

The role of Entrepreneurial Families in Entrepreneurial Ecosystems.

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Dissertation submitted in part fulfilment of the requirements for the degree of Doctor of Philosophy in Business and territorial competitiveness, innovation, and sustainability of University of Deusto (European PhD Degree).

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PhD Candidate:
Claudia Patricia Benavides Salazar

Supervisor:
Asunción Ibáñez Romero

San Sebastián, September 12, 2022



Doctoral Programme in Business and territorial competitiveness, innovation,
and sustainability

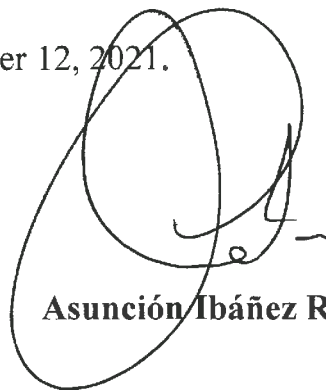
Asunción Ibáñez Romero, Associate Professor at Deusto Business School in Donostia-San Sebastián,

CERTIFY:

That the present dissertation *the role of Entrepreneurial Families in Entrepreneurial Ecosystems* has been carried out under her direction, at Deusto Business School of the University of Deusto, by Claudia Patricia Benavides Salazar and constitutes her doctoral thesis.

For the record, in compliance with current legislation, authorises the presentation of the thesis to the Academic Committee of the University of Deusto, by signing this certificate,

San Sebastián, September 12, 2021.



Asunción Ibáñez Romero

PhD Candidate:



Claudia Patricia Benavides Salazar

To my parents (my mom from heaven), sisters and from the bottom of my heart
to Mauricio, Juan José, and Antonia.

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Abstract

This dissertation studies the phenomenon of entrepreneurial families of recognized trajectory in entrepreneurship ecosystems and, therefore, the dynamics of entrepreneurship in a region. Specifically, it investigates the role of entrepreneurial families in the entrepreneurship ecosystem (1) from the perspective of entrepreneurs and mentors; (2) from the perspective of support entities in the entrepreneurship ecosystem; and (3) from the perspective of entrepreneurial families and members of their companies' work teams. To address these approaches, this research is based on several literature sources and proposes a set of propositions that guide new lines of future research.

In the theoretical framework, it analyzes models of family business systems, how the unique resources and capacity of entrepreneurial families are transmitted to family businesses, and given their embeddedness in the territory, increases the probability of influencing their environment through different mechanisms (formal or informal). Although a rich body of literature on entrepreneurial families has focused on family businesses, the role played by generational succession and, therefore, the need to formalize governance, and family agreements, among others; specifically, family social capital and how it materializes and how it is transmitted (bridging and bonding), has not been studied empirically (Campopiano et al., 2016; Per Davidsson & Honig, 2003). Consequently, this first part of the dissertation's theoretical framework allows us to orient how family social capital and its transmission mechanisms can generate articulation in a territory outside its natural dynamics, that is, outside its value chain (suppliers or clients), as suggested in the literature.

The second part of the theoretical framework of this dissertation allows us to analyze the different approaches to entrepreneurship ecosystems, starting from the different models and the leading exponents that exist to date, with the understanding that although it is an area of research that has relevance, it is still very recent and has specific gaps that should be further investigated. All models describe components (pillars, attributes, domains, among others) that generally cover all the key elements to mobilize the entrepreneurial dynamics in a territory. However, it is necessary to establish a deeper analysis of the social and cultural elements (Alvedalen & Boschma, 2017; Stam, 2015) that trigger or limit a greater articulation as an "ecosystem," as suggested by the literature. Most of the literature on the process of new business creation and its evolution into entrepreneurship ecosystems essentially analyzes the presence and articulation of actors, such as whether there is a market or the presence of entrepreneurship stories, or the importance of public policy and financing (Auerswald et al., 2015). Little attention has been paid so far to the cultural influences of a territory that demarcates entrepreneurship dynamics and the ecosystem itself that can be used to develop strategies or public policy; as well as the relationship of entrepreneurial families and family businesses in the mobilization of innovation, investment, or market in the entrepreneurship ecosystem itself. Therefore, this part of the dissertation sheds light on the link between the social capital of entrepreneurial families and the entrepreneurship ecosystem from the attributes that compose it.

As a result of the theoretical framework, it is possible to articulate two theoretical verticals, such as entrepreneurial families and entrepreneurship ecosystems, from a common axis of connection, social capital, to determine later and empirically how this relationship "materializes" and mainly the greater or lesser incidence that guides future actions or strategies.

The main question and the three objectives are developed in this manuscript, following the antecedents and research motivation explained in the first chapter. The second and third chapters develop the theoretical framework of this dissertation from the entrepreneurial family and entrepreneurship ecosystems. The fourth chapter describes the empirical study and the methodology used in this dissertation, considering that it is a case study. The fifth chapter presents the results of the empirical study from the three perspectives mentioned above, entrepreneurs and mentors, support entities, and entrepreneurial families, which cover the two parts of the theoretical framework and allow contrasting from the three visions of common elements or differences in front of the effective bridging mechanisms present and that mobilize or not the entrepreneurial dynamics in the territory. Finally, chapter six presents the conclusions, which cover the main results, limitations, and implications for entrepreneurs and policymakers to recommend future lines of research finally.

Chapter 1: Antecedents and research

motivation

1.1 Introduction

In the field of family business research, scholars define the importance of these types of companies on a global level, measured regarding job creation (Corbetta & Salvato, 2012), gross national product, and wealth generation (Randerson et al., 2015). They are a necessary form of business organization and contribute to the development of different economies (Stough et al., 2015a), even in developed economies like the United States, where Astrachan & Shanker (2003) have shown its role in the development of a country's economy. Also, (Corbetta & Salvato, 2012) (op. cit.) mention in their study that family business in Europe impacts the GDP by 29% to 64%.

According to some studies, Poutziouris (2001) establishes that for most developed economies, the family business can represent more than two-thirds of all companies and constitute the largest share of businesses throughout the world (Basco, 2014), bringing with them the implications of impact on employment and economic development. In the same study, Poutziouris (op. cit.) shows the result of the analysis of several studies such as Connolly & Jay, (1996); Poutziouris & Chittenden (1996); Neubauer & Lank (1998); Leach & Bogod (1999) and Romano and Tanewski, & Smyrnios (2000) which have revealed that family business is the backbone of the private economy. Furthermore, it demonstrated that it is the one that can make a strong contribution to socio-economic and entrepreneurial development in the countries.

