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Understanding pioneering orientation in tourism clusters: Market dynamism and social capital

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ABSTRACT

The aim of this paper is to study whether and how closed ties and diverse ties moderate the relationship between firms' market dynamism and pioneering orientation in a tourism cluster. We use original data on a sample of 215 firms belonging to the World Heritage Cities of Spain. The results show a curvilinear U-shaped relationship between market dynamism and pioneering orientation. This relationship is accentuated by higher closed ties, and is attenuated by higher diverse ties. Managers are advised to pay attention to changes in consumers' needs so as to identify first-mover opportunities. Furthermore, firms located within tourism clusters might benefit from developing social capital. Specifically, managers should strengthen their closed ties when market dynamism is high and their diverse ties when the first changes in the market emerge.

1. Introduction

In a context of high growth and global competition in the tourism industry (Aarstad, Ness, & Haugland, 2015), there is a need for finer grained analysis of tourism destinations from the perspective of clusters to better understand how firms located within tourism clusters relate and what strategies are being developed (Zach & Hill, 2017). A tourism cluster is a geographic concentration of interconnected firms and local institutions that compete but also cooperate in the domain of tourism (Porter, 1998). These organizations together generate a supply of products and services that configure a holistic tourism experience for tourists visiting a destination (Wang & Fesenmaier, 2007). In order to overcome the concept of cluster as a homogeneous unit, this paper assumes heterogeneity of firms located within a cluster and responds to the previous literature demanding more studies about distinctive relationships, strategies and performance in these firms (Giuliani, Balland, & Matta, 2019). From this perspective, the present study focuses on firms located within tourism clusters.

The literature on entry timing highlights the importance of gaining first-mover advantages for firms in diverse industries and contexts. In particular, it underlines the importance of obtaining first-mover advantages for firms' competitiveness in their environment (Stevens & Dykes, 2013). It therefore follows that further research is needed to better understand the internal and external determinants of pioneering orientation, and how they connect to each other (Lee, 2007; Zachary, Gianiodis, Payne, & Markman, 2015). The population ecology of organizations states that a firm with a suitable set of resources may adapt more easily to changeable and unpredictable environmental conditions (Teece, Pisano, & Shuen, 1997). The literature points out a range of environmental factors that may affect firms' behavior, such as hostility, munificence, dynamism, complexity or life-cycle stage of the industry (Covin & Slevin, 1991). Some studies claim the dynamism of an environment is a critical determinant of a firm's strategy (Lumpkin & Dess, 2001). The literature on manufacturing traditionally focuses on technological dynamism. However, market dynamism, considered as rapid changes of consumers' tastes and needs (Jaworski and Kohli, 1993), is known to be even more significant in the tourism industry. Tourism firms currently compete in a global market where consumers' behavior is highly changeable and unstable because new needs are continuously arising (Aarstad et al., 2015). In this context of continuous turbulences and threats, firms must display their assets effectively to compete and adjust their strategies successfully to the conditions of the environment (Hannan & Freeman, 1977). Thus, social capital is considered a strategic resource that provides adaptative responses to tackle highly dynamic markets and, hence, a critical factor influencing the pioneering orientation of a firm. This is especially so when firms are located in a tourism destination where the interactions among agents who make up social networks are important for creating a holistic tourism experience as well as improving business results (Ooi, Hooy, & Som, 2015). Despite the interest in these topics, there is scant literature connecting social

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capital and environmental dynamism with entry timing, and there are even fewer works on these topics in tourism clusters. Such a gap motivates the following research question: What is the joint effect of market dynamism and social capital on pioneering orientation in firms located within a tourism cluster? More specifically, this paper focuses on understanding how social capital, considering closed ties and diverse ties, influences the relationship between market dynamism and pioneering orientation and, in turn, determines achievement of first-mover advantages.

Pioneering orientation is a strategic position whereby a firm proactively tends to be the first to launch new products or services, taking advantage of market opportunities that competitors either did not recognize or are not interested in (Covin, Slevin, & Heeley, 2000). Firms following a pioneering orientation are able to capitalize on potential first-mover advantages, which may help create and sustain competitive advantage (Garret, Covin & Slevin, 2009). This occurs in the tourism industry (Lee & Jang, 2017) because pioneers are the first to access key resources, such as localization or desirable market segments. They can also achieve a technological leadership position and scale economies, and generate entry barriers for late entrants while benefiting from reputation effects as a leader and creating brand loyalty (Garret et al., 2009). However, the literature on entry timing also underlines disadvantages for pioneering firms, such as a high risk of failure and significant uncertainty (Mueller, Titus, Covin, & Slevin, 2012). Managers make pioneering decisions according to their expectations of achieving net first-mover advantages (Song, Zhao, & Di Benedetto, 2013).

There is special interest in pioneering orientation in the context of tourism clusters because the positive externalities that emerge in these agglomerations can foster first-mover advantages. These externalities generated inside the tourism cluster allow certain firms to reduce the drawbacks of pioneering related to services and training infrastructures, the lack of potential well-trained consumers, and the absence of diversified industries to supply complementary products and services (Porter, 1985). In addition, agglomeration economies favor tourism firms' access to important information on changes in products, services and markets (Sorensen, 2007), and tacit knowledge shared within a tourism cluster also fosters pioneering orientation in clustered firms. Furthermore, the high level of competition in this industry encourages firms located within tourism clusters to move first and launch new products and services in new markets, meaning they can differentiate themselves from competitors and prevent imitations (Wilson, 2016).

Over the last two decades, the literature on entry timing has addressed the antecedents of pioneering orientation (Schoenecker & Cooper, 1998; Fuentelsaz, Gomez, & Polo, 2002; Song et al., 2013; among others). Although some studies suggest that environmental changes influence firms' decisions to undertake a pioneering orientation (Kerin, Varadarajan, & Peterson, 1992; Lévesque, Minniti, & Shepherd, 2013; Lieberman & Montgomery, 1988), the likelihood of a firm taking advantage from being a first-mover depends on several organizational factors, which include a firm's resources and capabilities (Kerin et al., 1992; Schoenecker & Cooper, 1998). Some authors highlight the key role of relational resources connecting firms with their external contacts in order to define their environment and make strategic decisions that influence performance (Geletkanycz & Hambrick, 1997). These studies suggest the need for a better understanding of relational resources and their influence on a firm's expectations to achieve first-mover advantages in a dynamic environment (Lee, 2007; Lieberman & Montgomery, 1998).

Environmental dynamism is directly related to a constant flow of entry and exit in the industry, as well as to a high rate of changes in demand behavior, competitors' strategies and technological advances (Boyd, Dess, & Rasheed, 1993). In the context of tourism clusters, market dynamism is particularly relevant since changes in the preferences and needs of consumers, who constantly search for new products and services (Jaworski and Kohli, 1993), significantly affect the competitiveness of tourism firms located in clusters. In this line, a number of studies have underscored that a highly dynamic market might give rise to more opportunities, encouraging tourism firms to develop a pioneering orientation. Thus, a firm that implements such a strategy might stand out from its competitors and hence control emerging market segments and achieve a market leader position (Tegarden, Echols, & Hatfield, 2000). Despite these clear benefits of market dynamism for pioneers, disadvantages also exist. When there are rapid and significant changes in the market, pioneers can incur costs associated with their first-mover status, such as operating with limited knowledge about customers or obstacles caused by identifying changes in customers' needs that lead to a follower strategy (Golder & Tellis, 1993). Thus, most studies find a positive linear effect between market dynamism and pioneering orientation (García-Villaverde, Ruiz-Ortega, & Parra-Requena, 2012). However, dynamic environments also have negative effects (Tuppura, Hurmelinna-Laukkanena, Puumalainen, & Jantunen, 2010), although these have been the focus of less research. Thus, since the findings in the literature are controversial, we propose the analysis of a curvilinear relationship between market dynamism and pioneering orientation. The initial disadvantages of earlier entry in increasingly dynamic markets tend to increase until a threshold is reached, where they stabilize and then begin to decrease. Therefore, the pioneering orientation function, which depends on firms' expectations of achieving net benefits from market dynamism, presents a U-shaped curve.

As relational resources, social capital connects a firm with the agents in its environment that may help to identify potential first-mover advantages. Social capital consists of a set of resources embedded within a network of social relationships as well as all the resources accessible through this network (Nahapiet & Ghoshal, 1998). There is empirical evidence that geographical proximity has critical implications for the production and accumulation of social capital in a firm, and thus plays an especially important role in tourism clusters (Sorensen, 2007). In this sense, the social capital approach contributes to a better understanding of the complex nature of relationships in tourism clusters, where attracting tourists and the competitiveness of a tourism destination depend on collective actions of community members (Novais, Ruhanen, & Arcodia, 2018). From this perspective, it is claimed that social networks can facilitate the access of tourist firms in a cluster to key information and knowledge. These firms can then strengthen their capacity to identify and exploit new market opportunities and achieve first-mover advantages (Lee, Lee & Pennings, 2001). Therefore, following Varadarajan, Yadav, and Shankar (2008), we propose that the social networks of tourism firms located in a cluster exert a moderating role between market dynamism and pioneering orientation.

