

## **SOME ASPECTS OF STATE ADMINISTRATION FOR INNOVATION**

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### ***Abstract:***

*For long years, the governments of many countries in the world follow different administration schemes in science and technology (S&T) sector. These efforts lead to radical development of S&T and then make effective contributions to industrialization and modernization of the countries. With the same vision, Vietnam follows his own scheme for State administration of S&T activities and achieves certain success.*

*During recent years, the State administration approach with focus for innovation has created new trends in designing phase of policies and mechanisms and, more importantly, led to changes and new driving forces for socio-economic development in many countries.*

*This paper is to provide initial studies for this topic on basis of theoretical consideration and practical implementation in Vietnam.*

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### **1. Definition of innovation**

Innovation as definition appeared since decades. When talking about the innovation, it seems we deal with novel products and novel procedures introduced and applied in practice. We can list some innovations which play important roles in development of modern society such as the appearance and use of writing characters, printing machines, systems of communication, air planes, cars and many others. Also, innovations in other fields such as agricultural, medico-pharmaceutical and others lead to radical changes of the world. Clearly, the innovation plays important roles for socio-economic development but the study of innovation always did not get proper attentions from academic researchers.

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In history of studies for innovation, many authors gave various definitions for this notion even when, every one should agree for, it is quite difficult to give a right definition of this largely covering notion. From another side, the notion of innovation experiences changes and becomes more complicated than the one at the initial stage of appearance (Gault, 2013). Today, majority of studies for innovative economics are still based on the assumption which states “the innovation is a process” (Lundvall, 1992; Edquist, 1997; Fagerberg, 2004). In a study of synthetic nature by Tran Ngoc Ca (2018), the author had systematized the definitions of “innovation” as follows:

- *Joseph Schumpeter (1930)* gives the notion: the innovation is the introduction of a novel product or novel changes of existing products. It may be the process of renovation of industrial sectors, exploration of a new market, development of new supplying sources of raw materials, new changes of organizational structures and etc. By this definition, the innovation is equivalent to something novel (products, procedures, markets, material sources and etc.) necessarily bound to production and market.
- *Peter Druker (1954)* gives the definition of innovation as changes to create new results of activities of an organization. This definition makes focus on the effect of actions which change outcomes of activities.
- *Nelson (1993)* gives a vision: the innovation is the process to transform ideas to novel or completed products and then to introduce them to market, or to new procedures applied in industrial and commercial environments or to implementation of new approaches to social services. The approach by Nelson makes emphasis on the transformation of ideas to concrete products and procedures in production-business activities for social benefits.

The OECD (2018) Manual for measuring innovation introduces the following concepts upgraded for the innovation:

- Innovation is considered not only as a novel idea of technological inventions. Innovation requires the subsequent implementation which introduces their use or is supplied to other actors (organizations and individuals) to use. Economic and social impacts of ideas and technological inventions depend on the propagation and absorption of related innovations;
- Innovations start from activities on basis of knowledge related to application of practical or newly developed knowledge. Information is taken as data organized, capable of being reproduced and transferred between organizations with low costs. Here the information is interpreted as its comprehension and applicability for different purposes. Knowledge

gets available through efforts for comprehension and then it is quite difficult to transfer to other actors since the process requires certain efforts from receiving parties;

- For creation of novel knowledge, R&D is one of actions capable of creating innovations or, through it, to get knowledge useful for innovation. Other methods to get potential knowledge include market studies and technical operations to assess effectiveness of procedures or to make analysis of data from users of goods and digital services.

OECD (2018) introduces an overall view: the innovation is a novel and/or improved product/procedure which contains net differences from existing products/procedures of the organization and, at the same time, is supplied to potential users (for products) or using organizations (for procedures). In production-business sectors, OECD introduces the notion of Business Innovation, namely: a novel and/or improved product/business procedure which is considerably different from the previously existing ones of the enterprise and, at the same time, is introduced to market or used by enterprises.

In order to have innovative products/procedures, organizations and individuals need to carry out the following activities: (i) R&D activities; (ii) Technical-designing activities and other creative activities; (iii) Marketing activities and trademark assets; (iv) IP related activities; (v) Training of staffs; (vi) Development of software and database; (vii) Activities related to purchase or lease of tangible assets; and (viii) Activities for management of innovation.

