

Innovation, tourism and territory: the challenges of peripheral regions – the case of Cova da Beira, Portugal¹

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Abstract

The subject of innovation is nowadays central either to modern theories of regional development, either to the promotion of the tourism industry. Innovation, broadly defined to include not only product or process upgrading but primarily organizational and institutional rearrangements, is vital for regions and enterprises to obtain competitive advantages. During the last decade there has been a shift towards the understanding of the innovation process as a socially constructed mechanism based on the accumulation of knowledge (codified or tacit) through a continuous and interactive learning course. Territorial and firm competitiveness have, nowadays more than ever before, to deal with knowledge creation and with the development of localized capabilities able to promote learning processes. In this sense, the innovation dynamics is based on resources that are place-specific; so, regionally based complexes of innovation and production are increasingly the privileged instruments to harness and recreate knowledge and intelligence across the globe. One the fastest growing economic sector is nowadays the tourism activities. The purpose of the current paper is to provide, for one side, a critical state-of-the-art review of current research on innovation, either at territorial level, either within the tourist sector; for the other side the paper also aims to analyse the relation between entrepreneurial dynamics on the tourist sector and regional innovation theories, in a specific portuguese territory (the Cova da Beira region) with development difficulties. A special attention will be put on the firm and institutional characteristics of low density peripheral areas that have comparative advantages on tourism. Arguably, the promotion of territorially embedded tourist regional innovation systems in peripheral areas seems a fundamental and coherent strategy to face contemporary regional development challenges, as long-term regional competitiveness and sustainability has less to do with cost-efficiency and more to do with the ability of firms and institutions to innovate, i.e. to improve their knowledge base.

Keywords: Innovation; Territories; Tourism; Local tourism innovation system; Peripheral areas.

1. Introduction

Tourism is now one of the world's largest industries and one of its fastest growing economic sectors. Tourism industry has been used to create new employment opportunities and to improve the national balance of payments, gross income and

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production. The first part of this paper examines the concept of regional innovation systems and some basic concepts related to the economics of knowledge against the background of modern theories of innovation and territorial competitiveness. We proceed to the analysis of the contemporary innovation theories applied to tourism activities and how they can be put in practice in peripheral areas, taking into account the complexity of tourism. Finally, we pay special attention to the networking and learning dimensions of the entrepreneurial and institutional actors, trying to analyse how the articulation between territory, innovation and tourism can be brought together, on the promotion of the competitiveness of the low density and peripheral areas, paying particular attention to a case-study on a mountain area in Portugal, the Cova da Beira region.

2. Territory and Innovation: framework of analysis

2.1. The Industrial District

Concepts of innovation have changed deeply in recent years, away from a sequential and towards an interactive and systemic model. The role of the territory has also changed. Nowadays, it is argued that the territorial dynamics creates specific interdependences among the agents and between the agents and the institutions that evolve into peculiar industrial, technological and innovative trajectories.

Three main analytical frameworks share this particular approach: the Industrial District paradigm, the Innovative Milieu conceptual model and the Regional Innovation System approach. They all germinated during the 80's as a theoretical answer to the empirical analyses of some restricted territories whose industrial and spatial dynamics was based on the close links established between small and medium enterprises, production flexibility, entrepreneurship and external agglomeration economies. According to Hallin & Malmberg's (1996: 332) opinion, these models emphasize "the systemic nature of industry; the role of learning and innovation in industrial dynamics; and the spatially embedded character of industrial change."

The notion of industrial district, a marshallian view of the process of overall production organization, clearly rooted on the studies about the Third Italy and on authors like Bagnasco, Garofoli and Becattini, relates to export-based socio-economic firms, usually centred on one industrial branch with a high concentration of horizontally integrated, specialized and autonomous small firms, each one associated to a single phase of production. These small firms work interactively to produce a wide range of differentiated goods that are sold on customer-oriented, fragmented and diverse international markets. The local economies frequently benefit from the information exchange made possible by the growth of localised producer-user networks, consequent upon the flattening of vertical integration within firms (Garmise & Rees, 1997). Specifically, four elements are underlined as the real sources of regional development in this paradigm, as Capello (1996: 488) refers: "entrepreneurship, production flexibility, district economies and the presence of some *collective agents* capable of acting as a catalyst for the mobilization of the indigenous potential (a local bank, wholesalers, local industrial associations, some enlightened entrepreneur, etc)". This localized network of producers is bound together in a social division of labour in association with a local labour market and innovation, although important, is not strategically pursued (it does not constitute a priority purpose). Storper (1995) stresses the role of localised untraded interdependencies (labour market, local conventions, tacit knowledge collectively held, etc.) between firms and other institutions in promoting mainly incremental innovation; diversely, the concept of Technological District, as conceived by Rallet & Torre (1995), constitutes a variety of industrial district where the external economies lay fundamentally on scientific and technological change and innovation.