Previous research on social networks has identified two types of ties: closed ties, characterized by their density and strength, which depend on quantity and frequency of relations (Granovetter, 1973), and diverse ties, which are those between agents with a low level of connectedness, which form a disperse network with structural holes (Burt, 1992). Several studies focus on advantages and disadvantages related to both types of ties given that they could have different impacts on the pioneering orientation of firms in dynamic environments. In the literature, there is also controversy about the nature and effects of both types of ties (Wu, Chang, & Chen, 2008). We propose that it is of interest to have a better understanding of when and how closed ties and diverse ties influence the development of pioneering strategy in highly dynamic environments. The main goal of this paper is to study how closed ties and diverse ties moderate the curvilinear relationship between market dynamism and pioneering orientation in firms located in tourism clusters –whether they flatten or steepen the shape of the curve. Thus, using the population ecology of organizations (Hannan & Freeman, 1977), the paper contributes to the understanding of how market dynamism and social capital connect to better explain the pioneering orientation of firms belonging to tourism clusters.

Following this introduction, the theoretical basis and hypotheses are

discussed. We then present the method, the results and the discussion. The final section provides contributions, theoretical and practical implications, limitations and future research.

2. Theory and hypotheses

2.1. Pioneering orientation

Pioneering orientation, based on the concept of market pioneer, refers to a strategic position through which a firm aims to be the first to introduce innovative products and services in a new market, where other competitors either have not recognized or have not actively tried to exploit this opportunity (Covin et al., 2000). This strategy integrates a set of decisions about entry timing that depend on managers' perceptions of potential first-mover advantages and disadvantages (Song et al., 2013).

The literature on pioneering orientation has traditionally focused on manufacturing industries (Zachary et al., 2015), having received scant attention in the service literature and, to date, no research has focused on tourism. This could be attributed to the established notion that tourism firms are not innovators but mere adopters of technology produced elsewhere. Another established notion is that tourism firms may lack the motivation to introduce new products and services due to the difficulty in protecting innovation and, as a result, lose advantage over imitation by competitors (Hjalager, 2002). However, the evidence indicates that the tourism environment drives firms to implement a pioneering orientation, by seeking to be the first to introduce new products and services in new markets, which entails more complex and radical changes that might hinder imitation from competitors and hence achieve sustainable competitive advantages (Weidenfeld & Hall, 2014). Besides concerns regarding imitation, the tourism industry exhibits a complex scenario characterized by great uncertainty because of rivalry in globalization, technological advances, rapid changes in consumers' preferences, and political and social instability. Further to these characteristics, which are common to other industries, tourism, being a service, presents its own distinctive features, such as fragmentation of supply, segmentation of demand, the intangible nature of output, and co-creation and co-terminality of the tourist product (Beritelli, Bieger, & Laesser, 2014). The environmental uncertainty and these specific characteristics of the tourism industry could affect the proactive attitude tourism firms need to differentiate themselves from their competitors, the type and amount of their social capital and the possibilities of generating sustainable first-mover advantages.

Various studies have recently appeared about the advantages and disadvantages of pioneering strategy (Fosfuri, Lanzolla, & Suárez, 2013). Lieberman and Montgomery (1988) tackled first-mover advantages by identifying three main isolation mechanisms: 1) technological leadership, linked to benefits from the learning curve and anticipation in the development of patents; 2) early access to superior resources such as geographic location, equipment investment, distribution channels and the space defined by the product's characteristics; and 3) costs of change for consumers in an uncertain situation for decision-making. Moreover, some first-mover disadvantages have also gained attention among scholars, such as "free rider" and "harvest" effects, technological changes and market uncertainty, entry of new competitors, taking advantage of technological discontinuities, imitation of followers and the inertia of these firms to adapt to customers' changes (Stevens & Dykes, 2013). Thus, the net effect of a pioneering entry in the market depends on the balance between advantages and disadvantages associated with first-movers.

2.2. Pioneering orientation of firms located within tourism clusters

The environment may play a crucial role for competitiveness when sustainable competitive advantage comes from knowledge transfer and relationships with diverse partners, because these are complicated for remote competitors to imitate (Delgado, Porter, & Stern, 2014). In this context, firms located within a cluster have more opportunities to achieve competitive advantages since, due to their geographical proximity, continuous interactions among agents are easier (Porter, 1990). A cluster consists of an agglomeration of firms in geographical proximity that are connected by means of vertical and horizontal relationships, with support infrastructures and a shared vision of business (Cooke & Huggins, 2003). Although the literature has traditionally studied industrial clusters, a number of studies have focused on tourism agglomerations (Novelli, Schmitz, & Spencer, 2006; Merinero-Rodríguez & Pulido-Fernández, 2016) and have indicated tourism destinations as clear examples of tourism clusters (Porter, 1990). Hjalager (2000) identified conceptual similarities between industrial clusters and tourism destinations such as interdependence and flexible boundaries of companies, coopetition, sustained collaboration, and a common culture based on public policies to support tourism activity.

Previous literature has linked competitive advantages generated in the context of clusters with first-mover advantages (Audretsch, 1998). Often, a first-mover bears substantial pioneering costs in relation to developing infrastructures such as facilities and training services, investment in developing complementary products, gaining consumers' loyalty, or high costs due to small-scale production in this initial stage (Porter, 1985). Within a cluster, positive externalities tend to contribute to reducing pioneering costs. The most noteworthy are: 1) increased public investment in communications and other structures; 2) easier access to production factors, which are usually close to the cluster and are a distinctive localization factor; 3) a diversified and complete network of firms linked to complementary products and services; and 4) markets with more experienced consumers in the specific activity developed by firms in the cluster (Porter, 2003). Moreover, in a tourism cluster, the intensity of rivalry and imitation are determining factors that encourage firms to introduce a pioneer strategy. Rivalry among firms located in a cluster often goes beyond a mere price war where firms fight to launch new products and services in new markets (Wilson, 2016). Thus, these firms, by means of pioneering orientation, can differentiate themselves and hinder imitation by local competitors.

Moreover, firms located in a tourism cluster can leverage the local knowledge base. Knowledge flowing inside a tourism cluster is generally tacit, and can therefore only be transferred informally, usually requiring direct and repeated contact. Audretsch and Feldman (1996) suggest that the role of tacit knowledge as a driver of innovation is presumably more important during the early stages of the industry life cycle, before product standards have been established and a dominant design has emerged. Thus, tacit knowledge available inside a tourism cluster, which is critical for launching new products and services in emerging markets, provides firms with potential first-mover advantages (Audretsch, 1998; Parra-Requena, Ruiz-Ortega, & García-Villaverde, 2012).

2.3. Market dynamism and pioneering orientation

Traditionally, environmental contingencies have played a key role in pioneering orientation decisions (Covin et al., 2000). The literature finds that managers usually confront uncertainty in market environments because of the lack of information about their industry and competitors (García-Villaverde et al., 2012). Over the past decade, tourists' behavior and preferences have been constantly changing, entailing a high level of market uncertainty (Aarstad et al., 2015; Pavlovich, 2014). Accordingly, market dynamism is one of the main determinants of entry timing in the tourism industry, which is defined as changes in needs and preferences of consumers. The relationship between these two variables depends on a fine balance between expectations of pioneering (dis)advantages (Lieberman & Montgomery, 2013) according to the environmental dynamics. In this line, previous studies have debated the advantages and disadvantages of a dynamic environment in boosting pioneering orientation (Tuppura et al., 2010).

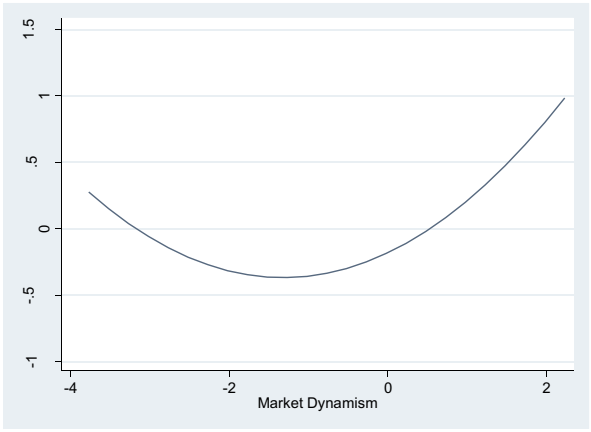
The evidence stemming from this literature is still mixed due to the interaction of negative and positive effects (Song et al., 2013).

