REGIONAL INNOVATION SUPPORTING AGENCIES: INTERNATIONAL EXPERIENCE AND LESSONS FOR VIETNAM

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Summary:

In the context of globalization and increasingly fierce economic competition, not only internationally but also domestically, many places around the world have identified innovation as the key to sustainable local development. Particularly, encouraging and supporting innovation at the local level has become a critical strategy to maximize the unique innovative potential of each region. Recognizing the importance of this, some areas in Europe have implemented various organizational models aimed at promoting and creating a favorable environment for unique local innovation activities. The study emphasizes the importance of building a diverse, flexible, and locally tailored support organization, as well as the necessity of promoting cross-sectoral collaboration to optimize the innovative potential in each region. This article investigates several exemplary organizations in three different regions of the world, to draw lessons for Vietnam.

Keywords: *Science and technology; Innovation; Regional innovation system; Supporting innovation agencies.*

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1. Introduction

In the context of globalization and increasingly fierce international economic competition, many countries around the world have considered innovation as an important driving force not only to promote sustainable development at the macro level but also to enhance competitiveness at the micro level. Local innovation not only helps localities develop robustly but also creates new vitality, encourages economic diversification, and improves social life, thereby contributing to the overall socio-economic development of the entire country. Encouraging and supporting innovation at the local level has been considered by many places as a key strategy to make the most of the unique creative potential of each region. Many places in the world have recognized the importance of science, technology, and innovation and have implemented organizational models to promote and create a favorable environment for these activities locally.

In particular, the Regional Innovation System (RIS) serves as an analytical framework for the practical innovation process of localities. The analytical framework emphasizes that each locality has different contexts, characteristics, and

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innovation capacities, so it is impossible to apply a universal local innovation model and policy *(Tödtling & Trippl, 2005)*. Therefore, to build a model to promote local innovation, it is necessary to consider the suitability of the specific characteristics and context of each region *(Barca, McCann, & Rodríguez-Pose, 2012)*. The article is the result of a study of the theoretical basis of mechanisms and institutions as the foundation for building a model to promote local innovation and reviewing some international organizational models to draw lessons for Vietnam.

This paper analyzes the theoretical framework and some practical cases on the characteristics and activities of innovation promotion organizations located in three different regions. The selected organizations are:

(1) Brainport Development in the Brainport region of the Netherlands. This is a leading region in innovation and technology development, known for its advanced and strong innovation ecosystem and close cooperation between businesses, government, and research institutes. The selection of Brainport Development represents a successful model in promoting innovation, providing lessons on how to optimize resources to create a high-tech development environment;

(2) Innobasque in the Basque Country of Spain. This is a developing region with great innovation potential, but still facing many economic and social challenges. The selection of Innobasque aims to analyze how a region in transition can use innovation to improve competitiveness and promote economic growth. It also provides insights into strategies that are appropriate for the local context;

(3) The Regional Agency for Technology and Innovation (ARTI) in Apulia, Italy. This is a less developed region in terms of innovation than the two regions above. The Regional Agency for Technology and Innovation (ARTI) in Apulia was chosen to study how a region with a weaker economic base can use innovation as a tool to improve its situation. The choice of ARTI reflects an interest in understanding the challenges and opportunities of promoting innovation in less favorable economic conditions.

The selection of these three organizations allows the paper to have a comprehensive and comparative view of innovation promotion strategies in regions with different levels of development. This not only helps to better understand how innovation promotion agencies operate in different contexts but also provides important information for applying lessons learned to regions with similar conditions. The paper examines the strengths and weaknesses of these organizations in developing and implementing effective local innovation promotion activities. The lesson learned is that: If placed in the right institutional context, local innovation agencies can promote innovation activities and help correct the shortcomings of RIS.

2. Theoretical framework for the formation of organizational models to promote local innovation

The concept of Regional Innovation Systems (RIS) is an analytical tool that emphasizes the importance of geographical factors in understanding the process of

knowledge creation and the differences in innovation outcomes between regions. RIS varies greatly between and within countries, making localities a particularly attractive focus for the study of innovation systems (*Braczyk, Cooke, and Heidenreich, 1998*). According to Doloreux and Parto (2005), RIS consists of a network of public and private organizations, formal institutions, and organizations that operate within frameworks that are conducive to the creation, utilization, and diffusion of knowledge.