2.2. The Innovative Milieu

Since 1985, the GREMI (Groupe de Recherche Européen sur les Milieux Innovateurs) has also developed a theoretical perspective not only based on the reduction of transaction costs but also on the role of external economies and on the notion of the Innovative Milieu, defined as a local milieu which has a certain socio-economic and cultural cohesion founded on common behavioural practices, as well as a technical culture. A milieu is a set of functional interdependences that belong to the same territorial entity. This concept is then intersected with the notion of Innovation Network to define an innovative milieu. An innovation network expresses the new context and profile of technological dynamics and change, i.e. the collective and interactive nature of the innovation process (Rallet & Torre, 1995). Maillat (1998: 124) establishes a useful distinction: “the innovative milieu is not a specific category of localized production system but a cognitive set ... (it) corresponds to a territorialized, outwardly open complex, that is, open to technological and market environment, which incorporates and masters know-how, rules and relational capital”. In this theoretical perspective, innovation is seen as the integration by the milieu of strategic information and resources (Crevoisier, 1996; Quévit & Van Doren, 2000), thus, largely surpassing the narrow definition of innovation as a merely technological domain. This is really the most interesting feature of the innovative milieu model - its value-added in comparison to the industrial district approach; innovation also encompasses a strong territorial and institutional structure which constitutes an essential instrument on the process of techno-economic creation, as well as an emphasis on the learning behaviours. The fostering of territorial synergies is a key matter of the innovative milieu, by other words, the territory is seen as a cause and a consequence of the actors’ strategies and their collective learning processes (Keeble & Wilkinson, 1999).²

2.3. The Regional Innovation Systems

The Regional Innovation System approach sustains that territorially based complexes of innovation and production are increasingly the preferred means to recreate knowledge and intelligence all over the world and that creative socio-economic interactions are often played on a regional context. If we consider a broad definition of an innovation system it involves not only research centres and institutions but also the productive fabric, its institutional and governance basis, its financial structure and its educational and training system. The innovation system articulates all these dimensions, independently of the level of analysis, which allows for a linear inference to the regional level. Such a system can, thus, be defined as a specific form of organization and regulation of the actors’ interactions throughout the innovation process. Due to the fact that the institutional context of the innovation dynamics is very much conditioned by strong national characteristics (Lundvall, 1992), the concept of innovation system was firstly introduced at the national level, but the existence of regional socio-economic and institutional peculiarities influencing the endogenous mechanisms of knowledge incubation, production and diffusion is often better studied and understood at a regional level. As Howells (1996: 6) indicates: “regions within nations can display distinct or idiosyncratic systems of innovation which depart from the national norm and in turn be different from

² Another branch of thought on the subject of innovation and territory has more recently (on the 90’s) appeared and may be called the *Learning Region* approach. It mainly has reinforced the organizational-institutional view of the innovative milieu and has also enlarged its scope to the ICT (information, computer and telecommunications)-related paradigm. This model has been developed mainly by scandinavian authors (Lundvall, Asheim, Isaksen) and two authors of the University of Cardiff in Wales, namely Philip Cooke and Kevin Morgan.

other regions”; so, innovation depends to a large extent on local externalities and knowledge spill-overs and regions differ greatly in their potentials for innovation. It seems useful, at this stage, to distinguish, analytically and politically, two different types of regional innovation systems, or to be more accurate, a regionalized national innovation system and a conceptually true regional innovation system as Asheim & Isaksen (1997: 307) suggest: “on the one hand, we find innovation systems that are parts of a regionalized national innovation system, i.e. parts of the production structure and the institutional infrastructure located in a region but functionally integrated in, or equivalent to, national (or international) innovation systems, which is based on a top-down, linear model of innovation. On the other hand, we can identify innovation systems constituted by the parts of the production structure and institutional set-up that is territorially integrated or embedded within a particular region, and built up by a bottom-up, interactive innovation model”. Non-market, tacit and informal relations, as vehicles to increase the cooperative dimension, constitute a fundamental axis for the promotion of territorially based regional systems of innovation instead of regionalized national innovation systems, that can be well exemplified by the technopolitan fever that still prevails in some European countries.

2.4. Synopsis

These three approaches lead to different forms of analysis and intervention, concerning the relation between innovation and territory. From what was stated before, we proceed to a synthetic analysis of the paradigms, comparing several aspects among them (Table 1).

Table 1. Industrial District, Innovative Milieu and Regional Innovation System: a synthesis

Aspects	Industrial District	Innovative Milieu	Regional Innovation System
Appearance	Spontaneous; as a local productive system	Spontaneous/Induced; as a cognitive entity	Induced; as an organizational entity
Predominant Climate	Industrial atmosphere	Entrepreneurial culture	Scientific and entrepreneurial culture
Productive System	Industrial; Productive specialization; SME's; vertically disintegrated; auto-centred	Industrial and tertiary; productive diversification; large and SME's; quasi-vertical integration; open	Industrial and tertiary; productive diversification; large and SME's; quasi-vertical integration; open
Inter-enterprise tacit relations	High intensity of extra-productive relations; inter-personal networks; informal channels of information flow; high horizontal and vertical labour mobility	High intensity of extra-productive relations; importance and diversity of formal non-market relations (cooperation networks, strategic partnerships, etc.)	High intensity of extra-productive relations; importance and diversity of formal non-market relations (cooperation networks, strategic partnerships, etc.)
Firm relations with the specialized institutional universe	Low contact intensity; casuistic	High contact intensity; strategic	High contact intensity; strategic
External enterprise relations	Linkages through supplier-customer chains	Strong opening to the exterior; insertion on the international circuits of information and knowledge transfer	Strong opening to the exterior; insertion on the international circuits of information and knowledge transfer
Network structures	Compacts; networks without strategic centre	Compacts, with leading enterprise or pivot-enterprise	With pivot-enterprise or pivot-institution (university, technological centre, development agency etc.)
Logics	Communitarian; of survival; avoiding a functional inscription on the global economy dynamics	Of partnership; creation of learning collective mechanisms as a vehicle to the renewal of the productive basis; promotion of the regional innovation potential	Of partnership; institutional architecture as the instrument to the entrepreneurial and territorial renewal; promotion of the regional innovation potential based on a strategic vision
Dominant knowledge modalities	Tacit; contextual	Codified; global	Codified; global
Dominant learning modalities	By doing, by using, by interacting	By doing, by interacting, by networking	By searching, by networking
Dominant innovation modalities	Incremental; adaptative; product and process	Incremental and radical - <i>first of its</i> kind; product, process and organizational	Incremental and radical - <i>first of its</i> kind; product, process and organizational

