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Research paper

Collaborative innovation, partners, and geographical proximity in the tourism sector in Chile

Innovación colaborativa, socios y proximidad geográfica en el sector de turismo en Chile

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ABSTRACT

Increasingly, firms collaborate with diverse actors to innovate, such as other business organizations and business support organizations. A better understanding of the relationship between the actors engaged in collaborative innovation is essential to innovation management and policy. However, literature on collaborative innovation addressing emerging countries and the tourism sector is relatively scarce. Using data from 257 Chilean tourism firms and partial least square structural equation modeling (PLS-SEM), we analyze the effect of the interrelations of tourism firms with business and support organizations on product and process innovation and the effect of geographical proximity. The results state that collaboration with business organizations as buyers and suppliers facilitates innovation. In addition, collaboration with business support organizations such as universities, public organisms, and technological centers facilitates process innovation and is influenced by geographical proximity. Conclusions and implications are discussed.

Keywords: *Collaborative Innovation, Innovation, Geographical Proximity, Tourism, Chile*

RESUMEN

Cada vez más, las empresas colaboran con diversos actores para innovar, como otras organizaciones empresariales y organizaciones de apoyo a las empresas. Comprender mejor la relación entre los agentes que participan en la innovación colaborativa es esencial para la gestión y la política de la innovación. Sin embargo, la literatura sobre innovación colaborativa dirigida a países emergentes y al sector turístico es relativamente escasa. Utilizando datos de 257 empresas turísticas chilenas y el modelo de ecuaciones estructurales de mínimos cuadrados parciales (PLS-SEM), analizamos el efecto de las interrelaciones de las empresas turísticas con las organizaciones empresariales y con organizaciones de apoyo en la innovación de productos y procesos, y el efecto de la proximidad geográfica. Los resultados afirman que la colaboración con organizaciones empresariales como compradores y proveedores facilita la innovación. Además, la colaboración con organizaciones de apoyo a la empresa como universidades, organismos públicos y centros tecnológicos facilita la innovación de procesos y está influida por la proximidad geográfica. Se discuten las conclusiones e implicaciones.

Palabras clave: Innovación Colaborativa, Innovación, Proximidad Geográfica, Turismo, Chile

INTRODUCTION

Innovation is increasingly analyzed as a process where different actors participate by sharing ideas, research, and development and creating new products and processes. This phenomenon is called "collaborative innovation," which has antecedents in systemic approaches to innovation, such as clusters, regional innovation systems, innovation ecosystems, and open innovation. These approaches highlight the formal and informal interactions between the various actors involved in innovation in each territory (Porter, 1998; Chesbrough, 2003; Oh et al., 2016; Marasco et al., 2018; Shin & Perdue, 2022; Xie et al., 2023). Another antecedent is that companies often lack the resources and capabilities to develop their innovation processes (Geldes et al., 2017; Heredia et al., 2019).

Although collaborative innovation is an approach that has been developed in the literature and is linked to open innovation, it has been less developed in emerging countries and the tourism sector, with increasing economic importance (Rubalcaba et al., 2016; Marasco et al., 2018; Shin & Perdue, 2022). Due to this, the aim of this study is to analyze collaborative innovation in firms linked to the tourism sector in Chile. Specifically, it studies the interrelations of tourism firms with other business organizations (buyers, suppliers, and clients) and with business support organizations (public agencies, universities, technology centers, and trade associations) to facilitate the development of product innovations (goods and services) and process innovations. Additionally, it is analyzed if the geographical proximity (distance) promotes the mentioned interrelations. These analyses allow answer questions such as: In the case of tourism firms, with which organizations to collaborate to innovate? Does the collaboration of tourism firms with other organizations facilitate product or process innovation? Does geographical proximity facilitate the collaboration of tourism firms with other organizations?

