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## The building of cross-border mega-regions: the Cali-Baja experience

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### INTRODUCTION

The territorial configuration of the border between Mexico and the United States during the 1980s and 1990s provided a strategic location for the emergence of cross-border mega-regions, embedded in industrial corridors. In this context, studying these spaces is crucial for promoting sustainable development in these cross-border mega-regions, which face various challenges in economic, political, environmental, educational, security, and health-related issues. Cross-border governance is a potential solution, but its complexity lies in coordinating different political jurisdictions and normative systems. Therefore, the aim of the article is to present the results of research on the construction of cross-border mega-regions, focusing on Cali-Baja, highlighting its role in industrial development linked to global production networks and economic complementarity. The main argument is that the formation of the Cali-Baja mega-region results from institutional and economic factors that enabled its expansion and enlargement, despite the corporatization process that occurred at some point. This process is analyzed throughout the work, organized into sections dedicated to theoretical-conceptual approaches, methodology, research results, discussion on Cali-Baja's role in cross-border development, and concluding reflections.

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### STATE OF PLAY OF CUESTION

The literature on mega-regions is relatively young. In the early 21st century, there was no clear definition of their characteristics. However, progress was made towards a consensus definition based on the work of Innes, Booher, Di Vittorio (2011), Doyle (2014), and the OECD (2018), building upon Gottman's (1961) concept of megalopolis. While the terms "macro-region" and "mega-region" share similarities in referring to large geographical spaces and overcoming physical borders to address common challenges and opportunities, they also have significant differences. According to the OECD (2018), the concept of mega-region emerged in the



United States, mostly linked to the city-region notion, whereas in Europe, the concept of macro-regions has been used, mainly associated with the idea of city networks and polycentric urban regions.

In a globalized world, mega-regions aim to integrate territories economically by connecting urban networks. However, this definition has limitations for cross-border mega-regions. To understand them fully, we need to consider regionalism perspectives (Hurell, 1996; Hettne, 1994; Hettne & Söderbaum, 2003; Bernal-Meza, 2018) and the Proximity School (Torre & Gilly, 2000; Boschma, 2005; Moodysson & Jonsson, 2007). These frameworks help analyze the Cali-Baja mega-region, which integrates two conurbated border spaces – Southern California (US) and Baja California (Mexico).

The cross-border regions emerged as micro-regionalism phenomena, reshaping economic, political, and social processes, particularly in peripheral areas of nation-states. Globalization, particularly in the economic dimension, led to emerging processes aiming for better global integration. Knowledge, innovation, and learning became key drivers of economic development, necessitating cooperation in innovation and knowledge transfer across borders. Distance between cultural, social, and institutional forms in cross-border regions poses challenges to learning processes and knowledge diffusion. However, it may also drive radical innovations through high complementarity levels. In conclusion, the discussion highlights the importance of regionalism theories, proximity approaches, and cross-border cooperation in understanding and promoting cross-border mega-regions' development and integration processes.

## METHODOLOGY

The methodology used in this research was based on a design that addressed the object of study from different dimensions: territorial, institutional, economic, and the involved actors. A comprehensive literature review was conducted to identify documents, studies, and records that allowed tracking the gestation process of the Cali-Baja mega-region, as well as other mega-regions along the Mexico-United States border. This approach was complemented by fieldwork, including semi-structured interviews with key figures from the public and private sectors, as well as focus groups to obtain a broader view of the mega-region's construction. Additionally, interviews with key actors conducted in 2013 and information generated by a Focus Group in the same year were retrieved. Furthermore, between 2022 and 2023, in-depth interviews were conducted with 10 key actors from the region, addressing topics such as the consolidation of the cross-border region, regional identity, and the role of knowledge and innovation in strengthening economic complementarity. Various development initiatives in cross-border regions were also reviewed through documents and websites of economic organizations and mega-region initiatives along the border to establish differences and similarities in objectives, vision, actor identification, and cross-border coordination mechanisms. Statistics produced by INEGI and the United States Census Bureau were also used to obtain relevant information about population, productive activity, industrial development, and education levels in the region. In this sense, the methodology used combined literature review, fieldwork, and statistical data analysis to comprehensively address the process of constructing the Cali-Baja mega-region and its cross-border context.

