THE SYSTEM OF STATE RENOVATION AND SOME ISSUES IN VIETNAM AT PRESENT

NGỌC TRÂN

"The system of state renovation" is a concept, which has been used instead of the notion "The system of state science and technology" or "The system of research and development" in the 1980s. This essay puts forward some concepts of "The system of state renovation" which has been used by many countries in attachment to certain background and object of study; it states the fundamental special points of the Vietnamese system of state renovation and brings forward some proposals in order to solve a good deal of problems in the present situation.

I. The system of state renovation, its components

It is the product of the market mechanism and experiences in the state management since the 1980s. At that time in some countries in the OECD "The system of state renovation" came into existence to replace the concept of "The system of state science and technology" or "The system of research and development" which had hitherto been used. In industrialized countries, this new thought has led to the change of development policies from special attention to the system of state science and technology and the system of research and development on the one hand to the system of state renovation on the other, concentrating to the concept of renovation policy instead of the policy of science and technology. According to this way of approaching, the important and essential problem is not the specialized competence of research and development; it is the competence of renovation. Moreover it is not only the competence of renovation at the state level, but also most importantly comprises the competence of renovation of products, services and processes of production and business in enterprises.

However until now there have been a lot of different definitions of the system of state renovation attached to certain research background and objective. For example:

"The system of state renovation is a network of organizations and institutions in private and public sectors which coordinate their activities with one another in the process of study, import, improvement and dissemination of the new technology" (Freeman, 1987)

"The system of state renovation comprises elements and interactive relations in activities creating, disseminating and employing the new knowledge of economic usefulness… taking place inside

or originating from inside the border of a country (Lundval, 1992)

"The system of state renovation comprises organizations of institution in the country, the system of stimulations and the capability deciding the speed and trend of improving the technology (or the speed and constituents of activities creating renovation in a country" (Pate and Pavitt, 1994)

"The system of state renovation comprises the assemblage of independent organizations and institutions which combine with one another to take part in the process of deploying and disseminating new technologies, putting forward frames to form and implement the policies of the government related to the process of renovation. It is also the system of institutions concerned in the process of creating, conserving and transferring knowledge and skill making up new technologies." (Metcalf, 1995) (according to 1)

Judged in overall, however, the concept "The system of state renovation" is considered to be an effort for the purpose of:

- Defining and describing the nature and decisive elements for the direct investment for invisible learning activities of countries and companies with a view to developing and managing technical changes;
- Assessing and explaining important differences in the degree and form of these investments between one country and the other.

The system of state renovation comprises state organizations, encouraging mechanisms and the capability to decide the speed and direction of learning technology (the contents and components of activities creating changes) of a country.

Organizations/institutions

There are four kinds of organizations and their activities are widely accepted as the essential point in the system of state renovation in all countries.

- Enterprises, especially those have invested for activities creating changes.
- Universities and similar organizations conduct fundamental study and training activities concerned.
- The mixed private and public organizations guarantee the general and vocational education.
- Government institutions funds and carries out activities both fostering and adjusting technical changes.

Encouraging mechanism

Economic analyses have a lot of effects in surveying the significance of encouraging mechanism and organizations creating technological knowledge.

- By economic reason, in all countries, it is natural that the government has to support the fundamental study. From this postulation, the importance is known in the system of state renovation in university education in which fundamental studies are combined with postgraduate training.
- The difficult balance between the supernatural force of profits of temporary monopoly and the renovation and competition pressure by imitation has been widely recognized and analyzed in market economies. The defective nature of such encouragements in the former centralized planned economies was the main reason for the lack of technological accumulation.
- Nevertheless until recently little attention has been paid to making clear the explanation by the encouraging mechanism of differences in the world about the speed and direction of technological activities in developed market economies.

Capability

At present people have recognized that the main reason for international differences in development and trade is the existence of a technological distance between one country and the other. In other words, the international differences in technological capability are the results of dissimilarities in scope and sector in research and development and related activities. Meanwhile little attention has been paid to analyzing the difference of capability between one company and the other in decisive industrial economies although experiences have revealed that at any point of time, companies are very different from one another about:

- Varieties of products and services, which they can supply;
- In the same variety, the differences of supply effects;
- Possible changes in the future.

