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Territorial innovation for sustainable living: multidimensional geographic approach

Innovación territorial para la vida sostenible: enfoque geográfico multidimensional

Inovação territorial para uma vida sustentável: abordagem geográfica multidimensional

Julio Cesar CARO MORENO[1]*

1 Escuela Superior de Administración Pública (ESAP), Bogotá, Colombia.

* Contact e-mail: julio.caro@esap.edu.co

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Abstract: The aim of the current research is to present an alternative geographical perspective by interpreting innovation multidimensional processes and effects as "well-being" drivers. Although the prevailing innovation models have focused almost exclusively on economic and technological development, the current study stands away from this limited perspective. It mainly seeks to address the theoretical association between Territorial Innovation (TI) and Sustainable Territorial Living (STL). The research mainly aim lies in setting a theoretical and conceptual framework intertwining the TI and the STL perspective. According to the STL, development emerges from fields where local actors make decisions about and manage their own resources in an orderly and participatory manner. This process leverages their territorial potential and assets to achieve balance across territorial system dimensions.

Keywords: territorial innovation; sustainable territorial living; geography.

Resumen: Esta propuesta de investigación presenta una visión geográfica alternativa, interpretando los procesos y efectos multidimensionales de la innovación como un motor para el buen vivir; mientras que los modelos de innovación predominantes se han centrado casi exclusivamente en el desarrollo económico y tecnológico, este estudio se distancia de esa visión limitada. El interrogante principal que busca resolver es la relación teórica entre la Innovación Territorial (IT) y la Vida Territorial Sostenible (VTS); el objetivo central de esta investigación ha sido establecer un marco teórico y conceptual que entrelace la IT con la perspectiva de la VTS; la VTS plantea una visión del desarrollo donde los actores locales deciden y gestionan sus propios recursos de manera ordenada y participativa, aprovechando su potencial y patrimonio territorial para lograr un equilibrio en las dimensiones del sistema territorial.

Palabras clave: innovación territorial; vida territorial sostenible; geografía.

Resumo: Esta proposta de pesquisa apresenta uma perspectiva geográfica alternativa, interpretando os processos e efeitos multidimensionais da inovação como um motor para o "bem viver". Embora os modelos predominantes de inovação tenham se concentrado quase exclusivamente no desenvolvimento econômico e tecnológico, este estudo se distancia dessa perspectiva limitada. A principal questão que busca abordar é a relação teórica entre Inovação Territorial (IT) e Vida Territorial Sustentável (VTS). O objetivo central desta pesquisa foi estabelecer um arcabouço teórico e conceitual que entrelaça a IT com a perspectiva da VTS. A VTS propõe uma visão de desenvolvimento em que os atores locais decidem e gerenciam seus próprios recursos de forma ordenada e participativa, alavancando seu potencial e ativos territoriais para alcançar um equilíbrio entre as dimensões do sistema territorial.

Palavras-chave: inovação territorial; convivência territorial sustentável, geografia.

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1. Introduction

From a geographical perspective, the sense of territory extrapolates the mere physical space. It is a dynamic *construct* rising from complex interactions between society and nature. These interactions have been historically determined by social, political, economic and cultural relations, besides opening room for what has been called multi-territorialities. However, either the constant evolution of societies and emerging challenges, such as globalization and spatial inequality, demand a new reading of traditional development models.

Despite the growing relevance of innovation in territorial studies, most approaches have focused its technological and economic dimensions, and neglected its sociocultural, environmental and political-institutional components. This biased approach has helped the persistence of both territorial imbalances and development policies' ineffectiveness. Therefore, this research is justified by the need for addressing current challenges imposed to social well-being and environmental stability based on adopting an alternative territorial innovation process.

Territorial innovation (TI) is defined as convergent and creative process applied to new or improved territorial, sociocultural, environmental, economic and political values that, in their turn, lead to dynamism and dimensional integration with social groups, sectors and institutions. From the perspective of Territorial Values (TVS), these entities interact with, and modify, their environment; value the environment and have impact on the achievement of a fair social, economic and political life.

The main aim of this study is to set a theoretical and conceptual association between Territorial Innovation (TI) and Sustainable Territorial Life (STL). Thus, STL is herein understood as a holistic vision of development. It gathers sociocultural, environmental, economic, and political-institutional dimensions, besides assuming that territorial actors, themselves, lead the management of their own resources and heritage in a participatory and sustainable way.