## RESULTS

Regarding the research results, it is observed a historical trajectories of cross-border mega-regions are examined, highlighting the connection between industrial corridors in the United States and the strategic location of Mexican border cities such as Tijuana, Mexicali, and Ciudad Juarez, driven by policies such as the Border Industrialization Program and the Export Maquiladora Industry Regime. The analysis reveals that these mega-regions have developed over decades, attracting investment and generating employment, but also facing challenges such as family fragmentation due to border division and unilateral security policies implemented by the United States after September 11, 2001. Additionally, the growth of migratory flows is highlighted as an additional factor in the current context of the region. Subsequently, several examples are



presented, such as the AriSon mega-region, the North America Borderplex, and the Bi-NED Zone, each with its own historical context and particular characteristics. These mega-regions have emerged with the aim of fostering cross-border economic cooperation and have been driven by both public and private actors.

Finally, the Cali-Baja mega-region (composed by the San Diego and Imperial counties in California and several municipalities in Baja California) is specifically analyzed and the construction process of this space is examined, dating back to the 1990s with initiatives led by non-governmental organizations like San Diego Dialogue; highlighting the importance of collaboration between local actors, both from the public and private sectors, as well as academics, in promoting cross-border cooperation and regional economic development. The study also reveals that this mega-region has been driven by objectives such as attracting high-tech industries, promoting innovation and collaboration in higher education, as well as generating various projects, such as the implementation of the SENTRI lane at the border crossing and formalizing the Cali-Baja brand through a binational nonprofit consortium, which demonstrate the effort and growing interest on the part of governmental, business, and academic actors in promoting the development of a binational innovation ecosystem in the region, with the aim of strengthening Cali-Baja's global competitiveness. However, it is currently noted the difficulty in accurately monitoring the development of the mega-region due to the lack of public information about the organization responsible for the Cali-Baja brand.

## DISCUSSION

In terms of the discussion on Cali-Baja mega-region development from a non-corporate perspective, it reveals a process of economic integration dating back to the 1980s and 1990s, driven by a significant increase in foreign direct investment (FDI) following the signing of the North American Free Trade Agreement between Mexico, the United States, and Canada in late 1993. Although local business initiatives drove the definition of the Cali-Baja mega-region, its development was based on FDI, mainly from the United States, directed towards the manufacturing industry. Foreign investment in the region has contributed to job creation in sectors such as metal product manufacturing, computer, communication, and electronic equipment manufacturing, as well as the automotive and aerospace industries. However, significant wage disparities are observed among workers on both sides of the border, reflecting differences in predominant economic activities. Although there has been diversification in sectors such as automotive and electronics, a sustainable industrial model has not been achieved, especially compared to technological development in San Diego. The lack of industrial policies focused on strengthening technological and educational capacities limits cooperation between the educational sector and companies to drive advanced manufacturing, and although local actors' express interest in attracting foreign investment under the nearshoring policy, currently, resolving immediate cross-border issues, such as waiting times at border crossings, is prioritized over developing a knowledge-based industrial model. Similarly, the productive and educational configuration in the mega-region reflects dual and asymmetrical structures, due to the lack of a joint vision that recognizes their existence and cross-border cooperation that is hindered by the absence of an institutional structure governing educational and innovation development processes.

## CONCLUSION

In conclusion, despite the formal mechanisms of bilateral cooperation between Mexico and the United States, such as High-Level Talks, there is a lack of a cross-border approach to advance the governance of the region. However, informal forms of cooperation have been developed among local actors to address common problems and promote joint projects. The regional identity of the Cali-Baja mega-region has been previously shaped through interaction among local actors, although the concept was mistakenly privatized as a registered trademark. Its development reflects a phenomenon of regional identity that does not originate from a corporate owner but rather from the collective construction of the local.