RIS studies describe the innovation process as non-linear, involving complex feedback mechanisms and interactions between science, technology, learning, production, policy, and market demand. The process develops through continuous interactions between different organizations to share and develop knowledge and resources. These interactions are important because they facilitate learning and knowledge accumulation, which are the main drivers of technological innovation *(Asheim and Isaksen, 2002).*

RIS studies focus on making specific policy recommendations for each locality based on the local context and RIS characteristics *(OECD, 2011)*. Government interventions in RIS usually aim at one of two goals. The first goal is to enhance interactions among actors in the system, thereby improving innovation efficiency. The second goal is to correct market and system failures that keep localities locked into a backward technological path *(Tödtling and Trippl, 2005).*

To achieve these goals, some regions around the world have established innovation promotion agencies, which have different names but are generally understood as Regional Innovation Agencies (RIAs). These agencies act as intermediaries in RIS, defined as "an organization that acts as an intermediary or broker in the innovation process between stakeholders" *(Howells, 2006).* According to OECD research (2011), RIAs are organizations that meet the following four criteria:

(1) *Mission*: an intermediary or broker between parties, responding to market or system failures;

(2) *Subnational geographic scope*: The organization's mission is aimed at a specific region, defined by administrative boundaries;

(3) *Permanence*: These organizations are not projects but rather long-lived entities;

(4) *Broad-based innovation promotion*: Supporting regional innovation is one of the organization's goals or its sole goal. The mission encompasses many aspects of innovation, not just a single tool or set of goals.

Although RIAs have significant differences in scale, structure, and operation, they all share a common mission of supporting innovation activities and connecting cooperation between parties in RIS, thereby enhancing local competitiveness and economic development through innovation. Research on RIAs around the world not only provides insights into how they operate but also brings valuable lessons to be applied to promoting innovation in localities in Vietnam, creating a solid foundation for sustainable development in the future.

3. Some models of local innovation promotion in the world

3.1. Regional agency for technology and innovation (ARTI) in Apulia, Italy

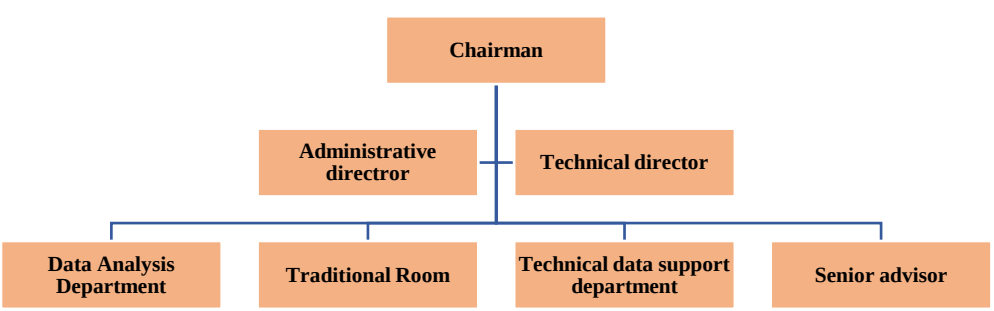
3.1.1. The context of the Apulian region, Italy

In the early 2000s, Apulia was a region with a medium level of economic development, reflected in economic indicators and characterized by several prominent elements in the economic structure, including many small and medium-sized enterprises; a low degree specialization in traditional industries; the presence of several multinational corporations together with a low level of international integration. The weaknesses of the innovation system in Apulia can be summarized as follows: (i) low spending on research and development (R&D); (ii) poor innovation performance; (iii) small number of innovative and creative enterprises; (iv) lack of financial resources for innovation; (v) limited (although increasing) university-industry collaboration; (vi) brain drain; and (vii) limited in high-tech sectors (*Fiore et al., 2011*).

3.1.2. Regional Agency for Technology and Innovation (ARTI)

To gain a foothold in the international market, European regions with a medium level of development such as Apulia have adopted a new development model, focusing on the renewal of traditional manufacturing sectors and the expansion into high-tech sectors by leveraging and optimizing available resources and capabilities.