In summary, the overall view is: *Innovation is an intended process which can be measured and determined to serve enterprises through creation of opportunities and conditions suitable and comfortable for others to transform knowledge and ideas to more efficient business procedures and superior products/services for higher economic growth and prosperity.*

## **2. Innovation activities and science-technology activities**

In addition to the notion of innovation, international organizations provide the notion related to S&T activities. OECD (1995b) gives the following definition: S&T activities are those works which have a systematic nature in close relation to creation, development, dissemination and application of S&T knowledge in S&T fields and services.

Vietnam Science and Technology Law 2013 defines: S&T activities are works for scientific research, research and experimental development (R&D), development of technology, application of technology, S&T services,

development of initiatives and other creative works for development of science-technology.

So, obviously there exist certain differences between innovation activities and S&T activities. Though the both types of activities are oriented to development and creation of new knowledge but their functions are different. S&T activities target the creation of scientific knowledge for development of S&T while innovation activities are oriented to the exploitation, development and creation of novel knowledge which are not only scientific knowledge but also practical knowledge-experiences. More important, innovation activities are oriented to applicability which means feasibility in transformation of knowledge to products/procedures capable of producing socio-economic values. This also leads to appearance of different models: one for implementation of S&T activities which is oriented to education and research facilities while another one for innovation activities which covers larger areas not only for research domain but other domains including industries, finance, market and etc.

### 3. National Innovation System

National Innovation System (NIS) is the notion attached to innovation. In views by *Lundvall (1992)* NIS includes “actors and mutual interactions in production and dissemination of novel and economically useful knowledge”. Lundvall did not pay more attentions to sectorial aspects but shifted the focus of consideration to a broader national framework where enterprises and related organizations in the system play very important roles in regards to creation of innovations produced and difussed in the whole economic system.

*Nelson (1993)*<sup>2</sup> focuses attentions on practical reality and studies of description of NIS by different countries. In views by Nelson in the science-technology-innovation model, NIS means the national science system.

*Metcalfe (1995)*<sup>3</sup> takes NIS as a set of different institutions and organizations which, together or separately, make contributions develop and disseminate new technologies and, at the same time, provide frameworks for the Government to form and implement policies towards innovation process. It operates as a system of institutions and organizations which interact mutually for creating, storing and transferring knowledge, skills and arts for identification of novel technologies.

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<sup>2</sup> See OECD. 1995a

<sup>3</sup> See OECD. 1995a

Actually, the broader view on the innovation system is applied in a larger community of researchers. In views by many researchers, the NIS is a system open, evolutive and complex which includes relations inside and between organizations, institutions, socio-economic structures, all together determining speed and direction of innovation as well as building specific capacities originated from science-experience based learning process.

#### **4. State administration for innovation**

In the most general concept, the administration is understood as the oriented and organized impacts of the administering object figures towards the administered subject figures by certain modes of actions to achieve certain objectives.

Accordingly, the State administration is a particular social administration form which appears and exists together with the State structure. It is in fact the activities of administration closely bound to the system of State authority organizations. By other words, the State administration can be viewed first as the actions of State organizations to enforce the State power.

In principle, the State power in all the countries in the world actually is divided into three main categories: legislative, executive and judicial with well-defined powers. The relations between organizations of these three State power categories form the organizational structure of the State apparatus and this leads to differences in the organizational structures in different countries.

In Vietnam, the State power is unified but there exist the scheme of assignment, coordination and control between State organizations in enforcement of the three legislative, executive and judicial powers. According to this mechanism, the legislative power is assigned to the only entity: the National Assembly. The executive power is assigned to the Government and local administrative apparatus which include certain administrative guiding and executing powers. The judicial power is assigned the system of People's Procuracy and the system of People's Court of various levels.

By this approach, in Vietnam, the State administration is the activities of enforcement of the State power carried out by State administration authorities toward every individual and organization in the society and over all the social life aspects by using the State power of unilateral enforcement nature for common objectives to serve benefits of the whole society, to maintain stably the social order and to push up social development in a unified orientation by the State.

Among the State administration powers, the State administrative activities are bound closely with implementation of the executive power which is in fact an important content of the State power. By other words, the State administrative management is an important content of the State power. In Vietnam, the State administrative activities follow the principle: The Party leads the State administration; the people supervise the State administrative activities; democratic concentration; socialist legislations; servicing; effective and efficient objectives.