Numerous studies have focused on the benefits of a highly dynamic environment and its influence on the development of pioneering orientation, with these arguments involving a linear, positive effect (García-Villaverde et al., 2012). The first product introduced in a market achieves the greatest influence on customers' preferences, builds early users' loyalty and, contributes to successfully differentiate the firm from its competitors (Zahra, 1996). Moreover, in a context of rapid change in products, the pioneers capture the most attractive market niches, allowing them to recover the R&D costs (Mueller et al., 2012). In short, in this context of highly dynamic markets, continuous changes provide firms with opportunities and success depends on the ability to develop and launch new products in the market faster than competitors.

Despite these benefits, some studies have revealed adverse effects that may discourage pioneering orientation in dynamic markets (Golder & Tellis, 1993; Suarez & Lanzolla, 2007; Tuppura et al., 2010). In this scenario of controversy, we consider that the impact of negative externalities of market dynamism on pioneering orientation increases rapidly until it reaches a threshold, beyond which it stabilizes. This is due to the difficulty that firms located in tourism clusters have in perceiving certain changes in clients' needs (Pérez-Luño, Wiklund, & Valle-Cabrera, 2011). They have no expectations of achieving first-mover advantages, and, therefore, tend to adopt a follower strategy in order to avoid incurring high adaptation costs (Porter, 1985) and cannibalizing their own products (Henderson, 1993). Moreover, it is known that pioneers face significant levels of uncertainty and have a high risk of failure (Shepherd, 1999), which may initially increase quickly first movers' disadvantages and, hence, discourage them from implementing a pioneering strategy. However, when changes in demand become faster and deeper, a follower strategy is not the best option for firms that aim to be competitive and to survive in the long-term. Such dynamism shortens the product life cycle thus pushing firms to move faster to reap these opportunities and consolidate their market share (Tuppura et al., 2010). As a result firms develop routines to improve detection and exploitation of opportunities from changes in demand, which reduce adaptation costs and stabilize adverse effects.

The interaction between the positive and negative effects of market dynamism on pioneering orientation, suggests a possible U-shaped relationship between these two variables. To elucidate the methodology behind the additive latent mechanism that generates a U-shaped relationship we follow the framework proposed by Haans, Pieters, and He (2016), as represented in Fig. 1. The left-hand panel shows the benefits of market dynamism increase linearly whereas the drawbacks (central panel) tend to increase at a decreasing rate when market dynamism increases. The right-hand side panel of the figure shows that the resulting additive net effect has a U-shaped curve. We propose that the mechanism at work depends on whether the adaptation costs have been fully internalized or not. Accordingly, for increasing levels of market dynamism, negative externalities will prevail up to a critical point above which tourism firms located in clusters develop certain routines that allow stabilizing these adaptation costs, thus adopting a more proactive pioneering orientation.

A U-shaped relationship has been found in prior some studies on diverse contextual factors of innovation and pioneering. Some examples are the works of Peroni and Gomes Ferreira (2012) and de Bettignies, Gainullin, Liu, and Robinson (2018), who show a U-shaped relationship between competition and innovation. In addition, the findings of Hsu, Lien, and Chen (2015) also reveal a curvilinear U-shaped relationship between R&D internationalization and innovation performance. The article of Eisenman (2013) reports this kind of relationship when studying the effect of technological evolution of a product category on aesthetic innovation. In this line, the study of Li and Vanhaverbeke (2009) is especially relevant in that it uncovers a U-shaped relationship between foreign competition and pioneering innovation. In particular, when competition increases from low to moderate, the likelihood of pioneering innovation decreases but when competition increases from moderate to high levels the likelihood of pioneering innovation increases. In line with these arguments, we propose that there is a U-shaped relationship between market dynamism and pioneering orientation of firms located within tourism clusters. Drawing on the above, we propose the following hypothesis:



Note: We use mean-centered values.

Fig. 2. Curvilinear relationship between market dynamism and pioneering orientation.

H1: Market dynamism presents a curvilinear (U-shaped) association with the pioneering orientation of firms located within tourism clusters. Accordingly, increases in market dynamism are expected to have an initial negative effect on pioneering orientation up to a critical threshold beyond which positive externalities will prevail and induce increasing pioneering orientation.

2.4. The moderating role of social capital

In recent decades, there has been growing interest in the mechanisms of creation of social capital through network embeddedness. Belonging to a network provides participating agents with benefits in the form of social capital stemming from the underlying structure and content of social relationships (Adler & Kwon, 2002).

A tourism cluster consists of a group of tourist agents located in a geographical area, who carry out complementary activities in order to achieve competitiveness as an overall destination (Pavlovich, 2003). Specifically, firms belonging to a tourism cluster cooperate to create a successful tourism product in the destination and so attract more visitors by providing an overarching experience (Zach & Hill, 2017). In tourism clusters, interorganizational networks are developed to coopete in the destination, based on trust-building processes that combine calculation, emotional bonds, reputation and embeddedness (Czernek &

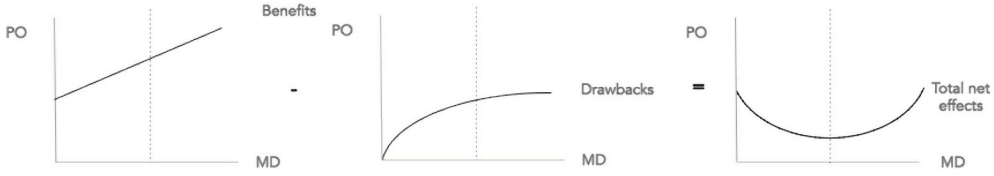


Fig. 1. Additive latent mechanisms resulting in a U-shaped relationship (adapted from Haans et al., 2016).

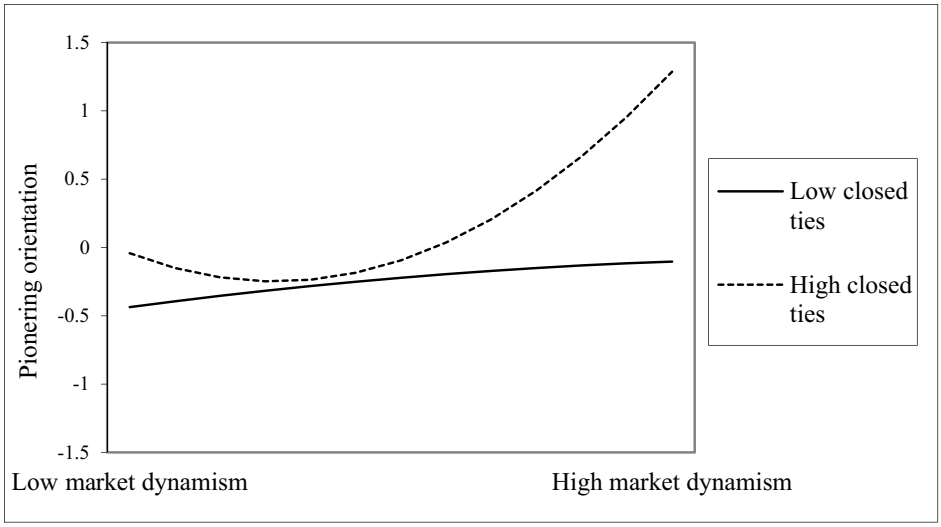


Fig. 3. Moderator effect of closed ties on the curvilinear relationship between market dynamism and pioneering orientation.

Czakon, 2016). An agglomeration of firms contains subgroups of multiple networks so that firms located within it maintain unique and idiosyncratic patterns of relationships with two main types of ties: closed and diverse (Desmond, 2004). Closed ties come from numerous and frequent relationships of agents that are strongly connected to each other (Granovetter, 1973), while diverse ties arise from relationships that give shape to networks with structural holes. A structural hole exists when a focal firm is connected with agents that are not connected to each other (Burt, 1992). Firms in tourism destinations are highly networked, and consequently, interorganizational networks and social capital are appropriate approaches to the study of the tourism industry (Erkus-Öztü;rk, 2009).

The population ecology of organizations argues that organizations of a population can survive by means of exploiting resources and opportunities coming from the environment in which they operate, thereby explaining its heterogeneous strategic behavior (Hannan & Freeman, 1977). As a survival instinct, a firm acts quickly when environmental conditions allow it to leverage its resources to compete, adapting to changeable surroundings (Brittain & Freeman, 1980). Therefore, in this context, the bundle of resources that a firm possesses significantly influences the way they respond to changes in the environment (Teece et al., 1997). In this line, the influence of market dynamism on pioneering orientation depends on the adequacy of a firm's resources. We posit that the interactions between social capital and market dynamism are key determinants of the pioneering orientation of firms located in tourism clusters.

As discussed above, there are advantages and disadvantages associated with the relationship between market dynamism and pioneering orientation. In any event, how social capital moderates the impact of market dynamism on pioneering orientation will depend on how social capital affects these two latent mechanisms. There are two types of moderation in U-shaped curves, which are conceptually and empirically distinct: the curve can shift left or right and its shape can flatten or steepen. We focus on how social capital affects -strengthening or weakening - the curvilinearity of the latent mechanism (the drawback curve), so that the moderator will flatten or steepen the U-shape curve (Haans et al., 2016).