Development dynamics	Competition-emulation-cooperation; based on an enlarged social mobilization; entrepreneurial risk socially supported	Competition-cooperation; induced by the activation of information and knowledge flows; entrepreneurial risk institutionally supported	Crossed fertilization; largely induced by the specialized institutional fabric; dynamic adjustment between the firm and the institutional universes; entrepreneurial risk institutionally supported
Potential risks	Social and technological locks-in; entrance and information barriers; appearance of firm hierarchical phenomena	Relational and technological locks-in; exit barriers	Relational and technological locks-in; exit barriers; institutional sclerosis; overwhelming public orientation of the cooperation networks

Source: Adapted from Santos (2002: 312)

It seems important to examine the innovation dynamics through this bottom-up territorial methodological angle, as suggested by the innovative milieu and the learning regions conceptual models (Cooke, Etxebarria & Uranga, 1997) instead of following a functional and sectoral approach, so that it can be possible to filter the way the different components of a regional innovation system interact. More specifically, Howells (1996) refers three dimensions that could serve as guide-lines to investigate the structure and evolution of these innovation complexes: the regional style of government, the specialization pattern of the productive fabric and core/periphery differences in industrial structure and innovative performance. Wiig & Wood (1997) enrich this methodological filter when they point out the following elements: the economic and innovative activities, the links both within and beyond the region, the availability of labour, education and training requirements, the technological infrastructure, including links with innovation support organizations and the role of public bodies in providing support for innovation.

More profound and lasting effects of increased competitiveness can only be obtained if innovation becomes systemic in the region, i.e. if it assumes a regional innovation system configuration, promoting the collective capability of interactive learning among the actors (firms, institutions and government agencies) which might positively influence the innovation performance of the regional economy. Networking, nevertheless, must be faced cautiously for individual firm strategies and networks; they actually may work against the formation of visibly-integrated regional innovation systems.

So, innovation is currently understood as an interactive and systemic process both inside firms and with other firms and institutions. Interaction goes beyond short-term market transactions and includes more durable trust-based relations. Learning and knowledge are two of the most important resources for innovation which is conceived in a broad sense. It is not only the result of R&D activities, but also of marketing, production, distribution and different organizational intra- and inter-enterprise dimensions. Consequently, both codified and tacit knowledge are crucial and firms can learn in different ways: by exploring, by searching, by using, by doing and by networking. Spatial proximity emerges as a crucial variable. As institutions and enterprises are bound to specific localities and regions, there is clearly a territorial dimension on the generation of innovation. So, in this context, many authors (Storper, 1995; Maskell & Malmberg, 1999; Santos, 2002) argue that the most successful regional economies are those which are characterized by the capacity of firms and institutions to learn – in products, processes and organizational structures – and adapt to changing competitive pressures.

Thus, the research accomplished under these Innovation Territorial Economic approaches allowed enriching the diagnosis of regional development dynamics. The existence of specific competences, the actors' cooperation capacities, the institutional arrangements and solidarity, the collective learning processes and the promotion of the innovation potential, they all constitute fundamental ingredients of the entrepreneurial and territorial competitiveness.

3. Learning processes and innovation in the Tourist Sector

3.1. Some general aspects concerning tourism

The practices and policies in Tourism are quite diffuse, which turns very difficult the quantification of its impacts (Nordin, 2003): the tourist sector comprises several industries and involves a large variety of goods and services. Nowadays, the sector presents, for one side, a supply-side intensification dynamic, in terms of perceived quality and real investment, and, for the other, a consumer's behaviour change process and a demand-side fast evolution. In this sense, Poon (1993) referred to a crisis and to a metamorphosis of the sector. Increasingly the tourist desires to fulfil more and more needs (and more differentiated ones), engendering an additional complex way of "doing tourism". The global instability (economy, war and terrorism, SARS³, internet development, low cost concept, ...) play a decisive role in the modification of the worldwide consumers' behaviour, namely the tendency to decrease the tourist expenses, the prevalence of last minute solutions and to look for more refined tourist destination choosing (Tortelli, 2006). More: there are a large number of peculiarities in the tourist sector that composes it quite differently from all other industry sectors.

The qualitative aspects of the classic format of the tourist demand have change strongly in the last years: there is, today, a plurality of needs (those of transport, hospitality, leisure, relax, health treatment, business development), a wide range of market segments, enlarged seasonality, a major concern about quality provided, a wider need for information and knowledge, etc. In this context, it becomes fundamental the supply-side ability of adapting to the ongoing changes and this is one of the today's key challenges that the tourist sector must face and overcome.

The correlation between tourism escalation and innovation is logical and tends to engender strategic behaviour. However, the research in this field of knowledge isn't significantly developed. The latter reasons can be found in the fact that involves a more incremental sort of innovation (less visible and more integrated) and it is a sector that presents growth rates rather high, mainly due to the increasingly higher income, specially in developed countries.

3.2. Innovation and Tourism

To innovate in tourism means, above all, to look at tourism from a intersectoral point of view, that is to say, tourism conceived as a global outline of intervention, combining the political, the institutional and the entrepreneurial dimensions. As far as the incentive to innovate in tourism, one can resume the three main factors: to survive, to grow and to look for better retribution.