The method used is Partial Least Square - Structural Equation Modelling (PLS-SEM). It analyzes the relations between constructs developed from the literature (Henseler et al., 2016). The data is obtained from a survey of 257 firms in the tourism sector in Santiago of Chile. Initially, a theoretical model of the relationships between geographic proximity, business organizations, business support organizations, process innovation, and product innovation is proposed.

The results of this study will generate background information to answer questions such as which partners to collaborate with to innovate and if geographic proximity is relevant to interrelate with business organizations and business support organizations. The policy and managers' implications are discussed.

The following sections are Theoretical Framework, Data and Methodology, Results and Discussions, and Conclusions and Implications.

THEORETICAL FRAMEWORK

This section has reviewed some approaches to define the theoretical proposed model and their hypotheses, such as collaborative innovation, geographical proximity, and types of innovation (Figure 1).

Collaborative Innovation

Increasingly in the management and tourism literature, it is emphasized that innovation is the result of a collaborative process between different actors (Cantù et al., 2015a, 2015b; Marasco et al., 2018). This approach has its bases in systemic approaches to innovation, such as clusters (Porter, 1998), technological innovation systems, or innovation ecosystems (Oh et al., 2016), as well as in the concept of "open innovation" that emphasizes the opening of the innovation process beyond the boundaries of the company seeking to complement ideas, resources, and capabilities with other actors (Chesbrough, 2003). Also, there are relevant antecedents in related approaches, such as "co-innovation" and "co-creation," that emphasize the participation of stakeholders in innovation processes, such as consumers and suppliers (Lee et al., 2012). In general terms, collaborative innovation is a process that involves cooperation with individuals, organizations, companies, and institutions to develop new ideas, products, and services. Moreover, it has positively affected innovative performance, especially in supply chains rather than industry-university-research collaborations (Xie et al., 2023). On the other hand, it has been seen that the effects of collaborative innovation have different results depending on the type of partners with whom it is innovated (Cantù et al., 2015a, b). In general, it is observed that cooperation with firms such as suppliers and buyers generate positive effects on innovation. Also, it is observed that collabora-

tion with support institutions such as public agencies, universities, and technology centers facilitates indirect firm innovation through support instruments and programs (Etzkowitz & Leydesdorff, 2000; Gallaud, 2013; Geldes et al., 2017; Marasco et al., 2018; Fuentes et al., 2019). For example, Castillo-Vergara & Torres (2019) indicate that business cooperation and professional cooperation affect technological innovation. However, academic collaboration has not a significant effect. In the tourism sector, collaborative innovation has diverse approaches in the literature. According to a systematic review by Marasco et al. (2018), there are five approaches: cooperative behavior of innovating firms, co-creation, collaborative networks for innovation, knowledge transfer, and innovation policies. In this vein, the need to research collaborative innovation in the tourism sector is highlighted (Marasco et al., 2018; Shin & Perdue, 2022). Moreover, in Latin America, there are fewer studies on innovation (Olavarrieta & Villena, 2014; Rubalcaba et al., 2016).

Tourism sector and collaborative innovation in Chile.

First, to analyze collaborative innovation in Chile, reference is made to the Global Innovation Index (WIPO, 2022). In this index, the country is in position 51 for 2021. However, the dimensions "innovation linkages" and "state of development and depth of clusters" occupy positions 75 and 77, respectively. It implies a lower development of these dimensions. On the other hand, the National Innovation Survey, based on the Oslo Manual (OECD, 2005; 2018), indicates that only 10% of companies cooperate to innovate. Specifically, 8.8% collaborate with domestic organizations and 3.2% with foreign organizations. In addition, Chilean companies present different levels of collaboration with other actors: higher education institutions (3.8%), public research institutes (3.7%), consultants, laboratories, or R&D institutes (4.2%), competitors (4.0%), customers (5.5%), suppliers (7.4%) and companies of the same group (6.2%). These results indicate that collaborative innovation is a challenge in Chile, and it invites to develop of more research in the tourism sector, given its contribution to the economy and employment, considering that cooperation to innovate and innovation differs according to territory and economic sector (Hall & Rosenberg, 2010; Geldes et al., 2017).

