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Redes sociais dos empreendedores para a inovação: estudo de casos múltiplos em micro e pequenas empresas

Entrepreneurial social networks to innovation: multiple case studies in micro and small enterprises

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Abstract

Entrepreneurs are highly engaged in their social relations, which are constituted of a network of different types of actors. Considering that innovation is a defining factor for small business survival, entrepreneurs need to count with resources from their social relationships to allow innovative actions. The goal of this study is to investigate how entrepreneurs' social networks favor the implementation of innovations through resource acquisition. We applied the method of multiple cases for allowing a better understanding of the studied phenomenon. Six cases of successful companies in the scope of the Program of Local Innovation Agents (LIA) were selected to collect evidence from semistructured interviews with nine entrepreneurs and five Local Innovation Agents. The results point that the analyzed companies innovate by adopting similar new technologies due to the standardization of the LIA program intervention.
Keywords: Entrepreneurs' Social Networks, Innovation; Small business innovation.

Resumo

Os empreendedores são agentes imersos em suas relações sociais, que são compostas por uma rede de diversos tipos de atores. Considerando que a inovação é fator determinante para a sobrevivência da pequena empresa, o empreendedor deve contar com os recursos obtidos nos seus relacionamentos sociais para que seja possível ações inovadoras. O objetivo deste estudo é verificar como as redes sociais dos empreendedores favorecem a implementação de inovações por meio da obtenção de recursos. Foi utilizado o método de estudo de casos múltiplos, que permite obter uma maior compreensão do contexto do fenômeno estudado. Foram selecionados seis casos de empresas de sucesso do Programa Agentes Locais de Inovação-ALI e coletadas evidências de entrevistas semiestruturadas com nove empreendedores e cinco agentes locais de inovação. Os resultados apontam que as empresas analisadas inovam com a adoção de novas tecnologias e que foram percebidas semelhanças entre elas devido à padronização da intervenção do programa ALI.
Palavras-chave: redes sociais empreendedoras; inovação; inovação na pequena empresa.

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1 Introduction

Small businesses have difficulty in generating and implementing innovations, which hampers their competitivity and survival (VRANDE et al, 2009). Developing innovations in the context of small business benefits entrepreneurs when exploring changes to understand opportunities of business differentiation (PAREDES et al, 2015). Thus, the survival and competitivity of a small business are directly related to the entrepreneur's ability to seek and explore innovation opportunities (UKKO; SAUNILA, 2013).

Granovetter (2007) argues that different aspects of human life are directly influenced by social relations, which, when properly explored, can contribute to the success of any type of activity. For the author, entrepreneurs come to be seen as agents engaged in their social relations, which are composed of a wide network of different types of actors. In this context, entrepreneurs need to resort to a consolidated social network in order to seize opportunities and acquire resources to implement actions (ALDRICH; ZIMMER, 1986).

Since innovation is a defining factor for small business survival, entrepreneurs need to count with resources from social relationships to allow innovative actions (VALE; AMÂNCIO; WILKINSON, 2008). Birley (1985) highlights that entrepreneurs do not rely only on physical and financial resources to conduct their business, but also on advice, information, opinions, confidence, and contacts from businesses. Similarly, in the context of innovation in small business, entrepreneurs should articulate their network of contacts of different levels and types to be able to conceive innovation (PARTANEN; CHETTY; RAJALA, 2014).

However, Huggins and Thompson (2015) point out that despite the increasing acknowledgement of entrepreneurship and innovation in the scope of economic development, the role of social networks is yet to be explored. In general, studies address alliances between companies towards innovation (PITTAWAY et al 2004), entrepreneurs' social networks in internationalization (FILATOTCHEV et al 2009) or the understanding about creation and evolution of new businesses (LARSON; STARR, 1993).

This study analyzes companies participating in the LIA Program – Local Innovation Agents, promoted by SEBRAE (in Portuguese – *Serviço Brasileiro de Apoio às Micro e Pequenas Empresas*, that is, Service of Support to Small and Medium-sized Companies), that achieved successful innovation actions. The main goal of the LIA Program is to enhance competitivity in micro- and small companies, information diffusion on innovation, technology and application of solutions, adapted to the characteristics of each business, to generate direct impact on business management, improvement of products and processes, and identification of new market clusters for products and services.