To encourage the interaction between innovation demand and supply, and more generally the establishment and strengthening of innovation systems at the local level, the Regional Agency for Technology and Innovation (ARTI), an organization created by the local government, plays an important role in supporting Apulia's transition to the new development model. Specifically, ARTI supports local governments in the design, management, and implementation of economic development, innovation, education, training, and employment policies. ARTI was founded in 2004 and began operating effectively in the fall of 2005.



Source: https://www.arti.puglia.it/

Figure 1. ARTI's Organizational Structure

ARTI has a compact and low-level structure. It consists of a chairperson, who is primarily responsible for planning and policy direction of the Agency (supported by

a director of administration on the management side), and an internal staff of 14 highly qualified people. In addition to the administrative and secretarial offices, the staff is divided into three divisions: (1) the Analysis and Project Division, which includes a senior economist and three economists with a strong focus on economic analysis and project management; (2) the Communications Division, which includes four editors, and is responsible for dissemination activities; and (3) the Division for supporting start-up projects, technology transfer, and patenting support. In addition to the internal staff, the Agency has a network of senior project-based advisors.

This organizational structure allows the Agency to (i) reduce costs and, above all, improve the quality of operations based on a refined and highly qualified human resource; (ii) have high flexibility in management; and (iii) be able to react quickly to new needs.

The policies implemented by ARTI aim to promote the functioning of the local innovation system and address market failures in realizing its full development potential. Based on the weaknesses of the innovation system in Apulia outlined in the previous section, the objectives of these policies are:

(1) Strengthening the necessary capacities to stimulate knowledge accumulation and support the formation of technological clusters.

Many empirical studies have highlighted the importance of industrial cluster formation for the economic development of regions and the role of public policy in creating a favorable environment for interaction and cooperation between enterprises and research institutions through networks, thereby enhancing the system's innovation capacity.

ARTI established a high-tech cluster of developed multinational companies and local innovative enterprises called the Apulian Mechatronics Zone in the first half of 2007. The zone, supported by the participation of multinational companies such as Bosch, Getrag, and Fiat, is located near Bari, the capital of Apulia. It is also part of 25 technology clusters in Italy. The cluster was created with the main objective of synthesizing, learning, and developing the region's leading scientific and industrial skills, thereby attracting new investments in research, development, and production in the mechatronics sector to improve the competitiveness of the cluster. ARTI plays an important role in encouraging cooperation among stakeholders, long-term planning, and promoting the interaction between innovation supply and demand, especially through highly feasible projects. In addition, ARTI developed the Italian Tech Park Program, implemented by the Government together with local authorities, demonstrating the mutual relationship and close connection between innovation policies at the national and local levels.

(2) Improving the functioning of local innovation systems (encouraging the commercialization of research results through patenting) and opening to new entrants through policies that encourage the establishment of spin-offs and innovative enterprises.

Support programs for clusters at national and regional levels are widely applied in many OECD countries. The VINNVA¨ XT program managed by VINNOVA, the Swedish innovation system agency, is a typical example of a triple helix model of cooperation involving the public, private, and research/academic sectors, aiming to integrate local innovation systems (*OECD, 2007*). This program facilitates the sharing of knowledge and resources between industry and education and encourages the application of research results to market practices. Within the framework of ARTI, this activity is carried out through the network of "Industrial Liaison Offices" (ILO), with projects including supporting the international expansion of patents from Apulian universities and promoting the creation and development of new businesses.

ARTI has implemented financial support for patent registration. This is an important financial support measure aimed at overcoming capacity challenges, namely the lack of capital and management skills in the commercial valuation of research results at Apulian academic institutions. The results show a clear transformation: in just one year, 28 university patents have received financial support, mainly in the field of biotechnology and 05 of them in the field of chemistry and materials. Notably, there are many cases of joint ownership of patents between universities. This measure has thus contributed to an increase in the number of international patent applications from Australian universities.

In addition, ARTI has supported the creation and capacity building of new start-up companies, to increase the value of research results. Support vouchers, a form of financial support, have been provided for the use of essential services in the process of starting and developing new businesses. Thanks to this support, 11 new start-ups have been created from universities, and 7 pre-existing start-ups have also benefited from this financial support. Among these companies, the technology sector, and the biological and chemical sectors are once again dominant, as is the case with patents. The recent growth in the total number of start-ups in Apulia has shown that financial support is an essential tool for the creation of these companies.