Official statistics show that tourism is a relevant economic activity in Chile (Subsecretary of Tourism, 2020). In 2019, Chile was the third country with the highest number of international tourist arrivals in South America, with more than 4.5 million arrivals, which generated revenues of more than US$2.9 billion. In the same year, approximately 440 thousand people worked in accommodation and food service activities, equivalent to 4.9% of total employment, primarily women. The country's regions with the highest proportion of people employed in the sector are the extreme zones: Arica and Parinacota, Tarapacá and Magallanes, and Chilean Antarctica. On the other hand, the supply of services in the sector comprises more than 177 thousand companies with related activities, among which, for example, there are 12 thousand tourist accommodation companies, 53 thousand food and beverage companies, and 2 thousand seven hundred tourism agencies. The supply of beds in the sector amounts to more than 266 thousand. The Metropolitan Region represents a significant portion of the tourist offer, with more than 70 thousand related companies that employ more than 200 thousand people and receive more than 3.5 million arrivals and 7.5 million overnight stays.

Geographical Proximity.

Different theoretical approaches highlight that geographical proximity (physical distance) is a critical element in facilitating the innovation process through formal and informal interactions of other agents in a territory, such as the Innovation Ecosystem (Oh et al., 2016), National Innovation System (Fagerberg & Sapprasert, 2011), Regional Innovation System (Asheim & Isaksen, 2002), Cluster (Porter, 1998), and Triple Helix (Etzkowitz y Leydesdorff, 2000). In this sense, the economics of geography proposes the approach of proximity to explain formal and informal interactions within a territory (Balland et al., 2022). Boschma (2005) states, "Proximity implies more than geography. It is a broad concept that incorporates the similarity between actors and organizations, including spatial and non-spatial dimensions". These dimensions of proximity are geographical proximity (spatial) and non-spatial proximities such as social proximity (decoupling), cognitive proximity (learning), organizational proximity (integration), and institutional proximity (institutionalization). Although there are different classifications of proximities, the Boschma classification is the most accepted (Knoben & Oerlemans, 2006; Balland et al., 2022). This means that geographical proximity (physical distance) facilitates formal and informal interactions between actors facilitating innovation. Considering the theoretical model proposed, the hypothesis H1.1 and H1.2 (Figure 1):

H1.1 Geographical proximity facilitates interaction with Business organizations.
H1.1 Geographical proximity facilitates interaction with Business support organizations.

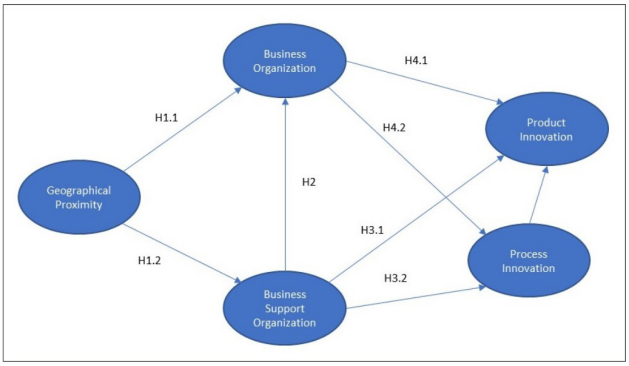
Types of Innovation.

