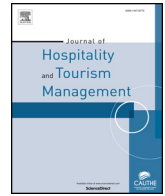




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# Innovation and internationalization as development strategies for coastal tourism destinations: The role of organizational networks

Filipa Brandão\*, Zélia Breda, Carlos Costa

University of Aveiro and GOVCOPP, Research Unit in Governance, Competitiveness and Public Policies, Portugal

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## ABSTRACT

Since the mid-twentieth century that several coastal areas in southern Europe began their tourism development, attracting unprecedented numbers of tourists, and culminating in the emergence of mass tourism. Henceforth, several negative impacts occurred, leading to the loss of attractiveness and competitiveness in the face of emerging tourism destinations. Therefore, there is a need for greater diversification of products and markets that underpin the tourism economy of seaside territories and enhance their competitiveness, which should be based on innovation. Recent territorial innovation models rely on networks, considering that the relationships established among organizations play an important role in the development of new products and services. This research aims at identifying the international dynamics that coastal tourism destinations should adopt within tourism innovation networks, that most contribute to regional-level innovation. Social Network Analysis (SNA) is applied to tourism stakeholders located in the coastal region of Aveiro, being possible to identify the structure and the processes underlying the international ties established towards the development of tourism innovation. The results bring important contributions to coastal tourism policymakers and governance, as it allows to (i) design innovation strategies based on international networks that increase competitiveness; (ii) acknowledge the most important type of organizations in coastal tourism innovation; and (iii) promote the geographical diversity of stakeholders in the network in order to capture new knowledge leading to innovation and to avoid the “lock-in effect”.

## 1. Introduction

Tourism is one of the fastest-growing industries worldwide (Gross, 2018). Within this growth, coastal areas represent a significant share, by attracting hundreds of millions of tourists each year, and influencing the increased flow of visitors, especially in the Mediterranean and Caribbean (Edgell, Allen, Smith, & Swanson, 2008; Gössling, Hall, & Scott, 2018). In fact, one of the most profitable industries in coastal areas is tourism (European Commission, 1999; Hall, 2001). “Sun, sea, sand” is the main tourism product in coastal areas (Zadel, Gračan, & Milojica, 2018), however, it should be noted that coastal tourism is strongly characterized by seasonality, since coastal areas are essentially sought after in the high season (Batista e Silva et al., 2018; Cuccia & Rizzo, 2011; Ferrante, Magno, & De Cantis, 2018). Nonetheless, there has been an effort to reduce seasonality by investing and modernizing the different infrastructures, preserving local heritage, supporting the development of complementary products, and using differential pricing on a temporal basis (Cuccia & Rizzo, 2011; Hall, 2001).

This way, tourism has positively contributed to the economy of

these territories, in particular through job creation and income generation (Zadel et al., 2018), which have enabled them to improve their accessibility and stimulate their growth and attractiveness, with the subsequent increase in residents’ quality of life (Freitas, 2010). Nonetheless, the classification of coastal zones has also generated negative environmental and socio-cultural impacts (Drius et al., 2019) and, ultimately, diminished their attractiveness and competitiveness (Manning, 1999). To ensure coastal tourism long-term existence, a balance between economic advantages and socio-cultural and environmental sustainability is needed (Mustapha, Zulkifli, & Awang, 2018). It is, thus, necessary to redesign the mass model that characterizes coastal tourism destinations by innovating the development models and tourism products.

The purpose of this paper is to analyse the innovation performance and network innovation processes of tourism firms located in coastal destinations, particularly with regard to international connections, thus focusing on internationalization patterns within innovation. It aims to present the specific structure and dynamics of institutional networks and their impact on innovation, namely through the: (i)

\* Corresponding author. Campus Universitário de Santiago, 3810-393, Aveiro, Portugal.

E-mail addresses: [filipa.brandao@ua.pt](mailto:filipa.brandao@ua.pt) (F. Brandão), [zelia@ua.pt](mailto:zelia@ua.pt) (Z. Breda), [ccosta@ua.pt](mailto:ccosta@ua.pt) (C. Costa).

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characterization of innovation performance of tourism firms in relation to the types of innovation introduced, the level of innovation, and involvement in innovation-support activities; (ii) analysis of the nature, type and geographical scope of network relationships in which tourism firms are involved to develop innovation from a coastal destination perspective; (iii) identification of the structure and dynamics of tourism networks that contribute, in the most positive and significant way, to the development of innovation at the destination level; and (iv) identification of relationships with international stakeholders that promote tourism innovation.

The results of research developed in the coastal region of Aveiro (Portugal) are presented for this purpose. Two complementary studies were carried out. The first one addressed the firms located in the region and whose activity is classified, under the Tourism Satellite Account, as characteristic of tourism. Data collection was completed through a questionnaire administered online and by telephone to 191 firms. The aim was to identify their performance in terms of innovation, as well as their cooperation levels. The response rate was 50.8%. The second study addressed regional organizations focused on the development, management, and innovation in tourism, in order to analyse specific networks supporting regional tourism innovation. Data was collected through face-to-face interviews with representatives of education and research institutions, public tourism organizations, business tourism associations, and innovation agencies. Data was subjected to sociometric analysis using the UCINET 6.0 software. This allowed for a complete regional perspective on the dynamics of coastal destinations in terms of tourism innovation.

The paper is organized as follows: first, the literature on coastal tourism destinations is reviewed, namely in what concerns strategies to relaunch stagnated areas, stressing the relevance of innovation and internationalization, following which the role of organizational networks is addressed. Subsequently, the methodology used for the empirical study is described in more detail. Finally, research findings are reported and discussed, and their implications for further research and applications are highlighted.

## 2. The stagnation of coastal tourism destinations: How to relaunch growth?

From the mid-twentieth century onwards, several coastal areas in southern Europe began their development process, attracting an unprecedented number of tourists (Davenport & Davenport, 2006). Factors such as post-war prosperity, paid and longer vacations, transport developments, and aggressive package tour sales strategies have boosted tourism's rapid growth, resulting in economies of scale and the emergence of mass tourism in these destinations (Bramwell, 2004). However, the evolution of coastal destinations has been proving the validity of the Tourism Area Life Cycle model proposed by Butler (1980). According to it, destinations experience the first stage of exploration and later growth, until they reach maturity and consequent stagnation. Destinations inevitably move towards decline, considering the number of visitors and the physical infrastructures that integrate it (Butler, 1980; Chapman & Speake, 2011). This phenomenon is observable in stagnation, decline and effort to revive first-generation tourism resorts (located in Northern Europe and North America), as well as in the recent trend towards the stagnation of second-generation destinations (e.g. Mediterranean) (Canavan, 2015).