(3) Encouraging collaboration between key partners, including businesses, universities, and highly qualified human resources.

In the pursuit of enhancing the competitiveness of RIS, it is essential to strengthen the strength and collaboration between stakeholders and encourage new parties to participate in the innovation process. ARTI's "Strategic Research Project" initiative represents a unique approach aimed at promoting close cooperation between universities and businesses, thereby building a strong and sustainable network. The main objective of the project is to contribute to the development of the region through the implementation of competitive strategy research, industry research, and training initiatives. Regional authorities have provided funding for research projects proposed by universities in cooperation with businesses, based on strong research capabilities and interdisciplinary approaches. In 2006, ARTI conducted a preliminary assessment of each research project and, after the evaluation process, selected 53 projects. The impact of these projects on the development of cooperation networks between businesses and research centers is particularly noteworthy.

Finally, one of the most unique initiatives implemented by ARTI is the "Talent Network", which marks a significant step forward in dealing with the problem of brain drain through the implementation of an effective network of remote human resources. Based on this initiative, the planned activities include (i) the establishment and maintenance of a continuously updated database of Apulian talents (including scientists, researchers, scholars, and managers) living and working outside the region; (ii) the encouragement and facilitation of the exchange of experiences, knowledge, and skills between migrant professionals and their region of origin; and (iii) to encourage the participation of network members in all other ARTI initiatives.

The main objective of the "Talent Network" project is to strengthen the connection of high-quality human resources born in Apulia but working far away. This human resource serves the need for connection, the transmission of knowledge and information to the local area, and the promotion of international research cooperation. To date, the initiative has achieved significant results. As of June 2009, the network includes 470 Apulian individuals in the fields of research, management, and culture. Nearly 70% of them are working in other regions of Italy, while 115 are abroad.

In summary, we can see that ARTI has contributed to the transformation of the local innovation system as follows: (i) strengthening cooperation between stakeholders in regional innovation (through the "Strategic Research Project" and promoting the development of clusters); (ii) promoting the commercialization of university research results through patents and vouchers for seed companies; (iii) encouraging more knowledge exploitation by stimulating partnerships between knowledge creators and knowledge exploiters, expanding innovation beyond large companies, and (iv) fostering a regional innovation culture by promoting RIS knowledge through various publications, meetings and newsletters.

However, ARTI's activities also have limitations. First, ARTI falls into an unclear "gray area" in the institution, it is not a state management agency although it is under the management of local governments. As a result, ARTI's involvement in local innovation policy formulation is weak, despite its significant role in the development of innovation strategies and policy implementation.

Furthermore, ARTI is not responsible for evaluation activities measuring the impact of regional innovation policies. Evaluation is an essential tool for optimizing innovation policies, identifying weaknesses and strengths in the design of programs, effectiveness in policy implementation, and desirable and undesirable side effects of implemented public interventions. The evaluation results are used to adjust and/or improve the set of priorities and measures set out in the framework of the Apulian regional strategy for innovation.

3.2. Basque Innobasque Innovation Agency, Spain

3.2.1. Background Basque Country, Spain

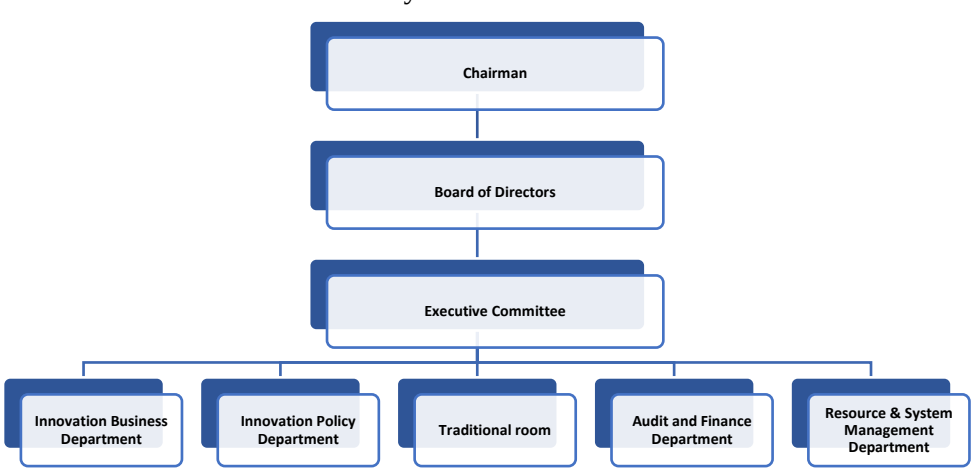
The Basque Country, located in northeastern Spain, covers an area of 7,234 km^2 and comprises three provinces: Araba, Bizkaia, and Gipuzkoa. As of 2016, the region

