
Governance and Value Co-Creation in Innovation Ecosystems: Spain and Brazil

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Abstract: This study investigates how governance characteristics influence value co-creation and capture in territorial innovation ecosystems. Using a qualitative multiple case study approach, it analyses the ecosystems of Valencia (Spain) and Florianópolis (Brazil) through the Quadruple Helix framework. Preliminary findings from Florianópolis reveal a structural plateau where historical assets, including informality, personalized relationships, and organic emergence, have become vulnerabilities. Furthermore, value capture at the organizational level is dissociated from mere ecosystem presence, depending instead on internal absorptive capacity. A critical gap persists regarding academia's participation and the integration of social-environmental value propositions. These results suggest that effective governance must move beyond physical infrastructure to enhance institutional readiness. The research contributes to the literature on territorial coordination and provides insights for public policies aimed at fostering systemic maturity and sustainable value dynamics.

Keywords: Governance; Value Co-Creation; Innovation Ecosystems

1 Introduction

Innovation ecosystems (IE) are increasingly understood as complex, collaborative, and territorially embedded arrangements that rely on interactions among heterogeneous actors to foster innovation and value creation (Adner, 2017; Cobben et al., 2022). From the ecosystem-as-territory perspective, innovation dynamics depend not only on the presence of actors and resources, but also on the quality of interactions, collective learning processes, and the ability to align diverse objectives within shared governance structures (Moulaert & Sekia, 2002; Thomas & Autio, 2020; dos Santos & Zen, 2023).

This perspective expands the value spectrum beyond economic and technological outcomes, incorporating social, cultural, environmental, and public dimensions of value (Carayannis & Campbell, 2009; 2011). As a result, territorial innovation ecosystems face heightened coordination challenges arising from heterogeneous actors, multiple institutional logics, and diverse value expectations.

This study addresses the limited empirical understanding of how governance characteristics influence value co-creation and capture in territorial innovation ecosystems. Although governance is recognized as essential for collaboration and collective outcomes, prior research offers limited clarity on which characteristics enable coordination, actor engagement, and value dynamics at ecosystem and organizational levels (Hoffmann et al., 2022; de Oliveira Rodrigues et al., 2024), thereby constraining theory development and the design of effective governance arrangements.

To address this gap, the study focuses on the IE of Valencia (Spain) and Florianópolis (Brazil), two medium-sized capital cities with relatively mature innovation ecosystems. Both cities host a diversified set of actors, including public and private universities, innovative firms, public policies supporting innovation, entrepreneurial environments such as incubators, accelerators, and science and technology parks, as well as intermediary organizations and networks. In addition, each ecosystem is anchored by a well-established innovation hub, making these contexts particularly suitable for examining how governance characteristics shape value co-creation and capture in territorial innovation ecosystems. Thus, the research seeks to answer: How do the governance characteristics of the innovation ecosystems in the cities of Valencia (Spain) and Florianópolis (Brazil) influence the co-creation and capture of value?

2 Literature Review

Existing research on IE has made important theoretical advances by framing ecosystems as networked, multi-actor arrangements grounded in the Triple, Quadruple, and Quintuple Helix models (Leydesdorff & Etzkowitz, 1996; Carayannis & Campbell, 2009; 2011). Studies emphasize the role of governance in enabling collaboration, aligning interests, and supporting innovation through policies, regulation, financing, and coordination mechanisms (Ansell & Torfing, 2014; 2021).

Systematic literature reviews have further structured the field by identifying key governance dimensions, such as governance approach, actors and roles, relationships, shared objectives, coordination mechanisms, and monitoring systems (Hoffmann et al.,

2022), as well as critical success factors for ecosystem governance (de Oliveira Rodrigues et al., 2024). However, these studies consistently highlight the need for empirical, case-based research to understand how governance characteristics unfold in practice and influence ecosystem outcomes.

Parallel streams of literature have explored value creation and capture in IE, yet often with a focus on individual actors or platform-based ecosystems (Khademi, 2020; Yang et al., 2020). More recent contributions argue for a territorial and integrative perspective that emphasizes collective processes, actor interdependencies, and interaction dynamics (dos Santos & Zen, 2023; Carrara & Freisinger, 2024).