Accordingly, a theoretical-conceptual method was adopted to build a knowledge framework to help better understanding how territorial innovation (TI) can be a dynamic process targeting a sustainable territorial life (STL). Based on the results, it is possible generating new values by incorporating TI to territorial practices in order to achieve equity, justice, identity and sustainability. This finding corroborated the study's main hypothesis. The present research provides a new approach to territorial planning and management rather than just contributing to the geography of innovation. It moves away from traditional static models and advocates for balanced and participatory development.

2. Territory as social construct and the innovation dynamics

Innovation and territorial development are not only based on technological innovations or economic structures, actually, they can also be grounded in a broader existential ontology (Moulaert & Nussbaumer, 2005). Most TI models are substantiated by institutions seen as development guarantors supported by knowledge and innovation.

According to Méndez (2002), territory is a social construct, the very reflection of multiple actions and behaviors accumulated over time, based on the ability to significantly influence society's structure and functioning. Significant changes have taken place in the current territory due to factors such as global openness, people displacement and the movement of businesses, capital and technologies through networks that, in their turn, link the global sphere to the local one. Therefore, they are a core feature of the socio-territorial model (Caravaca et al., 2005).

> Territory is the product of the society/nature relationship and the very condition for social reproduction; it is a *field* of power concerning historically determined social structures and economic, political, cultural and environmental relations. Territory is both the result and the determinant of the society/nature relationship reproduction and the concomitant 'territorialization'. Territories are produced in space and time through the exercise of power by a particular social group or class, and by their respective everyday territorialities. (Im)materiality is observed in both the result/product and the condition/becoming. (Saquet, 2015, p. 40).
>
> [...]
>
> Thus, territoriality is one of the key components of development, it always encompasses political, economic, environmental and cultural processes, i.e., interactions between subjects and the (im)materiality of the territory (Saquet, 2015, p. 120).
>
> [...]
>
> Therefore, territorialities must be considered by taking into account: a) the internal coherence of each place, which refers to its limits and differences; b) the historical process inherent to traditions, memories and attitudes; c) *the teleological tension*, which refers to future projections (Dematteis & Governa, 2003 cited in Saquet, 2015, p. 120) [italics from the original].

From the innovation paradigm perspective, investigations on the geography of innovation encompass the association between space and economy. Therefore, the geography of innovation seeks to better understand the formation of multi-scalar networks based on geographic locations (Tunes, 2017).

Rózga (2002) argued that, currently, the geography of innovation deals with three main issues, namely:

> 1) Factors influencing the location of invention and innovation activities (innovation environment). 2) Geographic location of research and technological

> development (R&D) activities by both companies and government research institutions. 3) Territorial structure of national and regional innovation systems or the formation of innovation networks (Rózga, 2002, p. 32, translated by the author).
>
> The location of activities is no longer based on simply using the pre-existing local resources, but on including the property in its deployment environment in order to set collaborative relationships there and, then, contribute to its enrichment and development in specific resources (Maillat, cited in Tunes, 2017, p. 9, translated by the author).

The industrial districts were highly prone to generate disparities; therefore, the National Innovation System (NIS) emerged as network of public and private institutions. They can generate new technologies depending on their activities (Table 1). The name National Innovation System (NIS) changes to Regional Innovation System (RIS), at regional level.

RIS great challenge in Latin America

> It is systemic rationality and efficiency [...]. [It means] synergies and coordination between the national and subnational levels, between sectoral (functional) and regional (spatial) policies, between public agents and civil society, and between regulatory frameworks and operational actions (Moncayo, 2002, p.. 48, translated by the author).

There is no uniform geography; actually, territories present different features that, depending on material and immaterial conditions, can generate learning relationships and cooperation networks for innovation purposes. Resources like tacit and codified knowledge, skilled labor and technology are not evenly distributed due to these conditions, but they rather get concentrated in certain areas by following some proximity pattern, work fields or a technology positioning. Together, these factors require tacit knowledge for their integration (Tunes, 2017).

Table 1 Main territorial innovation system theories.

New industrial spaces	Innovative Media	National innovation systems
Concentration of high-tech industries.	Interaction among all agents involved in the innovation process.	A group of different institutions.
Vertical disintegration (Georges Benko, 1995): social division of labor; companies focused on a specific aspect of production to generate cooperation networks between companies and institutions.	Learning.	Learning ability.
	Territory.	Confluence of social, political, institutional and cultural factors observed in the environment.
Window of opportunity: accidental factors, but also the possibility of locating.	Special attention should be paid to local development, as it allows the creation of the trust necessary for interaction; the State plays key role as the guarantor and provider of innovative policies.	Local, regional, national and global analysis.

SOURCE: Elaborated by the author, based on data by Tunes (2017, p. 4).