Specifically, our goal is to describe the actions and types of innovation adopted by the entrepreneurs in study, as well as to characterize the types of social networks used and accessed resources. In the theory scope, we seek to contribute with the analysis of how entrepreneurs' social networks favor innovation actions in small companies and by highlighting the role of these networks in the access to the resources required for innovation deployment. In a practical context, this study intends to contribute to different supporting bodies to small companies in the encouragement of actions that promote the development and expansion of these social networks in the scope of small companies.

2 Entrepreneurs' Social Networks

The central thesis of the new economic sociology unfolds reflections on the role of social links in the economic world through the concept of embeddedness (GRANOVETTER, 2007). Such term designates that economic actions and transactions are rooted in relationships and cannot be analyzed without considering social relations and individual social context (VALE, 2015). Thus, social networks refer to objects, people or groups of people that can provide resources such as capital and information (OSTGAARD; BIRLEY, 1994), as well as support ideas in areas about which the individual does not have expert knowledge (ALDRICH; ZIMMER, 1986).

For Granovetter (2007), networks are composed of two types of ties: weak ties, constituted of possible and sporadic contacts, and strong ties, characterized by intense and frequent contacts. In this context, Newbert, Tornikoski and Quigley (2013) state that businesses should acquire resources from an increasingly diverse set of strong ties and an even larger range of weak ties. By connecting an individual to worlds apart from their own, weak ties enable a better absorption of different types of information and opportunities (VALE, 2015). In turn, strong ties tend to provide relationships based on affective and frequent contact (ELFRING; HULSINK, 2003). Therefore, help and support to individuals in the strong tie are more evident, serving to access resources more easily due to the sense of mutual obligation and reciprocity (NEWBERT; TORNIKOSKI; QUIGLEY, 2013), especially in the context of family companies (STAMM; LUBINSKI, 2011)

In turn, Dubini and Aldrich (1991) highlight and classify the networks as personal and business related. Personal networks are characterized by all people with whom entrepreneurs have direct contact and are able to collaborate with advice, business support or even by offering a portfolio of options for personal relations, such as family and friends (DUBINI; ALDRICH, 1991). Business networks established within the context of organizations are characterized by all relationships among owner, managers, employees and how they are structured according to standards of coordination and procedures. The business network (or extended network) is partly shaped by entrepreneurs' personal network, since personal contacts intermediate and benefit the contact with other companies and different resources (HUANG; LAI; LO, 2012; JENSEN; SCHOTT, 2014).

It is natural for entrepreneurs to resort to and engage in their personal contact network in the daily activities of a start-up company, however, as its processes develop and consolidate in the market, the need to rely more on business networks arises. (STAM; ARZLANIAN; ELFRING; 2014). Thus, according to Dubini and Aldrich (1991), business networks are constituted of suppliers, clients, and competing companies or other professional contacts established by entrepreneurs that offer the required information and resources.

Schott and Sedaghat (2014) also distinct that entrepreneurs' social networks can be classified as private networks (family and friends) and public networks (workplace, professional, market, and international relations). Such nomenclature is associated with inter-relationship of personal and business networks proposed by Dublin and Aldrich (1991). Private relationships have a rather positive impact on business networks in consolidated companies. In contrast, public contacts enable to access useful resources for start-up or developing companies (GREEVE; SALAFF, 2003; SCHOTT; SEDAGHAT, 2014).

Entrepreneurs hardly have all the resources required to drive their businesses, which leads them to rely on their social interactions to acquire such resources (OSTGAARD; BIRLEY, 1994; LE and NGUYEN 2009). According to the entrepreneur's needs, social networks are formed to enable the articulation of resources, whether social, financial, or physical (BRUSH; GREENE; HART, 2001). Therefore, resources accessed by entrepreneurs in their relationships range different types and favor the entrepreneurs' ability to mobilize resources (FERGUSON; SCHATTKE; PAULIN, 2016).

In turn, Brush, Greene and Hart (2001) classify these resources in five types: 1) Physical – raw material and inputs, machines and equipment, vehicles, real estate, and physical location; 2) Technological and financial – patents, licenses, and technologies applied to the production process, equity, and third-party capital, 3) Social – legitimation, reputation, relationship with clients/suppliers, informal and formal relationships with other institutions, confidence and emotional and moral support, 4) Human – formal and informal education, professional experience, knowledge/abilities, and 5) Organizational – formal and informal information systems, control and management, structure and organizational culture, among others.