The relevance of family businesses and their entrepreneurial impact on the development of the economy, there has been significant evolution research about family business and entrepreneurship, and it has been considered a critical factor in many studies. Different perspectives and theoretical bases have been developed in the evolution of this subject of study of the family related to the family business and entrepreneurship (Bettinelli et al., 2014)

The evolution referred to in previous research proposes approaches to the unit of analysis that allows understanding of aspects such as entrepreneurial behavior (Lumpkin & Dess, 1996; Miller, 1983; Kellermanns, Eddleston, Barnett, & Pearson, 2009; Zahra, 2005), transgenerational entrepreneurship (Nordqvist & Zellweger, 2010; Zellweger, Nason, & Nordqvist, 2012; Chirico & Nordqvist, 2010), social capital relationship (Pearson, Carr, & Shaw, 2008; Sirmon & Hitt, 2003; Aldrich & Cliff, 2003), the family or entrepreneurial embeddedness (Aldrich & Cliff, 2003; Habbershon, 2006; Arregle, Hitt, Sirmon, & Very, 2007; Astrachan, Klein, & Smyrnios, 2000; Colli, Pérez, & Rose, 2003), which reach the importance of family and family business in regional development (Basco, 2015; Stough, Welter, Block, Wennberg, & Basco, 2015; Sanguino Galván, Ascensión Barroso Martínez, & Habibur Rahman, 2017; Del Baldo, 2012).

Although it has grown among researchers and gained legitimacy in the subject (Rodríguez & Basco, 2011), much uncertainty still exists about the relationship between entrepreneurial families and entrepreneurship not only in the firm or the family but also in the region. On the one hand, it is because the evolution of family business research has been focused on the impact of the family on firm-level dimensions (Stough et al., 2015a) and resources (Pearson et al., 2008), omitting the resources as a new venture creator (Randerson et al., 2015). Habbershon & Pistrui (2002) propose that an entrepreneurial family is an appropriate unit of analysis from the entrepreneurial perspective, even though the literature and practice do not reflect it. On the other hand (Stough et al., 2015a) the family firm field asserts that there is a lack of theoretical approaches or studies that explain why, how, and when family businesses impact regional development (Rodrigo Basco, 2015). Moreover, research has proven to be moved into the aggregate level hardly, and the links between family firms and regions still must be studied systematically.

Therefore, this is an excellent opportunity to develop some research on this field of knowledge, that is to say, to analyse an aggregate level to find the relationship from the entrepreneurial perspective between the entrepreneurial family and the impact on entrepreneurship in the firm and on the territory (R. Basco & Bartkeviciute, 2016).

1.2 Problem statement

The main problems based on identified literature gaps to be addressed in the research are:

- In the study of entrepreneurial families, unique family resources and capabilities provide the family firm a competitive advantage, limited, inimitable, and challenging to replicate, that is, non-substitutable (Barney, 1991). Resource Based View is one of the most critical theories to analyse this family characteristic. Still, it does not provide insights into how these resources are leveraged to develop a competitive advantage over time (Tokarczyk et al., 2007).
- Studies report more theoretical frameworks than empirical evidence to understand the family resources and capabilities. Habbershon & Williams (1999) propose the "familiness," and Pearson et al. (2008) use social capital theory to open the "black box of familiness" construct. To link family and entrepreneurship, portfolio entrepreneurship (T. Zellweger & Sieger, 2012) with long-term orientation appears. Despite the extensive use of the previous theories in research (Chirico, Ireland, & Sirmon, 2011; Sanchez-Famoso, Akhter, Iturralde, Chirico, & Maseda, 2015; Sorenson et al., 2009), there is a lack of empirical evidence of family entrepreneurship developing entrepreneurial process both to family firm and regional entrepreneurship (bridging and bonding).
- In the family systems, it is necessary to understand the effects that they can have on venture creation (Aldrich & Cliff, 2003). In this perspective, there are required research projects which would increase the scope of the existing social embeddedness approach to

entrepreneurship. The family embeddedness of entrepreneurial activities, particularly new venture creation, requires broadening the research perspective, and it could be considered the ecosystem model (Habbershon, 2006).

- Some studies have focused on the firm level. The aggregate level remains unknown (Casson, 1999; Stimson, Stough, & Nijkamp, 2011), and their attention focuses on the importance of relationships between the firm and the territory under regional growth perspectives (R. Basco & Bartkeviciute, 2016). Anyway, this is not done with particular implication for family businesses, their role, and the quality of their relationships with the territory to which it belongs (Del Baldo, 2012) and much less from the entrepreneurial perspective (Stough et al., 2015a) to establish how entrepreneurship has been generated in the territory with their influence.

1.3 Personal research motivation

After 20 years of continuous work in entrepreneurship and innovation in an intermediate region (Manizales) of a developing country like Colombia, I have been able to see the evolution of entrepreneurship and its institutional dynamics from different perspectives:

1. Institutionalists and services: the evolution is visible both in the number of actors supporting entrepreneurship and in the typology of their actions and services. The wide range includes training, generation of culture, advising, services, and market, among others. Twenty years ago, there was only one visible entity: Today, more than 36 are operating in the territory.
2. Articulation and entrepreneurship ecosystem: as the institutional framework advances, there is growing articulation. Today in the ecosystem, there are shared programs, joint activities, and city programs aimed at strengthening entrepreneurship, with relevant results in this regard at the country level.

3. Companies and entrepreneurs: the city have a significant mix of traditional industry, commerce, services, and new tech companies or those associated with the fourth industrial revolution. In the last 20 years, the business composition has hardly changed; it continues to be most companies in the territory, as in the rest of the country, micro and small businesses, and mostly family businesses.

4. Public policy: in 2019, the public policy for entrepreneurship, competitiveness, and employment in Manizales was approved. It is an evolution and shows the progress made by the ecosystem and the gaps that persist.

It is possible to say that the city has a meaningful result with the above. However, there are two components of the ecosystem that, despite the actions and interventions, there is no evidence of substantial progress. The first refers to the typology of entrepreneurs and their motivation towards growth; no data shows economic sectors or companies that scale exponentially or have accelerated growth, and the second is business families and family businesses.