The Markov stochastic model allowed identifying two agglomeration-driver types: location-specific drivers, which are observed in different economic activity types; and technology-specific drivers, which change depending on the sector. The model by Bottazzi et al. (2008) analyzes different location types that boost innovation growth and its associated benefits. The advantages of locating a particular place, for instance, increase due to the number of individuals located there (Bottazzi et al., 2008).

> This model can reproduce a wide variety of different spatial concentration patterns by changing the relative strength of geographic attractiveness and positive agglomeration reactions. On the one hand, on average, different locations attract a number of agents proportional to their geographic attractiveness when agglomeration forces are very low. On the other hand, when agglomeration forces are very strong, this model implies the emergence of a polarized distribution, according to which, a few locations capture the vast majority of agents (Bottazzi et al., 2008, p.. 192, translated by the author).

Regional innovation is bond to both pre-existing inventions and knowledge accumulation, as it leads to new inventions (Rózga, 2002). However, it is necessary bearing in mind that this process is also strongly influenced by public and private R&D investment, research promotion policies, human capital, social openness and spatial proximity to other territories known for holding higher innovation density. According to E. J. Davelaar, cited by Rózga (2002), there are two innovation components in regions, namely: the structural component – companies' features are adjusted to the size of the region; and the effect of productive environments – which is simultaneously systematized into four approaches (agglomeration of different companies, populations prone to adopt innovation, informational infrastructure, and physical and institutional structure).

Miller & Coté, cited by Rózga (2002), in their turn, identified four types of modern technology fields: self-sufficient, which is agglomeration-based; dependent, which is funded by the government; manufacturing-oriented, which is geared towards local supply; and focused, which uses high technology.

From a political, economic, social, environmental and cultural perspective, several factors, such as learning dynamics at business and institutional levels; interaction dynamics to achieve networks and seek solutions to existing problems; the use of resources as territory heritage deployed to address joint territorial development, are innovations means. Therefore, a territorial development is forged with competitiveness, environmental sustainability, balance, well-being and social cohesion (Caravaca et al., 2005).

Learning dynamics take knowledge as primary innovation driver as it enables maximizing production and the rational use of resources. Capital flow exacerbates technological and productivity inequalities in Latin America, as well as weakens productive alliances. In association with lim-

ited State presence, this process leads to greater backwardness and to significant challenges in peripheral urban centers (Fernández et al., 2009).

The accountability held by each stakeholder within the territory leads to informed decision-making and ensures that policies are tailored to local or regional scenarios. Likewise, assessment made before, during and after policy implementation is essential to monitoring and evaluations (González, 2006).

The spatial concentration of companies, or of sites where production, adoption or innovation takes place, explains the disparities observed between and within regions. This observation gave rise to the sense of spatial, regional or local inequality (Moncayo, 2002).

The geography of a given territory, as well as the interactive relationships between individuals, lead to innovation seen as compilation of scientific, technological, socioeconomic and cultural aspects. These aspects go hand in hand with the use of resources available in the environment for territorial development purpose (Caravaca et al., 2005).

Classifying 'capital' as ecological, social or private can help understanding innovation. It is ecological because it is a reserve of environmental resources. It is social given the relationships between individuals and organizations. It is based on skills and knowledge; and finally, it regards private businesses or infrastructure (Moulaert & Nussbaumer, 2005). However, a complete territorial analysis demands the integration of institutional capital, which is herein understood as the one set based on the strength of the public sector. It includes managerial bodies, universities, and the legal and political frameworks aimed at regulating the development, itself.

Innovation must be adopted as first step to help better understanding and addressing community needs at social and institutional level. It also contributes to capital innovation at other spheres (Moulaert & Nussbaumer, 2005). Limits are placed on the market logic if one adopts a cultural concept based on human rights; yet, community development models are embodied to allow broadening the cultural vision that serves the community.

It is essential having dynamic companies open to changes in order to create an innovative environment where problems are solved through research (González, 2006). Innovation is, therefore, conceived as socio-cultural process. Thus, some political, institutional, and, of course, social and cultural aspects are entangled with the innovative environment. Furthermore, it depends on effective and honest communication, as well as on collaborative work, in order to foster an environment of trust and cooperation, conducive to the innovation process.

Factors addressing either economic aspects and the dynamic advantages set to create knowledge and innovation through cooperation among innovation process agents, skills, knowledge, associations and other aspects observed in a territory, were proposed (Fernández et al., 2009).

Public, academic and private sector institutions, placed at local, re-

gional and national level, are the spearhead for knowledge construction and innovation. These institutions' representatives must pursue and reach common goals by following rules and values that allow them to coexist (Fernández et al., 2009). The new economic geographer must generate territorial organization processes to foster innovation and build knowledge, and, consequently, achieve greater and better territorial positions.