3 Entrepreneurial Social Networks and innovation in small business

The innovation typologies applied in small companies should be analyzed considering their peculiar characteristics (MALDONADO; DIAS; VARVAKIS, 2009). Naturally, small businesses reflect entrepreneurs, who do not always organize themselves as innovation managers (TAVARES, FERREIRA; LIMA, 2009). For Berends et al. (2014), the type of innovation is often diffuse in small business, without following a formal planning or clear understanding on the concept of innovation. In this context, the OSLO Manual (2005) encompasses four types of innovation in small companies: 1) Products/Services; 2) Processes; 3) Organizational, and 4) Marketing. Another derived typology is highlighted from a sustainable perspective and includes innovations of any sort resulting from adding value without harming the environment (FREEMAN, 1996).

When establishing a link between entrepreneurs' social networks and innovation in small business, it is important to understand entrepreneurs from two different perspectives: entrepreneurs as network articulators and entrepreneurs as innovation agents (VALLE; WILKINSON; AMÂNCIO, 2008). Despite appearing distinct, these approaches merge when considering entrepreneurs as designers of networks subjected to varied innovation degrees. Thus, entrepreneurs are able to articulate, unite, and connect different actors and resources to add value to the production activity (HUGGINS, 2010).

For Feldens, Maccari and Garcez (2012), several are the barriers to innovation in small businesses, including physical structure, organizational capacity, and even specific legislations. Complementarily, according to Partanen, Chetty, and Rajala (2014), small companies rely on few resources in financial, technological (P&D), and physical terms, in addition to intangible resources, like information about the market and inventions. Such scenario leads entrepreneurs to complement their resources by engaging in different types of relation networks (DUBINI; ALDRICH, 1991; PARTANEN; CHETTY; RAJALA, 2014). Small businesses have difficulty in promoting innovations resulting from their internal environment, thus relying on innovations supported by external knowledge, relationships with external agents, as research institutions, government bodies, suppliers, clients, and partners, thus characterizing open innovation (VRANDE et al, 2009; LEENDERS; DOLFSMA, 2016). These agents constituting the entrepreneurs' relation network correspond to their main sources of innovation resources (PARTANEN; CHETTY; RAJALA, 2014).

In a similar fashion, several authors highlight that in the innovation process, entrepreneurs should resort to relationships with universities or research institutes (LEENDERS; DOLFSMA, 2016), partners in the same segment (ROTHAERMEL; DEEDS, 2006), clients and suppliers (DEPROPRIS, 2002). Incremental innovations seem to demand relations with suppliers in particular, while radical innovations are associated with collaboration with suppliers and clients (AHSTROM, 2010; PARTANEN; CHETTY; RAJALA, 2014). Elfring and Hulsink (2007) analyzed the combination of weak and strong ties in entrepreneurs' social network with the ability to recognize innovation opportunities. The authors categorize entrepreneurs into two subgroups (radical and incremental innovative) according to the strength of ties. Incremental innovations, which use particularly weak ties, are more likely to offer new opportunities, while radical innovation demand a more balanced combination between strong and weak ties.

Partanen, Chetty and Rajala (2014) analyzed the different relations of contact networks with types of innovation and found that each type of innovation demands certain types of relationship. In turn, Jensen and Schott (2014) used data from 8918 small companies in 40 countries to identify their dynamics of relation networks. The results suggest that innovations are more influenced by relationships from weak ties, mentioned by the authors as public network.

Huang, Lai and Lo (2012) used a model to investigate the potential of influence of social ties of small companies founders on innovation and organizational performance. The results reveal a mediating role of business network towards innovation. A study by Vasconcelos et al (2007) analyzes the mobilizing of entrepreneurs' relationships to access simple and complex resources for the creation and development of innovative businesses. The research focused on high-technology companies that participated in incubator by analyzing the resources and relationships used in each of the incubation process phases.

