SOME PERSPECTIVES ON GENERAL POLICIES, SPECIFIC POLICIES, AND SUPERIOR POLICIES IN SCIENCE, TECHNOLOGY, AND INNOVATION IN VIETNAM

Hoang Lan Chi[1], Hoang Xuan Long
National Institute for Science and Technology Policy and Strategy Studies

Summary:

The system of science, technology, and innovation (STI) policies can be categorized into 3 types: general, specific, and superior policies. Each type has its characteristics, significance, and contents. The analysis of general, specific, and superior policies allows a clearer understanding of the current situation and development solutions for STI policies in Vietnam in the near future.

Keywords: *Science and technology; Innovation; Policies; Specific; Superior.*

Code: *23112301*

The STI policy system can be classified from different points of view. Thus, according to the science and technology (S&T) field, there are policies for natural sciences, policies for engineering S&T, policies for medical and pharmaceutical sciences, policies for agricultural sciences, policies for social sciences, and policies for humanities. According to S&T activities, there are policies for basic research activities, policies for applied research and technology development activities, policies for technical innovations and improvements, and policies for S&T services promotions. According to the functions of S&T activities, there are human resources development policy, financial supporting policy, land policies, and infrastructure (including information) development policy. According to the subject of S&T activities, there are policies for S&T organizations, policies for businesses engaged in S&T activities, policies for individuals engaged in S&T activities;...

In this paper, some opinions will be raised on STI policies classification according to the level of state intervention. With this perspective, the STI policy system can be classified to 3 types: general, specific, and superior policies.

1. General policy on science, technology, and innovation

1.1. Characteristics of general policy on science, technology, and innovation

The market mechanism is capable of regulating a lot of STI activities. And this part of STI activities does not require state intervention. At the same time, the

[1] Author's email address: lanchi.hoang.apd@gmail.com

market mechanism appears to be ineffective in regulating and controlling another part of STI and that part requires state intervention to be effectively operated. Thus, the general policy on STI is formed based on the limitations of the market mechanism.

The general policy on STI has the following outstanding features:

- Like the public policies in other fields such as economics, culture, education and training, environment, society, etc. the general policy on STI is compatible in terms of policy types (strategy, planning, etc.), policy tools (direct support, taxes, credits...), level of incentives, management methods...
- The general policy on STI is quite common in all sectors, socio-economic fields, fields of STI, types and subjects of STI, and the meanings of STI (increasing knowledge, improving increase productivity, increase competitiveness, increase GDP, develop new business models...).
- The general policy on STI includes many kinds of policy tools such as encouragement, direct and indirect support, honor, control,...
- The general policy on STI has internal intertwin/binding relationships that create a certain balance between different and specific policies. Differences between policy tools, incentive levels, management methods, etc. are limited and maintained in balance with each other.
- The wide - narrow scope, the greater or lesser extent of the general policy on STI depends on the limitations of market mechanism regulation and the ability of the state to intervene (resources, understanding, management capacity). In cases where regulation of the market mechanism is limited and there is not ability to intervene from the state, it is impossible to have truly effective policies.
- The boundary between the market mechanism regulation and the state intervention through general policies on STI is quite complicated. There are no clear, visible boundaries and a common framework between countries and stages of development. There is also no separate boundary between the general policy on STI and policies outside the STI fields.

1.2. General policy on science, technology, and innovation in Vietnam

In Vietnam, there are general policies on STI with many kinds of policy tools, related to many fields and types of S&T activities, regulating many types of subjects, and available in many other policy systems,... Most of the general policies on STI have had practical effects and contributed to the overall development of the country. Besides that, there are also some basic limitations such as lacking many policies on innovation...; some policy tools have not been applied; lack of some policies suitable to the new context of the Fourth Industrial Revolution; Policy implementation is limited; lack of effective coordination between STI policy with other policies. The main reason of these limitations is

due to the unclear concept of state intervention in the field of STI, because it has not kept up with the general changing trend of STI policies in the world.

