OP-ED

A place-based approach to innovation can advance the Texas-Mexico region

By Daniel Covarrubias

A recent funding opportunity published by the National Science Foundation (NSF) on Regional Innovation Engines got me thinking about the importance of people and place in promoting and achieving innovation. This NSF initiative looks to advance critical technologies, foster partnerships between the quadruple helix (industry, government, academia, and civil society), and promote economic growth and innovation to better prepare the United States for global competition. This program is based on the theory of Regional Innovation Systems (RIS). Let's talk about place-based innovation.

In past years, an extensive amount of research literature has been written across several academic disciplines, including economics, business, and geography, to emphasize that territorial innovation models play a key role in a region's economic development and competitiveness.

Innovation has increasingly become a "core strategy" for developing and maintaining competitiveness, growth, and prosperity. Regions play a vital role in cultivating, attracting, and retaining talent. Place matters for innovation; according to the Organization for Economic Co-operation and Development (OECD), innovation complementarities are found to be strongest within a radius of 125 miles.

RIS can be defined as a network of economic actors engaging in a range of complementary activities. The interchanges between firms and supporting institutions and organizations (research and innovation centers, industry associations, universities, vocational centers) play a crucial role in developing and bringing innovations to market. Within RIS, innovation is a living process that supports knowledge creation, diffusion, and absorption. Innovation-driven growth is a crucial RIS objective.

This place-based approach to regional economic development establishes an increased focus on people, with innovation acting as a conduit to mobilize local assets, enhancing the productivity and competitiveness of a region. This system for innovation, in which different levels of government, universities, and private and public actors collaborate to identify and develop unique assets for the region and define its competitive advantage, is not new.

RIS emerged in Europe in the late 1990s and early 2000s to develop innovation policy and generate collaborations between firms, universities, and governments at regional levels to produce innovations. Since then, RIS evolved into Smart Specialization Strategies (S3) in 2011. Most of Europe has spent the last decade designing and applying local Smart Specialization Strategies to promote innovation and competitiveness. S3s are localization-specific, based on each territory's structural characteristics and capabilities, and are developed so that regions can make difficult decisions to help them prioritize the investments to enable regional innovation systems.

Higher Education Institutions are fundamental players in territorial innovation models. Their education curriculum shapes regions and their engagement with the private and public sectors makes them essential in designing territorial development strategies, such as RIS. Texas A&M International University (TAMIU) is leading an effort to work, with other regional actors, on an NSF Regional Innovation Engine where innovation dynamics can be achieved, integrating all the region's resources, and identifying needs for continuous growth.

The Texas-México border is the focus of TAMIU's proposed Regional Innovation Engine. This Regional Innovation Engine stems from the views that regionalization is envisioned as a new stage of globalization, that supply chain resiliency is a strategic area for the United States and the world, and that Logistechs are changing how businesses operate, transforming the sectors in which they participate and compete. Creating a Logistechs binational RIS to empower supply chain resilience and capitalize on the underlying shifts and disruptions that have irrevocably changed how businesses will compete and do business over the next decade is an example of such forward-thinking initiatives.

The primary objectives of this RIS will be to modernize the traditional transportation and logistics industry, transition these industries towards emerging markets based on exponential technologies, and create new (sub-) sectors based on entrepreneurship. Through the dissemination of and access to knowledge and technology, we can increase competitiveness and facilitate innovation and entrepreneurship for regional binational businesses and students alike, ultimately leading to a general strengthening of the competitive and productive capacity of the Texas-México border.

To achieve these objectives, we propose working on four parallel action items that will allow us to promote innovation and entrepreneurship in a structured way involving academia, the private and public sectors, as well as civil society.

Our four aims are:

1. To generate links between Texas-México border logistics actors and their diverse portfolio of projects. These links will create synergies, complementarity, and agglomeration, which are essential determinants of innovation, creativity, R&D, and productivity.

2. To employ user-inspired research and development to contribute concrete solutions to the U.S. strategy of building resilient supply chains and revitalizing American manufacturing.

3. To create a Logistechs Living Lab for performing proofs of concept and minimum viable products based on state-of-the-art logistics technologies to facilitate the translation of innovations to practice.

4. To accelerate the adoption of emerging exponential logistics technologies and then create new applications as a basis for tech startups with the goal of workforce development for growing and sustaining regional innovation.

With the U.S. facing ever-growing economic pressures, our region is a cornerstone for supply chains that must be regionalized across México and Latin America to continue contributing to the U.S. economy and its global leadership.

This proposed RIS will work toward that by fostering collaboration with regional and international actors to contribute to the improvement of the socio-economic development of the Texas-México cross-border region.

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