The new recently developed point of view about "dynamic capability" of the company has made the above-mentioned differences between one enterprise and the other become the central point in analyses, at the same time it has broadened the concept of capability including that of organizing and managing as well as technological capability and many other aspects in managing changes.

II. Fundamental particular traits of the system of state renovation in Vietnam

In general view the system of state renovation in Vietnam has some favourable points such as:

- It can manage to build and maintain a solid system of institutions, scientific and technological manpower to carry out activities of research and deployment.
- It establishes a system of organizations to support renovation activities such as standardization, manage the quality, intellectual property, information and library, consultation…
- It contributes to productive activities although the effect of this contribution is still in debate.

Besides the system still have some weak points and difficulties such as:

- The scientific and technological manpower has a very great quantity; it however is weak in quality. The distribution structure, the age and the dissipation of research competence etc…are also worth mentioning.
- The networks of scientific and technological organizations have not been put in reasonable arrangement. They are not balanced and lack in association with one another.
- Although there have been some progresses, the infrastructure for research activities is still very poor.
- The research quality is inferior; it has not been attached to the productive sector; its association with the productive sector is very weak. The system of research and development has not been put at the head of the need of the productive block and therefore it cannot serve the requirement of enterprises effectively.
- The system of scientific&technological, educational and training service is still inferior.
- The system of managing scientific and technological activities must be improved.
- The ability of self-adjustment and satisfaction for change is almost non-existent.
- In general, the level of development of science and technology is not yet comparable with many countries; it is far inferior from the international standard even in the area.

It is possible to bring forward concrete observations of these problems as follows:

First the manpower that is classified into that of research and development is relatively rich. The existent studies and data have revealed that though the

quantity is so great, there are a good deal of difficulties, challenges and obstructions in manpower. The Vietnamese scientists and engineers have relatively high average age. This reveals great obstacles, which Vietnam will have to overcome in the medium-term period. Besides many Vietnamese scientists and engineers have been trained in a different period according to the old way of learning based on the linear viewpoint between science and technology, the outlook of heavy industry technology and state management of centralized planning. The competences of learning, skill and needed technological aptitude for the competition in the international economy have not been much supplied.

Second, the number of institutes is great, including agricultural and industrial ones. However there have been some contrary phenomena in the impact of these organizations to industry and the national economic productivity. The most basic difficulty does not exist on the side of institutes but on the side of demanding – especially the lack of dynamic enterprises in Vietnam, those need research and development resources for competition and growth. In other words, the users of Vietnamese scientific and technological bases have not effectively attracted suppliers of scientific and technological resources according to the direction of improving the capability of growth and competition. This is originated from the profound reason of inferiority in the association between state scientific and technological organizations and the enterprises, including state ones. It is this that the operation in the system of state renovation in Vietnam is chiefly "oriented by the supplier". There is a restriction, which is very noticeable on the part of the supplier; the finance for research and development through the state budget has been split into odd parts, which are only suitable to separate studies.

The Vietnam Communist Party and Government have understood this problem clearly. Some studies in the system of state renovation have disclosed that the economic and social change from the process of renovation has made effort to solve this state by measures to attach the system of state science and technology to the requirement of the productive sector more closely. Some principle measures include:

- To entrust the self-control to organizations of research and development to directly participate in contracts with industry and to operate as an enterprise.
- Organizations of research and development accordingly must be more flexible for development and supply beside the research in other types of services in which there is the technological transference, the consultative service, test and trial production etc…
- To diversify the financial potentiality for research and development, in which there is the maintenance of profits with legal basis to be able to borrow capital from the bank.
- To privatize activities of research and development (to do away with the former state monopoly) and create a legal framework for the protection of the right to intellectual property.