In the tourism sector there are several types of innovation's classification, that Hjalager (1997; 2002) has distinguished in product innovation, process innovation, management innovation and logistic innovation, considering that a) the agents are stimulated by economic forces to introduce any of those types of innovation and b) green consumerism and environmental guidelines are controlling the growth rates and the course of all the innovation's process oriented towards tourism (Hjalager, 1997). The development of strategic sectors demands, in this sense, an entrepreneurial activity capable of carrying out the task of innovating at different levels.

Weiermaier (2004) and Weiermaier & Peters (2002) clarify the potential target-areas of innovation. Hjalager (2002), in a more relational approach, has distinguished innovation accordingly with base concepts brought to discussion by Abernathy & Clark (1985), who

³ Severe Acute Respiratory Syndrome.

have considered that there are four types of innovation: regular innovation, revolutionary innovation, niche innovation and architectural innovation (Figure 1).

		Competence	
		Conserve/entrench existing competence	Disrupt/make obsolete existing competence
Linkages	Conserve/entrench existing linkages	Regular innovation: <ul style="list-style-type: none"> Promoting new investments that raise productivity Training proprietors and staff to operate more efficiently Incremental raise of quality and staff 	Revolutionary innovation: <ul style="list-style-type: none"> Diffusion of new technology to the business firms Introducing new methods that shift composition of staff Attachment to the same markets but with new methods
	Disrupt existing/creating new linkages	Niche innovation: <ul style="list-style-type: none"> Promote the entry of new entrepreneurs to exploit business opportunities Encourage firms to enter new marketing alliances Combine existing products in new ways 	Architectural innovations: <ul style="list-style-type: none"> Creating new events & attractions that demand a re-organization Redefining the physical or legal infrastructure Creating centres of excellence that treat and disseminate new operational research-based knowledge

Figure 1. Types of innovation, adopted by Abernathy & Clark

Source: Adapted from Hjalager (2002: 467)

The horizontal axis represents the interrelations with the clients or the markets, presuming a “creative destruction” or the preservation/improvement of those interrelations; the vertical axis deals with the organizational competences, enhancing the rejection or recreation of those competences or its preservation (with or without enrichment).

It is relatively known the model of innovation that can be adapted to the tourist sector and whose main characteristics are similar to the one applied to more industrial sectors, as figure 2 shows.

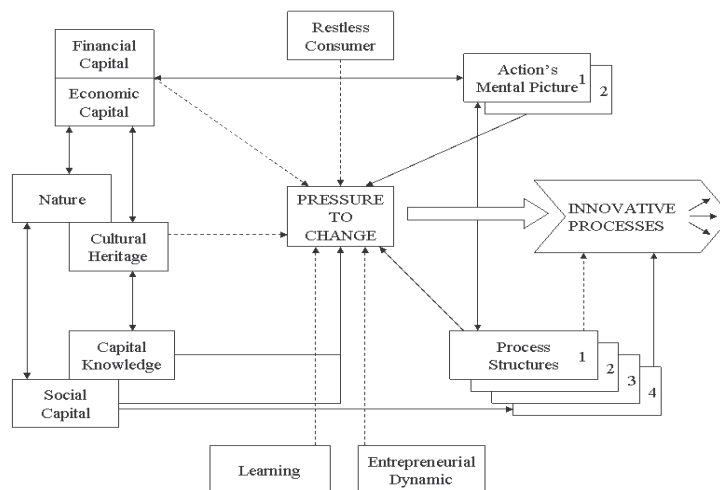


Figure 2. Innovative Process Components

Source: Adapted from Aho (2003: 48)

The figure 2 starts off a wide-ranging set of capital categories (including tourist capital-related aspects) as depending of the action’s mental representation (that control the way we understand the future; once there are more than one representation, there are several ways to understand that future) and depending also of the process structures (internal or

external; directives, programs, etc.) that constrain the productive capacity and the capitalistic resources' evolution; this articulation, at the bottom line, keeps a healthy pressure to turn change possible, including also some demand-related aspects.

The role of tourism in innovation processes involves some specific features and there are three potential sources of inspiration (new ideas, tourist atmosphere and social contacts) in order to turn innovation possible in the tourist sector (figure 3).

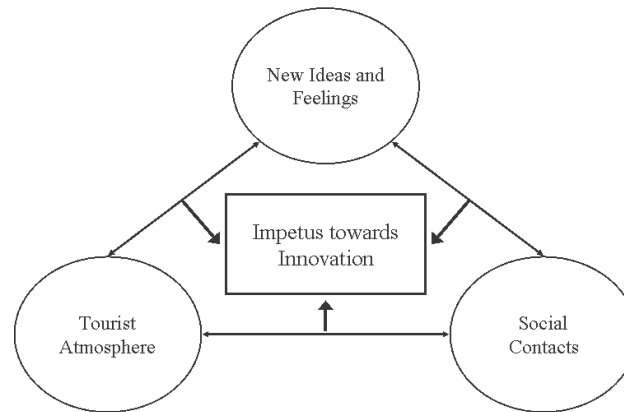


Figure 3. Impetus to innovation sources in tourist environments

Source: Adapted from Aho (2003: 50)

The figure brings back together those sources that affect each other and, above all, allows engendering the need and pushing forward the capacity to innovate.