From an environmental perspective, the good management of natural resources based on the sustainability approach must be the very core of one's concerns; thus, planning aims the economic exploitation of natural resources (Moncayo, 2002).

> Actually, the gravity of clusters in Porter's approach; the emphasis of the new economic geography on agglomeration effects; the relevance of interaction networks for the theories of industrial districts and innovative environment; the key role of civic engagement in social capital approaches; and the bioregion concept from the sustainable development perspective, share a common foundation: the revaluation of development territoriality (Moncayo, 2002, p. 26).

3. From innovation to territorial innovation

The innovation policy in the European Union is systematized based on three main topics, namely: diversifying local production, intensifying local and global interactions, and improving the relationships between stakeholders. The deep-rooted cultural identity of Europe's inhabitants opens room for this endogenous process, as they have fostered cooperation, effective organization, private initiatives to develop their activities, and, of course, used their heritage resources to develop innovative actions that have social, economic, environmental and cultural impact (Hernández et al., 2013).

> D'Allura, Galvagno and Li Destri (2012) pointed out that the most relevant and impactful contributions (scholars and policy-designing time) come from an interdisciplinary integration, according to which, economics (in its institutionalist and evolutionary versions), economic geography, sociology and political science stand out (Fernández & Comba, 2017, p. 384).

The new regionalism focuses the regional and local levels, right where the very foundations of learning, aimed at pursuing competitive advantages, lay on. Policies and strategies are planned based on these foundations and aim at linking the local sphere to the global one, as it enables generating economic dynamism. Amin, cited by Fernández and Comba (2017, p. 385), highlighted two aspects boosting the growing relevance of regions. The first one is associated with endogenous growth through agglomeration, positive externalities and spatial specialization. The second aspect relates to the new economic geography.

Innovation models in Latin America have been fostered through both technological improvements and production-chains integration, mainly in sectors associated with natural resources and agribusiness. All this scenario is immersed in global competition challenges, as observed by Moncayo (2002), who warned about the need for moving beyond simple technological adoption and for heading towards more integrated regional innovation systems.

The features defining the Latin American innovation model lie in relationships set between agents and institutions, according to which, policies and instruments are gathered to create businesses/universities collaboration and build knowledge to make innovations processes and products easier. These partnership networks comprise businesses, workers, universities, technology development centers and civil society organizations, a fact that leads to the creation of new job opportunities (Bertogli & Rhi-Sausi, 2010).

It is known that some Latin American territories do not hold all the necessary factors to develop a territorial innovation system; however, the actors/agents/companies networking combination becomes a significant open window for policies that comply with the environment. This process helps integrating this network system to the international market, besides giving access to resources or financing, governmental organizational improvements, public-private partnerships, and to plans and projects focused on territorial matters (Bertogli & Rhi-Sausi, 2010).

4. Sustainable Territorial Life (STL): Well-being Dimensions and Indicators

The four integrating dimensions of the territorial system represent the Sustainable Territorial Life's (STL) idea, mode, style or vision (Figure 1). These dimensions aim equity, and social and territorial justice; cultural aspects, identity, rootedness and territorial belonging; the promotion of distributive equity and the reduction of socio-territorial gaps (in economic terms); sustainability, and environmental and territorial harmony (in environmental terms); and governance, social and territorial cohesion for well-being, and coexistence as ultimate sustainable development goal (in political and institutional terms) (Gutiérrez Rey, 2014).

Although the concept of territorial balance is intrinsically linked to Sustainable Territorial life (STL), as it was described by Gutiérrez Rey (2014), it cannot be introduced as **structural condition**, but rather as the necessary structural context for achieving it. STL represents the 'well-being' paradigm (Table 2); territorial balance, in its turn, is the functional harmony state among the social, cultural, economic, environmental and political dimensions. Therefore, it is defined by its counterpart, in other words, by