Innovation has been studied from different approaches, such as innovation ecosystem (Oh et al., 2016), sectorial innovation (Marasco et al., 2018), and business innovation (Heredia et al., 2019). In the case of business, innovation has been extensively studied, generating multiple definitions and classifications of types of innovations such as administrative and technical, incremental and radical, and others (Crossan & Apydin, 2010; Rowley et al., 2011; Geldes et al., 2017). However, some consensus has been achieved with the definition proposed in the Fourth Version of the Oslo Manual (OCED, 2018, page 20): "An innovation is a new or improved product or process (or a combination thereof) that differs significantly from the unit's previous products or processes and that has been made available to potential users (product) or brought into use by the unit (process)." This definition includes two types of innovation: product innovation and process innovation. This classification differs from the Third Version of the Oslo Manual, which includes product, process, marketing, and organizational innovations (OECD, 2005). Specifically, product and process innovations are defined as: "A product innovation is a new or improved good or service that differs significantly from the firm's previous goods or services and that has been introduced on the market." "A business process innovation is a new or improved business process for one or more business functions that differ significantly from the firm's previous business processes and that has been brought into use by the firm" (OCED, 2018, page 21).

Regarding business innovations, several studies relating internal and external determinants of innovation differ according to economic sector and territory (Crossan & Apydin, 2010; Hall & Rosenberg, 2010). Some internal determinants are sales, employees, research and development, purchases of capital goods, leadership, resources, and capabilities. The external determinants are collaboration/cooperation, funding, information access, informality, and others (Lazonick, 2006; Heredia et al., 2017; Geldes et al., 2017; Heredia et al., 2019; Ortiz et al., 2023). In the specific case of the tourism sector, Divisekera & Nguyenm (2018) identifies collaboration, human capital, foreign ownership, and firm size positively influence service innovation. In addition, collaboration, firm size, information technology, funding, and market competition positively influence marketing innovation. Although collaboration is identified as a determinant of business innovation in the tourism sector, more research is needed, for example, by identifying with innovation actors or partners should collaborate (De Faria et al., 2010; Shin & Perdue, 2002). In general, it is determined that cooperation with business organizations such as suppliers, buyers, consultants, and other competing companies directly favors business innovation processes. Also, it has been observed that business innovation is facilitated with the collaboration of support organizations such as technology centers, universities, public agencies, and trade associations, which are favored (Etzkowitz & Leydesdorff, 2000; Gallaud, 2013; Cantù et al., 2015b; Marasco et al., 2018; Fuentes et al., 2019; Castillo-Vergara & Torres, 2019). Considering the previous antecedents, and the exploratory nature of this study of firms in the tourism sector in Chile, the following hypotheses are proposed (Figure 1):

H2: Business support organizations (public agencies, universities, technology centers, and trade associations) contribute to the Business organizations.
H3.1 Collaboration with business support organizations facilities product innovation.
H3.2 Collaboration with business support organizations facilities processes innovation.
H4.1 Collaboration with business organizations facilitates product innovation.
H4.2 Collaboration with business organizations facilitates process innovation.

Figure 1. Theoretical Model



METHODOLOGY

Sample and data collection

A survey was designed and applied to 257 companies in the tourism sector located in Santiago, Chile. For the design of the instrument, antecedents of the Oslo Manual (OECD, 2005; 2018) were reviewed to define the types of agents to collaborate in innovation and the types of innovation defined. Regarding geographic proximity (Boschma, 2005), an approximation of perception was used using the Likert scale. Before the application, five experts were consulted, and a pilot of 10 surveys was applied. Two persons were trained as a field team for the application and instructed to present an ethical protocol, "informed consent," to the respondents. The sampling is by "snowball," which seeks to contact relevant actors so that they can then indicate other actors who can be surveyed (Parker et al., 2019).

From the sample, 111 (43.2%) stated that their main line of business is directly linked to tourism, such as tour operators and hotels. On the other hand, 136 (56.8%) identify as suppliers of tourism companies' products and services. Regarding the size of the companies, a total of 115 (44.7%) have less than ten workers (micro companies), 124 (48.2%) between 11 and 49 workers (small companies), 16 (6.2%) between 50 and 250 workers (medium companies) and 2 (0.8%) more than 250 workers (large companies). In addition, only 6 companies (2.3%) reported belonging to a trade association, and 47 (18.3%) companies reported having foreign capital, mainly less than 25% for 40 companies.