In the ecosystem, it is blurred that a good proportion of the companies are made up of entrepreneurial families and that they can play a relevant role in dynamizing the ecosystem itself.

In this sense and knowing that entrepreneurial families and family businesses are still high, I wanted to advance in research that would allow me to understand the two worlds that have not been previously investigated. Entrepreneurial families and entrepreneurship ecosystems can reach relevant results to boost further the entrepreneurial process and its motivation towards global growth in intermediate cities that need to mobilize their development.

1.4 Research questions, objectives, structure, and research context

Research questions

To address this study, I posed the following research question: How the Entrepreneurial Families impact Entrepreneurial Ecosystems development and, thus, a region's entrepreneurial dynamics?

Main Objective

The objective of this research is to analyse the role of entrepreneurial families in entrepreneurial ecosystems through the perspective of different agents in the entrepreneurial ecosystem.

Specific objectives:

1. Analyse the role of entrepreneurial families in entrepreneurial ecosystems through the entrepreneurs' perspective.
2. Analyse the role of entrepreneurial families in entrepreneurial ecosystems through the business support entities' perspective.
3. Analyse the role of entrepreneurial families in entrepreneurial ecosystems through the entrepreneurial families' perspective.

Structure

This dissertation is divided into six chapters. After this antecedent and research motivation in which the research question and the objectives to solve this question are made visible; chapters 2 and 3 develop the theoretical framework of the two critical axes of this dissertation, the first associated with entrepreneurial families and family social capital; the second associated with

entrepreneurship ecosystems. Each of the two chapters begins with an introduction and ends with their corresponding conclusions.

Chapter 4 focuses on the structure of the empirical study, methodology, and data analysis.

Chapter 5 presents the results according to the approach of each of the objectives, from the perspective of the entrepreneurs, of the support entities, and finally of the entrepreneurial families of recognized trajectory, which were made visible in the first two objectives.

Finally, Chapter 6 presents the general conclusions of the dissertation, the determination of factors, methods, or instruments with which the entrepreneurial families may or may not influence the entrepreneurial ecosystems. This chapter presents the most relevant findings, the implications for ecosystem stakeholders and policymakers, and finally, the limitations and future lines of research.

Research context¹

For more than two decades, Colombia (South America) has carried out sustained actions regarding public policy to strengthen better institutional conditions to support entrepreneurship in the country (Chamorro et al., 2013). The National Planning Department - DNP (2020) built the CONPES document to formulate the "National Entrepreneurship Policy," aiming to generate enabling conditions in the entrepreneurial ecosystem. The document highlights the

¹ Research context taken from the article "The role of entrepreneurial ecosystems: the family social families in entrepreneurial capital approach" published in the Journal of Entrepreneurship in Emerging Economies by authors Benavides-Salazar et.al, (2021). Paper published within the framework of this research.

main gaps associated with several dimensions, such as cultural issues, financing, market access, business networks, and institutional support. The insufficient skills, competence, and culture for entrepreneurship, weakness in soft and hard skills for entrepreneurship, weak marketing networks, difficulty accessing markets, difficulty consolidating business networks, and disjointed institutional support are identified as the most relevant gaps in this context presented to developing entrepreneurial ecosystems. The low managerial quality represented in the differences in labour productivity between countries (Grover et al., 2019) that, among others, affects the growth and survival of companies (Lederman et al., 2014) is one of the leading causes of the lack of culture and entrepreneurship skills.

In the same CONPES 4011 document (DNP, 2020), the entrepreneurs' lack of social capital is highlighted (Morales et al., 2019), which considerably affects the success of their ventures. The consequences of such lack are evidenced in the reduced exchange of experiences, low or limited access to markets, and connection in the entrepreneurial ecosystem (Melguizo & Primi, 2018). It is also reflected in the Social Capital index, specifically in measuring the quality of networks and entrepreneurial social capital (H. Kantis et al., 2018).

Specifically, according to Colombian census data, Manizales, the capital of the department of Caldas, is a medium-sized city with a population of 400,436 (DANE, 2018). In Colombia's Coffee Belt, the small region of Caldas depended on the cultivation and marketing of coffee until the end of the coffee bonanza in the mid-1980s. The economic and business development of Manizales has had sustained results with significant support, such as that provided by the *Manizales Quality of Life Report* (Escobar, 2019). Since 2009, 100,000 people have escaped poverty, formal employment has grown by 20%, and per capita income has increased by 19% above the national average. In 2018, Caldas Department experienced the country's highest growth rate, with a 3.5% variation in real GDP (Escobar, 2019). As for business activity, the

Manizales Chamber of Commerce has stated that a growing dynamic has been reflected in the creation of companies in recent years. Table 1 presents business dynamics in terms of business registrations from 2011 to 2022. In evolutive terms, on average, the stock of companies has been growing at a rate of 2.6% per year since 2010, with the exception of 2012 and 2020; the latter as a result of the economic crisis caused by the Covid19 pandemic (García et al., 2022).

This economic evolution results from a set of characteristics that have established the city's identity as an optimistic, persevering, and hard-working society, which centres on the process rather than the result and seeks to do things right. Likewise, it is a cultured society where education and good habits stand out, which has repercussions for coexistence (Feed-Back, 2014). Economic outcomes are the result of the structural variables of the city that support the business dynamic, such as the quality of higher education and occupational training (1st place), institutionalism (4th place), and the business environment (1st place), according to measurements by the country's Private Competitiveness Council in 2019.

Table 1. Business dynamics in Manizales between 2011 and 2021

Year	Entry	Exit	Stock companies	Survival Rate		
				First year	Third year	Fifth year
2011	21,2%	23,1%	12.353	56.7%	37.8%	29.6%
2012	21,3%	24,7%	12.296	58.7%	43.8%	31.6%
2013	24,7%	23,8%	12.782	56.6%	37.7%	32.0%
2014	29,0%	22,7%	13.905	58.65%	38.4%	33.0%
2015	22,8%	19,7%	14.790	60.0%	40.9%	33.1%
2016	19,5%	20,3%	14.826	62.3%	41.5%	
2017	19,8%	18,3%	15.330	63.0%	40.9%	
2018	19,8%	18,5%	15.836	67.7%	38.4%	
2019	18,0%	18,1%	16.038	69.1%	37.7%	
2020	17,5%	23,9%	15.185	69.5%		
2021	20,7%	17,6%	16.255	69.5%		

Source: Economic Studies CCMPC business demographics newsletter 2022.