4 Methodological Issues

According to the nature of the proposed goals, this is a qualitative and descriptive study, an approach that favors researchers to interact, thus ensuring more in-depth data, and exploration of multiple factors involved by describing the characteristics of the context studied (CRESWELL, 2009). The research strategy applied is multiple-case study, which allows to analyze the phenomenon more deeply within its actual context, especially when the limits between the phenomenon and context are not clearly defined (SAUNDERS; LEWIS; THORNHILL, 2009; YIN, 2014). Such choice generates a more robust study, enabling to compare the findings and consequently a larger amount of more robust or convincing evidence and proof (YIN, 2014). Our analysis units are the relationship networks used by entrepreneurs in innovation actions.

We analyzed six cases chosen based on the following criteria: (1) small companies (SEBRAE, 2014); (2) at least two years of experience, (3) acting in only one of the production chains served by the program, and (4) companies regarded as successful innovation cases in the LAI Program. The successful case considered in this study refers to the companies participating in the LIA program for over one year and a half that have performed at least six innovation actions, improved the assessed innovation radar at least in two distinct stages, and presented a significantly better innovation degree in the innovation radar diagnosis.

We applied a semistructured interview as source of evidence that provides the researcher with a list of topics and issues to be addressed, modified during the interview depending on the context, thus allowing further conclusions (SAUNDERS;

LEWIS; THORNHILL, 2009). We conducted nine interviews with an average duration of one hour and a half with entrepreneurs who represent successful cases in the LIA Program for implementing innovation actions in their companies, in addition to five Local Innovation Agents who worked with the selected companies. Each interview was recorded using an audio recorder, transcribed, and further analyzed when describing each case. Chart 1 shows the respondents and corresponding company.

Chart 1 - Interviews

Cases	Interviews		
	Amount	**Entrepreneurs**	**Local Innovation Agents**
Case 1	02	Entrepreneur 1	LIA01
Case 2	02	Entrepreneur 2	LIA02
Case 3	02	Entrepreneur 3	
Case 4	02	Entrepreneur 4	LIA03
Case 5	02	Entrepreneur 5	LIA04
Case 6	04	Entrepreneurs 6,7, and 8	LIA05

Source: Field research (2018)

Chart 2 lists the analysis categories and elements considered based on literature review.

Chart 2 - Analytic Categories and Analysis of elements

Particular goals	**Categories**	**Analysis of elements**
To describe innovation actions implemented in successful small companies participating in the program ALI.	Innovation actions (OCDE & FINEP, 2005)	Opportunity identified Implementation Resources used Supports
To identify the types of innovation actions implemented.	Innovation typologies (OCDE & FINEP, 2005).	Product Innovation Process Innovation Marketing Innovation Organizational Innovation.
To characterize types of social networks used by entrepreneurs when implementing innovations.	Types of social networks (DUBINI; ALDRICH, 1991).	**Personal networks:** Friends, Father/Mother, Family, Spouse, Colleagues, and Partners. **Business networks**: Banks, Accountant, Lawyer, Consultants, Employees, Clients, Suppliers, Partners, and Institutions.
To analyze how social networks used by entrepreneurs influence the acquisition of resources to deploy innovation actions.	Social, financial, and physical resources. (BRUSH; GREENE; HART, 2001)	Emotional support, identification of opportunities, confidence, advice, knowledge, indications. Loans, subsidies, investments, resource application. Inputs, machines, equipment, physical structure.

Source: Author (2020)

In a simplified manner, our study proceeded in the following steps: identifying the companies corresponding to successful cases in the LIA Program; surveying the documents; elaborating an interview script; conducting the pilot case; analysis and description of pilot case; adjustments and script corrections;

contacting the entrepreneurs of the companies identified; interview scheduling; evidence collection in the companies; transcription; description and analysis of evidence; description of each case, comparative analysis, and final report of the multi-case study.

The analysis of the collected evidence followed the content analysis technique, which, according to Bardin (1977), defines the concept of a set of systematic techniques and procedures to unveil what lies beyond words, leading respondents to provide information intertwined with the messages. The use of semistructured interview justifies and highlights the application of content analysis since this type of interview expects researchers to be free to seek information other than that provided in the questions and answers. Our study followed the content analysis phases proposed by Bardin (1977).