3.3. The changing paradigm

The globalization paradigm underlies a strong connection between several actors (inducing improvements in the entrepreneurial managerial level, in the information transfer to the market, in the knowledge about competitive capacities in the market, in the development of the concepts of e-commerce and e-marketplace); for that sake, the appealing to information and communication technologies (ICT) becomes a critical tool in order to achieve entrepreneurial competitiveness. The tourist activities enclose some characteristics – heterogeneity, intangibility and it is perishable – that focus on the ICT, turning possible the building of organized and systematic adaptability to the market needs. This was, in fact, one of the sectors that first understood the strategic importance held up by the internet development.

This thematic points out the tourism as an informational product (Werthner & Klein, 1999), hand in hand with consumer's behaviour new tendencies – they search for a better service; they want specific offer; they are more mobile and demanding, but less “faithful”; they are more price-sensitive and compare increasingly; they use a lot more tourist activities but they spend less time using them; The new tourist market is more and more endowed with on-line strategies, aiming to turn easier the answer to market solicitations and to fasten the learning process, in pair with a more efficient client management.

Furthermore, the ICT-based interaction must lead to transaction costs' decrease, because it leads to the disintermediation of a large number of tourist activities; however, it isn't evident the agreement on this feature among researchers. Tourist destinies and services providers put together the capacity to interact directly with the clients, while new kinds of intermediaries are becoming visible in the cyberspace [*cybermediaries*, as Stamboulis & Skayannis (2003) labelled them].

It is known [and described by Roca (1994), for example] the relation between industry sectors and innovation. In the case of tourism, the sector tends to be subjugated to large operators and intermediaries' strategies, following a service-oriented economy of the sector, with a typological organization more and more segmented. One of the main characteristics of the tourist market (in comparison with the mass tourism) is that the difference and originality are the core features to attend in order to be competitive; the personification and market niches are conceptual marks that must be enhanced. The quest for new supply fields, where the local and the unique turns into attraction factors, turns into serious challenges to the tourist sector and one of the keys to successful competition. The new tourist demand engages a factor that was usually unattended: the experience. So far, tourism concern was around visiting, seeing and living in a different dimension. There are nowadays some evidences that point out to the incorporation of experience in tourism activities, even if staying is shorter; this fact must be taken into account from the supply-side strategies and planning (Pine II & Gilmore, 1998). Therefore, as regards to innovation, we are passing from a capital-intensive investment stage to a value creation/re-creation process that embraces experience. Accordingly to Bongini (2006), the relation between the demand for tourism dynamic and the globalization is embodied by some questions that lead to supply-side competences creation. These competences are related with the manner how new phenomena are faced and how to find new demand, how the competition firm behaviour is perceived, how the constant challenge of creation/adaptation of products and services is held up, how to use entrepreneurial strategies and marketing tools, how to build networks – these aspects can be brought together through a regional tourism system.

The need of knowing how the demand is changing (as well as its requirements) enhances the adaptation capacity of the supply-side, using the different types of innovation mentioned before.

The synthesis made about the mutational context in the tourist sector, as well as the innovation proposals to be applied in the sector, are a base of reflection about the proper strategic way to follow in specific cases. This base of intervention involves the adoption of an innovation and integration culture in order to infer correctly the new challenges that tourists, more and more informed, demand. The path is to discover new performing vectors, aiming to reduce the seasonality impact and to value alternative tracks, from a intersectoral point of view, that build up a infrastructure endowment consistent with development plans and the existence of human resources properly qualified, having always in mind that: first, the product is structured, then it is promoted and, finally, it is sold.

The number and dimension of firms that operate in the so-called low density areas (LDA) influences negatively the capacity to innovative behaviour; furthermore, in regions that present these characteristics, the issue is not to explore large scale tourism, but specific small scale tourism. These are facts that bound the capacity and motivation to carry out investment. In financial terms, the increased public difficulties of prompting investment, in pair with the need of promoting public resources optimization, enhance another level of constraints in LDA. Nevertheless, innovation results also from the diverse knowledge types and, increasingly, depends of the learning capabilities of the actors that develop the tourist activities.

Veltz (1996) considers that the globalization brings an added value to the territories, in the sense that they become social partners in the global development process. Thus, in this new economic context, the “local” becomes more protagonist and it must engender a strategic positioning in order to define its product and stay ahead of competitors (Asheim

& Isaksen, 1997). As a consequence, territorial marketing is a tool that territories must use to promote themselves and to widespread its values (Ramos, 2004).

Today, the management of the territory seeks to achieve local competitive advantages. Consequently, it defines a territory's strategic plan, based on three ideas: a) local peculiarities; b) the projection and integration in global spaces; c) the promotion of its distinctiveness (and its development). Sperling (1991) has called the attention to need of positioning a territory, that is, to optimize its value by its advantages (real or subjective) and by its uniqueness (to the market that values difference).

This way, the tourism industry becomes an open door to LDA that want to exploit fully the economic opportunities created by the segmented demands of these niche markets.

4. Innovation, Territory and Tourism: the triple helix interconnection

4.1. Introductory considerations

The tourism sector comprises, mainly (and especially in low density areas), small scale businesses that, inevitably, in order to survive, need to organize themselves in networks to assure an entrenched presence in the market (although it is well known the lack of consistency in the sector), in terms of income, revenue and employment (Nordin, 2003).