According to the City Competitiveness Index, Manizales ranks in the top three out of 12 metropolitan areas and 23 municipal heads of the country in business dynamics indicators such as business environment and innovation and business dynamics. This result has been consolidated thanks to the strong commitment of local actors articulated around a set of objectives, a public-private collaboration strategy, the value of external networks, and a focus on companies with high growth potential (H. Kantis, 2014).

Entrepreneurship and business dynamics have been constant in Manizales since its foundation. The growing of coffee and cocoa crops led to the emergence of coffee threshing machines and factories to produce chocolate. Indeed, the Manizales ecosystem is not new, given that for more than 15 years, there have been actors, institutions, and training programs that have contributed to the creation and strengthening of local enterprises. As a result of this systemic evolution, the Manizales entrepreneurial ecosystem has received international recognition and visibility for its achievements obtained in the short term and its peculiarity of being an intermediate city that is also classed as a university campus (Molina-Osorio, 2018). According to Isenberg and Onyemah (2016), the Manizales entrepreneurial ecosystem has passed through these four phases: (1) activating the stakeholders, (2) aligning the leaders, (3) establishing and executing platform and testing programs, and (4) systematizing and expanding the programs. In all these phases, the relevance of the entrepreneurial families has been ubiquitous. The most relevant company in Manizales is Casa Luker, a family business founded in 1906 by the Restrepo family (RF). Subsequently, the first modern factories appeared in the 1920s, and a new generation of investors and entrepreneurs emerged (Valencia, 1990).

In the 1940s, the Azucenos group was organized by young entrepreneurs who, with little initial capital, created industrial and other family businesses (Table II) in sectors other than coffee. The group increased its visibility after 1960 by creating a financial corporation that either

directly or indirectly promoted the creation of and strengthened at least 30 industrial companies (Drake, 1973). This dynamic of business development can be considered the first version of a non-formal entrepreneurial ecosystem in the city. After this period, other non-financial support entities were created. According to the survey results, the Manizales entrepreneurial ecosystem contributes to entrepreneurs in four areas (1) strategic orientation and the long-term projection, (2) entrepreneurs' attitudes toward growth, (3) contributions to internal processes, and (4) the effective growth of ventures, as shown in Table IV. Indeed, the Manizales entrepreneurial ecosystems development has brought about various programs and activities aiming to boost the city's entrepreneurial activity.

Following Spigel's (Spigel, 2017) definition of an entrepreneurial ecosystem, which combines material, social, and cultural attributes, a comprehensive picture of the mechanisms and actors operating in the Manizales entrepreneurial ecosystem was drawn up using secondary sources and interviews with entrepreneurs and mentors. This development has resulted in 48 actors within the entrepreneurial ecosystem of Manizales with different mechanisms associated with public policy, training, networking, 104 support programs distributed across four stages—identification, validation, consolidation, and scaling of a business—and three actors with mechanisms associated with entrepreneurial stories.

In summary, the perceived value of these contributions is partly due to the role that entrepreneurial families in the area have played, as shown in Table 2.

Table 2. Distribution of family and non-family businesses in the entrepreneurship ecosystem of Manizales

Type of business	Family Business			Non-Family Business			Total Firms num	Total Employees
	Firms num	Emplo yees	Age >50*	Firms num	Employe es	Age >50*		
Large Business	38	16.309	6	50	12.653	4	88	28.962
Midsize Busines	110	2.967	2	137	4.100	0	247	7.067

Type of business	Family Business			Non-Family Business			Total Firms num	Total Employees
	Firms num	Emplo yees	Age >50*	Firms num	Employe es	Age >50*		
Total	148	19.276	8	187	16.753	4	335	36.029
%	44%	54%	66%	56%	46%	33%	100%	100%

Source: Own elaboration based on Economic Studies CCMPC - commercial register 2019. Taken from Benavides-Salazar et.al, (2021).

* More than 50 years since it was founded

Moreover, the influence on the entrepreneurial mindset of the entrepreneurial family is the area in which the interviewees perceived the most significant influence of the entrepreneurial ecosystem. Mainly through recent and historical stories of entrepreneurs and entrepreneurial families with a long history in the region and promoted by the support entities and the business programs offered, as shown in Table 3.

Table 3. Area of contribution of the entrepreneurship ecosystem programs to entrepreneurial activity

Area of contribution	Types of entrepreneurial ecosystem support program	Number of citations	Description of the contribution (a cite example)
Strategy	Mentoring Program	22	It contributes to the strategy, from the <i>"resolution of business problems"</i> , in the <i>"focusing of the business"</i> .
Mindset	Entrepreneurial Stories	48	<i>"Knowing stories is inspirational and aspirational"</i> , given that awareness is generated by knowing the mistakes and learnings of others.
	Mentoring Program	28	<i>"It changes the mindset of the minds by asking themselves questions and guiding them in their solution"</i> .
Organization	Mentoring Program	18	It provides support when it allows errors to be evidenced and allows <i>"increasing the speed at which decisions are made"</i> .
Growth	Mentoring Program	9	It applies to companies in their growth <i>"measured mainly by sales and jobs"</i> .
	Support networks	5	It allows <i>"to be visible and in force, leveraging our growth, support for the closing of businesses"</i> .

Source: Benavides-Salazar et.al, (2021).

1.5 Contributions

This dissertation provides several contributions. First, in terms of literature, it gives a broader scope to the theory of the development of entrepreneurship ecosystems, focusing primarily on non-family entrepreneurship (Manolova et al., 2019). It is relevant to understand that in the

framework of the attributes of an ecosystem, there are relevant actors that are not visible in the models proposed by the authors to date and that play a relevant role, such as entrepreneurial families of family businesses with a recognized track record.

The above provides a deeper insight into how entrepreneurial families enhance their contributions to the entrepreneurial ecosystem and makes it possible to demonstrate the difference in benefits between institutionalized mechanisms and those that are not. Likewise, these mechanisms can be replicated or used as formal instruments of the ecosystem to increase its dynamics, interaction, and impact.