5 Comparative Analysis of the cases

Após a descrição individual de cada caso, foi realizada a análise comparativa com base nas categorias analíticas do estudo, procurando destacar as semelhanças e diferenças e, quando possível, a comparação com a teoria. Inicialmente são descritas as características das empresas e dos empreendedores e depois as inovações em produtos/ serviços, processos, organizacionais, *marketing* e as redes sociais empreendedoras e recursos acessados.

5.1 Characteristics of Companies and Entrepreneurs

In the context of economic activity, we identified two companies of the service sector, three from trade sector, and one from the industry/trade sector. The company in case 2 employs the smallest number of professionals, with four employees, while the company in case 6 employs the largest number of professionals, with 31 (thirty-one) employees.

We observed that most of the entrepreneurs were male since only two of the analyzed companies are managed by women. Regarding education, we found that only the entrepreneur in case 3 does not have higher education, only technical training unrelated to the business area, while all remaining entrepreneurs were Administration, Accounting, or Computer Science graduates.

In the scope of professional experiences, the entrepreneur in case 1 has extensive experience as banker, university professor, and business consulting. In case 2, the entrepreneur has prior experience as salesperson and manager of a clothing store, while in cases 3, 4 and 6 – second-generation family companies –, the respondent entrepreneurs have prior experience in their own business and learned to work with their parents. Finally, in case 5, the entrepreneur has prior experience as bank system programmer, which benefited the identification of business opportunities.

5.2 Innovations in Product/Service, Entrepreneurial Social Networks, and Accessed Resources

Concerning the innovation typologies, we learned that the innovations standing out in the studied cases encompassed the availability of services related to the main products, launch of new product lines, and increase in the mix of marketed products resulting from the expansion of physical space or layout dynamization.

When analyzing the availability of new services, we found that in case 3, the entrepreneur offered the services of credit granting and asset analysis through the cooperation of a financial institution. The entrepreneur in case 1, in addition to providing a new service tied to the traditional ones, developed a consulting/advisory kit in partnership and cooperation with his own clients, combining their different services. These innovations may reflect an open innovation application in small companies (VRANDE et al, 2009) that defines a series of technology exploration and innovation implementation practices in cooperation with competing companies, partners, and clients.

The entrepreneur in case 2 introduced a new line of seasonal products taking into account the clients' suggestions and the store expansion. Similarly, the entrepreneurs in cases 3, 4, and 6 issued new product lines due to the expansion of physical structure and production capacity. The analyzed cases revealed that the innovations counted with a creative use of scarce or external resources, without structured planning, supported on their own prior experiences. Berends et al. (2014) also addressed such a way of innovating by introducing that small companies do not usually implement formalized innovation processes for neither products or services. The entrepreneurs highlight difficulties in product innovation in the scope of small companies, like legal and fiscal matters, skilled labor, and risk aversion, similarly to some of the findings of Feldens, Maccari and Garcez (2012), who point out four of the main barriers to innovation in Brazilian small companies.

For being family companies, the main influencers in the personal networks in the entrepreneurs' social networks that adopted product and service innovations corresponded to family partners. Once again, we observe characteristics of family companies in which two or more members participate or influence business decisions. For Stamm and Lubinski (2011), these family companies are directly influenced by family members of different closeness degrees.

We also have come across the importance of friends for product innovation in the studied companies. In case 1, the entrepreneur emphasizes that these friends are generally former colleagues and professional contacts, as university professors and business consulting. In turn, in the remaining cases, friends who influenced the innovations are not necessarily professional contacts or involved in the entrepreneurs' activities, but brought in suggestions, feedbacks, and articulation with suppliers and partners. Likewise, Elfring and Hulsink (2007) corroborate the importance of strong ties, such as family and friends, at the early innovation stages, pointing out that these ties alleviate the entrepreneur's insecurity.

In turn, business networks showed several professional contacts with directly influence on service innovations. The entrepreneurs from the companies analyzed in this study are generally influenced by clients when unfolding an innovation idea, while the implementation process is influenced by competing companies, suppliers, and partners in the same segment. Likewise, Depropris (2002) emphasizes the importance of the relationship with suppliers to establish an innovation; in addition, Rothaermel and Deeds (2006) also point out that interacting with partners and competing companies in the same segment is an important factor for innovation.