had a population of 2,175,819, with Bilbao being the largest metropolitan area, with 857,016 inhabitants according to the 2018 Eustat report. The Basque Country specializes in sectors such as the iron and steel industry, shipbuilding, and machinery manufacturing. The Spanish Constitution of 1978 and the subsequent Devolution Act of 1979 granted the Basque Country autonomy, leading to the creation of the first regional government in 1980, largely composed of members from the private sector. As of 2016, the Basque Country was the second wealthiest region in Spain with a GDP per capita of 32,621 Euros, well above the national average of 23,970 Euros. However, the region has recently seen a decline in innovation indicators, such as R&D investment and the number of patent applications since 2012 *(Eustat, 2018).*

3.2.2. Characteristics of Innobasque - Basque Innovation Agency

Innobasque, the Basque Innovation Agency, is a private non-profit organization created in 2007 to coordinate and promote innovation in the Basque Country in all sectors and to encourage entrepreneurship and creativity. Innobasque is an organization that brings together members from the science, technology, and innovation network, private enterprises, public institutions, representatives of workers' and entrepreneurs' associations, as well as other organizations involved in innovation.

The organization's vision is to transform the Basque Country into a European innovation benchmark. For this purpose, an ambitious short--, medium- and long-term transformation program has been established. Innobasque identifies priorities, builds strong links between public and private institutions, and fosters the need for innovation in businesses and society.



Source: https://www.innobasque.eus/eu

Figure 2. Innobasque's organizational structure

The organizational chart of Innobasque, the Basque Innovation Agency, highlights the flexible and multidisciplinary team structure aimed at achieving the socio-economic transformation of the Basque Country. The agency is led by the President,

who is also the Governor of the region. The Board of Directors plays a crucial role in defining and monitoring the organization's strategy and providing overall direction and guidelines for its activities. The Board of Directors is composed of a group of 60 members at the highest level, who are vocal and diverse leaders representing the public-private alliance of the organization. Next, the Executive Committee is tasked with implementing the entire operation, ensuring ethics, quality, and timely decisions. The Committee is composed of 16 members, including the President, the Treasurer, and 5 Vice Presidents in charge of the strategic areas of innovation (administrative, business, scientific, technological, and social), as well as 09 stakeholders in the priority areas of action. The Board Secretary is the secretary of this Committee. Under the leadership of the Executive Committee are key departments such as the Innovation Business Department, Innovation Policy Department, Communications Department, Audit and Finance Department, and Resources and Systems Management Department. Each department is led by experienced professionals to promote innovation in various areas.

In the Basque Country, innovation policies are developed through the collaboration of multiple stakeholders at different levels of governance, including key entities such as Innobasque. Innobasque acts as an intermediary in the local innovation system, with the main task of facilitating interactions between academia/university - industry - and the state to identify and address weaknesses in the Basque innovation ecosystem. Innobasque plays an integral role in shaping local innovation policies and addressing systemic weaknesses.

Despite being a model of innovation best practice, as evidenced by its top ranking in Spain and Southern Europe on the European Regional Innovation Scorecard, the Basque Country has seen a decline in various innovation metrics since 2012. The region's innovation system, described as organizationally dense, suffers from overlapping organizational hierarchies without significant restructuring, leading to coordination problems and suboptimal innovation outcomes. The overlapping organizational roles add to the complexity and often lead to confusion about the separate functions and boundaries of each entity within the RIS (*OECD, 2011b*).