This networking, alongside with cooperative actions, can bring advantages: risk attenuation and expanded capacity to deal with unexpected events; wider capacity to face competition; reinforcement of the market share; strengthening of the local image and identity, with positive effects in local economy; transaction costs' cutback; more added value to the clients; larger tendency to innovation generation and combined ideas with high market's potential application. In what concerns this last issue, the access to valuable information involves a unachievable price to the foremost isolated SME's. In this perspective, cooperative entrepreneurial and institutional actions become indispensable for those who aim at developing activities (it is less costly, too), in the search for deeper market knowledge; this increased knowledge might (and should) lead to innovation in a variety of fields.

This approach, relating sector and territories in a development perspective (within an innovative ambience) leads to a configuration of the tourist destination with specific characteristics and objectives that will ask for, not only standard solutions, but also the strengthening of the cooperative culture and the activity's segmentation, aiming to promote integration and consolidation of those tourist destinies.

4.2. Conceptual model of analysis: the Local Tourism Innovation System

Based on the concept and characteristics of the regional innovation system and on the innovation factors at the tourist level, Prats & Guia (2005) developed a Local Tourism Innovation System (LTIS). This system (figure 4) is supported in a specific territory, where tourist sector's internal and external agents interact in a synergic way, through a set of variables (relational and environmental), engendering innovative capacity that, ultimately, leads to the achievement of better results in terms of competitive advantages, wealth and sustainability of the LTIS altogether.

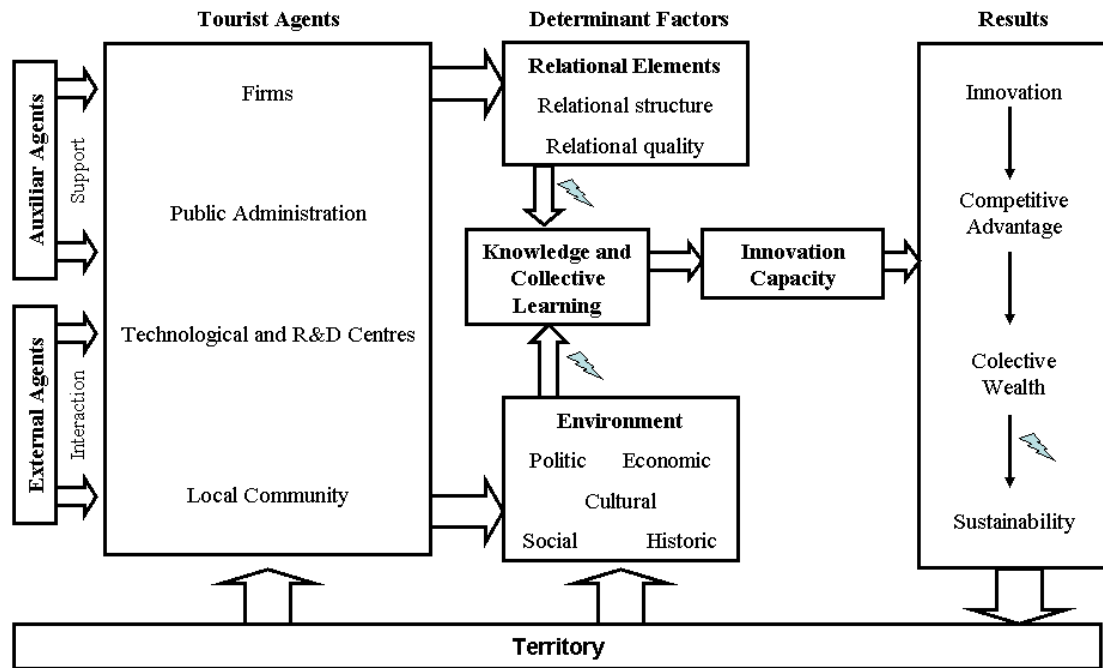


Figure 4: LTIS Model

Note: ⚡ means possible turbulent relations

Source: Adapted from Prats & Guia (2005)

The model is based on the regional innovation system concept and on the innovation conditions, at the tourist and local levels. It is assembled as a conceptual framework, since it involves the innovation components, but also as a reference to public intervention in territories development policies.

In the LTIS, the territory is regarded as an agglomeration of actors and agents, without clear physical or political boundaries. The tourist actors are an essential part of the system, including the firms, the public administration, the research and knowledge resulting from institutional actions, qualification and knowledge transfer and the local community.

The level of performance of these actors and agents is conditioned by the existing cooperative structure and by the level of integration and participation presented in the territories. On the other hand, local involvement also affects the relational capital that can be produced and/or developed (the relational quality must be explored preferably based on proximity). Merging those two conditional elements, arises the local intrinsic capacity of i) engender specific knowledge about the tourist sector in the territory, and ii) creating or developing collective learning processes, allowing the upgrade of agents' competences and skills (Kebir & Maillat, 2004). Since knowledge is the ground feature in innovation, the more developed those two levels are, the larger tends to be the tendency to the arising of ideas potentially applied into the market: there are objective conditions with positive impact in the innovation capacity. If this increased innovation capacity results in innovative elements, then the system will feed itself, since there is creation of competitive advantages whose exploitation will provide a larger effectiveness of the LTIS as a viable system, which can, in turn, become a fundamental contribution to territorial development.

4.3. Networking and specialisation

The more essential issue in the scope of the model is the centrality credited to the role of knowledge and learning (figure 5); these are characteristics that allow the creation and development of innovation capacity, starting from the relational aspects and the local macro-environment (Bocquet et alii, 2006).