In recent years there has been a good deal of effort to reform the renovation system at the state level in the adjustment of Vietnamese scientific and technological policy and activities of scientific research to carry out the tasks of priority in the common development strategy of the country. The compilation and adoption of the scientific and technological strategy to the year 2010; the projects of renewing

the mechanism of scientific and technological management, developing the scientific and technological market and international integration etc, are the most fundamental activities. This is aimed at solving entanglements of the centralized planned economy such as the continued separation of teaching from study in universities and the lack of association between research and industry (enterprise). The process of renovation has also taken place in the modification of the legal framework for technological renovation. Legal changes have been manifested in a lot of important texts such as the Law of Science and Technology and bills which are being compiled such as the Law of Technological Transference and Law of Intellectual Property etc…Other activities aimed at building the system of state renovation also comprise the establishment of the Scientific and Technological Fund, the strengthening of international cooperation and integration, the development of high technology in a number of fields such as the information technology, the biological technology etc… with the focus of more attachment to practice.

III. Some problems to be solved

The lesson from Asian economies has revealed that learning technology is a vital problem for success and this is still holding. International factors have created a lot of favorable opportunities for industrial production with low price to be able to integrate into the world economy. The present international background has also changed which is clearly manifested in the considerable decrease in the need for unskilled labour and the raw materials calculated according to industrial production unit while the requirement for skilled labour is increasing.

The system of state renovation in Vietnam needs a dynamic outlook and is to be applied in conformity with continuous and very rapid changes of international and state backgrounds. Experiences have disclosed that it is necessary to have time for a society like Vietnam to be able to absorb a new line of vision and viewpoint as international experts have put forward and changed into action of their own through endeavors on the spot. If there are no attempts for "adaptation of the policy" in slow and firm manner, the exertions for change will be hardly carried out solidly.

For Vietnam, in order to build an effective system of renovation, it is necessary to have drastic changes in many spheres, concretely:

- To renew the policy and mechanism of economic management, to create an eventful environment of business, to push up equal competition, to oppose to monopoly and budget subsidies, to abandon the economic thought in kind and centralized commanded economy. In the condition of international integration it is necessary to rely on knowledge, technology and the quality of manpower.

- Resolutely abolish to the every root of all disguised forms of mechanism of budget subsidies in the deployment of projects and programmes of scientific and technological progress which use the state budget; to establish new mechanism to promote the formation of the technological market, to encourage the association between enterprises and establishments of training and scientific research through the system of protecting reasonable right to intellectual property, to guarantee the right and interests of the creator, at the same time, make the interests of the creator shared by everybody.

- To raise the role of big companies. These companies play an important role in the system of state renovation. This conclusion is based on the data gathered

from over 500 big companies and dynamic firms in technology in the world through their registration of copyright in the United States of America.

The percentage of big companies in technological operation the world over is very different between one field and the other. In adding up it accounts for about 49%; it accounts for 70% in electronic and consumer goods, about 60% in car industry, over 50% in chemical, material and telecommunications branch.

- Drastically transfer application-studying and technology-developing institutes to the operation according to enterprise mechanism with the target of giving rise to many creative enterprises, to come to gradual abolishment of the boundary between the application-studying institute and the enterprise.

- The government must perfect the policies of encouraging scientific and technological organizations and universities to found productive and business establishments; the government must encourage enterprises, organizations and individuals to train manpower and solve employment, invest in scientific research and attach science and training to production and business. The government must have policies of encouraging and organizing forms of association and cooperation among enterprises, universities and institutes according to branch or group of products in order to rapidly form and develop new industries of strategic significance based on new technology. Programs of applying technological progress should be organized to develop areas, the countryside and mountainous areas; scientific and technological forces, enterprises in combination with farms and peasant households and other social organizations according to the economic contract carry out these programs.

- To accelerate the rate of progress of building areas of high technology, to issue policies of stronger priority to attract foreign investments of high technology; at the same time conditions should be created for research and training institutions and enterprises in the country to cooperate in joint ventures to rapidly develop industries of high technology, raising the technological competence in the country.

- Drastically develop consultative services. In the system of state renovation, the operations of consultative service have significance of special importance in using knowledge for development, contributing to pushing up the development of knowledge economy and realizing the requirement of durable development.

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