



TRIPLEHELIX
UNIVERSITY INDUSTRY GOVERNMENT association



XIX International Triple Helix Conference – 2021

TITLE: PARANÁ: ARTICULATION IN LEGISLATIVE MATTERS FOR AN INNOVATIVE STATE

TYPE: (c) practical case

TRACK: Theoretical foundations and methodological approaches of the Triple Helix

PURPOSE: Share the experience of an initiative based on the foundations of the Triple Helix for the definition of public policies

STATE OF THE ART

The Legal Framework for Science, Technology and Innovation in Brazil is constituted, at the federal level, by Constitutional Amendment nº 85/2015, by Law 13.243/2016 that updated Law 10.973/2004 and Federal Decree 9.283/2018. In the State of Paraná, Law 17.314/2012 was in force, which, with the advent of Constitutional Amendment 85 and the Legal Framework, needed to be revised, with its reformulation process culminating in the New Law of Innovation of the State of Paraná, Law 20.541, of April 20, 2021.

The Triple Helix model inspired the construction of interinstitutional relationships between industry-academy-government, oriented towards the scientific and technological development of the state of Paraná, Brazil. In this way, the articulation for updating the State Law on Innovation, counted on a wide participation and discussion among the players involved in the innovation process.

METHODOLOGY

This report will use the documents that informed the legislative process to describe the participation of the scientific and academic community, the Executive Branch, the private sectors and the third sector of society in the drafting of the New Law of Innovation of the State of Paraná, Law nº 20,541, of April 20, 2021 (PARANÁ, 2021). The results of the work developed in the Protocols that gave rise to the preliminary draft of the state innovation law will be analyzed and resulted in the preliminary draft of the State Innovation Law, which started on 08/01/2019 in the State of Paraná.

In the State of Paraná, studies for the drafting of the draft Innovation Law were formalized by the protocol 15.265.691-2 (PARANÁ, 2019), where players representing the most diverse sectors



of public power, academy and private sectors could participate. The Public Consultation (PARANÁ, 2019) was carried out, in which in a broad and democratic way, was made possible the manifestation of all entities of the Triple Helix and, consequently, the whole society, in the legislative construction.

The draft that resulted from this Protocol started from the synthesis of contributions received from the scientific community of Paraná, the state and federal universities, the State System of Technological Parks, the private sector, including startups and knowledge-based companies, the representatives of the Federation of Industries Paraná and the SEBRAE, as well as other secretariats and government authorities.

From that Protocol remained a proposal for a Draft Amendment to the Law of Innovation of the State of Paraná, which gave rise to Protocol 15.939.510-3 (PARANÁ, 2019a), started on August, 2019, which conducted the Draft Law Modification to the State Government's Superintendence of Innovation for contributions to updating the regulatory framework for ST&I activities in the State of Paraná.

The Work Group responsible for the legal analysis of the Bill was created through a Joint Ordinance of the General Superintendency of Science, Technology and Higher Education, and of the General Superintendency of Innovation. The result of the legal Work Group was duly assessed, as defined by the Law, by the State Finance Department and the Attorney General's Office, thus culminating in the Executive Author's Draft Law 662/2020 and provides for public incentive policy to innovation, research and scientific and technological development, the promotion of new businesses, and the integration between the public and private sectors in a productive environment in the State of Paraná (PARANÁ/LEGISLATIVE ASSEMBLY, 2020).

The Bill was approved and sanctioned, State Law published under nº 20.541/2021 (PARANÁ, 2021), keeping firmly the characteristics of the Triple Helix model.

DISCOVERIES AND INTERPRETATION

The new State Innovation Law (State Law 20.541/2021) aims at achieving the clear and ambitious objective of inducing the organization of the Paraná Innovation System, externally oriented (exogenous) to foster new business, and internally oriented to the achievement of goals solution for the back office of the Public Administration (endogenous).

It is understood that the objective will be achieved as long as it is possible to create synergy by building an organic and transversal function between the different organizational groups of the Government and the private initiative, expressed in a collaborative movement towards the



achievement of planned goals, and executed in environments characteristics of the knowledge-based economy, and conducive to innovation, basic and applied research, entrepreneurship of startups and knowledge-based companies, and independent inventors and creators.

Innovation systems, as institutional networks of players from academy, government and the market (LUNDVALL, 1995), permeate the economic literature and public policies of innovation and development as explanatory phenomena of various successful national historical experiences (MOWERY, 2001; MEYER-KRAMER, 2001; KIM, 2005). In this field, the overcoming of the divorce between science and technology, or between pure and applied sciences, is described as a reducing factor of the uncertainties regarding the return of public investments and, therefore, of increasing the legitimacy of science and technology policies (STOKES, 2005, p. 163).