Faulkner and Tideswell (2006) highlight some of the symptoms that coastal destinations present when they reach stagnation, which may include (i) changes in the tourism market, which becomes mainly composed of daily visitors, lower socioeconomic classes with reduced spending on the destination, organized mass tourists, repeat visitors, leading to high seasonality and reduced attraction of more distant markets; (ii) increased competition from new emerging destinations, as the destination is no longer fashionable; (iii) old and obsolete infrastructures, with a high number of man-made attractions outnumbering

the natural resources, which made the destination popular early in its development stage; and (iv) decrease in profits of tourism businesses.

Bearing this in mind, over the last decades, doubts about the future economic sustainability of the mass tourism model in the coastal areas of southern Europe have led policymakers to call for greater and more effective product diversification (Bramwell, 2004). In fact, several European beach resorts have considered whether they should stick to tourism or abandon this economic activity, as their decline has been endemic since the 1970s (Gale, 2007).

As Richards (2006) argues, on the demand side, there have been significant changes in the motivations and behaviour of visitors. Modern tourists are increasingly demanding, do not want to be identified as part of the “masses” and no longer find satisfaction in inflexible all-inclusive package tours to traditional destinations, such as the Mediterranean coast. In contrast, these “post-tourists” are increasingly looking for customized and differentiated products at reduced prices. In this context, it is essential to avoid that beach resorts remain “divorced” from their environment, which makes them more and more similar (Butler, 2004, pp. 159–169; Richards, 2006), by implementing differentiation strategies based on authenticity and offering unique and memorable experiences.

It is expected that tourism in the coastal areas of the Mediterranean will continue to grow. However, in several places there has been a marked stagnation in the number of tourists or even a reduction in their overall market share, as a result of the emergence of new beach destinations (Agarwal & Shaw, 2007; Richards, 2006). New tourists search for exotic holidays in different places with guaranteed sunshine leading to the decline of traditional destinations (Rawcliffe, 2009). In fact, nowhere has the impact of increasing competition been felt more acutely than in Mediterranean beach destinations, where several resorts and islands have experienced a decline in tourist arrivals from traditional northern European markets, which now prefer emergent and exotic destinations, in the Indian and Pacific areas (Ioannides, 2006, pp. 77–84). On the other hand, the new outbound markets are physically distant, namely in Asia (Bramwell, 2004), who choose to visit these competing destinations. The decline of traditional seaside destinations brings a set of negative outcomes. Canavan (2015) identified the following in the Isle of Man: closed shops and tourist facilities, losing “critical mass”, degraded town centres, reduced economic impacts, investment, and competitiveness, natural, cultural and built landscape damage, loss of historic buildings, hotel and leisure facilities and the subsequent restrictions on indoor and outdoor leisure opportunities, sense of peripherality due to reduced outsider interest.

Smith (2004) argues that, to avoid decline, coastal destinations should move towards a multifaceted rejuvenation process based on three distinct, but complementary, approaches: regeneration, revitalization, and reinvention. These three processes focus on the development of innovation, both in terms of products, processes and marketing strategies, and of innovation that promotes the growth and development of the territory through the creation of spillovers, particularly concerning regeneration. Economic diversification of coastal areas through tourism and leisure leads to job creation, development of small and medium enterprises (SMEs), increased visitor spending and multiplier effects (Smith, 2004). Albaladejo and Martínez-García (2017) confirm, through a multi-logistic growth model, that investment on infrastructures and innovation can lead to a process of continuous birth of new life cycles (logistic growth pattern) which superpose the old ones, that is, the destination can rejuvenate and new life cycles can emerge. International coastal destinations are considered as privileged locations for the development of innovation and creativity because they are endowed with internal and external connections (networks) that generate relevant flows of people, ideas and capital (Romero-Padilla, Navarro-Jurado, & Malvárez-García, 2016).

### 3. Innovation in coastal destinations

Several concepts and definitions of innovation have been emerging along the years, depicting the evolution of its theory and practice. From the early linear, neoclassical models, innovation is evolving into open, systemic, and holistic processes, based on collaboration, and on inter-organizational and inter-sectoral relationships fostered by networks (Brandão & Costa, 2019). The development of tourism destinations, and the stimulation of innovation that spurs it, derive, to a large extent, from the existing collaboration networks, particularly from the stakeholders that exert the greatest influence on the social structure (Brandão & Costa, 2014; Brandão, Costa, & Buhalis, 2018; Dredge, 2005; Novelli, Schmitz, & Spencer, 2006; Paget, Dimanche, & Mounet, 2010; Strobl & Peters, 2013; Sørensen, 2007). Despite the acknowledgement of the relevance of networks, Gomezelj (2016) concludes that only 12.4% of all published research on tourism innovation approach networks, alliances, clusters or other collaborative arrangements. In addition, the focus is on the importance of networks for innovation in small and medium enterprises (SMEs), disregarding their role at destination level. Sainaghi, Phillips, and Zavarrone (2017) go further to conclude that studies on networks as antecedents of innovation are scarce and, thus, this remains a relevant area for future research.

In what concerns beach resorts, Agarwal and Shaw (2007) point out that innovation has a fundamental influence on their future, enhancing their competitiveness, as a result of an adjustment to the new patterns of tourists' consumption, as well as the creation of new products, services, and processes, which lead to competitive advantages. In this context, the role of organizational networks is emphasized, by allowing a greater connection among the various actors involved in the destination development process and, consequently, the creation of joint knowledge and its subsequent transfer that will percolate through the network. These processes are the basis of territorial innovation and will give rise to new products and services, developed based on the destination's resources and in response to the needs of the 'new tourist'.

Despite the diversity of studies focusing on destination development, evidence on the role of innovation is reduced. Some authors, including Brooker and Burgess (2008), argue that when destinations reach the maturity stage, where most coastal areas lie at this time, in order to avoid their decline, it is critical to implement rejuvenation strategies based on a set of factors, such as cooperation and collaboration rather than competition, development of comprehensive strategies with the input of all stakeholders (participatory planning), adaptation to market changes, development of incremental and radical innovation, and emphasis on diversification and differentiation. Also, Faulkner and Tideswell (2006), Tinsley and Lynch (2001), and Skinner (2000) argue for the need to establish collaborative networks and strategic alliances among tourism stakeholders in different locations, both public and private, and local residents, so as to achieve sustainable development, to maintain or increase competitiveness and to ensure successful rejuvenation.

Innovation is relevant not only when destinations are in decline, but at all stages of development, especially if we consider that trends in consumer behaviour change rapidly, accelerating the life cycle of tourism products. Despite the small number of studies that relate innovation and tourism development, it is known that the dynamics associated with who introduces innovation, the levels of innovation developed and where it occurs depend largely on the phase of the product life cycle (Klepper, 1996).