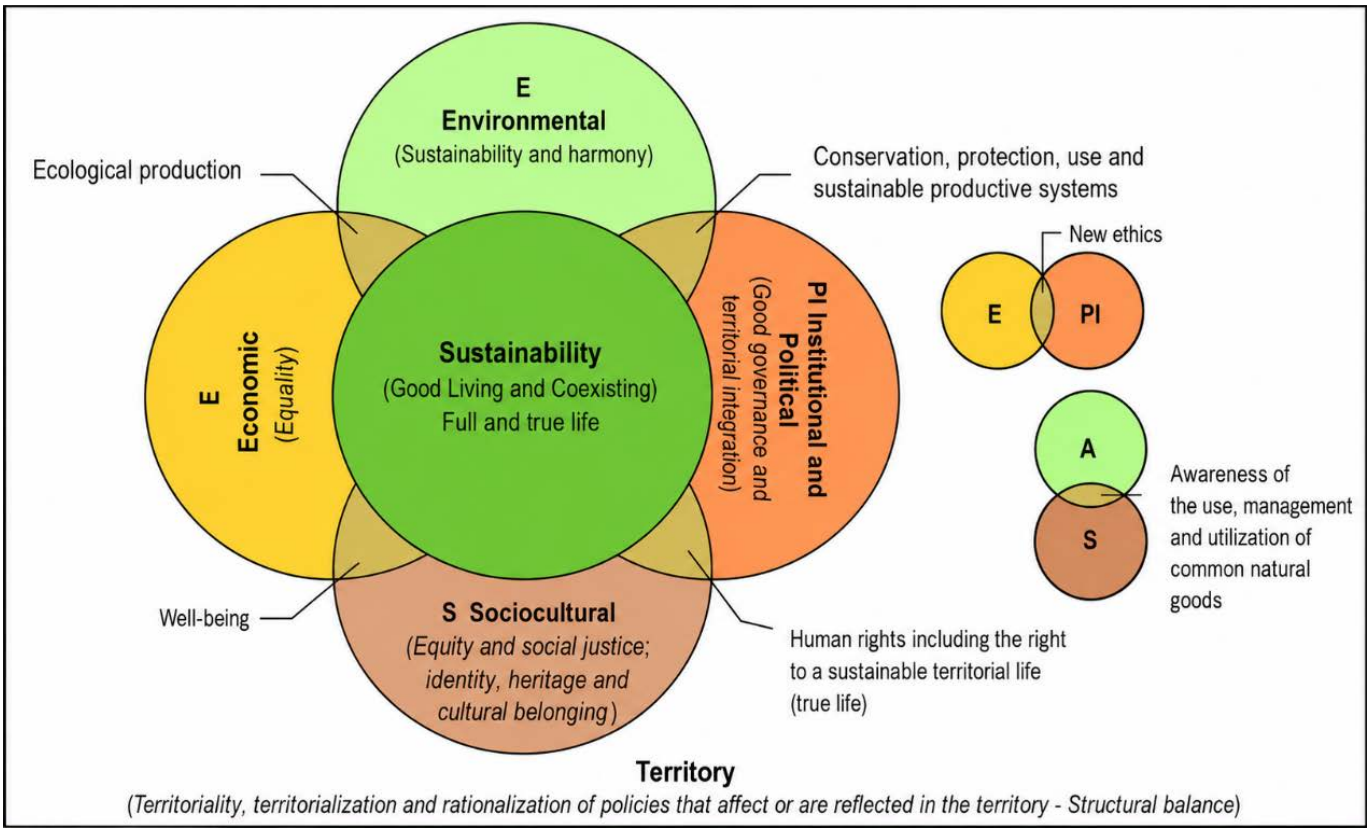


Figure 1
Territorial system dimensions.
NOTE: Gutiérrez Rey (2016).

lack of **territorial imbalances**, which are herein understood as unacceptable gaps or inequalities disrupting the territorial structure and impairing the sustainable development.

5. Territorial innovation as mechanism to achieve a sustainable living

It is clear that prior knowledge in different disciplines, such as economics, cannot be disregarded, as it is necessary strengthening other elements both internally and externally affecting and influencing the territories. Thus, it is essential investigating the capitalist system and its transformations over time in order to assess its lasting consequences for the territory, which require solutions.

Table 2 Territorialized dimensions of sustainable development.

Dimension	Target components
Social	Social and territorial equity, and social and territorial justice
Cultural	Identity, rootedness and territorial belonging
Economic	Social and territorial equality
Environmental	Sustainability and environmental and territorial harmony
Political Institutional	Governance and social and territorial cohesion

SOURCE: Gutiérrez Rey (2014, p. 244).

Méndez (2006) explained why technological development tends to be concentrated in territories known for having greater technological dominance; mostly in certain sectors. This feature allows identifying other social factors to be assessed and embodied in order to achieve a sustainable development process. Furthermore, technology has displaced the labor relevance as fundamental element for development processes in the contemporary world. Therefore, innovation generation, location and outspread can change the territory.