In regards to innovation activities, theoretically the intervention by the State in innovation activities can be interpreted by systematic approach for innovation in order to settle failures of system nature. The systematic approach for innovation gets out of the framework of the neo-economic theory which considers that the interventions by the State are legal and necessary due to failures of the market. The systematic failures in these activities are built on basis of the concept that the innovation process is a learning process of a whole system or between organizations of a system in order to bring in active impacts to innovation capacities of enterprises, regions and countries.

In industrialized countries this approach leads to the shift of development policies from attentions for S&T systems and R&D systems in economic systems to focus for NIS which is, in fact, the shift from attentions for S&T policies and R&D policies to focus for innovation policies. By this approach, the crucial importance is not R&D capacities of specific professional nature but innovation capacities which means the capacities to innovate products and services to be introduced to market.

This adjustment also means the use of State administration tools in different countries to push up innovation activities (R&D activities; technical activities, designing activities and other creative activities; marketing activities and trademark assets; IP related activities; training of staffs, development of software and database; activities related to purchase or lease of tangible assets and activities of management of innovations) not only in research institutes/universities (as it was in practice of S&T administration in the past) but also in production sectors for today's focus (OECD, 2018) and sectors of financial supports and resources for innovation activities by individuals and enterprises in the society.

In this view, basically we can identify: *the State administration for innovation is the use of administration tools by the State to make the innovation system operate and to carry out its functions and then to create new knowledge integrated in products, procedures and services to meet needs and requirements of the social life.*

## 5. Some problems in the State administration for innovation in Vietnam

In Vietnam there exists a legal room of use of the concept of the State administration for S&T but in reality, during recent years, there exist some large lines and directions by the Party and policy documents by the State to regulate the approaching stand in direction towards administration of innovations.

Resolution No. 20-NQ/TW on S&T development to serve industrialization and modernization in conditions of socialist oriented market economy and international integration had defined the stand: “Priorities and focus of all the national resources for S&T development. The State has responsibilities to make investments, to stimulate economic sectors to participate in development of infrastructure, to enhance integratedly potentials of social sciences and humanities, natural sciences, technics and technologies. Attentions for applied research and development, enterprises and public service units as the center of innovation of applications and technology transfer, being the most important sources of demands of S&T markets. Adequate cares for fundamental research, absorbing and mastering the world’s advanced technologies in conformity to the conditions of Vietnam”.

Law on S&T 2013, for the first time, introduces the notion of innovation into legal regulations. Law on Supports for Small-Medium Enterprises 2017 has the legal notions in relations to innovative start-ups. *Item 2, Article 3 stipulates: Innovative start-up SMEs are those SMEs established to carry out ideas on basis of exploitation of intellectual assets, technologies, new business models and capability of fast growth. At the same time, this law has the regulations to push up development of the community of innovative start-up SMEs. Item 2, Article 17 of this law also stipulates the contents of supports, namely:*

- a) Supports for application and transfer of technology; supports for use of equipment at technical facilities; supports for participation in incubating facilities and common working places; instructions of trials and completion of new products, services and business models;*
- b) Supports for in-depth training in formation and development of products; attraction of investment sources; consulting for intellectual properties; realization of formalities for standards, technical norms, metrology and quality;*
- c) Supports for information, communication, trade promotion, networking for innovative start-up, attraction of investment sources from funds for innovative start-up;*
- d) Supports for implementation of commercialization of scientific researches and technological development, exploitation and development of intellectual assets;*

*e) In every stage, the Government decides policies for compensation of interest rates for loans of innovative start-up SMEs. The compensation of interest rates is conducted through credit organizations.*

As measures to concretize the lines by the Party and the laws by the State, the Government issues policies, mechanisms and programs for promotion of national innovation activities. In order to enhance the linkage between universities, research institutes and enterprises in activities of research and commercialization of research results, the Prime Minister approved the Program of development of S&T market up to 2020 (Decision No. 2075/QĐ-TTg on 08<sup>th</sup> November 2013) for acceleration of socialization and enhancement of the central master roles of enterprises, particularly the S&T ones, proactive integration into the regional and international structures for development of S&T market.