Audretsch and Feldman (1996) argue that clusters that are in the introduction phase rely heavily on innovation developed by small firms, and radical innovation is also more frequent. Diversity of business opportunities and reduced entry barriers attract new businesses. The diversity of (new) products is high and, as such, competition is based on quality. Later, in times of growth, the rate of innovation is maintained, however, it is now developed by large firms, being mostly incremental and based essentially on process innovation. In the maturity stage,

which corresponds to the standardization of products, innovation rates are low. Indeed, the tendency for firms to innovate, and for innovation to create spillovers in the destination, is higher during the initial stages of development, and it is more dispersed in later phases (Audretsch & Feldman, 1996), in which destinations become massified. If destinations reaching this stage do not have the ability to reinvent themselves and find new growth models, they will decline.

Considering that resources are indeed more standardized, coastal destinations may find it difficult to find new business areas or governance models that leverage their rejuvenation. Without a single formula for all, what is fundamental is that these territories and firms develop structural conditions supporting future development. That is, rather than creating innovative products and processes, they should first implement management and governance models and ensure the existence of factors that allow sustainable development in the future.

Clar, Sautter, and Hafner-Zimmermann (2008) argue that decline occurs because firms lose capacity to innovate and competitiveness due to the lock-in effect resulting from excessive reliance on networks and tacit local knowledge, which becomes obsolete, neglecting connections to actors outside the cluster. The process of redeveloping these destinations depends on its management strategies, which should be proactive, aiming at the creation of diversified networks, including external actors that ensure the introduction of new knowledge in the destination to serve as the basis for innovation.

Innovation models have been changing significantly in recent decades. The organizational configurations, inputs, drivers and barriers of innovation have evolved as a result of different socio-economic contexts, competition, market changes and the dynamics between scientific and market knowledge. If the first models of innovation were endowed with a linear nature, in which the processes resulted from a set of sequential events within firms (linear or neoclassical models), nowadays the dynamics have changed. A number of limitations have been pointed out to these models, namely that innovation is the result of a process without any interactivity between the different functional units of the companies and, above all, between them and knowledge, both scientific and market (Chaminade & Roberts, 2002; Cooke & Morgan, 1998; Rothwell, 1994).

In response to these limitations, Kline and Rosenberg (1986, pp. 275–304) and Rothwell (1994) developed the first models approaching innovation as an interactive process developed inside and outside companies, as a set of intra- and inter-organizational communication paths that combine the functions of the company, both to the scientific community and to the markets, moving away from the linear models. The most recent approaches, evolving from these interactive and integrated models, advance to a concept of innovation that relies on the relevance of networks. In addition to integrating their functional units, firms need to strengthen their links with other organizations that are part of the innovation system. Interaction and knowledge sharing are fundamental for innovation, especially when they result from links to other sources of knowledge, such as companies, universities, research centres, consumers and suppliers (Brandão et al., 2018; Costa, 1996; Lundvall & Borrás, 1997; Nieves & Diaz-Meneses, 2018; Ozseker, 2019). It is not just the sharing of simple information. The recognition of the importance of tacit knowledge for innovation has led to a focus on the mechanisms that promote the creation, transfer and use of all types of knowledge. Thus, the most current models are based on knowledge, as opposed to simple information, and on the connectivity of the actors to their surrounding environment, rather than on the establishment of formal networks (Chaminade & Roberts, 2002). According to Ozseker (2019, p. 213), "in tourism industry, local knowledge can play a major role in the configuration and evolution of the destination as a tourism product" and, thus, its innovation ability can transform the territory in a local innovation system, depending on the diversity of agents and the networked relationships established among them (Brandão et al., 2018). However, besides local sources, external knowledge is significant to assure a good innovation performance at destination level

(Booyens & Rogerson, 2017).

As mentioned by Cooke and Morgan (1998, p. 17), “the wider environment of the firm – the social and political system in which it is embedded and with which it interacts – can play a vital role in facilitating (or frustrating) its learning capacity”. This line of thought emphasizes the fact that innovation is a systematic, and socially and institutionally rooted process. Moreover, Fagerberg (2006, p. 4) argues that organizations rarely innovate in isolation, since innovation “results from continuous interaction between different actors and organizations”, thus confirming the fundamental role of networks and relationships between organizations. In the study of Divisekera and Nguyen (2018), which focused on the determinants of tourism innovation, collaboration is considered as the most significant determinant factor.

Territorial-based innovation models emerge in this context, as a result of the valorization of local and regional initiatives as a source of economic development and as an alternative to national economic policies. In these approaches, endogenous development and the role of local institutional dynamics form the basis of regional strategies (Moulaert & Sekia, 2003). Innovation has a direct and positive impact on tourism destinations’ competitiveness, as it makes tourism firms more advanced, efficient, and productive. However, the relevance of innovation goes beyond the enhancement of competitiveness, as it can bring prosperity by providing a better quality of life for the destination (García-Sánchez, Siles, & Vázquez-Méndez, 2019), which is particularly relevant in mature and tourism-dependent coastal areas that experience overcrowding in the peak season and the loss of economic activity in low season.

#### 4. Internationalization of coastal destinations

As a result of globalization, of vertical and horizontal integration and of the opening of global borders, competition has become fierce and has led to increasing pressure on tourism companies, especially on SMEs (Smeral, 1998). On the other hand, globalization can also be seen as an opportunity to benefit from the opening of the global market (Song, Li, & Cao, 2017). Rising competition is making companies more efficient and effective, and aware that in order to compete globally, they need to connect with other stakeholders. The importance of these links, as facilitators in access to knowledge, resources, markets and technology, is enormous, especially in a globalized sector such as tourism, with globalization being carried out through different phases, characterized by different forms of internationalization, namely at the level of collaboration and knowledge acquisition (Hjalager, 2007).

Hjalager (2007) provides a descriptive model of the globalisation of the tourism industry, aiming to understand the increasing complexity of dynamic interactions across borders. The level of analysis of the model is the tourism community and its actors, and the globalisation process is seen as the result of both business decisions of single enterprises and political decision-making. The model suggests that individual firms, destinations and countries, by embracing globalisation in stages, may be able to control costs, gain market shares, and enjoy access to competencies and other important resources.

The development of international activities in the late twentieth century stimulated considerable academic interest on the topic, however, few studies have focused on the internationalization of the tourism sector, only recently starting to receive more attention from international business scholars (Breda & Costa, 2013). A significant part of the literature on internationalization does not address tourism destinations, being equally scarce the one focusing on the tourism industry (Pillmayer & Scherle, 2014). Some authors (e.g., Alonso Rodríguez, 1994) argue that the way in which internationalization processes take place has evolved, based mainly on cooperation agreements translated into strategic alliances, including companies, governments, international entities, among others.