Second, as a part of the "how," as a fundamental axis of this dissertation for being qualitative research, it allows us to determine, for the case of ecosystems in developing countries (Evansluong & Ramírez-Pasillas, 2019; Fernández-Serrano & Liñán, 2014; Scheel, 2014), the factors that mobilize the dynamics of the evolution of such entrepreneurship ecosystem. First, gaps visible from the national policy (DNP, 2020) and that in the case of a highly connected ecosystem (such as the one in Manizales) still need to be solved, such as articulation. It seems a bit paradoxical; however, the duplicity of actions, the low dynamics to solve issues such as financing or investment, or the way they increase quality deal flow, is an example of this. Moreover, regarding the sustainability of strategies, it is evident that in some cases, they are designed and implemented but not sustained, and therefore, the impact on the dynamics of the entrepreneurial ecosystem is low; only institutionalized strategies are sustained (Ceci et al., 2019; Coffé & Geys, 2007a), and in the case of Manizales, the most relevant is the one promoted by an entrepreneurial family. Finally, the role of entrepreneurial families shows that they are relevant actors and potentially have a fundamental role when the context of the territory allows them not only their embeddedness but mainly their interaction (Martínez-Sanchis et al., 2020; Martínez-Sanchis, Iturrioz, et al., 2021).

Third, as part of the research question, this dissertation aims to contribute to and motivate the search for new knowledge in entrepreneurship; this is articulated with other fields or areas of expertise that have not been previously analyzed. The above contributes to closing gaps in a recent field of research, such as the entrepreneurship ecosystem. It also aims to contribute to the actors that mobilize entrepreneurship ecosystems, mainly in developing countries, to make decisions regarding the articulation and improvement of services to close the gaps in their context. Finally, to contribute to updating or generating a more adjusted or effective public policy on entrepreneurship. Given that not only the current state of the articulation and dynamics of an entrepreneurship ecosystem is made visible, but also because it seeks to make visible actors and instruments that have not previously been taken into account..

1.6 Implications

The implications of the dissertation, which are presented in depth in Chapter 6, are structured in two moments, the first theoretical and the second practical. In the first case, considering that we base ourselves from the entrepreneurial families' side on the so-called "family social capital," a concept studied in the literature (Pearson et al., 2008), we intend to contribute to establishing how, from the theory of resources and capabilities (Habbershon & Williams, 1999b; Pearson et al., 2008; Sirmon & Hitt, 2003), entrepreneurial families can influence outside their business environment, such as in an entrepreneurial ecosystem.

Under the above premise, another of the theoretical implications presented is the articulation that theory had not previously made of entrepreneurial ecosystems with entrepreneurial families, and a positive bidirectional relationship has given the embeddedness they have in a territory.

Regarding the practical implications for support entities and for regional and national policymakers seeking to mobilize the development of entrepreneurial ecosystems, they are oriented towards the visibility of support mechanisms for entrepreneurship, the identification of ecosystem attributes that should have greater focus in order to mobilize business networks and investment or financing strategies, among others.

Chapter 2: Family business and Family Social

Capital

2.1 Introduction

Considering that this research aims to analyze entrepreneurial families in entrepreneurial ecosystems through different agents in the entrepreneurial ecosystem, it is necessary to understand the family business dynamics.

This chapter begins with a description of family businesses, showing the evolution of this concept from the theoretical perspective. For this purpose, the main models of the family business and their relationship with the family are presented.

The relevance of this family business section focuses on understanding the articulation between the family and the family business and, in turn, the interrelation with the environment and the territory in which it operates.

Furthermore, the distinctive attributes of family businesses are identified based on their resources and capabilities, according to Habbershon's (1999) theoretical orientation called "familiness."

Subsequently, a section focused on social capital, in general, and family social capital is presented (Pearson et al., 2008). We start with Social Capital as an "umbrella concept" (Hirsch & Levin, 1999). Subsequently, a route is sought from the family as a system to understand the relationship of capabilities and resources from familiness.

Finally, we understand Bridging and Bonding Family Social Capital, which allows us to understand the flows of social capital inside and outside the family, being a relevant element in entrepreneurship.

2.2 Family business

In the field of family business research, scholars define the importance of these types of companies on a global level, measured regarding job creation (Corbetta & Salvato, 2012), gross national product, and wealth generation (Randerson et al., 2015). They are so present that we are unaware of their presence in our economic and social environment (Gersick et al., 1997).

The family business is a necessary form of business organization. It contributes to developing different economies (Stough et al., 2015), even in developed economies like the United States, where Astrachan & Shanker (2003) have shown their role in developing a country's economy. Also, Corbetta & Salvato, 2012 (op. cit.) mention in their study that family business in Europe impacts the Growth Domestic Product (GDP) by 29%.

According to some studies, Poutziouris, (2001) establishes that the family business may represent more than two-thirds of all businesses in developed economies. Therefore, they are the most relevant companies worldwide (Rodrigo Basco, 2014; Allen et al., 2021), impacting employment and economic development.

Extensive literature reveals that the family business is the backbone of the private economy, contributing to the socio-economic and entrepreneurial development of countries (Connolly & Jay, 1996; Neubauer & Lank, 1998; P. Poutziouris & Chittenden, 1996; Romano et al., 2001).

Given its importance, it is relevant to have a definition of a family business. In this regard, there is extensive research in the literature on family businesses, so many definitions suggest that their typologies depend on the conditions in which they operate. Therefore, their results also vary.

In this research, we assume the description made by Miller (2007, p. 831), gathering the approaches of several authors, where he establishes that "the typical family business has been characterized as an organization controlled and usually managed by multiple family members (Shanker & Astrachan, 1996); Lansberg, 1999), often from multiple generations (Anderson and Reeb, 2003; Gómez-Mejía et al., 2007)."

As mentioned, there is a large variety of approaches, not only about the definition but also about the condition needed to consider a company a family business. (Chrisman et al., 2005, p. 556) gather the following elements that scholars define as the essence of the family business: "(1) a family's influence over the strategic direction of a firm (Davis & Tagiuri, 1989); (2) the intention of the family to keep control (Litz, 1995); (3) family firm behavior (Chua et al., 1999); and (4) unique, inseparable, synergistic resources and capabilities arising from family involvement and interactions (Habbershon et al., 2003a)."

The relevance of family firms lies in ownership, control of the firm, and management of the firm (Ang et al., 2000; Faccio & Lang, 2002; Gómez-Mejía et al., 2007; Howorth et al., 2010), governance, and transgenerational succession (Chua et al., 1999).