Additionally, scholars call for comparative and international studies to capture contextual differences across regions and countries, particularly in emerging and developing contexts (Neto et al., 2024; Santos & Zen, 2023; Hoffmann et al., 2024). Despite these advances, the literature remains fragmented, offering limited empirical insight into how governance characteristics influence the co-creation and capture of value in territorial innovation ecosystems, thus motivating the present study.

3 Methodology

This study employs a qualitative approach through a multiple case study design, focusing on the IE of Valencia (Spain) and Florianópolis (Brazil). The first stage of the research involved mapping ecosystem actors in both cities based on the Quadruple Helix framework (Carayannis & Campbell, 2009, 2011).

In this context, the data collection involves semi-structured interviews with key stakeholders directly involved in municipal innovation, including: (i) public officials, such as municipal secretaries and directors of development agencies; (ii) leaders of local innovation hubs; (iii) managers of university programs and innovation-related units; and (iv) representatives from the business community and civil society organizations engaged in municipal innovation initiatives. Thus far, interviews have been conducted with 20 participants in Florianópolis and 8 in Valencia.

The interview protocol was developed based on the theoretical-analytical model proposed by Hoffmann et al. (2026), which focuses on two primary dimensions: (1) innovation ecosystem governance and (2) value co-creation and value capture. The first dimension encompasses various governance configurations, ranging from top-down to bottom-up approaches, as well as the diversity of human and non-human actors, their respective roles, and the relationships that structure ecosystem dynamics. The second dimension addresses value propositions, co-creation processes, and the distinction between ecosystem-level value co-creation and organizational-level value capture, considering both tangible and intangible outcomes.

The interviews lasted approximately 40 minutes each. Data are currently being processed through thematic analysis, supported by the AI tool Claude for data organization and coding assistance. Upon completion of the interviews, a comprehensive survey of public documents related to the studied ecosystems will be conducted to facilitate data triangulation, ensuring a robust integration of primary and secondary sources.

4 Findings and Results

As this study is still in the data collection phase, the results presented at this stage are preliminary and exploratory in nature, referring only to the city of Florianópolis.

Over the past four decades, Florianópolis's IE has established itself as a premier Brazilian tech hub, earning the title of National Startup Capital. The technology sector accounts for 25% of the local GDP, and the city boasts the highest business density among state capitals.

In the **governance dimension of the innovation ecosystem**, regarding the **actors** that compose the Florianópolis IE, the quadruple helix model is identified as the predominant institutional structure. The analysis reveals that local actors adopt this terminology to substantiate their narratives of participation, evidencing a discursive convergence regardless of the actual integration between the helices. Municipal regulatory frameworks, the physical infrastructure of innovation centers, and funding are highlighted as non-human actors.

There is a convergent pattern regarding the recognition of universities in the 1960s as the origin of the IE; however, in contemporary governance, they appear as actors with low effective presence. There is also evidence of a gap between the presence of business representative entities and the direct participation of business owners. This scenario of low operational engagement from the business sector is accompanied by the invisibility of peripheral communities in the ecosystem's architecture.

The analysis of **actor roles** reveals interpretive heterogeneity, with the orchestrator function being the most contested point in the ecosystem. An unresolved duality is identified between the Municipal Innovation Council (MIC), holder of the legal prerogative for coordination, and the business representative entity, which acts as the de facto operational orchestrator. The latter assumes a hybrid nature by acting as both a business association and the municipality's innovation center. Although its practical effectiveness is empirically recognized, the accumulation of functions by a private entity generates structural tensions and incompatible readings regarding governance effectiveness.

Regarding the **relations between ecosystem actors**, a central finding concerns informality as the predominant mode of interaction. Far from representing an absence of structure, this informality is described as an operational resource capable of generating levels of agility and trust that institutional formality cannot achieve. The model's ambivalence lies in the difficulty of converting the agility of interpersonal relationships into formal processes, keeping the ecosystem dependent on personalized ties.

Another aspect is the relational density of the city of Florianópolis, which manifests as an organic and historical property, characterized by high connectivity rates and a perception of social proximity that transcends institutional formality. Because it does not result from deliberate public policies, this configuration constitutes, simultaneously, the ecosystem's main relational asset and its central vulnerability, since the stability of trust networks relies on the continuity of specific leaderships rather than institutionalized processes. Added to this is the constitutive role of physical space, identified as an essential element for the quality and maintenance of these interactions, consolidating the territory as the indispensable material support for the cooperation dynamics among actors.