The destination development process is closely linked to the

intensification of the processes of urbanization and internationalization of tourism, since this activity attracts a set of services, equipment and support infrastructures, in addition to workers who migrate from other regions. The internationalization of tourist destinations should, therefore, be seen in a systemic perspective, integrating the territory and the political, economic, environmental, and social dimensions that underlie it (Mira & Breda, 2019). This should be supported by a strategy of territorial and organizational development that encourages commercial transactions and the movement of people between countries. In this sense, tourism is, by its nature, an internationalized industry, since it incorporates the individual movement of people between different countries, being coastal areas the ones most directly involved in international tourism since they concentrate a large proportion of international tourism arrivals. A multivariate linear regression analysis carried out for the Portuguese context concludes that agglomeration, especially in great centres and on coastal areas, is statistically significant for the internationalization of the tourism sector (Oliveira, Braga, & Costa e Silva, 2019).

Ayoun, Johnson, Vanhyfte, and O’Neill (2010) argue that the internationalization of destinations also involves the inclusion of this topic in the training and education of tourism professionals. Creating awareness among new industry professionals regarding the best practices, advantages and risks of internationalization appears to be one of the greatest allies in the successful discovery of collaboration and development opportunities for companies and regions. In this way, internationalization is no longer just a matter of internal strategic management of companies, but it appears as a much more comprehensive process, in which different actors of the destination may have a role to play. It is, therefore, necessary to analyse the specificities of the territories, whether in the economic, political, cultural or social level.

The major challenges facing the internationalization of coastal destinations are associated with the development of governance models capable of harmoniously articulating competitiveness, strategic alliances and innovation at the meta-organizational level. In fact, the large number of stakeholders involved in defining the identity of these destinations and the different characteristics of tourism products, as well as their cultural and territorial diversity, legal nature, size, influence and pressure is so vast that it is difficult to build a congruent international image of both products and destinations (Mira & Breda, 2019).

#### 5. The role of organizational networks in innovation and internationalization of coastal destinations

Society is built as a communication network (Castells, 2010). In terms of innovation, ideas exist and come to life within these networks, which include relationships between firms, governments, public organizations, knowledge-producing centres, interest groups and social movements (Considine, Lewis, & Alexander, 2009). Networks provide access to sources of information and skills that are more diverse than those available to firms, thus increasing the level of innovation within companies (Powell & Grodal, 2006, pp. 56–85).

Network relationships bring unique and irreplaceable value, as well as access to unparalleled resources and expertise from other organizations, providing actors with critical conditions to innovate. Networks guarantee timely access to external knowledge, resources, and cost savings that would otherwise be inaccessible to an isolated company. At the same time, they allow testing the organization’s internal competencies and learning capacity (Costa, Breda, Costa, & Miguéns, 2008, pp. 96–114; Kofler & Marcher, 2018; Vonortas, 2009, pp. 27–44).

Swan, Scarborough, and Robertson (2003) relate different types of networking (global/inter-organizational vs. local/intra-organizational) with specific episodes of the innovation process (invention, diffusion and implementation) and knowledge transformation processes. The authors report that during the invention process, the focus is on social construction and the creation of new knowledge. At this stage, relations are restricted and mostly developed at the local/regional or intra-



organizational level. As the process evolves, the group of stakeholders tries to identify potential participants who have information and experience relevant to innovation. At a later stage, the focus is transferred to obtaining knowledge through global or inter-organizational networks, in order to legitimize and validate them within the community. In practice, as networks evolve, they feel the need to incorporate actors and global knowledge. This dynamic finds parallelism in the process of innovation that accompanies the development of tourist destinations. Effectively, as they evolve and move to stages of maturity and stagnation, it is critical that new knowledge is introduced to respond to the necessary regeneration and innovation process.

For innovation to occur continuously and have positive effects on the destination, it is crucial that networks are as diverse as possible. They should include companies, public organizations and knowledge producers. However, diversification should not be limited to the typology of organizations involved, their location should be also considered. This is because, according to Morgan (2001, pp. 20–23), we can differentiate local, tacit, rooted, person-embodied and context-dependent knowledge, strongly linked to the territories and the people who integrate them, from more global knowledge forms. This dichotomy between local buzz (Bathelt, Malmberg, & Maskell, 2004) or sticky knowledge (Markusen, 1996), consisting of tacit knowledge transferred within the region, and the global pipelines, or codified knowledge that travels the world through different means of communication, must necessarily coexist to ensure the advantages and unique conditions for companies to innovate and avoid the lock-in effect. As concluded by Ozseker (2019), the successful innovation and competitiveness of tourism destinations results from the relationships established with non-local networks (national, international or global). Tourism networks should be built on a wide variety of relationships to obtain diverse knowledge, as it will foster the development of more impactful innovation and overall destination sustainability (Martínez-Pérez, Elche, & García-Villaverde, 2019). Effectively, a dense network based on solid connections within tourism destination has strong impacts on innovation, as it promotes mutual trust, reciprocity, transfer of tacit knowledge and collective learning (Bellandi & Caloffi, 2010; Cooke, 1996; Costa et al., 2008, pp. 96–114; Powell, Koput, & Smith-Doerr, 1996; Vonortas, 2009, pp. 27–44). However, these physically, culturally, and organizationally close links must be combined with links to external (i.e. international) organizations (Booyens & Rogerson, 2017) that inject new and diverse knowledge into the tourism system and avoid the decline of coastal destinations.

According to Jacobsen (2005), innovative tourism destinations are those that demonstrate, among other factors, the capacity to develop processes of collaboration and effective partnerships with other actors in the tourism system, as well as to obtain and share knowledge, and to identify and acquire the necessary resources for the innovation process, namely financial, infrastructure, and knowledge.

It is important, thus, to recover the idea of Williams and Shaw (2010), which highlights internationalization and global connectivity as fundamental dimensions of innovation in tourism. Lundvall and Borrás (1997, p. 106) argue that “only a minority of firms innovate on their own, and that most innovations involve a multitude of organizations”. In tourism, the situation is no different. Innovation in tourism requires cooperative networks and systems. In this context, territories play a fundamental role, since these dynamics must be understood from the perspective of the destination, where tourism companies operate and are mutually dependent on the development of innovation at the destination level (Sundbo, Orfila-Sintes, & Sørensen, 2007).

The relevance of networks for the internationalization of companies has been extensively documented in the literature, being a natural evolution of the Nordic school of thought. This approach has its roots in the importance of the relationship between all actors in the value chain, popularized by Håkansson (1982, 1987). The underlying idea is that these stakeholders and the environment in which business is conducted affects the way companies interact. In this sense, the complementarities

between them allow the creation of a network of relationships in which internationalization occurs when the network extends to other countries (Moreira, 2009).

The first work to apply the network theory to international business was that of Johanson and Mattsson (1988, pp. 287–314), who presented the network approach to internationalization, and concluded that the degree of internationalization of companies depends on the networks they belong to and their position in them. These authors conceive internationalization as a cumulative process in which relationships are established, developed, maintained, and continuously disrupted to achieve the firm's goals. Progressive learning and the acquisition of knowledge through interactions within the network are of great importance.