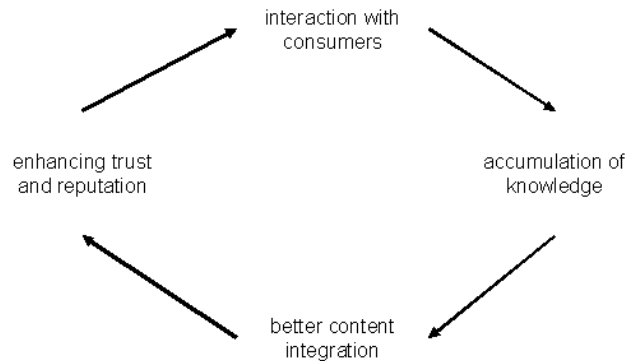


Figure 5. The virtuous cycle of user-based interactive learning
Source: Stamboulis & Skayannis (2003: 37)

In this sense, two aspects can be enhanced: the creation of intensive local/regional networking and human resources more creative and more entrepreneurial-oriented.

Tourism presents, in what concerns to LDA, two main slopes (Silva & Silva, 2003): the sector can involve a potential dominance or a mere local activity's dynamic. The first situation occurs when tourist activities capable of growing stronger and recessive activities (or, at least, activities that present low realization) coexist, revealing some infrastructural debilities, insufficient strategic planning and lack of knowledge about the radial effects of the tourist growth, but also showing actors' voluntarism and willingness.

The second case happens when there isn't capacity to create a strong structure besides restricted impact, presenting clear deficits of basic tourist infrastructure, commercialization processes and channels, disarticulation between the actors, difficulties in identifying the target in the market and low level of controlling localized effects.

In order to overcome the mentioned difficulties, the strategy to follow should be closely linked to the infrastructure creation – either following territorial management policies and investment or including it in local development strategies – pursuing critical limits of specific tourist load, developing the commercialization processes or providing tourist products differentiation, aiming a inter-institutional and inter-professional cooperative climate and monitoring the results gotten. It seems obvious that the LTIS will be more viable in a territory marked by the characteristics of potential dominance.

The LTIS model presents some of the characteristics that apart it from the concepts of the innovative milieu, the learning region and the regional systems of innovation, especially because it emphasises the reconfiguration of the institutional dimensions and deals with organizational issues.

The possibilities of appearance and emergence of an innovation system depend on two factors: spatial and technological/organizational proximity. The conversion of these two proximity factors in a territorial anchored tourist innovation system assumes that they are institutionally structured (collective actions logic and common rules sharing). In certain cases, such as the industrial district, the innovative milieu and the learning region, the consistency of the systems reveal rules and norms that prevail in local socio-economic culture and reduce the ambiguity of the actors' reciprocity of behaviour. In the other cases, the institutionalization of the territory relapses on the creation of formal

institutions that demand the reorganization of the *modus faciendi* and the put into practice a political and administrative action's framework – that is the case of the LTIS.

Given the networking and learning structural deficits of LDA, this seems to be one of the key challenges for the creation of a sustainable tourism strategy. In fact, the baseline for portuguese least favoured regions is very low in terms of their innovative capabilities and potential, in their preconditions for following up a tourist innovation-led regional or local innovation trajectory. So, unlike the core of the discussion on the scope of the GREMI and of the regional innovation system approach, that are concerned about the functioning of innovative regions, the debate for LDA, specially on what concerns the portuguese reality, about regional development strategies on tourism must be centred on the promotion of the necessary conditions that must be fulfilled to initiate and sustain a relational, learning and innovative process. This seems to be the real challenge for almost all peripheral portuguese regions, and a critical assessment must be made considering the implementation of ready-made recipes. Since this means tackling social, economic and institutional inertia, results should only be judged on a medium to long-term basis.

In this way, a LTIS can be broadly understood as a vehicle to establish an organizational and learning framework for all partners involved in the upgrading trajectory both at sector and territorial levels.

An innovation-oriented tourism policy needs to concern itself with the resources that stimulate the process of innovation – the territory is, thus, clearly an innovation creation mechanism, enabling to take full advantage of the existing endogenous growth potential.

5. Cova da Beira territorial overview

In what concerns the development of low density areas in Portugal, all regions located in the interior part of Portugal match this concept. These are fragile regions, with employment and industrial development problems, where people tend to move to more attractive regions (the portuguese coastal area or even other countries) looking for the means to survive and to increase the living standards. This situation is leading to a fast decrease in the population numbers, with all the negative impacts that such fact is causing.

The Cova da Beira region is a NUT III region that includes 3 municipalities: Covilhã (the most important urban center), Fundão and Belmonte. It has about 93.500 inhabitants (about 40% of them live in Covilhã), with an important percentage of elderly persons and with a very negative natural growth rate. In economical terms, 52% of the active population is working in the tertiary sector and about 41% are secondary workers. The textile industries are the main sector of activity, along with agro-food industries and metallic products industries.

The fundamental issue concerned with tourism activities in Cova da Beira is that this region offers the unique product winter-related in Portugal in Estrela Mountain. This is a 2.000 meters mountain, which has (besides the “snow” product) strong possibilities of developing winter and radical sports, as well as nature tourism (trekking, geocaching, etc.); the regional geographic and landscape diversity are also important features to perceive the tourist sector potential. Despite the present low accommodation capacity, some investments recently carried out and some others that are intended can be a sort of “launching ramp” to improve the quantity and the quality of supply-side tourism activities in the region (Leitão, 2006).