2.5. The moderating effect of closed ties

Traditionally, certain benefits have been associated with dense networks and strong ties that arise from access to information and tacit and relevant knowledge (Yu, 2013). However, the power of closed ties to limit disadvantages to take action in the face of strong market dynamism with a pioneering orientation has been questioned due to limitations in coping with a changing environment (Guler & Nerkar, 2012). The main reason is that knowledge acquired through closed ties quickly becomes redundant and obsolete (Tiwana, 2008). A firm obtains information from agents that are also connected to each other, and have a very similar knowledge base (Burt, 1992; Rowley, Behrens, & Krackhardt, 2000). Thus, closed ties rarely provide new knowledge to be used with originality in a tourism destination (Zach & Hill, 2017), but instead provide redundant knowledge. Thus, when the demand changes continuously, redundant information available to firms through closed ties may not arrive on time and may not be enough to address such changes, making it even more difficult to detect changes in customer needs in dynamic environments, thereby increasing adaptation costs.

Furthermore, firms belonging to a tourism cluster with high levels of closed ties suffer lock-in (Giuliani et al., 2019). In this situation, group thinking is generated, reinforcing the idea of “us versus them” and the associated bias of “not invented here” (Grabher, 1993). Thus, firms initially do not trust external information, tending to feel their ideas are opposed to those of other firms and discard ideas generated outside the cluster, thus potentially failing to perceive changes in demand (Katz & Allen, 1982). Likewise, control mechanisms generated within the cluster can stifle attempts to acquire the radical thoughts and ideas needed to develop a pioneering orientation in the face of rapid changes in the environment (Alexiev, Jansen, Van den Bosch, & Volberda, 2010; Coleman, 1988). Therefore, when market dynamism is high, tourism firms located in a cluster with closed ties are unable to reduce the time needed to adapt to the rapid market changes through a proactive attitude, since these ties limit pioneering orientation and also hinder the identification of new consumer demands and the exploitation of emerging opportunities (Expósito-Langa & Molina-Morales, 2010).

Based on the above arguments, when tourism firms located in a cluster have high levels of closed ties in highly dynamic markets, the costs of adapting to the new market situation increase. In this way, closed ties will amplify the drawbacks of market dynamism, and as a result, the U-shaped curve for the relationship between market dynamism and pioneering orientation will be steeper for tourism firms located in a cluster with a higher level of closed ties than for those with a lower level of closed ties. Accordingly, we propose the second hypothesis:

H2: The U-shaped relationship between market dynamism and pioneering orientation will be steeper for firms located within tourism clusters with a high level of closed ties.

2.6. The moderating effect of diverse ties

Recent studies underline that relationships with diverse agents help tourism firms located in clusters to keep up to date through access to external and novel market information (Hemphälä & Magnusson, 2012). The structural differentiation of a network of relationships composed of firms with different routines and competencies enriches the content of the network information, and enables firms to overcome the problems that may arise in identifying changes in the demands of consumers (Neffke, Hartog, Boschma, & Henning, 2018). In this way, tourism firms located in a disperse network with structural holes can access resources from unique parts of their network, so they can learn about imminent threats and opportunities in the market more quickly than other agents without these types of links, cushioning adaptation costs that limit pioneering orientation in a situation of high market dynamism.

In addition, when environmental conditions are increasingly changing, access to new and non-redundant information will encourage a more proactive behavior of firms, so the time to adapt to these market changes will be shorter thanks to a faster response (Cohen & Levinthal, 1990). This new knowledge allows firms to quickly identify and respond to the changing needs of consumers with a more creative and proactive attitude (Liu, 2018). This is so because relationships established through structural holes enable different ideas and knowledge to come into contact, allowing firms, in turn, to be more proactive in launching new products and services in new markets in order to satisfy the customer needs (Kang & Kang, 2014). In this sense, social capital generated by diverse ties exerts a critical role as a driver of territorial development in dynamic areas, by boosting a spiral process of creation of other capital, such as financial and human capital, and providing new and diverse knowledge from outside agents (Emery & Flora, 2006). Therefore, under high market dynamism conditions, proactively tapping into complementary information from diverse ties will facilitate appropriate offers of new products and services, satisfying emerging customer needs and providing rapid entry into new markets and segments (Sarkar, Echambadi, & Harrison, 2001). From there, firms with high diverse ties will reduce their adaptation cost to the constant market challenges by means of a pioneer attitude, since they will be well positioned to quickly and efficiently learn to develop innovative responses to industry trends (Zaheer & Bell, 2005).

In short, diverse ties can absorb the negative impacts that market dynamism generates on pioneering orientation, since firms located in tourism clusters will have less difficulty to detect changes in customer needs and will develop rapid innovative responses to industry trends, thus not having to endure such high costs of adaptation to new markets. Therefore, diverse ties will reduce the negative impacts that market dynamism generates on pioneering orientation, and, as a result, the U-shaped curve for the relationship between market dynamism and pioneering orientation will be flatter for firms located in tourism clusters with a higher level of diverse ties than for those with a lower level of diverse ties. Accordingly, we propose the following hypothesis:

H3: The U-shaped relationship between market dynamism and pioneering orientation will be flatter for firms located within tourism clusters with a high level of diverse ties.

3. Methods

3.1. Context of study and data collection

The empirical analysis focuses on the tourism industry, specifically in UNESCO World Heritage Cities in Spain. The interesting point is that cultural capital within these cities fosters flow of asset local that attract financial capital and hence entrepreneurial development. Cultural capital is therefore the main driver of an “upward spiral of creation of capitals” that lead to economic development (Emery & Flora, 2006, p. 27).

The UNESCO World Heritage Cities of Spain have been identified as tourism clusters in previous studies (Martínez-Pérez, García-Villaverde, & Elche, 2016). These works combine both quantitative and qualitative criteria to identify these cities as cultural tourism clusters. Quantitative criteria include a location quotient and territorial specialization (Lazzeretti & Capone, 2008). The qualitative approach is based on a number of specific characteristics (Expósito-Langa & Molina-Morales, 2010) such as local communities, cultural landscapes, and the predominance of small- and medium-size firms coexisting with multinationals, such as hotel and restaurant chains. The following Spanish cities had been declared World Heritage Cities at the time of data collection: Alcalá de Henares, Ávila, Cáceres, Córdoba, Cuenca, Eivissa (Ibiza), Mérida, Salamanca, Santiago de Compostela, Segovia, San Cristóbal de la Laguna, Tarragona, and Toledo.

The data collection was carried out from April to September of 2012. NACE-09 (Spanish National Classification of Economic Activities from 2009) was used to define tourism activities, following Lazzeretti and Capone (2008). The activities included are: accommodation services (55); food and beverage services (56); travel agency, tour operator, and other reservation service (79); creative, arts, and entertainment (90); libraries, archives, museums, and other cultural activities (91); sporting, recreational, and entertainment activities (93); interurban passenger transportation by rail (491); other passenger land transport (493); maritime transport of passengers (501); passenger transport by inland waterways (503); passenger aviation (511); and rental of motor vehicles (771). The databases of SABI (The Iberian Balance Sheet Analysis System) and Camerdata (directory of all the Spanish firms from the network of local Chambers of Commerce) were used to define the population under study. The final database consisted of 2037 firms. Due to the characteristics of the tourism industry, where very small firms predominate, we included firms with more than three employees in order to ensure a minimal operative structure (Spanos & Lioukas, 2001), and so avoid excluding a large part of the firms (more than 95% of firms have fewer than 10 employees). A postal and online survey was sent to CEOs after a pre-test phase was carried out with academic and professional experts in tourism. The sample consisted of 215 firms (response rate: 10.55%; sampling error: 6.32%, for a confidence level of 95% and the least favorable situation for $p = q = 0.5$).

The non-response bias was tested with a mean differences test that showed no statistically significant differences between early and later respondents in structural characteristics; and between the size and age of the firms in the sample and the entire population (Armstrong & Overton, 1977). The response bias due to manager perceptions was tested with a mean differences test that showed no significant differences for the variables used in the study between the responses of the senior and a second manager (we obtained questionnaires from a second manager for a subsample of 15.81%, corresponding to 34 firms). Harman's single-factor test confirmed there was no common method bias (Podsakoff & Organ, 1986). Moreover, the results were tested by means of a “marker variable” (Podsakoff, MacKenzie, Podsakoff & Lee, 2003), which was unrelated to the variables of the model such as the identification number of each firm, and showed no statistically significant relation between the latter and the variables of the model. Finally, the ANOVA and Scheffe tests showed there were no significant differences for the variables used in the study between the different cities in which the tourisms firms were located. Table 1 shows the main characteristics of the sample.