Firms use their networks to access resources, improve their strategic position, control transaction costs, gain skills and legitimacy, and deal with technological change (McDougall & Oviatt, 1996). Through networks, it is easier to compete, both domestically and internationally, in order to achieve economies of scale and generate synergies (UNWTO, 2001). Cooperation and partnerships, thus, play an important role in the internationalization process, preventing many of the location-specific risks due to “foreignness” and inadequate knowledge of the operating environment, as partners tend to compensate these shortcomings by providing information and interpreting market information (Etamad & Wright, 2003, pp. 3–14; Forsgren, Holm, & Johanson, 2005).

There are records of firms that have worked together to identify solutions to important issues related to the global competitiveness of the destination, such as the decline of certain coastal areas, the need for rural diversification and the complexity of urban regeneration. By stimulating networking, providing infrastructure, transferring knowledge and sharing good practices, SMEs at a local level can become part of a self-sustaining business cluster (Novelli et al., 2006). The aim of clusters and of tourism networks is to highlight the availability of certain activities at a destination and to lead SMEs, which would normally work in isolation, to cooperate and build a successful tourism product. In a study developed by Jesus and Franco (2016), hotel managers found that the most important innovative aspects deriving from networks was greater visibility, higher service quality standards, the development of new products and services, new forms of selling and promoting their products, increased destination competitiveness, and advertising the region outside with lower costs and risks.

It is undeniable that networks bring important benefits for tourism companies and destinations. This social capital has been widely studied and reviewed in this paper. Nonetheless, further knowledge should be advanced regarding the dynamics of coastal destinations, characterized by shorter life cycles (Butler, 1980), frequently experiencing decline and subsequently in need of engaging in processes of regeneration based on innovation. In this context, network theory can bring important insights, especially in what concerns the international links established by tourism firms and destinations. Specifically, network theory and social network analysis allow identifying the dynamics that, although supported by internal links, enable the internationalization of knowledge and innovation processes, fuelling the re-birth of coastal destinations in decline. It is fundamental to pinpoint which type of actors perform paramount roles within tourism innovation based on international links, as well as the processes underlying them. This will allow coastal destinations to engage in collaborative structures that will foster destination-level innovation.

## 6. Research methods

This research aims to identify the international dynamics that coastal tourism destinations should adopt within tourism innovation networks, that most contribute to regional-level innovation. To do so, two complementary studies were carried out, which allowed for a complete regional perspective on the dynamics of global destinations in terms of tourism innovation: one addressing tourism firms; and a

second one focusing on innovation supporting networks in which regional tourism organizations are included.

In the first case, the objective was to identify their performance in terms of innovation, as well as their cooperation standards. Data collection was completed through a questionnaire administered online and by telephone to tourism firms located in the coastal destination of Aveiro (Portugal). When conceptualizing tourism as a system, the definition of tourism supply is best achieved when considering the guidelines of the Tourism Satellite Account (UNSD EUROSTAT/OECD & UNWTO, 2008). This approach allows defining the tourism economic structure through the identification of tourism-specific activities. Therefore, for the purpose of this study, tourism firms considered as the population are those that fall into the following categories: (i) accommodation; (ii) food and beverage; (iii) passenger transport services; (iv) transport rental services; (v) travel agencies, tour operators and tour guides; (vi) cultural services; and (vii) recreation and leisure services. In order to obtain a more precise definition of these groups of firms, each category was further analysed, and specific types were detailed. This helped to create a more comprehensive basis for the subsequent definition of the target population. This first approach was developed based on the Statistical Classification of Economic Activities in the European Community, commonly referred to as NACE codes. The overall population comprises 191 tourism firms, divided as represented in Fig. 1. Due to its reduced size, the option was to survey the entire population. A response rate of 50.8% was achieved.

In the second study, data was collected through face-to-face interviews with representatives of the following categories of organizations: education and research institutions (5), public tourism organizations (4), business tourism associations (4), and innovation agencies (2). The obtained relational data was subject to sociometric analysis using the UCINET 6.0 software. The analysed dimensions are: (i) the network centrality, which identifies the extent to which nodes are in the centre of the network, having a higher importance or prominence or, in this case, those that have a significant role in internationalizing tourism innovation processes within the network; (ii) connectivity, or the extent to which actors and the overall structure are linked; and (iii) the External-Internal Index, which measures group embedding, based on the comparison of the numbers of ties within groups and between groups, namely regarding national and international connections. To obtain reference values in order to compare the structure with, a random network of the same size and order was calculated using the Erdős Rényi method (Baggio, Scott, & Cooper, 2002; Scott, Baggio, & Cooper, 2008). The results of the metrics computed for the real networks were then compared against the reference (null) model.

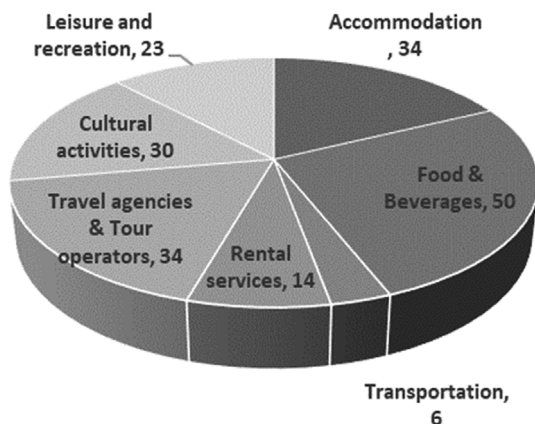


Fig. 1. Population of tourism firms  
Source: own elaboration.



Fig. 2. Location of the region of Aveiro  
Source: own elaboration.

## 7. The role of networks in innovation and internationalization of the region of Aveiro

### 7.1. Characterization of the region

The region of Aveiro, located on the northwest coast of central Portugal, includes 12 municipalities (Fig. 2), being highly polarised by the city of Aveiro. The experiences in the region are closely linked to the traditional activities of salt production, fishing and agriculture. It is a wetland, essentially sandy, dominated by the Vouga River basin and the Estuary of Aveiro, which is one of the main tourist attractions. The beaches, gastronomic diversity, the richness of natural and cultural heritage, and thermal water spas are other attractions of the region, which has a great potential to establish itself as an important tourism destination in the central region and at the national level. In fact, tourism has experienced significant growth in recent years, and it can be said that the region is in its development phase. The main market is still the domestic one, which represents 61.5% of the total, followed by the Spanish market (18.3%) (INE, 2018).

### 7.2. Tourism firms' innovation patterns

Results show that 84.4% of the firms participate in innovation processes. In general, since there is a strong correlation between internationalization and innovation at the firm level (Altomonte, Aquilante, Ottaviano, & Bekes, 2013), this represents an extremely favourable scenario for tourism companies in Portugal, contrary to authors arguing that tourism firms rarely innovate (Mayer, 2009). Accommodation and food and beverage companies experience a similar rate of innovation (27% and 26%, respectively), representing more than half of the innovative firms (Fig. 3).