Measures

The measurement variables were defined considering the related literature. The detail of the items considered for each variable is shown in Table 1. All the variables were evaluated on a five-point Likert scale: "very low," "low," "indifferent," "high," and "very high." Specifically, in the case of geographic proximity, a qualitative and alternative approach is used based on the valuation of the physical distance to the different actors of the tourism ecosystem. It was based on the question, "Value the geographical proximity (physical distance) to collaborate with the following actors...." (Geldes et al., 2015). In the case of partners of collaborative innovation, consider the Oslo Manual (OECD, 2005; 2018). They are grouped into two types: "Business organizations" (suppliers, buyers, consultants, and similar companies) and "Business support organizations" (universities, public bodies, technology centers, and trade associations). In this case, the question is, "Value your level of collaboration with the following stakeholders..." Process and product innovations (goods and services) are considered according to the last definitions of the Oslo Manual (OECD, 2018). We have considered the constructs in the reflective mode for analysis (Hair et al., 2019).

Analysis

The method used is Partial Least Square Structural Equation Modelling (PLS-SEM); the estimations are performed with SMART-PLS software (version 4.0.0.3) (Ringle et al., 2022). Two models are calculated: the measurement (or outer) model shows how the observed variables link to the latent variables, and the structural (or inner) model shows how strong and in which direction the relationships between the latent variables are (Hair et al., 2014).

In the case of the measurement model, the items of each construct present in the theoretical model proposed are selected with factor loadings above 0.700. In the case of the composite reliability of the constructs, Cronbach's alpha, rhoA, and rhoC values over 0.700 are accepted. In the case of convergent validity, AVE ≥ 0.500. Discriminant validity is evaluated with the heterotrait-monotrait ratio (HTMT) statistic ≤ 0.85 ≤ 0.9. Regarding multicollinearity, the "collinearity statistics" (VIF) ≤ 3.0 for all variables. The model fit indicator is SRMR ≤ 0.10, and the exact fit test is based on bootstrap d_ULS ≤ HI95 ≤ HI99 and d_G d_ULS ≤ HI95 ≤ HI99 (Henseler et al., 2016; Hair et al., 2017).

About the structural model. A bootstrapping with 10,000 subsamples is performed. Then, we evaluate the model fit indicators. The collinearity VIF ≤ 3. Sign coefficient path: compare with sign postulated in hypothesis. Path coefficient value between -1 and +1. Path coefficient significance by bootstrapping: i) signed hypotheses 1-tailed test: $p < 0.05$; CI percentile: 5% - 95% (no change of sign at the extremes), ii) unsigned hypothesis 2-tailed test: $p < 0.05$; CI percentile: 2.5% - 97.5% (no change in sign at the extremes). 97.5% (no change of sign at the extremes). Determinant Coefficient ($0 < R2 < 1$). Total effect: i) small effect $0.02 \leq f2 < 0.15$; ii) moderate effect $0.15 \leq f2 < 0.35$; iii) significant effect $f2 \geq 0.35$ (Cohen, 1988).

RESULTS AND DISCUSSION

The measurement model results are presented in Table 1. For each construct, the items are selected with factor loadings over 0.700. Concerning composite reliability, Cronbach's alpha, rhoA, and rhoC values are above 0.700, except for "business organizations" with rhoA 0.661, accepted considering the exploratory nature of the classification of collaborative partners to innovate. In addition, the constructs present discriminant validity with AVE < 0.500. They show the convergent validity of the measures.

Table 1: Measurement model

Construct	FL	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
Business Organization		0.633	0.661	0.843	0.729
Buyers	0.813				
Suppliers	0.893				
Consultans					
Competitors					
Business Support Organization		0.809	0.813	0.874	0.635
Technology centers	0.777				
Universities 0.843					
Trade organizations	0.763				
Public organizations	0.801				
Geographical Proximity		0.885	0.892	0.916	0.685
GP-universities 0.873					
GP-trade organizations	0.859				
GP-public organizations	0.820				
GP-consultans 0.805					
GP-competitors 0.777					
GP-technology centers					
GP-buyers					
GP-suppliers					
Product Innovation					
Goods innovation					
Services innovation	1.000				
Process Innovation					
Process innovation1.000					

Source: Prepared by the authors by SMART-PLS.