3.2. Measures

Market dynamism refers to unpredictability of market changes (Dess & Beard, 1984). To measure this variable, we used the three-item scale

Table 1
Main characteristics of the sample.

Variables	Frequency	Percentage	Variables	Frequency	Percentage
City[a]			**Size**[b]		
Alcalá de Henares	16	7.4	0–10	139	64.7
Ávila	9	4.2	10–20	31	14.4
Cáceres	11	5.1	20–30	12	5.6
Córdoba	32	14.9	30–40	11	5.1
Cuenca	12	5.6	40–50	5	2.3
Ibiza	17	7.9	50–60	4	1.9
Mérida	6	2.8	60–70	1	0.5
Salamanca	29	13.5	80–90	3	1.4
San Cristóbal de la Laguna	12	5.6	100–110	4	1.9
Santiago de Compostela	18	8.4	110–120	1	0.5
Segovia	12	5.6	TOTAL	211	98.1
Tarragona	20	9.3	**Age**[c]		
Toledo	21	9.8	0–10	95	46.6
TOTAL	215	100.0	10–20	45	22.1
Subsector[d]			20–30	27	13.2
55 (Accommodation)	95	44.2	30–40	16	7.8
56 (Food & beverage)	84	39.1	40–50	11	5.4
491, 493, 501, 503, 511, 771 (Transports)	6	2.8	50–60	3	1.5
79 (Travel agency)	8	3.7	60–70	1	0.5
90, 91, 93 (Creative, arts & entertainment activities)	22	10.2	70–80	3	1.5
TOTAL	215	100.0	80–90	1	0.5
			120–130	2	1
			TOTAL	204	100

[a] UNESCO World Heritage Sites in Spain.
[b] Firm size is measured by the number of employees (the table presents intervals of employees).
[c] Firm age is measured by the years since it was constituted (the table presents intervals of years).
[d] Subsector of economic activity, within tourism industry, are included in the empirical analysis and codified according to the Spanish National Classification of Economic Activities from 2009 (NACE-09).

proposed by Atuahene-Gima, Li, and De Luca (2006), which is an adaptation of the scale designed by Jaworski and Kohli (1993). The scale measures the managers' perceptions about speed of changes in demand, specifically changes in customers' preferences and also the entry of new consumers in the market. The reliability test yielded a satisfactory Cronbach's alpha value of 0.781. A factor analysis also showed satisfactory results, Bartlett's sphericity test was significant ($\chi^2 = 176.342$, $df = 3$, significance = 0.00), and the Kaiser–Meyer–Olkin (KMO) was 0.702 ($p = 0.00$). Results yielded a single factor that supported 69.604% of explained variance and whose factor loadings exceeded 0.820.

Social capital consists of both closed and diverse ties. Following previous studies, to measure closed ties, we considered strength of ties and network density (Zaheer, Gözübüyük, & Milanov, 2010). Strength of ties was measured with a three-item scale adapted from Maula, Autio, and Murray (2003), and network density with a three-item scale adapted from Molina-Morales and Ares-Vázquez (2007). The value of Cronbach's alpha was 0.849, and a factor analysis also provided satisfactory results, Bartlett's sphericity test was significant ($\chi^2 = 591.712$, $df = 15$, significance = 0.00) and KMO = 0.789 ($p < 0.01$). The factor analysis yielded two independent factors according to the scales of the measurement model - strength of ties and network density; the explained variance was 57.064% with factor loadings that exceeded 0.688.

The diverse ties variable was evaluated as the extent of the firms' relationship through structural holes. To measure this, we used a three-item scale adapted from Tiwana (2008), which assesses diversity of knowledge, skills and background relations. The value of Cronbach's alpha was 0.891 and the KMO = 0.695 ($p = 0.00$). The results yielded a single factor that supported 82.163% of explained variance and whose factor loadings exceeded 0.840.

Pioneering orientation was our dependent variable, which was measured using a three-item scale adapted from Zahra (1996) to assess firms' likelihood of developing pioneer behavior, which consists not only of developing new products or entering a new market, but also new ways of making decisions and undertaking actions (Covin et al., 2000). Pioneering orientation is a continuum ranging from the market pioneer to late follower (Mueller et al., 2012). Cronbach's alpha was 0.842, and a factor analysis also showed satisfactory results; KMO = 0.651 ($p < 0.01$) and Bartlett's sphericity test ($\chi^2 = 307{,}856$, $df = 3$, significance = 0.00). The analysis yielded a single factor that supported 76.485% of explained variance and whose factor loadings exceeded 0.810.

Discriminant validity was tested by means of a confirmatory factor analysis, and we obtained appropriate goodness-of-fit indices ($\chi^2 = 139.4594$, $df = 80$, normed fit index "NFI" = 0.943, comparative fit index "CFI" = 0.956, incremental fit index "IFI" = 0.957, root mean square error of approximation "RMESA" = 0.060).

The *control variables* included in this analysis were family business, sense of belonging to a cluster, imitation, access to financial resources, use of information and communication technologies (ICTs), and type of company. Family businesses were identified by means of a dichotomous variable. Following Becattini (1979), sense of belonging to a cluster was measured by asking respondents whether they felt identified with the city. We controlled for the potential influence of this variable in the regression because it could affect closed and diverse ties of the firms located within tourism clusters and their consequences (Molina-Morales, Capó-Vicedo, Martínez-Fernández, & Expósito-Langa, 2013). A two-item scale adapted from Lee, Smith, Grimm, and Schomburg (2000) was used to measure imitation, which reflects competitors' speed and ability to imitate new products and services. Following Wiklund and Shepherd (2005), we measured access to financial resources by means of one item. Another item in the questionnaire asked whether ICTs (webs, chats, online bookings, emails) were crucial to the operation of a firm's activities (Doloreux & Shearmur, 2010). Finally, we used a dichotomous variable to measure type of firm, subsidiary versus independent.

All variables included in the analysis were measured at firm level by using a seven-point Likert scale. The items of the scales are included in the Appendix. Missing values were treated using the listwise deletion method since it leads to consistent estimation in most structural equation models (Bollen, 1989), even if this entails losing more data than pairwise deletion and other missing value replacement methods. We checked the normal distribution by using absolute values of skewness

Table 2
Correlations (Pearson), descriptive statistics, Cronbach's alpha, AVE and discriminant validity.

	Mean	SD	α	AVE	1	2	3	4	5	6	7	8	9	10
1 Family business	–	–	–	–	1.000									
2 Sense of belonging	5.019	1.362	–	–	−0.120	1.000								
3 Imitation	5.460	0.879	0.828	0.800	−0.022	0.196**	1.000 (0.895)							
4 Access to financial resources	2.520	1.630	–	–	−0.040	−0.041	−0.030	1.000						
5 Use of ICTs	5.550	1.819	–	–	−0.049	0.190**	0.174*	0.037	1.000					
6 Type of firm	–	–	–	–	0.036	−0.012	−0.038	0.128	−0.001	1.000				
7 Market dynamism	4.773	1.371	0.781	0.659	0.001	0.102	0.271**	0.012	0.202**	0.027	1.000 (0.812)			
8 Closed ties	4.359	1.201	0.849	0.570	−0.062	0.417**	0.243**	0.077	0.054	−0.067	0.222**	1.000 (0.755)		
9 Diverse ties	4.609	1.357	0.891	0.800	−0.061	0.213**	0.054	0.146*	0.059	0.149*	0.114	0.255**	1 (0.893)	
10 Pioneering orientation	4.462	1.494	0.842	0.729	0.044	0.081	0.182**	0.276**	0.159*	−0.052	0.251**	0.268**	0.162*	1.000 (0.854)

Notes: Square root of the AVE in parentheses.
SD: Standard Deviation.
α: Cronbach alpha.
AVE: Average Variance Extracted.

and kurtosis. These values ranged from 0.862 to −1.18 for skewness and from 0.343 to −1773 for kurtosis across the 22 items. All the items had acceptance values following Kline's (2011) conventional criteria (skewness < 3; kurtosis < 8) of multivariate normality, which indicated there was no evidence of non-normality (see Appendix).

4. Results

Table 2 presents the descriptive statistics, Cronbach's alpha, Average Variance Extracted (AVE), Pearson's correlation and discriminant validity for all variables. As AVE values are higher than 0.5 and the values of the correlations between the constructs are lower than the square root of their AVE, it can be concluded that there is convergent and discriminant validity for all the constructs (Fornell & Larcker, 1981). The partial correlation values are below 0.7, so there are no multicollinearity issues. Before the regression, the means of variables were centered to avoid multicollinearity issues between independent variables (Aiken & West, 1991). The highest value of the variance inflation factor (VIF) was 2.448 –lower than the threshold of 5 suggested in the literature (Kleinbaum, Kupper, & Muller, 1988)- and the highest condition index (CI) was 3.5 –low in relation to the accepted threshold of 30 (Belsley, 1991). Finally, the Durbin-Watson test was also satisfactory with a value of 1.761-close to 2, suggesting the independence of error terms.