The most common types of innovation are product (53%) and process (53%), followed by marketing innovation (48%). Organizational innovation represents only 21%. The high percentage of process innovation can be explained by the region's stage of development. After the consolidation and standardization of tourism products and services, it is usual for companies to focus on improving quality and operation standards by developing innovations that optimize processes (Gort & Klepper, 1982).

One of the ways to characterize the degree of novelty of new products is to assess whether they are new to the market or new to the company only, indicating whether firms are risk-takers or just followers, and whether the innovation is primarily incremental or more radical. In the region of Aveiro, 55.8% of companies state that their

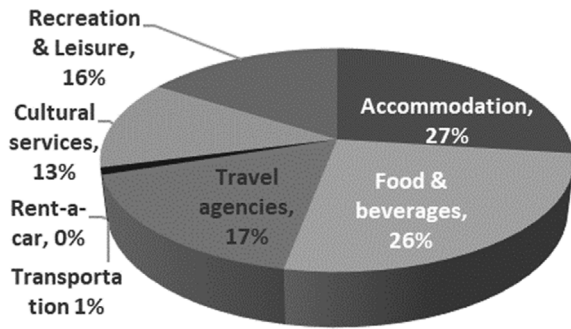


Fig. 3. Innovative tourism firms, by subsector  
Source: Own elaboration.

innovations are new to the market and, therefore, represent a greater investment in research and development (R&D), marketing and operations. These companies foster a more entrepreneurial environment, as well as R&D to innovate and have more and stronger linkages with knowledge producers. Comparing with the results of a similar study carried out in the inland Douro region (Brandão, 2014), the differences observed follow the pattern observed in Portugal's general economic scenario, where coastal regions are more active and dynamic, concentrating the majority of the population, resources, equipment economic activities and accessibility.

Results demonstrate that innovative companies are the ones that are most involved in innovation networks (61.7% vs. 48.5%). These results confirm the findings of Costa et al. (2008, pp. 96–114), Vonortas (2009, pp. 27–44), Faulkner and Tideswell (2006, pp. 306–335), Tinsley and Lynch (2001), and Skinner (2000), who argue that dense networks and strategic alliances in tourism destinations positively impact the development of innovation and the destinations' successful rejuvenation. Cooperation partners are mainly other tourism firms, especially travel agencies (66.0%), accommodation establishments (46.8%), restaurants and cultural and recreational activities (34.0% each) (Fig. 4). Kofler, Marchera, Volgger and Pechlaner (2018) found that nearly 90% of tourism firms located in Tyrol are engaged in formal inter-organizational cooperation, a value significantly higher than the one registered in Aveiro. However, less than half cooperate for innovation purposes and, in this case, the firms located in Aveiro register a higher

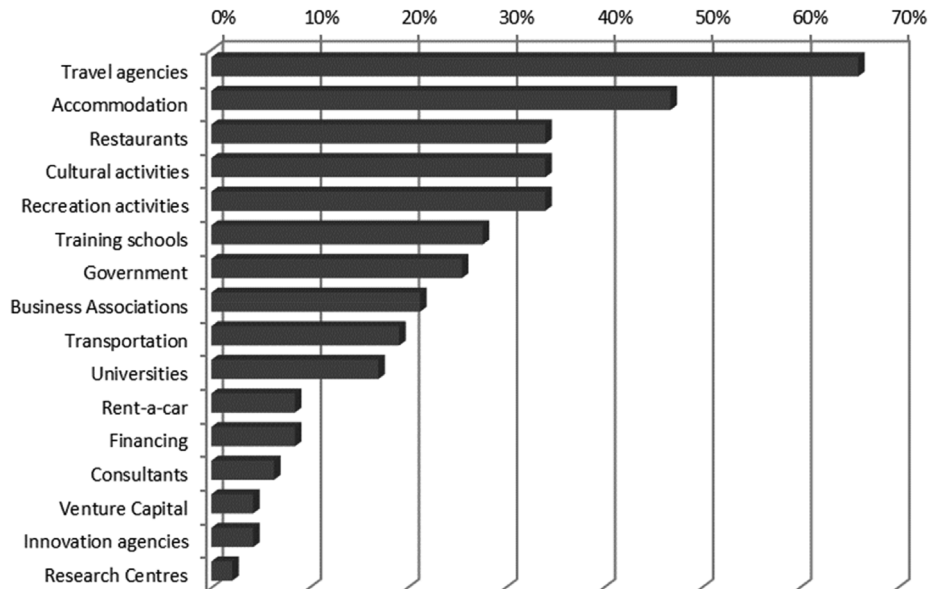


Fig. 4. Cooperation partners  
Source: Own elaboration.

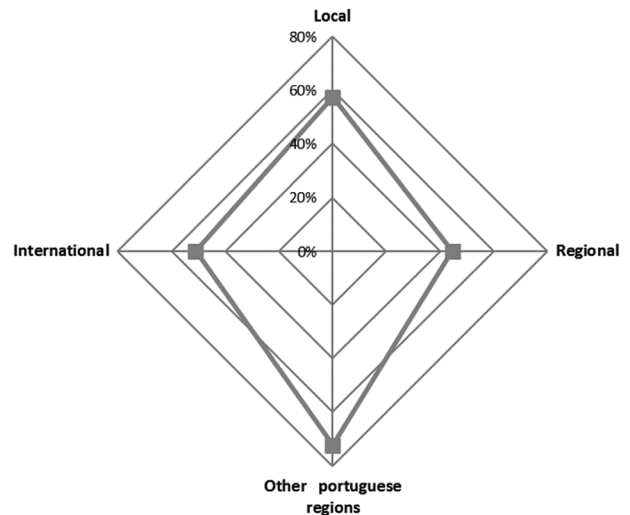


Fig. 5. Geographical scope of cooperation  
Source: Own elaboration.

performance. In what concerns innovation partners, the authors found a dissimilar pattern, once that Tyrolese firms prefer to cooperate with actors from other sectors.

An important aspect to consider is the geographical patterns of collaboration. It is important to combine physical proximity (which promotes trust, knowledge sharing, and collective learning) with external organizations (national or international) to the territory, to ensure access to new and diverse knowledge for innovation. More than half of the companies (51.1%) ventures into the international market in search of partners to collaborate in the development of innovation (Fig. 5).