Realizing the guiding line for further development of the eco system of innovative start-ups, the Prime Minister approved the project “Supports for the eco system of national innovative start-ups up to 2025” for setting up of favorable environment to push up and to support the formation and development of the type of enterprises with fast growth rate on basis of exploitation of intellectual assets, technologies and new business models.

Despite of these important adjustments in guiding stands, realization and design of policies in orientation to administration of innovation activities the State administration system in Vietnam still has the following problems:

*First, for stand of view and position of innovation activities in the legal regulations*

Law on S&T 2013, for the first time, introduces the notion of innovation. However, the notion of innovation itself as regulated by the Law provides the general contents without indicating clearly the nature, activities and related objective figures of innovation activities. This notion, at certain level, is different from international common interpretation of innovation activities.

Besides, Law on S&T is seen as a frame law to govern the legal room for S&T activities or innovation activities and a platform for the Government to build up and promulgate sub-law documents or concrete policies. Law on S&T 2013 has many chapters and articles to regulate the administration of research-development activities but lacks legal regulations for innovation activities despite of certain regulations for the notion of innovation. It can be seen as the biggest remaining problem which, at certain level, hampers the design of State policies and mechanism for innovation during the recent time.

*Second, for designing of the organizational system of administration of innovation activities*

In order to push up innovation activities, in addition to establishment of legal rooms for these activities, it is necessary to set up the apparatus for implementation of practical activities. According to Resolution No. 95/2017/ND-CP governing functions, duties, authorities and organizational structure of Ministry of Science and Technology (MOST), the innovation is defined as functions in administration of S&T activities by MOST. Even with this regulation, the Government does not yet issue more concrete regulations on types of activities and duties of innovation activities in relations to the State administration functions as governed by the regulations. This leads to the actual situation where many organizations and agencies take parts in administration of innovation activities without indicating clearly the scope, roles and power in administration and implementation of innovation tasks. By other words, at present time, there is no regulations towards the organization in position of main charges of administration of innovation activities at national level. This leads to the non-conformal situation in designing of organizational structure and implementing administration activities in ministerial, sectorial and local levels.

*Third, for designing of policies towards innovation activities*

The direction and guiding stand to push up innovation activities had been presented in the documents by the Party and the regulations by the State. But the concrete documents and regulations for organization of implementation of innovation related duties and activities still follow the ways of administration of R&D tasks. Since Law on S&T provides regulations towards the types of S&T tasks and forms of related supports leading to the unreasonable and non-feasible situation in implementation of tasks in relations to innovation activities since the contents, norms and procedures of expenditures still have to follow the regulations applied for R&D tasks.

## **6. Conclusions and recommendations**

### ***6.1. Conclusions***

As presented above, the stand of view on the State administration for S&T activities has been shifted gradually to the one for administration of innovation activities. In Vietnam, at macro level, the stand of view of the State administration for S&T contains many aspects of administration of innovations.

However, the concretization of the stand of view of the State administration for innovation is under completion and trials. In the meantime, with the common development trends of the world, innovation activities get realized and conducted intensively in socio-economic development of the country. Therefore, it is possible to see that the real practice of innovation activities advance ahead of the changes and adjustments in the State administration for this sector.

## **6.2. Recommendations**

In order to catch up the world's common trends and the domestic real practice and then to give contributions to change the growth models for breakthrough moves in development of the country, it is necessary to conduct the basic adjustments as follows:

*First*, MOST needs to have early plans to revise and to amend Law on S&T 2013 with concrete regulations for innovation activities.

*Second*, it is necessary to improve and complete the regulations towards functions and duties of MOST for administration of innovation activities through revision and amendment of Resolution No. 95/2017/ND-CP which governs functions, duties, power and organizational structure of MOST. It would be the important background to complete the apparatus and organizations in charge of innovation activities at national and local levels.

*Third*, it is also necessary to recheck and complete the legal room of policies for science-technology-innovation activities. Accordingly, the State needs to issue regulations and guiding instructions to distinguish the types of tasks and supports related to scientific research activities, technological development activities and innovation activities. The separation of the types of supports (scientific research, technological development and innovations) would ensure effectiveness and efficiency of State intervention measures towards science-technology-innovation activities. This would then lead to positive impacts for socio-economic development of Vietnam in the coming time./.

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