The hypotheses were tested by means of hierarchical linear regressions (Table 3). According to Haans et al. (2016), based on recommendations of Lind and Mehlum (2010), different tests on the curvilinear analysis and the robustness of the curvilinear relationship were performed. Following these authors, three-step requirements must be satisfied to identify a quadratic relationship. First, the quadratic term (β_2) should be significant and with a positive sign for the U-shape. Model 3 shows that the market dynamism square has a positive and significant curvilinear relationship with the dependent variable ($\beta = 0.175$, $p < 0.05$). A significant β_2 coefficient alone is a necessary but not a sufficient condition to establish a quadratic relationship. Second, the slope must be sufficiently steep at both ends of the data range. Supposing X_L is at the low end of the X-range (which is $\beta_1 + 2\beta_2 X_L$) and X_H is at the high end (which is $\beta_1 + 2\beta_2 X_H$), a formal test for U-shaped relationships should prove that the slope at X_L is negative and significant and the slope at X_H is positive and significant. This test is corroborated in Table 4. Third, the inflection point must be located within the range of data. The inflection point is obtained by taking the first derivative of the equation and setting it to zero (which is $-\beta_1/2\beta_2$). If we estimate the 90 percent confidence interval using Fieller's test and it is within the data range, a U-shaped curve will exist. Table 4 shows that the inflection point has a value of −1.321 in the dependent variable function. Fieller's test revealed that the interval of the inflection point is within our range of data, meaning that both ends of the curve have a significant slope, so the entire curve is revealed by our data. Thus, the results confirm the existence of the U-shape of the relationship at both ends of the function, as can be seen in the following plot (Fig. 2). Finally, the robustness tests are satisfied -adding a quadratic term in the regression, splitting the data based on the turning point and testing the consistency with the shape of the curve of both slopes and exploring the shape of the relationship without imposing a structure on the function analyzed. These results confirm that the relationship between market dynamism and pioneering orientation follows a U-shaped curve and, thus, Hypothesis 1 can be accepted.

Following Haans et al. (2016), the value of the independent variable squared and multiplied by the moderator variable must be statistically significant to claim that the moderating variable has an effect on the curve between the independent and the dependent variables.[1] As

[1] It is known that the moderating effect flattens or steepens the curve representing the relationship between the independent and the dependent variables. Specifically, flattening occurs for U-shaped relationships when this value is negative. On the contrary, steepening occurs for the U-shaped relationships when this value is positive (Haans et al., 2016).

Table 3
Results of regression analysis for pioneering orientation.

	Model 1		Model 2		Model 3		Model 4		Model 5	
	β	t-statistics	β	t-statistics	β	t-statistics	β	t-statistics	β	t-statistics
Family business	0.066	0.976	0.062	0.936	0.056	0,863	0061	0,95	0,047	0733
Sense of belonging	0.041	0.586	0.032	0.461	0.031	0,452	−0,052	−0,715	−0,065	−0,893
Imitation	0.139*	2.007	0.089	1.272	0.092	1327	0,063	0918	0,115	1649
Access to financial resources	0.284***	4.18	0.279***	4.187	0.307***	4609	0,276***	4133	0,27***	4,11
Use of ITCs	0.108	1.559	0.071	1.037	0.058	0,854	0074	1097	0,056	0837
Type of firm	−0.068	−0.999	−0.075	−1.123	−0.066	−1011	−0,063	−0,964	−0,073	−1134
Market dynamism			0.206**	2.951	0.263***	3625	0,224**	3086	0,187*	2513
Market dynamism squared					0.175*	2502	0,17*	2475	0,128†	1766
Closed ties							0,189*	2,56	0,043	0456
Diverse ties							0,067	0979	0,216*	2496
MDxClosed ties									0,114	1574
MDxDiverse ties									−0,025	−0,33
MD squaredxClosed ties									0,193*	1999
MD squaredxDiverse ties									−0,212*	−2,17
Adjusted squared R	0.091		0.125		0.148		0.176		0.206	
F	45.010***		45.959***		34.215***		34.770***		35.328***	
Change in adjusted squared R	0.118		0.038		0.026		0.035		0.044	
Change in F	4.392***		8.707**		6.259*		4.292*		2.829*	

†p 0.10; *p 0 0.05; **p 0.01; ***p 0.001.

shown in Table 3, the second-order interaction, market dynamism squared by closed ties ($\beta = 0.193$, $p < 0.05$), has a positive effect on pioneering orientation, whereas the second-order interaction between market dynamism squared and diverse ties ($\beta = -0.212$, $p < 0.05$) has a negative effect on pioneering orientation. Moreover, the change in R^2 is significant ($\Delta R^2 = 0.044, p < 0.05$). This confirms that closed ties positively moderate the U-shaped relationship between market dynamism and pioneering orientation. Graphically, the positive effect accentuates the U-shaped curve, which indeed becomes steeper. However, diverse ties negatively moderate the U-shaped relationship between market dynamism and pioneering orientation. Graphically, the negative effect attenuates the U-shaped curve, which indeed becomes flatter. These findings lead us to accept Hypotheses 2 and 3. Following Aiken and West (1991) and Dawson (2014), we plotted the results of the moderator effects. These revealed that with high levels of closed ties, the U-shaped curve between market dynamism and pioneering orientation is accentuated (Fig. 4). In contrast, in the presence of high levels of diverse ties, the U-shaped curve is attenuated (Fig. 5), so much so that the slope becomes linear and positive. These findings suggest that the initial drawbacks of market dynamism for developing a pioneering orientation disappear when a firm builds a great number of diverse ties.

Moreover, following Brambor, Clark, and Golder (2006), we tested the marginal effects of market dynamism and closed ties and diverse ties (Figs. 5 and 6, respectively) in order to corroborate the moderator effects. The plot shows that the effect is significant (95% confidence intervals) for levels of closed ties higher than −0.29, which represents 64% of the total sample. For low values of closed ties, the interaction effect of closed ties is non-significant. Therefore, Hypothesis 2 can be confirmed, since a large part of our sample lies in the significant interval. In the case of diverse ties, the effect is significant for a range of values comprised between −2.36 and 1.89, representing 85% of the total sample. For very low and very high values of diverse ties, the interaction effect of closed ties is non-significant. Therefore, almost all our sample is in the significant interval, so we can confirm Hypothesis 3.

Note: We use mean-centered values.

5. Discussion

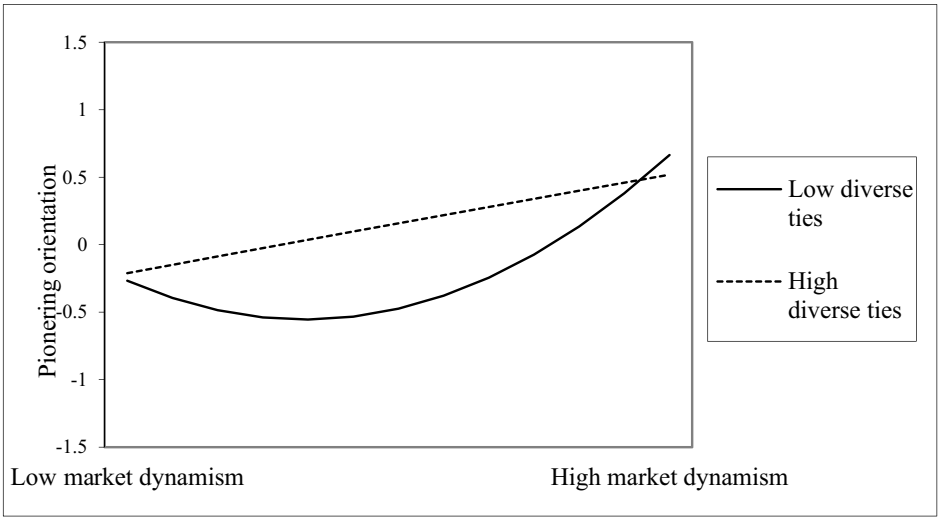
This study focuses on factors influencing pioneering orientation, namely market dynamism and social capital –closed ties and diverse ties. In particular, moderator effects of closed ties and diverse ties were analyzed in the U-shaped relationship between market dynamism and pioneering orientation of firms belonging to tourism clusters.

The present paper contributes to prior literature on many counts. First, this study proves the existence of a curvilinear U-shaped relationship between market dynamism and pioneering orientation. These findings differ from previous studies that have supported a linear and positive effect or even linear and negative effect (García-Villaverde et al., 2012; Suarez & Lanzolla, 2007; Tuppura et al., 2010; Zachary et al., 2015). This curvilinear U-shaped relationship implies that considering both advantages and disadvantages of market dynamism, initially the latter have a dominant role in pioneering orientation.

Table 4
Curvilinear analysis (U-shaped).