So, in the coming period, it is necessary and possible to continue to adjust and expand the general policy on STI in Vietnam. Specifically, we should pay the attention to applying general policies on STI to several policy solutions such us:

- Regarding investment and finance of STI:
  + Promote the mobilization of the private sector and businesses to heavily invest in STI.
  + Take advantage of ODA, FDI and other funding sources for the STI development.
  + Expand the application of the S&T Development Fund financial mechanisms and increase the quantity and scale of S&T development funds.
  + Continue to improve the public-private partnership cooperation mechanism in STI activities.
  + Improve mechanisms and policies to promote funding, loan support, and loan guarantees from credit institutions for STI activities.
  + Strengthen the legal corridor on public investment and medium-term public investment plans in the direction of ensuring the State's priority orientation in development investment in STI.
- Regarding S&T human resources development:
  + Focus on training new S&T knowledge for young people. Take career orientation to pursue science, engineering and engineering majors in high schools and universities.
  + Maximally mobilize and support economic sectors to directly participate in the process of training S&T human resources, especially the private economic sector and foreign direct invested economic sectors.
  + Increase effective use of students, graduate students, interns, and studying and working abroad S&T experts.
  + Support to foster and improve professional qualifications and skills of human resources in intermediary organizations of the S&T market to meet the needs of businesses.
- About the STI organization:
  + Plan and reorganize the S&T organizational system in the direction of drastically reducing the focal points, overcoming the overlap, spread, and duplication of functions, tasks, and research fields; ensure the effective operations, consistent with the goals and mission orientation of S&T development.

+ Encourage and support the development of research groups in key research institutes and key universities to create different schools of thought to promote the development of S&T.
+ Develop and improve the capacity of the system of S&T service organizations, meeting the requirements of developing the S&T market, which focuses on technology transfer services, intellectual property, standards, measurement, and quality.

- Regarding STI infrastructure:
  + Prioritize investment in strengthening the capacity of key laboratory systems and specialized laboratories.
  + Build and improve a reliable, up-to-date S&T information and statistics infrastructure in accordance with international standards.
  + Formulate a system of national, regional, and local data centers connected synchronously and unified. Promote the dissemination of S&T information to users, focus on information that serve businesses and developing rural and remote areas.
  + Build testing zones for technology businesses according to the world's advanced models. Implement identification, recognition, and build a system of standards and regulations for new products, technologies, and business models.
  + Through public-private cooperation, forming a simulation and technology transfer center to quickly promote the application of S&T in production and business.
- Regarding S&T projects and programs:
  + S&T programs should participate in supporting organizations and businesses in finding technology information, consulting, transferring technology, training human resources to master and develop foreign technology from abroad into Vietnam.
  + Expand and improve the effectiveness of the integrated relationship between research and training in S&T programs.
  + Enhance public transparency of information on S&T research results, transfer results and application of S&T products to production and social life.
- Regarding STI activities in enterprises:
  + Focus on improving the businesses capacity to acquire, master and gradually participate in creating technology in the coming time.
  + Promote the formation and development of businesses networking to enhance science, technology, and research activities.
  + Support to improve the capacity of research staff and technical staff for businesses.

  + Strongly develop the research ordering form from businesses for institutes and universities to implement S&T tasks; stimulate businesses to associate with institutes and universities in building and jointly organizing the S&T tasks implementation at all levels.
  + Complete the legal corridor and mechanisms and policies in a synchronous direction, creating motivation for the development of S&T and the application of S&T results in production, creating favorable conditions for innovation in businesses.

- Regarding domestic linkages:
  + Strengthen measures to connect the State, businesses, and scientists to improve technological capacity and new technology applications.
  + Build and develop a linkage model between S&T organizations, research institutes, universities, domestic and foreign scientists, and businesses to link the technology market needs with the level of response in research and transfer.
  + Develop mixed research groups of businesses - universities -and research institutes.
- About the S&T market:
  + Develop a network of intermediary service organizations for brokerage, evaluation, and technology transfer.
  + Effectively connect national technology exchanges centers with the provincial local centers for applying and transferring scientific and technological advances.
  + Promote enforcement of intellectual property laws.
  + Promote the connection between the S&T market with the goods and services market, and the labor market and the capital market.
- Regarding international integration of STI:
  + Promote the attraction and effective use of resources from abroad and international partners for research, application, innovation, creative startups, and technology transfer.
  + Create favorable mechanisms and policies to attract and encourage organizations and individuals in all sectors to cooperate and make linkage in scientific research and technology transfer.