Table 2 y Table 3 shows that discriminant validity with HTMT all values are lower than 0.885. Regarding multicollinearity, the "collinearity statistics" (VIF) is checked with values minus 3,000 for all variables. The Fornell-Larcker criteria (Fornell & Larcker, 1981) are also met, fulfilling the requirements for discriminant validity.

Table 2: HTMT

Constructs	(1)	(2)	(3)	(4)	(5)
Business Organization (1)					
Business Support Organization (2)	0.293				
Geographical Proximity (3)	0.184	0.490			
Process Innovation (4)	0.461	0.179	0.138		
Product Innovation (5)	0.463	0.097	0.064	0.333	

Source: Prepared by the authors by SMART-PLS. HTMT statistic.

Table 3: Fornell-Larcker Criterion

Constructs	(1)	(2)	(3)	(4)	(5)
Business Organization (1)	0.854				
Business Support Organization (2)	0.192	0.797			
Geographical Proximity (3)	0.144	0.428	0.828		
Process Innovation (4)	0.376	0.157	0.106	1	
Product Innovation (5)	0.375	0.085	0.021	0.333	1

Source: Prepared by the authors by SMART-PLS. Fornell Larcker Criterion.

The overall goodness-of-fit indicators of the model meet the expected thresholds. The SRMR value is below 0.08 (Cho et al., 2020), obtaining a value of 0.058. The values of the unweighted least squares discrepancy and the goedesic discrepancy are below the threshold d_ULS (0.325) ≤ HI95 (0.570) ≤ HI99 (1.193) (Henseler et al., 2016).

The results of the path coefficients of the structural model are shown in Table 4. First, geographic proximity is significant and positive (0.428) for collaboration with "Business support organization," supporting hypothesis 1.2. In contrast, geographic proximity is significant and negative (-0.277) for the case of collaboration with "Business organizations." Then hypothesis 1.1 is not accepted. This result can be explained by the low levels of cooperation and collaboration that companies perform with other companies due to a strong focus on competition rather than on collaboration (Bengtsson & Raza-Ullah, 2016), generating effect lock-in (Balland et al., 2022). Also, it can be explained by the differences in collaborative innovation according to the economic sector and territory (Fuentes et al., 2019; Lopes et al., 2021). In Chile, social closeness negatively impacts company-organization innovation cooperation due to reputation, prior knowledge of the actors, and common experiences, probably due to low social capital (Geldes et al., 2015; Geldes et al., 2017). Additionally, the relation between "Business support organizations" and "Business organizations" is positive and significant, with a path coefficient of 0.310, supporting hypothesis H2. It means real support for innovation from universities, technological centers, and public organizations. This support could be forming sectorial professionals, public funding, research, and others (Lopes et al., 2021).

Complementarily, the results state that "Business support organizations" is positive (0.088) and significant to "process innovation" (confirming hypothesis H3.2), and it is not significant to "product innovation" (hypothesis H3.1 is not confirmed). This result can be explained by some public or government programs oriented to improve the process in the tourism companies such as "quality programs and certification of tourism services," financial support for training, support guide for the commercialization of rural tourism, and others. In the case of "Business organizations," the relation between "process innovation" (0.359) and "product innovation" (0.292) are positive and significant, confirming hypotheses H4.1 and H4.2. In addition, these results confirm cooperation's effect on developing innovations (Geldes et al., 2017; Heredia et al., 2019).