These international partners are essentially travel agencies (47.2%), accommodation establishments (16.7%) and cultural activities (11.1%). The scope of collaboration is mainly the development of new products, the exchange of knowledge and the creation of marketing strategies. The large proportion of international travel agencies allows us to conclude that most tourism companies seek to internationalize their business by attracting the foreign market. On the other hand, the search for collaboration with accommodation establishments and international



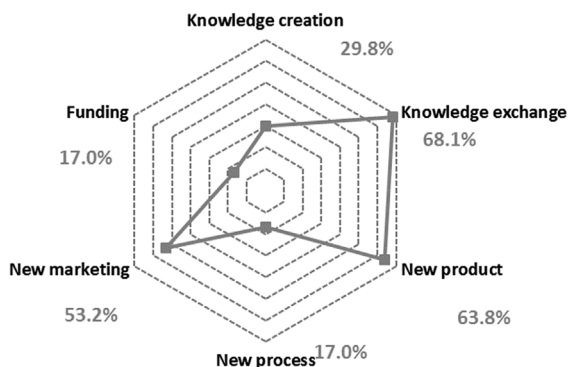


Fig. 6. Cooperation purposes  
Source: Own elaboration.

cultural activities indicates the operation of national intermediaries at the outgoing level. As postulated by Håkansson (1982, 1987) and Alonso Rodriguez (1994), the internationalization process occurs due to cooperation agreements among different stakeholders.

The surveyed coastal firms present a significant pattern of external cooperation (it is a developing destination that needs to seek new knowledge externally to promote innovation and competitiveness), since the percentage of external links is high (53.8%) but maintaining interesting levels of internal relations (46.2%). The main reasons for cooperation are related to knowledge exchange, the creation of new products (co-creation) and the development of new marketing strategies (Fig. 6).

7.3. Networked innovation dynamics

In relation to the regional institutional network, it is verified that the social structure has a low density, since only 4.2% of all the possible connections are present (Table 1). However, if we consider the performance of the innovation, we can conclude that it is an effective network, since, with a lower number of connections, it achieves a high innovation performance (and may even be indicative of a low number of redundant connections). The centralization of the network is very high (44.5%), indicating a strong concentration of power and prominence in a few actors. Thus, the efforts towards innovation in the tourism sector are strongly concentrated in some organizations. Kofler, Marcher, Volgger, and Pechlaner (2018) developed a similar study and found a lower overall centrality (of about 5.6%). However, the sample also included tourism firms, instead of focusing on institutions. It may be concluded, thus, that innovation networks that include tourism companies, besides institutions, have a more balanced distribution of power between actors.

The network presents a good clustering, significantly higher than the reference values of the random network, revealing a pattern of cohesive social structure. This confirms that relationships are, therefore, more embedded, knowledge is easily disseminated and there can be a greater level of trust between individuals and organizations,

Table 1  
Main network metrics.  
Source: Own elaboration

Metrics	Real network	Random network
Order (nodes)	87	87
Size (ties)	314	314
Density	0.042	0.042
Average degree	3.61	3.61
Network centralization	44.5%	6.18%
Diameter	5	8
Clustering coefficient	0.677	0.045

increasing the potential for collective learning and the development of network innovation.

The survey also revealed that the main actors in the network are essentially public sector agencies, but they are diversified in terms of the roles they play in the regional tourism system: governmental organizations, such as the regional tourism board or the association of municipalities; knowledge producers (university, research unit, vocational school and tourism spin-off company) – which occupy central positions in regional tourism innovation that occurs due to the strong relationship built with tourism institutions and companies located in the region –; and private associations (Fig. 7). Despite centralization, there is a great diversity of actors concentrating power. These actors with a high degree of centrality have the greatest number of direct connections and, therefore, have more powerful positions in the network, greater access to resources, information and knowledge, besides being less dependent on other actors. There is a strong and positive relationship between the degree of centrality and the innovative capacity of the organizations. It is interesting to note the significant role played by knowledge producers, which goes against the argument of Liburd and Hjalager (2010, p. 15), who believe that “most tourism departments at universities do not enjoy a scientific, economic, cultural image and weight that ensure them a similar high and recognised position in the regional innovation systems”.

When comparing the dynamics between the coastal regions and the hinterland (Brandão, 2014), several differences are also found, both regarding the type of actors involved and their geographical location. The hinterland has a smaller number of external links, both at national and international levels, concentrating mostly at the local and regional levels. It is also verified that tourism companies located in these regions cooperate essentially with other companies in the sector, revealing some structural equivalence, and with public (governmental) entities. Indeed, in coastal regions there is greater diversification, both at the geographical level and the type of companies and organizations selected for collaboration in the field of innovation. In the case of Aveiro, it stands out the expressive dimension of knowledge producers (university, research centre, schools) as prominent actors in the network. Indeed, this finding confirms the argument of Hardy, Vorobjovas-Pinta, and Eccleston (2018), who state that universities play a central role in producing and disseminating knowledge (the main activities of innovation development).

Considering the Internal-External Index (0.643), which measures the embeddedness of network members based on the comparison of the number of external links with the internal links, four different groups can be defined in terms of their geographical scope (local, regional, national, international). External links (links with organizations in other geographical areas) are much higher than internal ones, which is ideal for acquiring external resources for innovation in the network, and regional players are the engines of the dynamics of tourism innovation. This result does not confirm the findings of Kofler et al. (2018), who conclude that the innovation network presents a high number of links established between territorially close tourism actors. This may indicate that different geographical settings may present distinct geographical patterns of collaboration. In general, the network is well distributed in terms of diversity, geographical scope, and type of actors. The geographical diversity of actors, based on the dichotomy between the local buzz (Bathelt et al., 2004) and the sticky knowledge (Markusen, 1996), brings important advantages and unique conditions for companies to innovate and avoid the lock-in effect.

There are 24 links between regional and international organizations, with a density of 6.6% (Table 2). The research unit, the University of Aveiro, the spin-off company and the Regional Tourism Board stand out for contributing to the orientation abroad of this innovation network, since they have several national and international links (Fig. 8). This network has also a significant level of regional integration. However, it has the advantage of being involved in external links that introduce new knowledge and promote innovation.