2. Specific policies on science, technology, and innovation

2.1. Characteristics of specific policies on science, technology, and innovation

Each field often has some unique characteristics. The specificities of the field of STI are related to long-term and overall benefits, creative activities, promoting

the role of individuals, etc. The specificities of STI have an impact on the market mechanism in STI. So, promoting the market mechanism in STI faces many difficulties due to: demand is often for the future and indirect, the reliability of exchanged goods is not high (cannot be touched and not easily directly recognized the attributes of STI, the use value of STI products is only really revealed during the process of use it to produce products and services,...); there is a large information inequality between buyers and sellers of STI products (while sellers know their products well, buyers often have very little information about the actual quality of the goods being exchanged, making it difficult for sellers to know whether buyers keep their commitments in contract after obtaining the product or not,...); difficulties in determining the selling price and making price agreement for STI products (prices of goods in the S&T market are often not determined by value but by decisive usefulness value,...).

As a result, the general policy on STI is limited in interfering into the specificities of STI and therefore there is a need for a specific policy on STI.

The specific policy on STI has the following outstanding features:

- Specific policies on STI have a certain compatibility in terms of incentives with other specific policies on education, culture, etc.
- The scope of the specific policy on STI is much narrower than the scope of the general policy on STI.
- The specific policy on STI has a higher level of incentives and a more open and flexible management mechanism than the general policy on STI.
- There are also many types of specific policies on STI, that corresponds to the specific characteristics of each field of S&T, each type of S&T,...
- The specific policy on STI has a complementary meaning to the general policy on STI (overcoming the limitations of the general policy on specific activities), and at the same time, to some degree, it also partly disrupts the balance, which is established in the general policy on STI. Specific policies make general policies relatively less attractive. The presence of specific policies easily causes the tendency to “specialize” general policies to receive higher incentives.
- The unique characteristics of STI activities are a condition for forming specific policies on STI. However, there are several other factors that hinder the emergence of specific policies on STI such as: fear of discrepancies in incentives compared to the general level, having to spend more resources, and increasing management capacity. In many cases, there is no specific policy on STI, not because of a lack of awareness of the unique characteristics of STI, but because of not thinking that the consequences of the new policy are too great compared to the benefits.

2.2. Specific policies on science, technology, and innovation in Vietnam

In Vietnam, there have been specific S&T policies on human resources development, S&T organizations, S&T infrastructure, and exchange of scientific research results and technology development, etc. Many specific policies on STI have been effective in practice and has contributed to the development of STI and the socio-economy.

Besides successes, specific policies on STI in Vietnam also reveal some limitations. Most obviously, there is a lack of some specific policies on STI. STI activities are also regulated by inappropriate policies on S&T projects and programs, on autonomy of public S&T organizations, science, and technology human resource management, etc. This includes the cases where the policies are categorized as specific and divided from the common level of general policies but in fact still are not enough having a specific difference with the general policies.

The lack of specific policies and the use of general policies to regulate specific subjects has resulted in discouraging STI activities, hindering the development and application of STI in production and life. Specific policies on STI also often face difficulties in implementation. These are specific policy contents that cannot be promoted in practice and are only meaningful in name.