Although traditional theories tended to take territories as static components or as mere physical supports, the contemporary economic geography has revalued their role and highlighted the need for analyzing the innovation/territory symbiosis. Similarly, according to Sánchez (cited in Méndez, 1998), this association can be approached from two perspectives, namely: technology has impact on the space; space is an active constraint used either to optimize location or to maximize profits. Overall, research on innovation mechanisms can be closely linked to four other different topics, although related, that converge into this case, namely: innovation theory, local production systems, network analysis and local development propositions.

It is necessary to better understand the following underlying risks to guide innovation processes and disrupt established theoretical frameworks: the hasty implementation of a process driven by current trends; and the misconception of innovative environment, which is embodied based on dimensional needs and environmental analysis. It is so, because different network types can be adopted to develop innovation processes. Finally, it is important to emphasize that this territory presents its own internal and external flows, which influence innovation processes' success or failure.

It is prudent reviewing the endogenous aspects of the territory, such as its resources, in order to head towards new innovation forms, to diagnose its limitations and potentialities, incorporate actors and strategies capable of achieving a successful process, as well as institutions that make this process easier and embody roles aimed at favoring innovation (Méndez, 2002).

Public institutions, mostly the State; private institutions that make knowledge transfer easier; civil society and local communities are the four types of actors that have been joining innovation processes. Innovation strategies require the creation of cooperative networks to increase their effectiveness and help them adjust themselves to changes taking place in the territory. Similarly, the transmission of explicit and tacit knowledge fostered by proximity is a development source.

This proposition seeks to identify a more decentralized, polycentric development model to leverage the strengths of each region. Its aim lies in achieving a more balanced innovation heading towards value-added technologies across territories and in addressing the inequalities and problems

arising from innovation processes. Furthermore, it focused on developing a more balanced regional system applicable for territory size and scope, based on economic diversification, social cohesion and resource valuing. Finally, it aims at ensuring territorial access to knowledge and the provision of the necessary infrastructure. It must be done through strong and trusting relationships set among all stakeholders, as this aspect allows the achievement of innovative development.

Not all territories successfully embody innovation processes; it would first depend on their social and institutional actors' ability to manage knowledge and to achieve changes. These agents are those who guide their own efforts toward continuous learning through deliberate strategies. This learning is driven by innovation and creativity, which are elements triggering social and environmental well-being through community participation.

Specific resources available to the territory must be used to build an innovative territory, and this action must be followed by in-depth actions taken by local actors. It is so, because these actors tend to organize local systems according to an institutional organization whose cooperation networks boost innovations and balance their dimensions.

Méndez (2006) argued that fostering innovation in territories is an action closely linked to activating specific territorial resources, among them, one finds territorial social capital enhancement, institutional strengthening and coordination stand out. Ultimately, this process concerns searching for a new territorial governance capable of properly responding to challenges posed by the current context.

It is crucial to conduct a preliminary assessment as attempt to better understand the environment and the outcomes of activities carried out in sites focused on becoming an innovative territory. It must be achieved by assessing all territory components, including stakeholders, and how they operate. A series of indicators must be considered to make dimensional analysis easier and to finally reach the aforementioned goal. These indicators comprise sociocultural, environmental, economic and political elements (Caro, 2023).

Territorial innovation (TI) will strive to make sure that each territory can develop its own dynamic propositions, based on inherited specific economic, social and institutional conditions. These conditions have derived from both TI's historical trajectory and strategies applied by experienced actors skilled to influence STL.

Creating networks and developing them in partnership with actors and institutions; creating cooperation processes and collective learning, as part of interactions between individuals who converge to a given place, are the main factors substantiating innovation generation. This bond is built through social innovation, which can be seen in two ways: fulfilling overall needs and social relationships (Moulaert & Nussbaumer, 2005).

Accordingly, needs arise to connect our group territories to develop

territorial innovation systems. This agglomeration derives from factors specific to, and shared within, the territory, as well as to the ability of actors and institutions found in each territory and to their power to create bonds that make territorial innovation systems easier.

Likewise, institutions are key elements to set standards and make interaction among different actors easier. Furthermore, they encompass private and public agents, and social and institutional networks for cooperation. However, institutions must operate within a flexible, participatory and adaptive context in order to play core role in TI. They must be capable of fostering knowledge absorption and its effective transformation into social, productive and technological innovation. This process guides stakeholders' actions, sets values, and designs strategies and policies to create an environment conducive to R&D. These institutions provide certainty, control and regulatory capacity by managing clear and stable standards aimed at avoiding potential conflicts, as they exceed a merely normative function.

Some authors point out two paths to TI achievement. One goes through what already exists in the territory, such as cultural heritage, which represents the social capital. The other one goes through reciprocity, which is built over time, thanks to the relationships set between different agents who, in their turn, seek a common goal – in our case, STL (Sustainable Territorial Life).