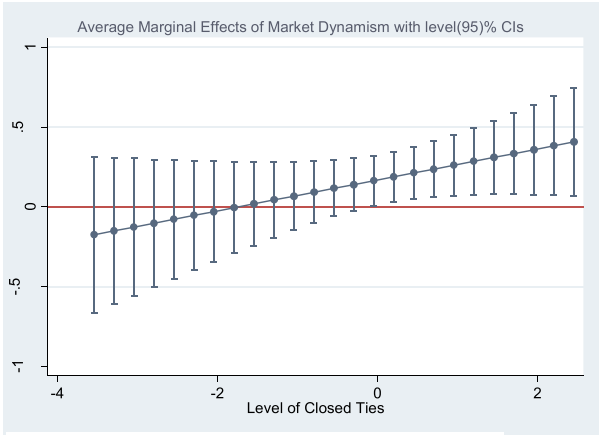
Step 2		
	Lower bound	Upper bound
Interval	−3.7726	2.2274
Slope	-.5260899	.761458
t-value	−1.707.611	333.865
P > |t|	.04465	.0005042
Step 3		
Inflection point -Extreme point-	−1.32101	
90% Fieller interval for extreme point	[-3.5536814; −.69023579]	

Note: We use mean-centered values.



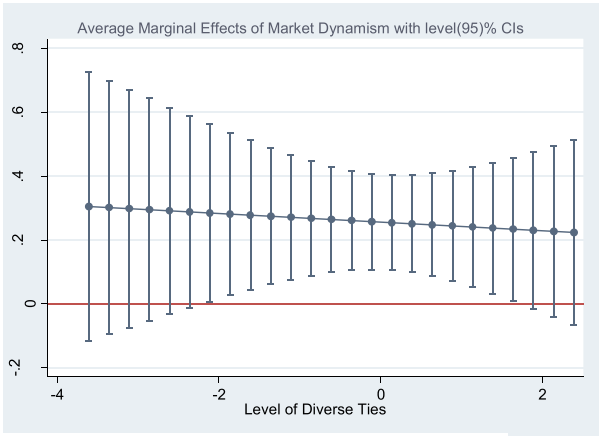
Note: We use mean-centered values.

Fig. 4. Moderator effect of diverse ties on the curvilinear relationship between market dynamism and pioneering orientation.



Note: We use mean-centered values.

Fig. 5. Marginal effect of market dynamism on pioneering orientation as closed ties changes.



Note: We use mean-centered values.

Fig. 6. Marginal effect of market dynamism on pioneering orientation as diverse ties changes.

However, beyond a certain point, the benefits exceed the drawbacks and market dynamism has a net positive effect on pioneering orientation. Moreover, graphically, it is shown that this curve is asymmetrical, which reveals that the positive effects on pioneering orientation prevail with reduced levels of market dynamism.

Second, our results confirm that closed ties and diverse ties have divergent moderating roles on the curvilinear U-shaped relationship between market dynamism and pioneering orientation. The positive moderation effect of closed ties consists of a smaller focal length, and thus a steeper U-shaped curve. This indicates that firms with high levels of closed ties accelerate learning and improve the ability to counter the negative effect of adaptation costs that initially hinder pioneering orientation. These costs stem from the difficulty of perceiving changes in consumer preferences in the presence of factors such as lock-in, resistance to new ideas and an "us versus them" attitude caused by an excess of closed ties. However, beyond the critical level of market dynamism shown in the diagram, tourism firms with high levels of closed ties will be able to take advantage of changes in market dynamism to develop greater pioneering orientation than firms with low levels of closed ties. At this level of market dynamism, trust and common goals between agents in the cluster are crucial to boost willingness to cooperate and exchange ideas and key resources, significantly reducing uncertainty and hence fostering pioneering orientation.

The marginal effects analysis shows that the moderator effect of closed ties does not hold for low levels of market dynamism. When tourism firms with a high level of closed ties face a low level of changes in the market, they perceive a predominance of first-mover disadvantages that leads them to lower pioneering orientation. Firms with a shortage of closed ties have no redundant information problems, and hence fewer difficulties in identifying changes in tastes and preferences of customers, and so implement a greater pioneering orientation. However, when these firms have to deal with high market dynamism, due to strategic collaboration, which reduces uncertainty, they will perceive first-mover net advantages and the development of a pioneering orientation strategy will be fostered.

The negative moderation of diverse ties corresponds to a larger focal length of the U-shaped curve. This illustrates that the potential adverse effects of market dynamism on pioneering orientation for tourism firms located in clusters with high levels of diverse ties disappear. In this case, the flatter slope of the curve reflects the fact that diverse ties enable firms to connect with heterogeneous agents, who have very different

backgrounds, experience, knowledge and skills, and who open up opportunities to access a greater variety and diversity of information and of knowledge. These tourism firms are constantly updated on changes in the demands of consumers in environments where such changes occur at quite high speed, and can leverage the opportunities arising from a dynamic market through greater pioneering orientation.

However, at the highest levels of market dynamism, tourism firms with high levels of diverse ties do not achieve such robust pioneering orientation as firms with low levels of diverse ties (see Fig. 3). This is for various reasons. First, when tourism firms belonging to a cluster perceive that markets are radically changing and receive a greater amount of new information and receive it faster, through dispersed contacts, these firms suffer information overload and confusion (Ahuja & Lampert, 2001). Second, searching for exclusive opportunities through diverse ties leads to a firm's knowledge base changing continuously in a dispersed manner, with the possibility of random decisions that may result in costly, excessive and inconclusive experimentation (Karamanos, 2012). These arguments justify the results of the marginal effects analysis, which shows that for very high levels of diverse ties, the moderator effect is non-significant.

The analysis of marginal effects also shows that the moderator effect is non-significant for very low levels of diverse ties. Tourism firms located in a cluster require, therefore, a minimum level of diverse ties in order to take advantage of the potential of these relations when managers perceive high market dynamism. Diverse ties provide novel and relevant information about markets through structural holes that connect diverse tourism agents, which are not interconnected, identifying a wide range of opportunities arising from changes in needs and preferences of consumers at higher level. Therefore, diverse ties can be a key factor in fostering pioneering orientation against market dynamism for firms located in tourism clusters that do not have excessively high or low levels of diverse ties.

In addition, the results show that the development of greater pioneering orientation does not depend on whether the companies are independent or subsidiaries of corporations, or on their family character. We also found no correlation between the numbers of employees and pioneering orientation. However, access to financial resources and the imitation of competitors have a positive effect on pioneering orientation.

Our results show that small firms located within cultural tourism clusters, like World Heritage Cities, can develop a high pioneering orientation to respond to increasing market dynamism. Thus, small firms with a deep knowledge of the territory based on closed ties with agents of the cluster, with the ability to identify changes in preferences of customers through diverse ties and with enough financial resources, can be the first firms to offer new products and services to provide attractive experiences for these types of tourists. These novel experiences consist of combining diverse elements such as heritage, landscapes, cultural events, traditional customs and gastronomy based mainly on local products. Thus, small firms can maintain first-mover advantages, based on resource position barriers, even in industries with few entry and imitation barriers (Makadok, 1998). This is more frequent in mature industries such as tourism, where large firms may delay the introduction of new products and services in a market due to their structural inertia and the risk of cannibalizing their own products (Taylor & Anderson, 2001).

6. Conclusions

The paper adds to the open debate about the advantages and disadvantages of pioneers. Initially, Lieberman and Montgomery (1988) tackled first-mover advantages, highlighting three main isolating mechanisms. They later focused on disadvantages such as the free-rider effect, technological change and changes in consumers' needs. Thus, the most recent literature pays special attention to the net effect of entry timing in a market that depends on a fine balance between benefits and drawbacks of pioneering orientation (Zachary et al., 2015). In this sense, previous studies have called for more research on explanatory factors of pioneering orientation (see Schoenecker & Cooper, 1998; Fuentelsaz et al., 2002; Garret, Covin, & Slevin, 2009, among others).

In this line, this paper contributes the literature by connecting arguments of the social capital approach with environmental dynamism as antecedents of a pioneering orientation position. Specifically, this paper explains how social capital -closed ties and diverse ties- and market dynamism connect to drive tourism firms located in clusters towards a pioneering orientation.

This study also contributes to the population ecology of organizations (Hannan & Freeman, 1977), whereby firms with adequate resources to compete in a specific environment are able to develop a suitable strategy and succeed. Furthermore, the relation between market dynamism and pioneering orientation is clarified by proving a curvilinear U-shaped effect.

In addition, this thorough analysis of the divergent moderator roles of closed ties and diverse ties adds to the literature on social capital and, particularly, on the controversy about closed ties and diverse ties, known as the paradox of networks whereby certain characteristics of ties can assist some actions but may adversely affect other actions (Coleman, 1990). Even though prior literature has addressed social capital as a one-dimension construct or a tridimensional construct, with structural, relational and cognitive dimensions (Nahapiet & Ghoshal, 1998), this paper uses a bidimensional approach of social capital and contributes the debate on the optimal level of closed ties and diverse ties.