The results corroborate the conceptual model proposed by Huang, Lai, and Lo (2012), who sought to investigate the potential of influence of social ties on the innovation of small companies based on a three-dimension structure of relation networks for innovation: interaction with suppliers, clients, and competing companies. Still regarding business networks, the entrepreneurs in cases 1, 3, 5, and 6 accessed financial resources from bank institutions and credit agents, while in case 3, the financial resources were accessed through a partnership with a financial institution. The importance of such relationships is noticeable since the entrepreneurs in cases 1 and 3 highlight the relationship with credit agents as determinant for the implementation of these innovations. Le and Nguyen (2009) state that the relationship with banks facilitates innovations to be implemented since entrepreneurs hardly have their own resources.

As for personal networks, all entrepreneurs reported accessing social resources. In turn, human resources, in general, were accessed by the entrepreneurs in the scope of their personal networks, except for the entrepreneur in case 4. Brush, Greene and Hart (2001) classified these types of resources by expressing that social resources provide moral and technical support, while human resources correspond to formal or informal education, professional experience, and abilities. Only the entrepreneur in case 1 highlights the access of a different type of resource through the personal network, which was the case of service innovation in which physical resources were accessed through the relationship with his son and partner when implementing a videoconference room.

In cases 1 and 3, the entrepreneurs accessed technological resources from their business networks, which in case 1 corresponded to the deployment technology of a videoconference system. In case 3, the entrepreneur highlights the relationship with a supplier when implementing a credit granting system.

We found that the entrepreneurs accessed the organizational resources mainly through their employees or formal and informal systems of information. The exception was case 1, in which the company accessed organizational resources through clients and partners by elaborating a consulting kit. Several authors (PITTAWAY et al., 2004; PARTANEN; CHETTY; RAJALA, 2014; LEENDERS; DOLFSMA, 2016) highlight that the particular dynamics of small business replaces the possibility of innovations derived only from the internal environment with innovations based on external knowledge.

5.3 Innovations in Products, Entrepreneurial Social Networks, and Accessed Resources

The process innovations adopted in the analyzed cases introduced significant changes to internal procedures by using more innovative management tools and systems. We identified innovations such as the reformulation and mapping of internal processes, application of ISO 9001, implementation of a client relationship system, use and update of management software, application of financial control tools and stock control system. In addition to these innovations in traditional processes, we also observed sustainable ones, as the residue destination program and energy efficiency project.

The adoption of a management system for the relationship with clients was another action exclusive to the company in case 1. However, the entrepreneurs in cases 2, 4, and 6 reported having implemented or improved their relationship with clients by applying and updating the integrated management system. Tavares, Ferreira and Lima (2009) emphasize the importance of client relationship for small business innovation since its credibility reflects entrepreneurs' performance and their relationship with clients.

The update or use of a management system was another innovation identified in cases 1, 2, and 4. Adopting an innovative management system, like in cases 2 and 6, in which the entrepreneurs report the deployment of new technologies, can be regarded as a technological innovation, since, according to Ahstrom (2010), these innovations can be characterized by the deployment of new technologies that enhance business efficiency.

We also identified innovation actions that can be categorized as sustainable innovation, which, according to Freeman (1996), establishes the fusion between sustainability and innovation, encompassing the creation of added value without compromising natural resources. These sustainable actions were found in cases 1, 2, and 3 and were associated with management actions for solid residues and energy efficiency. It is worth highlighting that in cases 2 and 3, the application of the energy efficiency project required specific measures that favor the management of residues as consequence of lower energy consumption, or at least a more responsible use. Such actions enable some clear results of less cost with electrical power, in addition to a greater credibility for clients.

For the social networks that promoted innovation processes, we found the use of personal networks was generally associated with family partners actively participating in the innovations. In the analyzed cases, these personal networks are directly linked to moral and technical support. Birley (1985) argues that such networks are highly important to identify improvement opportunities regarding routine operations.

During the innovation processes, the entrepreneurs generally access social and human resources, and more rarely organizational resources. Social resources are the most accessed in personal networks for corresponding to the closest ties in the scope of moral and technical support. Brush, Greende and Hart (2001) state that social and human resources are the base of social capital, often accessed exclusively in an informal manner. In turn, regarding business networks, the entrepreneurs reported accessing financial and technological resources in addition to social and human resources, as in cases 1 and 2, and only financial resources in case 3. We found that technological resources derived from the development of management software, while financial resources resulted from subsidies granted by SEBRAE.