The above limitations are due to the following reasons:

- Although the uniqueness of STI has been emphasized in many important orientation documents, there is still no consensus on specific issues. Somewhere there are still doubts about specific policies for STI that will create unnecessary differences and waste of resources. Without overcoming this fear, it is impossible to develop a specific policy on STI, or even if it is issued, it will not be easy to implement in practice.
- Weak management capacity causes limitations in implementing specific policies on STI. The specific policy on STI that has been issued has not been promoted and has not achieved expectations. In fact, it has become a reason to support the opinion of hesitating to issue more specific policies on STI.
- Part of S&T world is still mixed with other status quo such as state research institutes still having people who do not have research ability but can not be eliminated... That mixed S&T word reduces its unique characteristics and affects the work on developing and implementing the specific S&T policies.

The above analyzes have suggested solutions in the coming time: focus on effectively implementing specific policies on STI that have been issued (including reviewing and adjusting policy contents that are suitable for implementation ability); Add more specific policies on STI to remove obstacles in STI activities and promote the development of STI; The expanding specific policies on STI must be synchronized with solutions such as strengthening coordination between ministries and agencies, improving the capacity of the management apparatus, and strongly innovating STI activities in the direction of screening and eliminating

that parts which does not belong to STI world. More specifically, attention should be paid to applying specific policies on STI for several policy solutions such as:

- Regarding the STI investment and finance:
  + Promote the mobilization of the private sector and businesses to heavily invest in STI;
  + Take advantage of ODA and FDI and other funding sources for the development of STI;
  + Strengthen encouragement and financial support to promote businesses to conduct STI, especially all types of S&T startup businesses;
  + Promote the autonomous mechanism for public S&T service units, implement the contract funding mechanism to the final product or partially contract funding, and implement the project funding through the S&T Development Fund. Putting the salary spending and organization operating expenditures in the public S&T organizations regular tasks according to their functions;
  + Amending the investment regulations to facilitate the activities of attracting capital, purchasing shares, and mergers and acquisitions of technology enterprises; And facilitate foreign investors to contribute capital to innovative startups.
- Regarding S&T human resources development:
  + Develop policies to send Vietnamese scientists to work and study at oversee research institutes, universities, and businesses;
  + Strengthen the attraction of excellent scientists and experts from abroad and overseas Vietnamese ones to return home to participate in STI activities. Reforming the recruitment regime and appreciating foreign and overseas Vietnamese S&T talents to take part in S&T activities in Vietnam;
  + Encourage the mobility of highly qualified labor from research institutes and universities to the business sector;
  + Strongly reform the S&T human resource management mechanism;
  + Practice democracy, respect and promote freedom of thought in research, creativity, consultancy, and criticism activities of scientists. Develop ethical standards in scientific research according to international norms and practices.
- About the STI organization:
  + Planning and reorganizing the S&T organizational system in the direction of drastically reducing focal points, overcoming the overlap, spread, and duplication of functions, tasks, and research fields;
  + Establish a number of advanced models of S&T organizations with foreign investment or in association with foreign advanced scientific organizations;

  + Thoroughly implement the mechanism of autonomy and self-responsibility of public S&T organizations in terms of human resources and operating costs based on results and operational efficiency; shifting the arrangement of regular operating funding for public S&T organizations to allocating method of the State ordering and bidding to perform S&T tasks and the contracting funding to final products mechanism based on output results

- Regarding STI infrastructure:

  + Continue to invest and effectively exploit high-tech parks, high-tech agricultural parks, information technology parks according to world advanced models, and common working areas.

- Regarding S&T projects and programs:

  + Restructure national S&T programs in a direction that practically serves socio-economic development goals, focusing on interdisciplinary S&T tasks; dedicating resources to enhance the ability to absorb technology and proactively respond to the opportunities and challenges of the Fourth Industrial Revolution;

  + Reform the S&T projects and programs organizing and implementing mechanism in the direction of expanding the participation of scientists, businesses, and social organizations to ensure transparency, competition, objectivity, openness, and equality in selecting organizations and individuals to perform S&T tasks; fundamentally reform S&T evaluation, ensuring compatibility with international standards;

  + Expand the application of public-private partnership (PPP) and specific investment mechanisms for large-scale S&T tasks and projects.