The **governance dynamic** within a bottom-up approach is valued as a constitutive and virtuous trait, whose legitimacy rests on a trajectory of organic emergence developed without the imposition of a formal architecture. In this scenario, top-down governmental

actions act primarily as facilitators of structural conditions through regulatory support and infrastructure funding, yet without determining the local strategic agenda. The MIC establishes itself as the instance of synthesis between these logics: it stems from a legal structure (top-down) but operates through voluntary mobilization (bottom-up).

An interpretive dissonance is identified regarding the efficacy of governance: it is validated for not interfering with the local spontaneous organicity but criticized for the absence of mechanisms capable of producing active articulation and collective strategies. Thus, what part of the actors interpret as a functional architecture suited to the local nature, others identify as a systemic gap that compromises the ecosystem's strategic articulation capacity. This tension signals a structural dilemma of governance: balancing the historical organicity of the ecosystem against the urgency of deliberative processes capable of responding to new demands.

In the dimension of **co-creation and value capture** analysis, a convergence is observed in two aspects of the shared **value proposition**: the growth and prosperity of companies as the immediate objective, and the positioning of Florianópolis as a reference in innovation as a medium-term objective. Both were built organically over decades without formal collective deliberation, which is described by the majority as a positive property of the ecosystem rather than an absence of governance.

A possible incompatibility is identified between the technological-economic value proposition and the demands for social and environmental innovation. This issue suggests the coexistence of two value systems operating on the same territory under distinct logics, which prevents the consolidation of a single shared goal for the ecosystem as a whole. The invisibility of the environmental dimension in institutional discourse reinforces this diagnosis. This scenario is exacerbated by the lack of systemic review mechanisms and democratic instances for renegotiating the collective vision.

Regarding **value co-creation**, which occurs at the ecosystem level, there is a consensus that Florianópolis distinguishes itself from other ecosystems of similar size by how it created and reproduces a historically rooted collaborative culture. Incubators and innovation parks are described as results of collective value creation through articulation between the helices, embodying the scientific, technological, and economic dimensions. In the social dimension, while the ecosystem creates social value via inclusion, there is increasing evidence that economic growth does not distribute its benefits equitably. When it comes to the environmental dimension, the responses are virtually non-existent.

Regarding **value capture**, which occurs at the organizational level, the long-term logic of associativism stands out as a condition for capture, guided by a culture of reciprocity and voluntary commitment. In this arrangement, value capture is perceived as a deferred return, in which the initial contribution to the collective precedes individual benefit, operating across extensive time horizons and driven by intrinsic motivations that transcend immediate gain. Furthermore, there is a convergence among actors that engagement in the ecosystem primarily generates the accumulation of relational, symbolic, and reputational capital, elements that sustain the agents' position and legitimacy within the network.

A pattern identified is the dissociation between presence in the ecosystem and effective value capture, a phenomenon observed transversally across the governmental, academic, and business helices. The data indicate that the determining variable for return is not the actor's structural position in the arrangement, but rather its absorptive capacity. Thus, value capture depends on internal organizational factors, such as a pro-innovation culture,

institutional readiness, and leadership profile, becoming a process dissociable from simple participation in innovation environments.

5 Conclusion

Preliminary conclusions point to the fact that while Florianópolis's IE is robust in its economic-technological dimension and firmly rooted in a four-decade associative trajectory, it has reached a structural plateau. In this context, the elements that secured the success of its initial phase, namely informality, personalized relationships, emergent goals, and physical concentration, now operate in a duality, serving simultaneously as the primary relational assets and the most significant structural vulnerabilities for the continued development of the arrangement.

As critical warning points, the study highlights the gap between Academia's historical prominence and its current marginal presence as the deepest structural tension in local governance, directly impacting the connection between actors, roles, and value capture. Furthermore, the findings underscore that the effectiveness of ecosystem participation is conditioned by the internal absorptive capacity of institutions. This carries critical implications for public policy design, suggesting that the creation of physical infrastructure and funding programs is insufficient without targeted actions to qualify the organizational readiness of actors to effectively absorb and convert these resources.

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