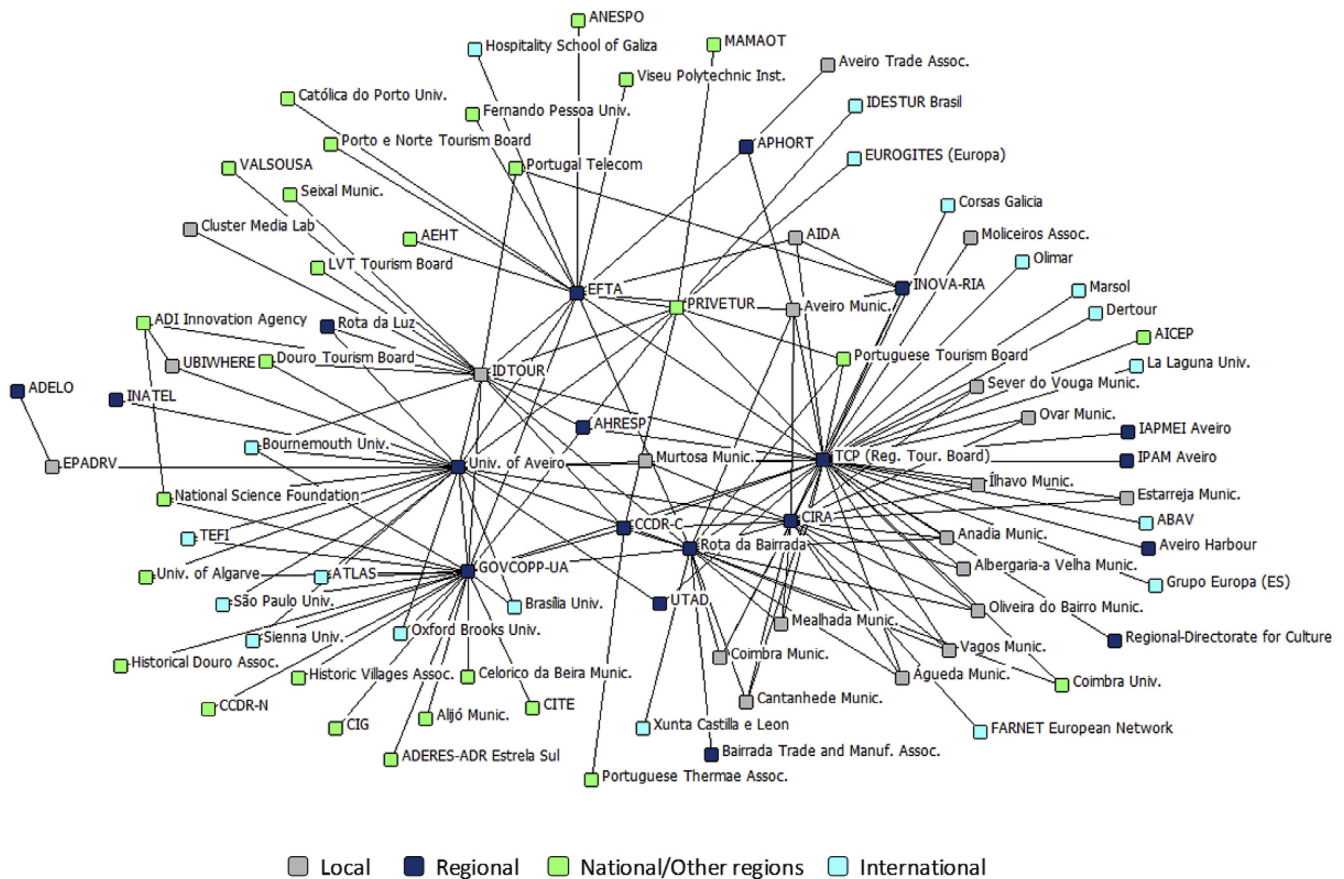


Fig. 7. Geographical scope of Aveiro's tourism innovation network  
Source: Own elaboration.

**Table 2**  
Network density by actors' geographical scope.  
Source: Own elaboration

	Local	Regional	National	International
Local	0.005	0.140	0.014	0.003
Regional	0.140	0.181	0.058	0.066
National	0.014	0.058	0.008	0.004
International	0.003	0.066	0.004	0.000

With regard to the role played by knowledge producers, it is interesting to note that links with universities increase with distance, that is, international universities have a higher rate than those located in the region or in Portugal. This indicates that the new scientific knowledge that enters the systems of innovation comes mainly from other countries and foreign experiences. *Booyens and Rogerson (2017)* conclude that external knowledge is paramount for the development of innovation. This gains increased significance if this knowledge is transferred between universities located in different countries, as it fosters the novelty of the knowledge used for innovation.

The most central actors will be those who exercise greater control, power, and influence. By bringing together the largest number of links, they are the ones who first identify market opportunities, concentrate more knowledge and resources, and influence the flow and direction of information. They are usually entrepreneurs or drivers of innovation in tourism destinations.

As an established coastal destination, the region of Aveiro already has some tradition in the tourism industry and, it is understandable (and advisable) that it needs to seek external partners that can bring new knowledge to the network, in order to allow organizations develop new products, services, processes, and marketing strategies that make

the destination competitive in the domestic and international markets, avoiding the lock-in effect that may eventually lead regions to decline. More external links and diversity of partners will result in an increasing amount of new knowledge that will be combined in different ways, giving rise to innovation in tourism, and a richer, more empowered and creative collective learning process.

## 8. Discussion and conclusion

In today's increasingly globalized and interconnected context, organizations and destinations cannot be seen in isolation, and their success is tied to the external environment. Tourism is a broad phenomenon and it is important to consider the network of stakeholder relationships (networks), the strategic decision to expand business (competitiveness), the participation of organizational actors (governance) and the sustainable development of these systems (innovation and research). In tourism, innovation requires networks and systems of cooperation because companies are mutually dependent. In this way, territories have a primordial role, and innovation must be seen from the destination point of view and materialized in networks, characterized by the diversity and geographical coverage of its members.

Internationalization in tourism can be approached from a territorial development perspective, supported by a strategy that enhances economic and social development. The internationalization of destinations involves the ability of all stakeholders to participate and contribute with new products and services, in an articulated and sustained way, ensuring unique, high quality, high-value tourism experiences.

It is essential to rethink the tourism development model in coastal zones, in order to create room for the mass product of "sea, sun, sand", combined with other tourism products that allow a more balanced use of these areas, thus contributing to their development. The rejuvenation



innovation strategies based on the internationalization of networks, increasing the competitiveness of destinations, especially directed to the creation and diffusion of knowledge and collective learning; (iii) recognize that organizations that play a greater role in coastal tourism innovation, namely the knowledge producers (universities and R&D organizations); (iv) provide the ideal conditions to create an environment conducive to innovation by consolidating internal links and promoting the establishing of international networks; (v) access to broader resources that promote the development of strategies for regeneration, revitalization and reinvention of coastal destinations, out of which new knowledge and skills can be highlighted; (vi) promote the geographical diversity of actors in the network in order to capture new knowledge leading to innovation and avoid the lock-in effect; and (vii) identify how involvement in international networks can prevent coastal destinations from diminishing and supporting their competitiveness and relaunching their growth.

### 8.3. Limitations and suggestions for further research

This paper presents some limitations. The first one derives from the fact that the study is applied to a single region. A comparative study including other coastal destinations, located in different countries and in other stages of development could bring important additional insights. Another limitation is concerned with social network analysis. In this study, this method is only applied to institutions. It would, however, be interesting to study the network structure of tourism firms as well. This is, nonetheless, a difficult endeavour, as most firms present constraints in specifically identifying other organizations with which they are engaged in collaborative arrangements to develop innovations, which is absolutely necessary in order to apply the social network analysis method. Some suggestions for further research on this topic also include interviews with tourism firms and institutions to deepen issues such as which specific innovative projects are on the basis of cooperation with international partners, to further identify determinants and obstacles to firms' innovation and to analyse the specific internal characteristics of tourism firms that lead to the development of innovation in coastal destinations and to the increase in innovation performance.

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