From another perspective, family firms, like any other actor, develop endogenous factors (Stimson et al., 2011) as social capital and creative/entrepreneurial capital (Basco, 2015), having a relevant role in regional development. According to Basco (2015, p. 3), they "represent the fuel for the quantity (i.e., growth), quality (i.e., equality), and pace (i.e., rhythm)" of this development. And, since entrepreneurs and their families are active members of a community (Del Baldo, 2012), who are "creative souls," they are also part of the economic wealth.

2.2.1 Conceptual Models of Family Firms

Conceptual models have recently been proposed to better understand family businesses' dynamics and structure. Such models have begun to be applied to understand elements such as performance, strategy, human talent, finance, ownership, or duration of the business. These models, which were analyzed by Molina et al., (2016), allow understanding of the composition, structure, and performance given the unique characteristics of the family business.

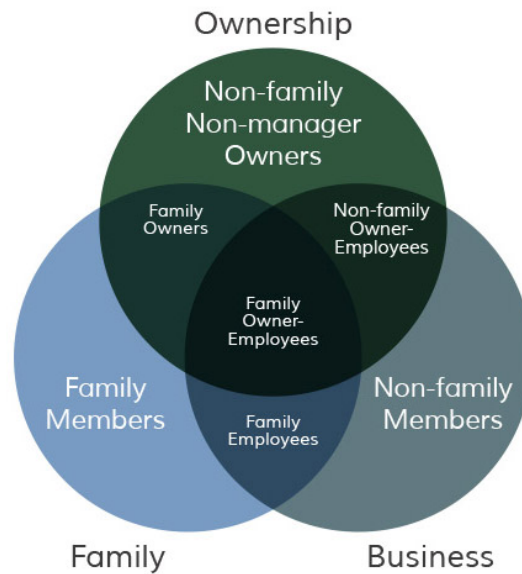
The following are the models from the literature review that articulate the research object.

2.2.1.1 Three-circle Model of the Family Business System

The initial model established that family businesses were generated by integrating two systems: the business and the family. However, a new model is presented (Tagiuri & Davis, 1996), where a new pillar is added: the property. The new pillar allowed the analysis to be expanded and shows four additional subgroups formed by the intersections of the pillars identified (family, business, and property).

The model specifies the conditions under which the family business is configured, considering the family, the business, and the property. For instance, we have family members in a family pillar. In a business pillar, we have non-family members; however, family employees appear in the interaction between these two pillars (Figure 1).

Figure 1. Three-circle Model



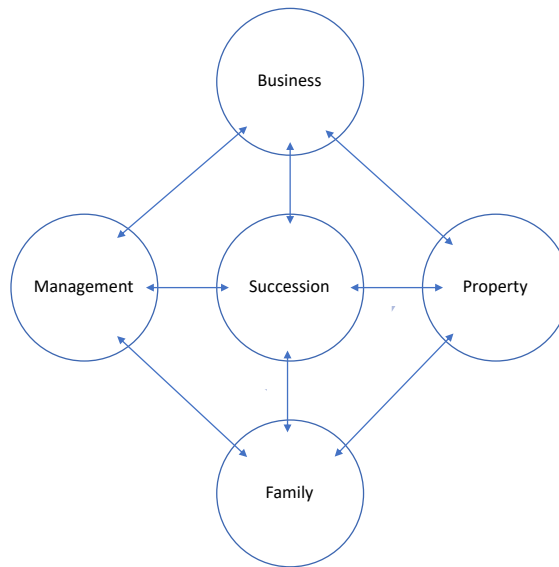
Source: Taiguiri & Davis, (1996)

Ownership is represented by the participation of non-family members who do not work in the business. By interrelating them with the family, family owners are presented. On the other hand, when we mix those employees who are non-family members with the ownership, non-family owners who are also employees are identified. Finally, in the center of these three pillars, we have the owners who belong to the family and work in the company.

2.2.1.2 Five-circle Model of the Family Business system

Amat (2004) defines this model as an evolutionary process of the three-circle model, adding the pillars of management and succession (Figure 2).

Figure 2. Five-circle Model



Source: Amat, (2004)

The model proposes that the family transfers its visions, motivations, and constraints. In this sense, the family environment can influence the company's dynamics.

The business pillar considers both the company's strategy and its performance. The system is supported by the different resources available to the company and provided by the management pillar.

The ownership pillar analyses the relationships of the company's owners, who may or may not be part of the family, depending on the family's policies.

Finally, succession involves the transfer of ownership and decision-making to the next generation.

2.2.1.3 Holistic Model of Family Business and Their Environment

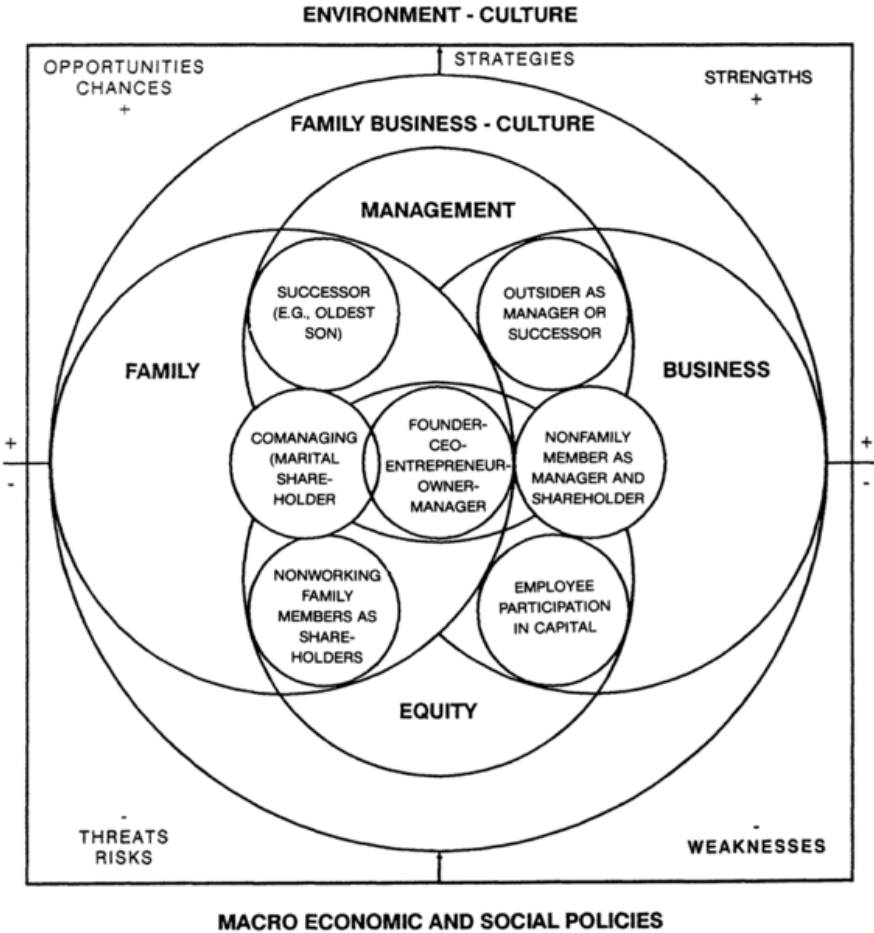
This model developed by Donckels and Frölich (1991) provides an expanded family business perspective. It involves fundamental elements of its environment that can influence or affect it,

