P02 / Science, Technology and Innovation Policies in Metropolitan Regions

Topic : SCIENCE, INTERNET AND TECHNOLOGY POLICY

Chair : Michele Gonzalez Galindo (Secretary of Science, Humanities, Technology and Innovation (SECIHTI))

Second Chair : Moises Israel Iraheta Avila (CIDE Centro de Investigación y Docencia Económicas A.C.)

GENERAL OBJECTIVES, RESEARCH QUESTIONS AND SCIENTIFIC RELEVANCE

Metropolitan regions have characteristics such as economic dynamism (Henderson, 2010; Storper, 2013; Tomàs, 2020, pp. 28–29); air and land connectivity (Hoyler et al., 2008; Thierstein & Lüthi, 2013; van Winden et al., 2007); ethnic, cultural and creative diversity (Florida, 2002; Graizbord & Santiago, 2019; Jacobs, 1961/1992; van Winden et al., 2007); and a strong presence of high-quality universities (Geenhuizen et al., 1997), research centers and human capital (Chapple et al., 2004). All these elements are linked to knowledge, science, technology and innovation. In addition, metropolitan regions are characterized by more pluralistic local governments (Ostrom, 1972).

The economic engine of these regions is related to industrial and service activities (Black & Henderson, 1999; Glaeser et al., 1992; Storper, 2013), and in recent decades, activities associated with the Knowledge Economy (Brinkley, 2006). In this sense, the metropolitan regions of high-income countries have been the first to most successfully arrive at a knowledge-based economy (Lever, 2002; Scott & Storper, 2015, p. 5). However, the national and local governments of middle-income countries have also gradually incorporated scientific and technological development as part of their public policy objectives: They have created a legal framework, designed programs, incorporated institutions and allocated resources, as well as the use of policy mixes (Hood, 1983; Hood & Margetts, 2007; Howlett, 2019; Howlett & Rayner, 2007), to achieve the benefits of the knowledge economy, but at the same time, they have faced their own particular problems when promoting these policies, such as institutional weakness, corruption, little care for the environment, resistance to change in the economic model, resistance from business organizations (unions), lack of investment ecosystems, economic and social inequality, etc.

Given the characteristics of middle-income countries compared to high-income countries, we believe that valuable science and technology policies lessons can be learned by reviewing and comparing these different contexts. In addition to the differences and peculiarities that the metropolitan regions present for the design of public policies that promote technological innovation, policy makers are facing many problems in making the policy related to the innovation system (Howlett, 2014; Peters et al., 2018), one example is the impact of the pandemic derived from Covid-19. The health emergency changed the way science and technology policies are designed, prioritizing specific issues and immediate needs.

The general objective of this panel is to discuss –from a theoretical and empirical point of view- the different challenges that metropolitan regions face in the design and implementation of science, technology and innovation policies. Also, to identify lessons that can be drawn from the successes and failures, and outline some policy suggestions for metropolitan governments, particularly, we stress lessons from middle-income countries that intend to enter, or are in the process of entering, the knowledge economy.

The principal questions to guide the discussion are: How have science and technology policies succeeded or failed in metropolitan regions? What lessons can we learn in the design and implementation of science and technology policies in metropolitan regions?

CALL FOR PAPERS

In this panel we seek to address the main challenges, changes and perspectives of science policies in metropolitan regions. The design of effective policies to promote technological innovation will also be addressed, considering the challenge of new needs in health, environment, transportation and entrepreneurship. And finally, we are interested in the role of actors in metropolitan regions in the design and implementation of policies related to science and technology. In this context, both empirical and conceptual contributions are welcome, but mainly comparative or single case studies related to these topics:

I. How is the design or implementation of science policies in metropolitan regions? What are the strategies that follow for the design of policies that promote technological innovation?Are there specific patterns in

science, technology and innovation policies in metropolitan regions? What could be the differences of the metropolitan regions between middle and high income countries for the design and implementation of science and innovation policies? Do metropolitan regions focus on local technology sectors or national science policies?

II. What was the impact of the Covid-19 health emergency on the design of science and technology policies in metropolitan areas? Have the actors of the innovation ecosystem been strengthened or weakened in metropolitan regions? Do the designers of public policies obey the demands of the international market or do they focus on the needs of the metropolitan region?

III. What are the main challenges for public policy designers on issues of technological innovation in metropolitan regions? What is the short- and medium-term outlook for metropolitan regions to deal with health, national security, food, transportation and logistics emergencies? And what will be the role of public policy decision-makers in science and technology issues?

Contributions from any scientific background are welcome, but with a particular interest in the literature and/or knowledge of public policy studies, public policy design, science, technology and innovation, local governments, governance in metropolitan regions, and related topics.

The best proposals can be considered for a joint project that can be reflected in the publication of a book.

The format of the panel will be onsite.

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Session 1

Tuesday, June 27th 13:30 to 15:30 (KHW375)

Science, Technology and Innovation Policies in Contemporary Uruguay. Problems of coordination and regulation functions

Camila Zeballos Lereté (Universidad de la República)

Marcelo Castillo (Instituto de Ciencia Política - Facultad de Ciencias Sociales - UdelaR)

From Smart Cities to Smart Regions: regional innovation and digital infrastructure development in Niagara

Nathan Olmstead (Brock University)

Charles Conteh (Brock University)

Smart Cities in Metropolitan Regions - Analyzing strategies and funding schemes in the Ruhr Area, Germany

Anne Goldmann (Universität Duisburg-Essen)

Jana Baum (Center for Advanced Internet Studies Bochum)

Mennatullah Hendawy (TU Berlin)

The effects of the adoption of regulatory frameworks on FINTECH development. Comparative analysis.

Mario Miguel Pérez (Center for Research and Teaching in Economics (CIDE), Mexico)

Adriana Ramirez Ruiz (Centro de Investigación y Docencia Economicas)

Jaime Hernández Rocha (Center of Research and Teaching in Economics)

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Session 2

Tuesday, June 27th 15:50 to 17:50 (KHW375)

Reflections on the geographical distribution of projects financed by Conacyt's "Innovation Stimulus Program" in Mexico, between decentralization and the reproduction of metropolis

Mónica López Rivas (Centro de Investigación y de Estudios Avanzados del IPN)

GUADALAJARA METROPOLI DE LA ELECTRÓNICA

José Leyva

The importance of long-term policies to consolidate innovation spaces in Latin America. The case of Hidalgo State Government, in Mexico.

Nahely Ortiz Lira (Universidad Nacional Autónoma de México)

(Virtual) Evaluating Performance of Regional Innovation Systems: a Meta-Analysis of Empirical Studies based on National Innovation System (NIS) Framework

Mingxi Zhang (Hong Kong University of Science and Technology(Guangzhou), China)