- Regarding STI activities in enterprises:

  + Remove institutional barriers that cause difficulties for STI activities. Develop and implement groundbreaking policies to encourage and promote innovation in the business sector;

  + Strengthen support for businesses implementing projects of technology transferring, mastering, and developing from abroad into Vietnam;

  + Strengthen support for businesses to research, deploy, exploit inventions, and decode imported technology;

  + Implement a public-private partnership mechanism for businesses to effectively exploit innovation, creativity, research, and technology development projects;

  + Streamline and simplify business support requests to carry out STI activities;

  + Encourage and support businesses to establish research and development organizations;

+ Adjust policies to attract FDI towards improving quality, meeting criteria for transferring high technology, clean technology, and source technology to indigenous businesses (upstream, downstream) in the production chain. Encourage FDI enterprises to locate R&D centers and innovation centers in Vietnam;
+ Have a mechanism for state-owned enterprises to invest in technology research and development, venture capital investment, and investment in innovative startups;
+ Increase the number and scale of enterprises' S&T development funds; Review and amend regulations to create favorable conditions for businesses to form S&T funds that are large enough to meet technological innovation requirements;
+ Strengthen the role of the State as a customer in purchasing new products produced based on new technology.

- Regarding domestic links:
  + Promote research and transfer of research results, combining scientific research and training in universities;
  + Strengthen cooperation between research institutes and universities;
  + Develop a mechanism to encourage organizations and businesses to associate with higher education institutions and vocational education institutions to invest in strengthening facilities and training high-quality human resources capable collecting, mastering, and effectively exploiting technology from abroad into Vietnam;
  + Complete the legal corridor and mechanisms and policies in a synchronous direction and creating motivation for the development of S&T and the application of S&T results in production, creating favorable conditions for innovation in businesses.
- Regarding the reform of the institutional environment to facilitate the development of STI:
  + Promulgate controlled sandbox for new technologies and innovation models come from the Fourth Industrial Revolution.
- Regarding the S&T market and national innovation system:
  + Promote support for commercialization of scientific research and technology development results and intellectual property;
  + Expand the form of the State ordering S&T tasks and purchasing research results;
  + Strengthen support for businesses to research, deploy, exploit inventions, decode imported technology, and prioritize the purchase of domestic technology created by S&T organizations;

+ Focus on improving the national innovation system and innovative startup ecosystem, taking businesses as the center, which focuses on human, technology, and market solutions.

3. Superior policies on science, technology, and innovation

3.1. Characteristics of superior policies on science, technology, and innovation

STI is not only an area that the state is interested in intervening in (through the general policy on STI) and an area with specific characteristics that the state pays attention to (through the specific policy on STI), but also a field that has its own characteristics where the state is expecting to play a dominant role. General and specific policies cannot be used to promote STI to play a dominant role. Therefore, a new type of policy is needed - that is, a superior policy on STI. The superior policy on STI has the following outstanding features:

- At the same time, there may be some sectors that play a dominant role in the country's overall development, and there may be superior policies in several different sectors. At that time, superior policies on STI are compatible with superior policies in several other sectors.
- The scope of superior policies on STI is very narrow. This range is defined by the following limits:
  + Superior role different from the normal role of STI. Differences are reflected in breakthroughs, leading, and paving the way for socio-economic development.
  + Excels in STI associated with common national development goals. The goal of superior development in STI is an important and prominent part of the country's overall development goals.
  + The objects of superior policies on STI must be specifically identified forces and components. Thus, the subjects of STI policies are differentiated and only a very small part is targeted by superior policies.
  + We can imagine two cases: (1) STI plays a dominant role in general development and there are qualified forces who are ready to perform this role; (2) STI play a superior role in general development but there is still a lack of force capable of performing this role. Case (1) does not require state intervention and superior policies on STI are only for case (2).

  Limiting the narrow and clear scope of the superior policy on STI is meaningful to convince what deserves priority in focusing resources and minimize the impact of disrupting the balance of general policy.
- Superior policies on STI include many different types depending on specific subjects, specific policy tools, and specific orientations.