Innovative territories must seek innovation by using local actors and institutions as the very basis to organize and structure their processes. Likewise, in addition to sustainability (a factor that is not insignificant), they must understand their social and human capital, the resources available to be used (in the most efficient way), and extract the necessary benefits from them.

Thus, local actors are essential for the development of processes and interactions in partnership with civil society and institutions. Territories must use resilience, which is the ability to individually or collectively face problems or crises, because the effects of it are only felt in the mid- or long-term. Not all territories have this advantage as it depends on the social environment and is assessed through a diagnostic process that takes into consideration the previously mentioned indicators.

The role played by local institutions, businesses and civil society is crucial to create strategies aimed at revitalizing the territory. These strategies must be supported by existing resources, such as the capital available, cultural and social assets, and network building. Therefore, governments are the guiding agents orienting and promoting multidimensional projects and initiatives (Sánchez et al., 2015). The alternative economy emerges as option in response to fractures in the capitalist model. It focuses on embodying social aspects, including new actors, setting new relationships and diversifying the overall activities (Méndez, 2016a).

Local actors' active participation allows leveraging the inherent po-

tential of the territory and making the coordination and mobilization of other strategic stakeholders easier This process requires physical resources like infrastructure and educational centers, financial resources, as well as social, human and institutional capital. All these resources are supported by interrelationships that embed the social dimension to achieve smart, sustainable and inclusive growth. If one bears this goal in mind, it is possible to state that actions first head toward activities that would further combine knowledge, modern structures and sectoral diversification. Later, these actions would point toward the responsible use of natural resources. It would be applicable by fostering an environmental culture and promoting a green economy; and by, finally, emphasizing the relevance of caring for the population.

The new ways to understand the development that have emerged in the last two decades emphasize the economic (competitiveness), environmental (sustainability), political (governance and local participation) and cultural-social (defense of identity, heritage and well-being) components of development, itself, to provide society with higher quality of life.

The general concept of innovation should be understood as the creation of equivalent economic and social values. It is so, because, on several occasions, the social-value creation is not foreseen or achieved. Therefore, after all, only economic evolution is achieved, but it might have no significant impact on well-being.

In other words, the concept of innovation is based on continuous changes or on dynamic improvements that must include territorial sociocultural, economic, political and environmental actors, rather than just the business sector, in order to achieve a truly balanced development.

The conceptual contribution of the current article lies in defining Territorial Innovation (TI) as convergent and creative process aimed at new or improved territorial sociocultural, environmental, economic and political values capable of generating dynamics and dimensional integration with social groups, sectors and institutions. From the Sustainable Territorial Life (STL) perspective, these groups, sectors and institutions interact with, and modify, their environment, besides valuing the environment and contributing to a fairer social, economic and political life.

Territorial value concerns actions taken by local actors in economic, political, sociocultural and environmental processes by exercising territoriality. This innovation type enhances the peculiarities of each territory, since it is essential to define new territorial practices and increase multidimensional territorial heritages; in other words, sociocultural, environmental, economic and political aspects (SAEP).

Table 3 provides the overall TI factors based on STL. This general approach refers to the ongoing pursuit and accomplishment of balanced territorial development got through different space or territory dimensions, within each dimension and between dimensions (structures), as well as

among different components, in order to achieve sustainable development, well-being and population coexistence. The innovative environment reflects the learning and interactive relationships offset by actors within a territory. It leads to an innovation process taking place within a local system or network of agents linked by social (trust) and economic (transactions) bonds built, over time, in a defined territorial framework.

Table 3 General TI factors based on VTS.

Dimension	Innovation factors
Economic (well-being and entrepreneurship)	• New or better ways of equitably satisfying needs. • Reduction of disparities (equity) and territorial justice. • Generation of multiculturalism and thought. • Multidimensional quality of life. • Knowledge and different kinds of knowledge. • Equitable and distributive economic growth. • Redistribution (reduced economic poverty). • Longer life expectancy. • Education levels.
Political-institutional (governance and local participation)	• Active participation in the democratic process. • Expanded coverage and reduced hegemonic dominance. • Own public policies with a positive impact on territorial cohesion and sustainability. • Processes specific to sustainability and institutional policy. • Effective action within its space legitimized by the citizenry.
Sociocultural (identity, heritage)	• Elements of cultural identity and values shared and legitimized by the community. • A function that guides civic coexistence and social cooperation. • The dynamics inherent in a strictly practical function change as the reasons that conditioned its emergence are modified. • Process of adapting to their habitat. • The ideology with mental characteristics of a population and its way of relating. • Collective behavior; people subordinate their personal goals to the objectives of a community.
Environmental (sustainability)	• Landscape transformation in harmony with the environment. • Balanced consumption and production patterns. • Proper use of water. • proper use of land. • Policies for the recycling and reuse of goods. • Positive impacts on biodiversity. • Climate change mitigation.