such as culture and macroeconomic and social policies. The model also highlights the family business' strengths and weaknesses to design strategies so that strengths would translate into opportunities and weaknesses would not become risks.

The centre (Figure 3) is the founder, the CEO, or the owner, who must articulate a system composed of the management, the business, the equity, and the family.

In this model, equity appears in place of ownership. However, its components are related to the participation in the company (family members or not) as shareholders, as established by the ownership pillar in the other models.

Figure 3. Holistic Model of Family Business and Their Environment

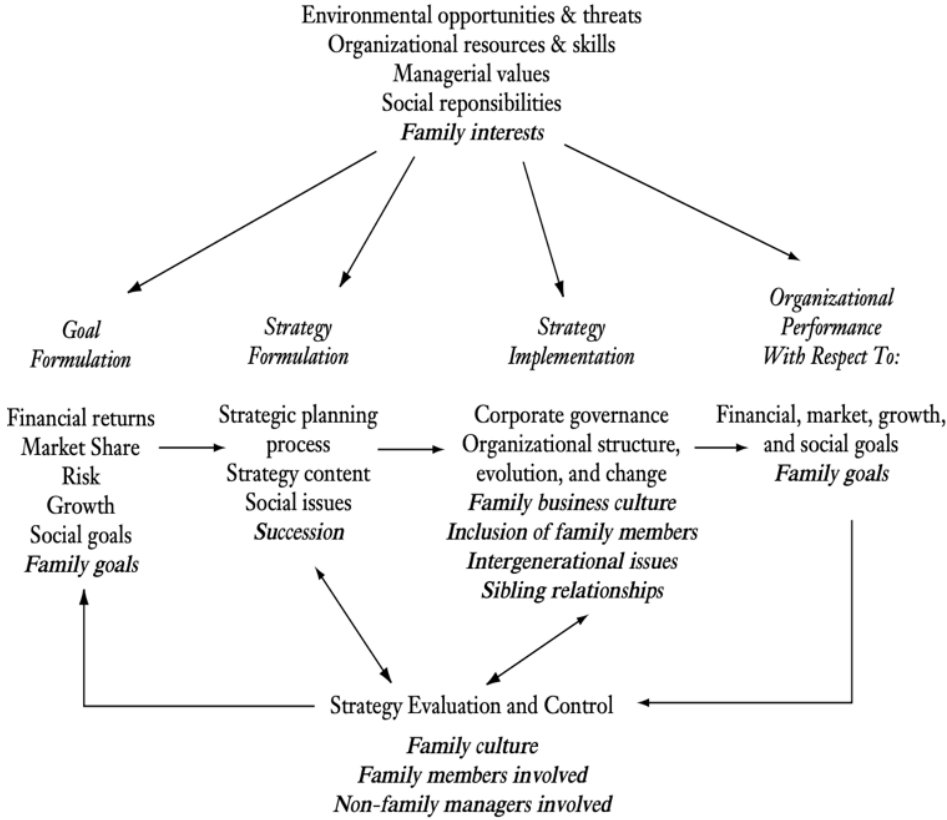


Source: Donckels y Frölich, (1991)

2.2.1.4 Sharma, Chrisman & Chua Model

The model provided by Sharma, Chrisman, and Chua (1997) highlights the elements in which the family and its interests play a predominant role in management. In this sense, the model (Figure 4) is directly related to the strategic management processes of the organization from its objectives, strategy, and performance.

Figure 4. The Strategic Management Process



Source: Sharma et al., (1997)

In the evolution of the models, more elements, or factors in which the family has an impact or relationship, reflected both in the company's performance and in its strategic management, are being incorporated, such as environment or context (Basco, 2013). Likewise, there has been a growing interest in understanding the difference or reasons why some companies perform better than others (Barnett et al., 1994; Rodrigo Basco, 2009).

In this framework, the difference between family and non-family firms is evidenced by several authors (B. S. Anderson et al., 2009; Rodrigo Basco, 2013; Joern H. Block et al., 2011; Chua et al., 2009; Le Breton-Miller & Miller, 2009; Sirmon et al., 2008) becomes increasingly apparent and visible.

One of the most important theoretical perspectives for understanding these differences, developed since the 1980s and taking on greater importance in the last decade, is the firm's resource-based view (hereafter RBV) (Barney, 1991; Hitt & Ireland, 1985; Wernerfelt, 1984). This perspective suggests that the competitive performances of firms are mainly attributable to their resources (Penrose, 2009) .

Regardless of whether it is a family business, the study of the existence of the competitive advantage of companies and the potential for generating or obtaining long-term benefits is an area of research for many scholars. Barney (1991) presents a perspective that became very significant concerning the resources among organizations and their ability to use them efficiently. Since that year, the model's validity has been confirmed, given the extensive research carried out in this area. New areas of application of this theory have been provided (Barney et al., 2011).

One of these new research areas concerns the family business field. Scholars are investigating the uniqueness of family businesses, which, as evidenced in the models presented earlier, are based on integrating the family and the business (Habbershon & Williams, 1999a). Even the ownership and its context. In addition to this uniqueness, the resources and capabilities of family businesses enable them to provide family-based competitive advantages called "familiness" (Habbershon & Williams, 1999a).

2.2.2 Familiness

Familiness is defined as "the unique bundle of resources a particular firm has because of the systems interaction between the family, its individual members, and the business" (Habbershon & Williams, 1999b).