- The role of STI is expressed in general policy at the level that the state must intervene with general policy. The role of STI is expressed in specific policies at the level that the state must pay attention to specific characteristics and intervene with specific policy tools. However, it is possible to clearly distinguish the role of STI in superior policies from the roles of STI in general and specific policies.

  There is also a certain relationship between specificity and superiority in STI. STI plays a superior role thanks to its unique characteristics. But not all "specials" become "superior" and not always "special" is "superior".

- The development and implementation of superior policies on STI depends on conditions such as: a clearly defined and convincing role of superiority, the specific identification of the targeted objects of the superior policy, the agreement and general consensus from ministries/agencies, the appropriate management methods and management capacity, the guaranteed resources,... and especially the will of highest level leaders, which is expressed clearly, strongly and resolutely. Creating these conditions is also the challenge that a superior policy on STI must overcome.

3.2. Superior policy on science, technology, and innovation in Vietnam

In Vietnam, there is a superior policy on STI in the form of specific regulations, major policies, and fundamental orientations. The superior specific regulations are preferential content for high-tech parks, for some special S&T organizations (such as VKIST Institute...), or for some special S&T tasks, etc. The superior major policies on STI are affirmed in documents of the Party and State through emphasis on receiving the highest priority. The superior fundamental orientation of STI is affirmed in documents of the Party and State through its role as "key", "leading national policy", etc. Making the linkage of these superiority types clearly shows the limitations of existing superior policies on STI: specific regulations are fragmentary due to lack of substantive relationship with major policies and fundamental orientations; Major policies are neither fundamental nor specific due to the lack of a substantive relationship with specific regulations and fundamental orientations; The fundamental orientation is formal due to the lack of a substantive relationship with specific regulations and major policies.

There are many reasons causing the limitations of superior policies on STI, but mainly the fundamental orientation is not clear, leading to major and large policies are not specific and specific regulations are lacking systematicity. Other causes such as lack of good coordination between sectors, inadequacies in management capacity, etc. are only secondary reasons to the main cause.

Faced with a complex problem, in the coming period, superior policies on STI in Vietnam need to be determined based on clarifying important premises such as superior roles, forces performing superior roles, and superior incentives. Only based on clear premises can building superior policies on STI bring real results.

In the coming period, the role of STI has been affirmed as a strategic breakthrough in national development. At the same time, we should be more specific in emphasizing that STI go first and lead socio-economic development. In the fight against falling behind and shortening the development gap with the world, STI must be one step ahead, shortening the development gap earlier than other fields. It is necessary to use the advance development of STI to pave the way and attract other fields to realize the common goals set. That is the superiority of the role of STI in Vietnam in the new development period.

In accordance with the superior role and other characteristics of the superior policy on STI, the force that performs the superior role and being the object of the superior policy must meet the following requirements:

- Is a STI force that is both independent and closely linked to the economy and society. Taking the lead to lead is different from being separate. At the same time, more analysis is still needed to determine the appropriate level of escape to bring the highest efficiency.
- Development in Vietnam in the coming period includes sequential, shortcuts and anticipation. The force that performs the superior role in STI must be associated with shortcut and proactive development.
- The force that performs the superior role in STI must have certain capabilities in approaching new and modern STI, connecting with the socio-economy, spreading influence, taking responsibility, etc. Its current superior role as a superior policy object also has clear limitations that require support from the State. This is an issue that needs further clarification. Having certain capacity and being limited are two opposing sides but need to be combined to ensure that superior policies are effective and soon confirmed through convincing results.
- The force that plays the superior role as the superior policy object in STI should only be limited to a very narrow scope. Widespread expansion of the subjects of superior policies on STI (a trend that is very likely to happen in Vietnam) will cause chaos and reduce the significance of superior policies. The meaning of a superior policy object is not in its large scale, large number, synchronous system etc., but in its pioneering nature, and ability to assert novelty, breakthrough.