6. Results and theoretical-conceptual contributions

The fast changes emerging in territories demand new responses from researchers who must suggest innovative processes to successfully address the new challenges crossing balanced territorial development. It must happen by also fulfilling sociocultural, environmental, economic and political needs. Historically, innovation models have prioritized economic and technological growth, but emerging paradigms, such as Smart Specialization heading towards the Sustainable Development Goals (S3+), seek to embody sustainability. Thus, priority is given to innovation processes and effects in order to support well-being. This action complies with the herein addressed evolution and works as alternative deepening the multidimensional geographical vision.

The current study defined innovation as intentional original change, although planned, in the sense of difference. Innovation introduces something new into the world. It is based on applying new concepts and adopting new practices. Méndez et al. (2016) considered innovation a sequence of purposeful activities involving different actors.

Innovations emerge from participatory spaces whose agents seek explanations or aim at fulfilling their own needs. This scenario triggers the willingness to change and takes place in vulnerable or crisis contexts. These actors chose the paths that bring along substantial changes at social, cultural, environmental, economic and political level due to innovation processes aimed at achieving equitable contexts and opportunities based on territorial autonomy.

The geographic space derives from relationships set between society and nature; the territory, in its turn, mainly emerges when such a space is materially and symbolically appropriated. Therefore, the territory is both a result and determinant of territorialization; it is understood as the projection of intentions onto space. Territories are produced in space and time through the exercise of power by a particular group or social class, and by their respective everyday territorialities. This proposition for multidimensional innovation is a territoriality practice seen as one of development's fundamental components. It always encompasses political, economic, environmental and cultural processes, in other words, interactions between subjects and the (im)materiality of territory (Saquet, 2015).

Territorialities must be taken into account as

(a) the internal coherence of each place, which refers to limits and differences;

(b) historical process inherent to traditions, memories and attitudes;

(c) teleological tension, which refers to future projections.

All these factors enable defining the main purpose of innovation in territories as a change of course, a geographical perspective, as alternative to current innovation models. This new scenario is achieved through both

plurality and the clear understanding of territorial phenomena that must include a socially fair and equitable, economically feasible and egalitarian, environmentally sustainable and harmonious, politically and institutionally sound world capable of making territory organization, integration and structuring, as well as good governance, easier to achieve.

Therefore, this current research rose from the perspective of sustainable territorial life (STL), as it has advocated that territorial actors should decide and exercise the management of their own departments in an orderly and participatory manner. Their activities should be based on their potential and vocation, besides being planned, sustainable and bring along opportunities due to their location and physical, environmental, cultural, symbolic and relational territorial heritage. Furthermore, they must integrate all the aforementioned elements based on balance between the territorial system dimensions.

A sustainable territorial life (STL) demands new territorial management (innovation) concepts and instruments that allow harmonizing public and private goals, strategies and actions in order to successfully address the complex social, cultural, environmental, economic and political realities of departments and countries. A sustainable territorial life provides a holistic vision that enables integrating social, cultural, economic, environmental and political innovation policies. This process must start from understanding the territory as articulating element and active agent.

Innovation as process allows each territory to develop its own dynamic propositions, based on the aforementioned economic, social and institutional conditions. It is a dynamic process resulting from its own historical trajectory and from the strategies applied by actors at the sphere herein understood as TI.

Accordingly, and back to the concept introduced at the beginning of this study, territorial innovation (TI) operates as convergent process to generate new territorial values. This dynamic has been proven to foster dimensional integration with social groups, sectors and institutions. From the STL perspective, it allows validating the premise that interaction with the environment, and environmental valuation, have strong impact on a fairer life.

In addition, this research established the referential and conceptual framework integrating TI with STL as methodological process to achieve territorial balance through innovation processes, based on equity, and on social and territorial justice (in the social dimension); on identity, rootedness and territorial belonging (in the cultural dimension); on social and territorial equality (in the economic dimension); on sustainability and territorial environmental harmony (in the environmental dimension); on governance, and social and territorial cohesion (in the political-institutional dimension).

This study presented a coordinated and coherent system of concepts

by assigning total importance to geographical factors. It was done by identifying the territory as dynamic and active scenario where TI processes are generated and by featuring STL as primary element contributing to its understanding and theoretical support. Finally, its findings corroborated the main study hypothesis, according to which, the TI process is made easier by STL.

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