5.4 Innovations in Organizations, Social Entrepreneurial Networks, and Accessed Resources

The entrepreneurs highlighted the following organizational innovations implemented by the studied companies: application of project architecture with structural renovation, application of MEM – Management Excellence Model –, reformulation of strategical planning, acquisition of machines and equipment, and store sectorization. Such innovations clearly demonstrate changes in the organizational structure, including different strategical direction. In almost all cases, the entrepreneurs used an architecture project or structural renovation.

The entrepreneur in case 1 described having applied an important organizational innovation that introduced an expressive change in the strategical direction and organizational structure management. Such innovation was the complete reformulation of the strategical planning through the application of a strategical planning tool based on the MEM – Management Excellence Model.

The networks that benefited the implementation of organizational innovations in the analyzed companies involved family partners in the company and some friends with specific ideas. In turn, regarding business networks, the entrepreneurs point out the participation of employees, LIA, consultants, SEBRAE, suppliers, and credit agents. In the scope of resources accessed by entrepreneurs for organizational innovations, case 1 only implemented actions of organizational reformulation using social and human resources from their personal networks. In turn, in case 2, in addition to social and human resources, the entrepreneur accessed physical resources from both personal and business networks. Cases 3 and 4, 5 and 6 accessed physical and financial resources from their business networks through bank financing or SEBRAE subsidy.

5.5 Innovations in Marketing, Entrepreneurial Social Networking, and Accessed Resources

Except in case 3, the visual identity action proved a defining innovation factor for reflecting changes in the business positioning. Consequently, such innovation influenced the adoption of new ways of communicating with clients. In cases 1 and

5, the redefinition of visual identity occurred due to the logo update and standardization of colors business. In turn, in cases 2 and 6, the change in the company focus demanded the establishment of a new identity, unlike case 4, which leveraged the credibility of the company name to build its own identity. It is worth emphasizing that in case 4, the entrepreneur reported that the development of company visual identity represented a radical innovation for having caused deep changes in the organization, ranging from ways to serve customers, facade renovation, to the standardization of internal colors.

The three stores of retail trade in the analyzed cases presented merchandising actions. In case 2, such actions occurred according to the deployment of a specific consulting, while cases 4 and 6 involved only isolate actions prompted by the knowledge achieved during a course. In both cases, the motivation for merchandising actions resulted from new visual identity and product arrangement.

Another innovation action in the marketing scope that we observed in the companies studied was the organization of events and sales in partnership with other companies and organizations. In case 2, the entrepreneur describes having organized an event in partnership with suppliers and other companies of the same segment to promote its new visual identity and launch a new line of products. In case 3, we identified partnerships with competing companies and the CDL to organize a Christmas sale, while in case 6 the partnership was with schools and professionals of the segment for specific events. Still regarding marketing campaign, we found two other innovations worth highlighting for having not used direct financial resources. Case 3 involved the preparation and dissemination of jingles, while case 4 engaged in a formalized policy about sponsorships and support to local events. Similarly, a study by Panetworks et al (2015) concluded that the companies attended by the LIA Program tend to adopt creative innovations without using financial resources.

As for the social networks that benefited the implementation of marketing innovations, we found that family members who work in the same company and some friends were the most accessed. An example is case 4, who had the help of colleagues from the Rotary Clube. In turn, for business networks, all entrepreneurs highlighted the participation of SEBRAE, suppliers, and credit agents.

Regarding the resources accessed by the entrepreneurs for marketing innovations, personal networks were the most accessed social resource, especially in the scope of technical and moral support. In turn, business networks also included human and organizational resources and, in some cases, physical and financial resources. We found the implementation of visual identity actions in the companies of cases 1, 2, to 4, 5 and 6. Such actions caused changes in the whole color identity and consequently in the facade and internal ambiance of the companies. In all cases, ambiance demanded new equipment, like mobile signs, rotating plates, and light play. In addition, case 1 involved LED lamp arrangement on the facade, while in case 2, new showcase schemes and a mobile fitting room were implemented, and in case 4, new material of product shelves and availability of shopping carts in the store. Finally, cases 5 and 6 implemented a small light play on the facade. Concerning the financial resources, in the companies of cases 1, 2, and 4, 5 and 6, we identified the use of subsidies granted by SEBRAE, used for visual identity service and other projects. Authors as Le and Nguyen (2009) state that entrepreneurs' social networks influence the access to financial resources, to a greater or lesser extent depending on the interaction level of the relationship.