We should not look at the preferential level of superior policies on STI by comparing the difference with the level of general policies and specific policies. The superior policy on STI is a way of proactively and responsibly participating by the State (representing the common interest) in developing pioneering activities along with the force that performs a superior role. More broadly, the State itself is also a force that plays a superior and dominant role in STI and the way to do it is through building and implementing superior policies.

Superior incentives for a part of specific force are not a portion for that part but an investment for a particularly important and especially difficult development

direction of the country through a specific selected component. Superior development in STI aims to compete with outsiders, accordingly, incentives must also be internationally competitive. Only with internationally competitiveness, preferential levels of superior policies on STI can create unique advantages for the country.

In the coming time, it is possible to strengthen superior policies on STI with several solutions such as:

- Regarding the STI investment and finance:
  + Deploy research and apply technology development in priority fields of S&T. There is a mechanism to promote technological innovation towards the application of new and modern technology; Support the import of core technology, high technology, purchase of designs, and hiring of domestic and foreign experts in priority fields. Support investment from the state budget to enhance the potential of several non-public S&T organizations with development potential, research and technology development activities in priority and key areas.
  + Dedicate resources to enhance the ability to absorb technology, selectively apply the world's advanced S&T achievements to develop key products and strategic competitive products of the country.
  + Increase investment in construction and create conditions to promote the effectiveness of world-class S&T organizations. Encourage and provide financial support for new types of organizations such as innovation centers.
  + Increase investment in development and create conditions to promote the effectiveness of a team of leading scientists and general leading engineers.
  + Implement a special investment mechanism to deploy several large-scale S&T projects that serve national defense and security or have a strong impact on the productivity, quality, and competitiveness of national products.
- Regarding S&T human resources:
  + Promulgate and implement specific policies for leading scientists, leading general engineers, and chief engineers.
  + Support S&T staff to work and intern for a short or limited time at S&T organizations and businesses abroad to solve S&T tasks of national significance.
- Regarding the STI organization:
  + Apply special and groundbreaking mechanisms and policies to build world-class S&T organizations, serving as the nucleus for research, development and application of S&T in priority areas. Encourage and support the development of innovation centers.
- Regarding STI infrastructure:

  + Prioritize investment in strengthening the capacity of key laboratory systems and specialized laboratories to directly serve the development of key products and priority technologies

- Regarding S&T projects and programs:
  + Focus on S&T tasks serving priority areas, key products, and strategically competitive products of the country.
  + Focus on attracting international experts from advanced S&T organizations in the world to participate in building important S&T tasks.
- Regarding STI activities in enterprises:
  + Support the building and development of S&T enterprises. Encourage the development of technology incubators and S&T business incubators in key and priority fields and industries.

Classifying STI policies into general, specific, and superior policies provides an additional perspective on the STI policy system. Each type of policy has its own meaning. They cannot replace each other but can support each other.

The structure of three types of policies reflects in-depth many essential relationships of the STI policy system such as the different roles of STI in national development, the different relationships between STI policies and policies in other different sectors and areas, the different policy attitudes of the state towards STI, etc. For Vietnam, in the coming time, STI policy innovation must take place comprehensively and synchronously, reflected in changing in the 3 types general, specific, and superior policies. Reforms of the STI policy must be profound, when focusing on the specific policies changes; and must be pioneering, when focusing on the superior policy changes. Hopefully, reforms that based on the classification of general, specific, and superior policies promises to create a new landscape of the STI policy system in Vietnam./.

REFERENCES

1. Communist Party of Vietnam (2015). Summary report: Some theoretical and practical issues over 30 years of innovation (1986-2016). National Political Publishing House, Hanoi.
2. World Bank and Ministry of Planning and Investment (2016). Vietnam 2035: Towards prosperity, creativity, fairness, and democracy. Washington, DC: World Bank Group/ Hanoi: Ministry of Planning and Investment
3. National Department of S&T Information (2017). “Global megatrends affecting STI”, Review of science, technology and economics, No. 4/2017.
4. National Department of S&T Information (2019). “Innovation policies in the digital era”, General Review of Science, Technology, Economics, No. 3/2019.