3.3. Brainport Development in Brainport, the Netherlands

3.3.1. Background of the Brainport region, the Netherlands

The Brainport region, which comprises 21 municipalities around the city of Eindhoven in North Brabant, the Netherlands, had a population of 756,615 and a GDP per capita of €49,297 in 2016, compared to national figures of 16,979,120 and a GDP per capita of €41,258. Renowned as an important technology hub both in the Netherlands and globally, the region obtained 7,222 patents between 2011 and 2015, ranking 18th worldwide, behind Chicago and ahead of Shanghai. Notably, Philips Electronics accounted for 84.9% of these patents. The economic trajectory of the city of Eindhoven is largely dominated by Philips, which is not only the largest employer but also facilitated the establishment of other major companies such as ASML. In the 1990s, the region struggled with crisis following the reorganization

of Philips and the bankruptcy of truck manufacturer DAF. During this period, the City of Eindhoven, under the leadership of Mayor Rein Welschen, Eindhoven University of Technology, industrial companies, and chambers of commerce collaborated extensively to promote regional economic growth and strengthen the city's industrial and innovation sectors. This collaboration, described as the triple helix model, led to the development of Brainport Development, a regional agency dedicated to innovation and investment promotion (*Bergquist et al., 2017*).

3.3.2. Characteristics of Brainport Development

Founded in 2005, Brainport Development is a tripartite partnership between local government, major corporations, and research and education institutions including Eindhoven University of Technology. Brainport Development is the driving force for innovation and investment initiatives, aiming to maintain the Brainport region as a leading global technology hub. In 2018, Brainport Development operated with a budget of €8,117,000, funded equally by the 21 municipalities in the region and a combination of national and provincial governments, private companies, the EU, and the organization's revenues (*Brainport, 2018*).

Brainport Development uses a comprehensive resource-sharing model to support and implement its innovation strategy across a variety of sectors. This model facilitates the pooling of financial contributions and staffing from member organizations to Brainport's activities, enhancing the ability of board members to collaborate on the implementation of regional strategies.

The organization plays a key role in engaging other stakeholders, particularly SMEs, in the implementation of the innovation strategy through project development and stakeholder engagement. This includes identifying strategic opportunities, developing project ideas, and gathering input from local businesses, only initiating projects where there is significant local business interest.

In addition, Brainport Development is tasked with developing and implementing micro-policies across its areas of activity: human resources, business, international cooperation, technology, and fundamental sciences. The "human resources" area focuses on enhancing human resources to meet growing skills needs, addressing the growing labor gap due to rapid technological advancement, promoting lifelong learning, and encouraging STEM education. The "business" area supports startups and SMEs in the region, helping them to outpace domestic and international growth by providing capital, methods, and networking opportunities. The "international cooperation" area aims to attract global companies and talent. The "technology" area promotes research and development, monitors technologies, and finds new opportunities for local businesses. The "Fundamental Sciences" sector seeks and promotes government and EU support for local infrastructure.

The formation of Brainport Development, marked by cooperation between local leaders, aims to respond to structural crises and rejuvenate innovation in the region. Through various initiatives, the organization has sought to diversify its technological base, increase its international appeal, and support new business ventures. Brainport Development maintains contact with its citizens and monitors

its activities through various channels, including its website and annual reports. These reports, which highlight both qualitative and quantitative results, are important for monitoring macroeconomic progress and concrete project achievements. The board members and stakeholders coordinate regional activities and promote interests at national and European levels, their role as ambassadors for the region is becoming increasingly clear.

There are several potential gaps in Brainport Development's approach, including overlapping functions with other public sector development agencies, the need for more systematic evaluation, and a lack of initiatives to build institutional capacity. Addressing these issues may require deeper engagement with civil society and perhaps adopting a quadrilateral spiral model involving academia, industry, government, and civil society to implement innovation policy.

4. Lessons learned for Vietnam

Based on the case studies presented, local innovation agencies (LIAs) adopt different approaches when addressing the issues in different regions with different levels of economic development, innovation capacity, industrial base, or institutional context. These agencies are established to respond to structural economic crises, such as the case of Brainport Development, or to strengthen regional technological innovation capacity, such as ARTI and Innobasque. These regions are often characterized by specialized industries, large social capital, and the presence of many innovators and supporting organizations. In the process of forming these organizations, cooperation between the public and private sectors plays a key role, with the private sector representing the voice of business in the design and defining the missions of these agencies. For example, although ARTI is a public organization, its founding members are mainly from the private sector. Meanwhile, Brainport Development and Innobasque are structured as non-profit organizations according to new public management principles, which aim to increase autonomy and minimize political interference.