The players organized in their respective niches, are jointly denominated “Environments Promoting Innovation” by the State Innovation Law, as well as the relationships, networks of players, organizations, people, spaces, infrastructures, economic resources and legal formats, public or private spaces conducive to innovation, scientific and technological research, and entrepreneurship, which constitute environments of the knowledge-based economy in an articulated way, and involve two dimensions: a) innovation ecosystems; and b) business generation mechanisms.

Another measure adopted by State Law 20.541/2021 was to update the compendium of entities and institutions that participate and integrate the Paraná Innovation System, as well as to establish the cooperation regime between it and the other Federative Entities, the private initiative, and the third sector, including the expansion of the scope and possible integration of new players in the execution (end activity), and also in the connection (middle activity) between the participants.

Finally, the main highlights are the reduction of barriers between the public and the private in favor of the scientific, technological and economic development of the State of Paraná, bringing measures to support micro-enterprises, startups and individual creators, in incentive to ST&I and its environments as opportunities for the future. It compares the State of Paraná, in terms of competitiveness, to the other Brazilian states that have already implemented the federal legal framework of innovation in their legislation.

CONCLUSIONS AND POLICY IMPLICATIONS

As society moves towards a knowledge-based economy, interinstitutional interaction promoted through public policies designed by state programs is increasingly efficient and diligently translated into results.



The participatory method used, open to the contributions of society, associated with the aspirations of the academic scientific community to participate in economic development, seeks to materialize the non-linear model of production of technology and knowledge for innovation (MARTIN; ETZKOWITZ, 2000). In the same way, promoting industry-academy-government interaction (LEYDESDORFF, 2012; ETZKOWITZ and ZHOU, 2017), means intensifying support for strategic arrangements and alliances to be made possible by state legislation based on the foundations of the Triple Helix theory.

The articulation between different State Secretariats with the universities for the elaboration of the bill was fundamental to promote discussions and an in-depth study of the entire legal framework that involves the matter. Likewise, the interaction with the other agents involved in the process, especially between industry-academy-government, will be essential for the process of implementing the state law of innovation in the practical reality of the institutions involved and recipients of the entire system. In other words, the process is continuous and open to public programs and policies for the scientific and technological development of the state of Paraná.

KEYWORDS: Development, innovation, state policy

REFERENCES

- ETZKOWITZ, Henry; ZHOU, Chunyan. Hélice Tríplice: inovação e empreendedorismo universidade-indústria-governo. In: Estudos Avançados. São Paulo, v.31, n° 90, p. 23-48, may 2017.
- KIM, L. Da Imitação à Inovação: a dinâmica do aprendizado tecnológico da Coréia. Campinas, SP: Editora da UNICAMP, 2005.
- LEYDESDORFF, Loet. The Triple Helix of University-Industry-Government Relations. In: Encyclopedia of Creativity, Innovation, and Entrepreneurship. New York: Springer, February, 2012.
- LUNDVALL, B. National Systems of Innovation: towards a theory of innovation and interactive learning. Nova York/London: Pinter, 1995.
- MARTIN, B. R.; ETZKOWITZ, H. The origin and evolution of the university species. In: Vest, New Haven, v. 31, p. 9-34, 2000.
- MEYER-KRAMER, F. The German Innovation System. In: In: Research and Innovation Policies in the New Global Economy: an international comparative analysis, p. 205-252, 2001.
- MOWERY, D. C. The United States National Innovation System After the Cold War. In: Research and Innovation Policies in the New Global Economy: an international comparative analysis, p. 15-



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46, 2001.

PARANÁ. Lei nº 20.541 de 02 de abril de 2021.

PARANÁ. Secretaria de Estado da Ciência, Tecnologia e Ensino Superior. Protocolo 15.939.510-3. 2019.

PARANÁ. Secretaria de Estado da Ciência, Tecnologia e Ensino Superior. Protocolo 15.265.691-2. 2019a.

PARANÁ. Secretaria de Estado da Ciência, Tecnologia e Ensino Superior. Consulta Pública. Disponível em: <http://www.fappr.pr.gov.br/Noticia/Superintendencia-abre-consulta-publica-sobre-nova-Lei-Estadual-de-Inovacao>. Capturado em 14/05/2021.

STOKES, D. E. Quadrante de Pasteur: a ciência básica e a inovação tecnológica. Tradução José Emilio Maiorino. Clássicos da Inovação. Campinas; Editora Unicamp, 2005.