Regarding both personal and business networks, all entrepreneurs accessed social and organizational resources through emotional, moral, and technical management support, a process in which relationships with suppliers and clients stand out. Vasconcelos et al (2007) found a similar result by verifying that entrepreneurs often combine the access to the same type of resource and different types of relation networks. Especially for actions involving some third-party service provision, human resources were the most accessed, followed by organizational resources from their business networks. Ramani, Mukherjee (2014) point out to such observation by stating that entrepreneurs require different resources according to the deployment phase of projects developed by service providers.

6 Final Remarks

Our study sought to identify how entrepreneurs' social networks favor the implementation of innovations in successful companies participating in the LIA Program. We highlight that the innovations identified in the companies are similar, which can be explained by the fact that all of them participated in the LIA Program and received standardized interventions in the attendance of local innovation agent. The LIA Program has a service pattern whose monitoring provide the indication of pre-defined solutions by the local SEBRAE. In general, such actions include courses and consulting offered according to the regional demand. During this service, the companies have access to financial subsidies of up to 80% through the SEBRAETec, allowing the access to new technologies and innovation projects, such as new management software, websites, and systems of support to decision.

We identified the four types of innovation defined in the OSLO Manual (2005) in all companies analyzed. In the scope of product innovations, we found that their implementation generally resulted from an expansion in the physical structure or internal layout rearrangement. Such innovations enabled the availability of new product lines and even meeting a new segment. In turn, service innovations were implemented through the availability of new services related or combined to those already offered. Thus, existing products and services were leveraged by articulating with partners to reach improvements and novelties. Concerning process innovations, we found the use of management and reformulation systems for internal procedures due to other changes and innovations. In some cases, such alterations resulted from physical structure and layout expansion, use of new management tools, and even the application of energy efficiency projects.

The organizational innovations were reported to be generally related to the architecture project, both for the expansion of physical structure or reformulation of service layout. It is worth highlighting that the changes of strategical direction were regarded as organizational innovations for having altered the arrangement or model of management/business. As for marketing innovations, we highlight the redefinition or creation of visual identity. Entrepreneurs reported that such action was enabled by the availability of subsidy offered by SEBRAE, which allowed marketing innovations to be implemented, such as creation of websites, which, according to the entrepreneurs, provided the use of new tools of client relationship.

With respect to personal networks, we observed that the entrepreneurs resort to their families, spouses, and, to a lesser extent, friends. An explanation for such result is the amount of family companies approached in this study, since, in general, the relatives working in the company correspond to their most relevant personal networks for these innovations to be implemented.

As for the business networks, we emphasize the importance of the Local Innovation Agent and consultants associated with SEBRAE due to the profile of successful companies in the LIA Program participating in all program stages. We found that these networks favored the acquisition of different types of resources in different scenarios. In general, entrepreneurs' personal networks influenced the implementation of innovations in moral and technical support through encouragement, suggestions, and even use of specific knowledge on management. They also benefit the articulation of contacts and relationships with other institutions to favor innovation opportunities.

All actors in these business networks reported using the five types of resources: physical – with the availability of machines, equipment, and inputs; technological – with software licenses and new technologies applied to business; financial – with subsidies and financing; social – with suggestions and technical and moral support, and human – including specific and organizational knowledge and abilities, with the application of management tools, knowledge on the segment and organizations.

The analysis of the companies demonstrated that these social networks have direct influence on the implementation of innovations and shape emotional, technical, strategical, and operational support for innovation actions. Even though, it is worth reinforcing that support agencies should highlight the importance of entrepreneurs' social networks to achieve innovation, since small businesses do not always have the resources required to implement such actions. Thus, entrepreneurs need to realize the contribution of each relationship and be aware of the interactions with other entrepreneurs, innovation funding agencies, universities, works councils, among other institutions.

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