Local innovation agencies have developed and implemented policies to strengthen local innovation systems, focusing on identifying and addressing weaknesses through collaboration between the private sector, the public sector, research institutes, universities, and civil society. Their goals are not only to enhance science and technology capacity at the enterprise level but also to promote institutional and organizational innovation. These activities include promoting STEM education, encouraging citizen participation in policy formulation and evaluation, and promoting entrepreneurial approaches and research and development (R&D) in the private sector.

Innovation agencies need a compact and flexible organizational structure to be able to respond quickly to ongoing changes in technology and markets. This structure makes it easy for agencies to adjust their strategies and operating processes, conduct pilot projects to evaluate effectiveness and make timely adjustments, thereby effectively exploiting innovation opportunities. Furthermore, a compact and less hierarchical structure will help accelerate decision-making and project

implementation, optimize resources, and reduce operating costs. This also facilitates the establishment and maintenance of cooperative relationships with domestic and foreign partners and leverages external financial and technical resources to support and promote innovation projects. To build such an organizational structure while still ensuring work efficiency, innovation agencies need to have a high-quality staff with experience working with both the private and public sectors. At the same time, establishing strategic partnerships at home and abroad is essential to ensure access to resources, technical expertise, and financial support. Partnerships with other government agencies, international organizations, and the private sector help to build capacity and expand the scope of these agencies' activities.

Although all local innovation organizations aim to promote innovation, the specific initiatives, and programs they implement vary. This demonstrates that there is no single way to optimize innovation in each locality, but rather that appropriate solutions must be developed based on the specific characteristics and weaknesses of each local innovation system. For example, Brainport Development focuses on diversifying and improving the quality of human resources, while Innobasque focuses on building best practices at both the enterprise and community levels. ARTI focuses on connecting local actors and providing financial support, intellectual property protection, and attracting high-quality global human resources to address specific weaknesses in their innovation systems. Overall, these organizations have helped regional actors acquire, learn, and use knowledge from outside their region.

In Vietnam, innovation support organizations are not yet clearly defined in legal documents, leading to them often being equated with intermediary organizations in the science and technology market. This creates ambiguity and difficulty in managing, researching, and evaluating the activities of these organizations. According to the 2019 Science, Technology and Innovation Report of the Ministry of Science and Technology, intermediary support organizations include financial institutions (banks, funds, venture capital companies) directly supporting innovation activities; Organizations providing intermediary services for innovation such as agencies on intellectual property, standards, measurement, quality and inspection, high-tech zones, incubators, business promotion organizations, innovation support centers, innovation startups, brokers, technology exchanges, etc. However, the activities of these organizations are still unevenly developed, functions such as linking and building networks have not developed (*Tran Ngoc Ca, 2023*).

Therefore, to build an effective local innovation support organization, address systemic failures, and provide comprehensive support for all aspects of innovation, Vietnam needs to consider the following lessons:

First, an overall direction for the organization's activities should be defined, which should harmonize the interests of the public and private sectors.

Second, the optimal level of operation is at the provincial/municipal scale, as coordination across multiple levels can lead to institutional complexity.

Third, the innovation organization should engage stakeholders from the private sector, the public sector, academia, and civil society to provide an objective and comprehensive view of the local innovation system.

Fourth, local innovation promotion organizations should continuously monitor and evaluate their regional innovation systems and successful systems globally, to identify and address local shortcomings, and facilitate the development of necessary innovation capabilities through clearly targeted programs.

Fifth, organizations promoting innovation need to regularly research and evaluate the relationship between enterprises - universities - and the state, thereby setting strategic priorities and building necessary support programs.

Sixth, organizations should aim for a compact, low-level structure with a team of highly capable staff to optimize operating costs and be more flexible with system changes.

5. Conclusion

The paper provides insights into the role and activities of local innovation organizations in promoting innovation in different regions of the world. The study highlights the importance of facilitating innovation activities through local coordination organizations, to fully exploit the unique innovation potential of each region. In particular, the models from Apulia, Brainport, and the Basque Country show the diversity in approaches and applications of innovation policies, from financial support to encouraging cooperation between stakeholders. The lesson for Vietnam is that there needs to be flexibility in designing innovation programs and policies, ensuring that they are appropriate to the specific conditions of each region to optimize the effectiveness of the local innovation system./.

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