Table 4: Structural model

Relation	Path coefficients	P values
Business Organization ➔ Process Innovation	0.359	0.000
Business Organization ➔ Product Innovation	0.292	0.000
Business Support Organization ➔ Business Organizations	0.310	0.000
Business Support Organization ➔ Process Innovation	0.088	0.042
Business Support Organization ➔ Services Innovation	-0.006	0.848
Geographical Proximity ➔ Business Organization	-0.277	0.000
Geographical Proximity ➔ Business Support Organization	0.428	0.000
Process Innovation ➔ Product Innovation	0.224	0.000

Source: Prepared by the authors by SMART-PLS.

Table 5 shows the effects on innovations, where all are significant except geographic proximity. Also, it is observed that the total effects of "business organization" on process and product innovations are significant with f2 ≥ 0.35. In the case of "business support organization," it is significant for process innovation (f2 ≥ 0.35) and moderate for product innovation (0.15 ≤ f2 ≤ 0.35). Also, the significant effect of geographic proximity on "business support organization" and moderate and negative on "business organization" is highlighted. These findings support hypotheses validation.

About indirect effects, small (f2 ≤ 0.15) and significant effects are observed for the relationships: business organization to product innovation (f2=0.080); business support organizations to process (f2 = 0.113) and product innovations (f2=0.136); and geographic proximity to business organizations (f2 = 0.141). The business support organization mediates the geographic proximity-business organization link. Innovation proximity has no major secondary impacts.

Table 5: Total effects

Total effects	Original sample	Sample mean	P values	Type of effect
Business Organization ➔ Process Innovation	0.359	0.360	0.000	Significant
Business Organization ➔Product Innovation	0.373	0.373	0.000	Significant
Business Support Organization ➔ Business Organization	0.310	0.313	0.000	Significant
Business Support Organization ➔ Process Innovation	0.200	0.200	0.000	Significant
Business Support Organization ➔ Product Innovation	0.129	0.130	0.001	Moderate
Geographical Proximity ➔ Business Organization	-0.144	-0.141	0.017	Moderate
Geographical Proximity ➔ Business Support Organization	0.428	0.440	0.000	Significant
Geographical Proximity ➔ Process Innovation	-0.014	-0.012	0.358	
Geographical Proximity ➔ Product Innovation	-0.048	-0.047	0.057	
Process Innovation ➔ Product Innovation	0.224	0.223	0.000	Significant

Source: Prepared by the authors by SMART-PLS.

CONCLUSIONS AND IMPLICATIONS

First, it is concluded that collaborative innovation is a relevant strategy for companies in the tourism sector to develop process and product innovations. This would allow companies to maintain and increase their competitiveness levels.

It is also concluded that different effects depend on the type of organization with which collaboration occurs. It is established that collaboration with a "Business organization" directly affects the development of product innovations (services) and process innovations. This is the result of direct links with buyers and suppliers. On the other hand, collaboration with "Business support organizations" favors process innovations. The services and support programs of public organizations, universities, and technology centers explain this. This also explains the positive relationship between "Business support organization" and "Business organization."

Regarding geographic proximity, it is observed that the perception of proximity to the "Business support organization" is relevant for innovation in tourism companies because these institutions have evident local roots, such as public organizations and institutions, universities, and technology centers. It also stands out that geographical proximity hurts the "Business organization." This can be explained by focusing on competition rather than collaboration with other companies, such as buyers and suppliers. Implications.

First, the need to continue deepening and expanding studies on collaborative innovation in the tourism sector is highlighted, as it is a relevant strategy for the growing competitiveness and complexity companies face.

From the point of view of policymakers, it is necessary to implement policies and programs that favor collaborative innovation among the different actors in the tourism sector in Chile and emerging economies. This could be addressed by developing systemic approaches to innovation

and stimulating interactions among all the actors in the innovation ecosystem. It also highlights the need to favor trade organizations' role in channeling tourism companies' challenges.

Companies and their managers must disseminate the benefits of collaborative innovation and develop strategies that allow tourism companies to develop programs and capabilities to innovate together with other organizations.

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