The empirical focus of the paper also contributes the literature on clusters. In particular, we delve into the antecedents of pioneering orientation, connecting entry timing and cluster literature. Moreover, this study adds value to the entry timing literature by focusing on the tourism industry, since service industries have traditionally been neglected in this area.

Regarding practical implications, managers are advised to pay attention to changes in demand in order to evaluate potential opportunities for firms located in tourism clusters, by developing a pioneering orientation that boosts the development of more innovations in new markets. Initially, when early changes in markets occur, adapting to outweigh any possible first-mover advantages has its drawbacks. However, beyond certain levels of market dynamism, firms located in tourism clusters may take advantage of opportunities as a result of these changes in the market.

In addition, these firms might benefit from the development of social capital. Specifically, closed ties hinder the development of a more pioneering orientation when market dynamism is low; but beyond a certain point of market dynamism, the chances of achieving higher net first-mover advantages with high levels of closed ties increase. Likewise, managers of tourism firms located in a cluster should develop diverse ties in order to eliminate the initial adverse effects of market dynamism on pioneering orientation. Thus, these firms could benefit from first-mover advantages with initial changes in needs and tastes of customers.

We found that firms based in Spanish Word Heritages Cities that perceive structural changes in demand and new needs from tourists tend to introduce new products and services early to the market. A clear example are hospitality firms, which have pioneered an innovative service experience, including accommodation in restored historical buildings with personalized environments and high quality service, mobile and cloud technologies applied to intelligent rooms and spaces, and virtual reality with wearable devices; there already even exist experimental hotels run by robots. Moreover, medium and small-size firms with less access to cutting-edge technology also have great

opportunities due to their location in tourism clusters. From the current approach of service as experience, small firms can customize their tourist services with guided tours around historical towns, heritage monuments, and art galleries. Sometimes visitors can participate in craft workshops, as well as wine tastings, and sampling of cheese, honey and other quality agri-food products from the territory. The collaborative relationships among firms within a tourism clusters provide an integrated tourist product consisting of a holistic experience for the visitor.[2]

Hospitality firms that have closed ties with local institutions and local agents, through informal and frequent relationships, can obtain more knowledge and cooperate with a higher level of confidence, designing new products that allow them to leverage the opportunities of a changing market. On the other hand, hospitality firms that establish diverse ties can then offer more alternatives, designing new products and introducing novel elements in their tour packages. However, when market changes are radical, an extremely high level of diverse ties can generate ambiguity and confusion regarding the changes, hindering the launch of innovative products in the market.

Managers of the tourism firms located within World Heritage Cities can develop a variety of mechanisms to monitor when significant changes in demand require the development of a greater pioneering orientation. Thus, managers should complement the reports from public and private institutions about trends in tourist flows and new demands related to cultural and heritage tourism with information provided by their closest agents.

On the one hand, managers of firms belonging to tourism clusters could take advantage of their closed ties, maintaining direct and personal contact with clients, suppliers and competitors in order to detect when a turning point occurs in the habits, demands and levels of satisfaction of their clients, which demands an increasing introduction of innovative products and services in the market. Thus, significant complaints from clients, frequent demand for products or services not offered by the firm or loss of loyalty of regular qualified customers can be key signs for detecting the crucial point of changes in demand that should lead them to rapidly strengthen their pioneering orientation.

On the other hand, managers should maintain diverse ties with heterogeneous agents from different contexts, through private and professional trips, attending trade fairs, and also by applying new technologies (big data, beacons, etc.) to identify significant changes in demand at a very early stage, and so take advantage of these chances in order to develop a higher pioneering orientation. Thus, these diverse ties drive an increasingly proactive strategy to respond to higher changes in the market. In short, managers of firms located within World Heritages Cities must be able to cooperate and compete with global and local agents, combining diverse ties and closed ties, to improve the adjustment between market changes and their pioneering orientation. The social capital generated in these World Heritage Cities might contribute to configure a more attractive tourist experience, reinforcing the prestige of a tourism destination, which, in turn, will benefit firms located in these cities.

Some limitations of the present study may affect the generalization of the results. First, the empirical study is cross-sectional, but we believe that a longitudinal analysis could have hindered the acquisition of key, solid information on the various factors analyzed. Second, despite the efforts made in the development of the scales and the validation of the measures, there may still be a potential bias. Finally, the empirical study was carried out in a specific context of tourism clusters, World Heritage Cities of Spain, which could affect the generalization of the results. However, results could be extrapolated to World Heritage Cities from other countries (Su & Lin, 2014), because they have common characteristics, such as the prevalence of small- and medium-sized companies, cultural identity, values and customs based on tradition, and the coexistence of small and large firms. Furthermore, this study finds no significant differences among World Heritage Cities located in Spanish regions with a diverse cultural background. Another limitation of the study is that the sample is comprised of very small sized firms, which may not apply to other contexts. Finally, caution should be exercised in extending the results and conclusions to other more standardized and globalized types of tourism, such as sun and beach tourism, where large tourism companies and multinational chains tend to have a greater presence in the market and could maintain first-mover advantages over time.

The results obtained lead us to propose several future lines of research. First, we suggest including other aspects of social networks in future studies, such as trust or shared values, and other types of environmental conditions, such as environmental hostility and technological turbulence, which might affect pioneering orientation, as suggested by several authors (Kerin et al., 1992; Parra-Requena et al., 2012; Schoenecker & Cooper, 1998; Tegarden et al., 2000). It would also be interesting to extend this study to other types of tourism and to World Heritages Cities in other countries, where the possibilities of obtaining and maintaining net first-mover advantages might be different to those in the context of our study.

Author contribution

Pedro M. García-Villaverde has contributed to the paper with the introduction, the results discussion and conclusions. The contribution of Dioni Elche has been mainly the literature review and Angela Martínez-Pérez carried out the empirical analysis.

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APPENDIX. Items in scales and descriptive statistics

	Mean	Stand. Desv.	Skewness		Kurtosis	
			Statistic	Std. Error	Statistic	Std. Error
Market dynamism						
In our business, customer demands and product preferences change quite rapidly	4.77	1.702	−0.433	0.167	−0.747	0.332
New customers tend to have product needs that are considerably different from those of existing customers	4.71	1.636	−0.441	0.166	−0.53	0.331
Our customers tend to constantly look for new products	4.84	1.591	−0.399	0.166	−0.56	0.331
Closed ties						
Social interaction						
The firm is often in touch with its contacts	5.48	1.503	−0.855	0.166	−0.036	0.33
In the firm, the contacts are known on a personal level	5.26	1.512	−0.688	0.166	−0.139	0.33
In the firm, there are close social relationships with contacts	4.26	1.642	−0.129	0.166	−0.665	0.33

[2] The examples are based on our knowledge obtained through direct contact with the managers of the companies and professional tourism experts during the development of the empirical study as well as news from the media.

Network density						
The resources and information exchanged with contacts are similar	4.58	1.504	−0.361	0.167	−0.432	0.332
The firm's closest contacts know each other	3.84	1.575	0.098	0.166	−0.737	0.331
The firm's contacts that provide useful information know each other	3.81	1.608	−0.007	0.166	−0.783	0.331
Diverse ties						
Many of the firm's contacts vary widely in their areas of expertise	4.6	1.57	−0.393	0.166	−0.359	0.33
Many of the firm's contacts have a variety of different backgrounds and experiences	4.75	1.508	−0.606	0.166	0.054	0.33
Many of the firm's contacts have skills and abilities that complement each others'	4.47	1.41	−0.422	0.166	0.112	0.33
Pioneering orientation						
This firm is usually among the first to introduce new products to the market	4.52	1.676	−0.411	0.167	−0.657	0.333
This firm is the industry's leader in developing innovative ideas	4.34	1.674	−0.36	0.167	−0.617	0.333
This firm is well known for introducing breakthrough products and ideas	4.53	1.788	−0.33	0.167	−0.869	0.333
Participation of family members in management (0 = no; 1 = yes)	0.62	0.487	−0.494	0.168	−1.773	0.334
Identification with firms located in the same town	5.46	0.879	0.178	0.166	−0.659	0.33
Imitation						
Firms in our sector often quickly imitate new products and services	5.01	1.508	−0.474	0.167	−0.359	0.332
Firms have significant capabilities to mimic new products and services	5.03	1.444	−0.579	0.166	−0.183	0.331
Easy access to financial resources	2.52	1.63	0.825	0.167	−0.386	0.333
Use of TICs is critical for the firm (web, chats, bookings, emails, etc.)	5.55	1.819	−1.18	0.167	0.343	0.333
Type of firm (0 = subsidiary; 1 = independent)	0.3	0.461	0.862	0.167	−1.269	0.333

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