Having in mind several Cova da Beira's embedded regional studies, it was possible to work out a SWOT analysis concerning the region (Table 2):

Table 2. Cova da Beira SWOT analysis

Strengths	Weaknesses
<ul style="list-style-type: none"> • Secular industrial know-how in different sectors (textile, timber, agro-food); • Emergence of new regionally-based clusters (e.g., energy); • Existence of some innovative regionally-based enterprises in several sectors (either on traditional sectors or in emerging sectors); • The existence of well succeeded pioneer projects of firms-university partnerships, which might contribute to the development of further similar projects in the area; • High potential for exploiting renewable energy, namely wind and biomass; • Growing internationalisation of the regional economy; • Cultural, historic and environmental heritage as a basis for new types of tourism; • Improved accessibility at regional national and international level. 	<ul style="list-style-type: none"> • Productive specialisation based on low-technology intensive industries; • Quantitative, organizational and skills deficits in most firms; • Very low academic profile of most businessmen; • Lack of perception in the private sector about the need to carry out S&T activities, particularly R&D; • Cheap labour is still the adjustment variable to the dynamics of international markets; • Foreign direct investment tending to divest and move away – delocalisation’s strong tendency in traditional labour-intensive industries; • Low increases in productivity; • Lack of intra- and inter-industrial linkages; • Downward trend in terms of regional competitiveness; • Lack of an effective regional strategic planning experience.
Opportunities	Threats
<ul style="list-style-type: none"> • Knowledge transfer and innovation systems are becoming priorities of the PT government; • Move up the value chain in some sectors like tourism; • Densification of the educational and training system; • Launching of bridging initiatives between the R&D sphere and the productive fabric; • Cross-border cooperation on related or complementary areas, such as tourism; • Emergence and reinforced capability of some regional actors at national and international level; • Launching of new PT and EU programs allow increased funding. 	<ul style="list-style-type: none"> • Danger of increased competition due to globalised markets; • Incapacity to quickly adjust to new economic international demands; • Difficulties to attract qualifying FDI; • Continuation of an excessively centralised political system; • Incapacity to rearrange the regional governance scenario; • Danger of restructuring and deindustrialisation without the launching of alternative new economic activities; • Growing deficits concerning the creation of qualified jobs; • Danger of growing unemployment and out migration.

One important fact must be added to fully understand the importance of tourism in this region: the public interest. Recently, the National Strategic Plan for Tourism (known as PENT) was presented and, among the 10 main strategic products outlined, the nature tourism becomes a fundamental axis of development. Considering the Cova da Beira characteristics, this is one of the major development opportunities that must be faced; further on, there is a high level of dependence of the tourist’s national market and the challenge is to enlarge the consumer’s market to other countries, competing (for example) with the established mountain resorts in Spain.

The opportunity geared by the PENT action’s plan provides the chance to a previous planning of activities, agents’ and actors’ linkages, public and support institutions’ coordination, ..., making it a surplus to the regional development path [see, for example, Carvalho (2006)]. This feature seems quite possible through, for example, cross selling strategies as a complementary approach to the plan.

In order to do so, it is fundamental to understand how innovation and knowledge is engendered and putted into practice in the region. The diagnosis of these aspects may provide useful information to promote synergies and integration in the tourism system,

capable of overcoming the chronological gap of development, and to engender a strong and competitive sector with regional impacts. It is not possible by this moment to go deeper on comments once that the qualitative data is not fully gathered; in this sense, this paper is strongly concerned with the theoretical ground of understanding how innovation and knowledge in the tourism sector is involved with the territorial aspects.

6. Conclusion

The meaning of innovation in the new economy based on knowledge is absolutely fundamental. Innovation is considered today as the most important parameter for development, in a territorial level as well as in the business sector, while it tends to become a first priority in all nations policies. The differences in competitiveness and GDP observed among national and regional economies may, in a way, be attributed to various levels of the innovative activity, its diffusion and absorption dynamics.

Innovation may refer to a new product or service, their production patterns or technology used, as well as an administrative procedure or organizational structure (internally or externally in relation to the customers or suppliers).

In recent years, it has been recognized that innovations are localized. They are now believed to be the result of ongoing and prolonged collaboration and interaction between firms and a variety of actors around them within what has been termed regional innovation systems. The actors in the regional innovation systems include customers, producers, subcontractors, consultants, governmental institutions, research institutes, universities, etc. The capability of regions to generate, apply and exploit new knowledge and to innovate has become a critical factor of their competitiveness. Such advantages, especially in less developed and peripheral areas such as Cova da Beira, do not emerge spontaneously through entrepreneurial actions alone, but are the result of collective actions and initiatives taken by firms, research organizations and governments at various levels.

Most of the research on regional innovation systems has focused on high-tech clusters in large metropolitan regions well equipped with a broad spectrum of all kinds of actors that are strategic in the innovation process. Much less interest has been devoted to regional innovation systems in small and medium-sized regions that are less diversified as regards strategic actors in the innovation process. The focus of our paper relies on the concept of local tourist innovation system, which seems to be quite an interesting analytical instrument to understand the relational and learning capabilities of peripheral regions with tourism comparative advantages, as well as a policy instrument, in order to promote the competitiveness of these territories. A combination of public and private governance at territorial level to promote systemic innovation is advocated, which implies a new operational attitude of the key stakeholders of the business and local or regional innovation system, enhancing the relational and learning dimensions that constitute the basis for a sustainable competitive trajectory.

Enlarging and rejuvenating the tourism industry through innovation, especially in LDA where the small and medium sized enterprises largely dominate the tourism fabric, seems to be a complex task, as diverse organizations from different areas of the tourism value chain are included. Thus, a multi-organizational approach is required, combining in different contexts the three sides of this helix: tourism, innovation and territory.

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