Therefore, the competitive advantages of family business (K. Cabrera-Suárez et al., 2001; Habbershon et al., 2003) come from the system's interactions with their resources, capabilities, and competencies. While these are unique resources, they can create advantages and disadvantages for family businesses, depending on their vision or direction or because of conflicts, problems, or differences of interest related to the interaction of family members in the contexts of ownership and business (Habbershon et al., 2003a).

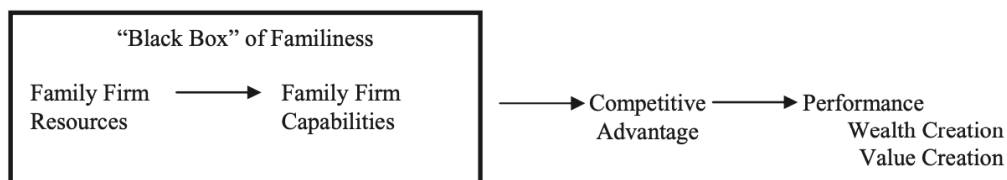
The familiness provides a systemic perspective; therefore, the system's performance prevails over the performance of the parts (Habbershon & Williams, 1999a). In this same research, Habbershon (1999a) suggests the need to identify the familiness of a company and measure its impact on its strategic capabilities, which allows investigating any familiar form of business organization systemically. Finally, this familiness, as mentioned by (Nordqvist, 2005, p. 287), "can lead to competitive advantage if it is 'unique, inseparable, and synergistic' and becomes a 'hard-to-duplicate' capability."

As previously mentioned, from the concept of familiness, family businesses provide their competitive advantages from a business culture that promotes commitment, trust, relevance, entrepreneurship, administrative flexibility, speed in decision-making, teamwork, empowerment, and sacrifice.

According to the authors, the resources mentioned in the RBV approach refer to the elements that the company gets or "has" that allow it to have capabilities to "doing" actions and that together allow it to develop a competitive advantage. In the end, this condition's result enables it to create wealth and value.

Below, Figure 5 shows the capabilities and resources model; however, as mentioned by some authors such as Pearson (2008), it is a "black box" that needs to be explored in greater depth.

Figure 5. Resource-Based View Model of Familiness



Source: Pearson, (2008)

Therefore, as recommended by Pearson (2008), it is first necessary to identify the family business' resources and capabilities, which are unique and constitute the familiness. From this basis, the competitive advantage is configured and allows to explore the key relationships that achieve performance toward value creation.

The following is a description of both resources and capabilities from the RBV perspective of the firm theory (Barney, 1991).

2.2.2.1 Resources

According to the Oxford dictionary, a resource is a place, person, or thing you get something from. This definition, therefore, requires its application in the context in which it is needed. In this sense, from the perspective of the company, resources involve elements such as assets, knowledge, processes, and strategies that allow it to improve its performance; even starting

from the company's strengths to design and implement plans (Barney, 1991; Daft, 2019; Porter, 1981).

On the other hand, (Amit & Schoemaker, 1993, p. 35) defines resources as “stocks of available factors that are owned or controlled by the firm” and capabilities as “the firm’s capacity to deploy these resources.” Therefore, resources and capabilities are factors that the company owns or controls independently.

Irava & Moores (2010, p. 102) defined resources as “all assets, capabilities, organizational processes, firm attributes, information, knowledge, etc. controlled by a firm that enables the firm to conceive of and implement strategies that improve its efficiency and effectiveness.”

In the framework of family businesses, it is essential to establish which types of resources are unique to this type of business, which according to some authors (Pearson et al., 2008; Sirmon & Hitt, 2003), can be human, social, financial, and patient capital.

Barney (1991) presents a classification of firms' resources into three aligned categories, physical capital (Williamson, 1975), human capital (Becker, 1993), and organizational capital (Tomer, 1987). Combined from the interactions between the family and business systems, the social, human, financial and physical capital resources of a firm (Habbershon et al., 2003; Habbershon & Williams, 1999).

On the other hand, Irava and Moores (2010) and Baños-Monroy (2015) confirmed resources described by authors (Barney, 1991; Harrison et al., 2001; Wernerfelt, 1991) with their empirical research, which concluded that familiness is composed of three resource-based dimensions: organizational resources (decision making and learning), human resources (reputation and experience), and process resources (relationships and networks).

Finally, Camisón (2002) argues that the resources are based on exchanging and developing information through the firm's human capital.

2.2.2.2 Capabilities

According to Camisón (2002, p. 129), “Capabilities are the skills which represent the "know-how" and the idiosyncratic and tactical knowledge that the organization and its members possess, for the coordinated deployment of resources that contain special aptitudes to develop systematic and effective activities that enable the achievement of certain objectives.”

Capabilities allow companies to identify and maximize the potential value of their resources (Sirmon & Hitt, 2003). Resources must be valuable, rare, imperfectly imitable, and non-substitutable (VRIN) (Barney, 1991; Vivas López, 2005; Wernerfelt, 1984) to contribute optimally to the firm's sustainability.

Therefore, capabilities emerge when a group of resources is used coordinated; for example, human capital can convert resources into business expertise, thus transforming them into capability (Baños-Monroy & Ramirez-solis, 2015).

This shows the complementarity and the need to have both resources and capabilities. However, a necessary condition for RBV is insufficient for obtaining a sustainable advantage (Alvarez & Busenitz, 2001).

2.3 The Family Social Capital

Pearson et al. (2008) provided, from the Resource Based View, a model of the social capital components of "familiness" to clarify the role of the family in three dimensions: structural, cognitive, and relational, as establishing an organizational performance outcome.

2.3.1 Social Capital

There are many definitions of Social Capital, and it is considered an "umbrella concept" (Hirsch & Levin, 1999). Nahapiet and Ghoshal define social capital as the "sum of actual and potential resources embedded within, available through, and derived from the network" (1998, p. 243). In this sense, social capital implies relationships between individuals or between organizations (Burt, 1997).

Adler and Kwon (2002, p. 21) establish, among other things, that social capital is "those features that give collectivity cohesiveness and, thereby, facilitate the pursuit of collective goals."

Social capital is understood within the company's framework as the exchange of resources between units and companies. In this sense, it can affect the essential activities of the companies. Because it focuses on relationships between individuals, it can affect the creation of intellectual capital, organizational and business-to-business learning, process and product or service innovation, relationships with suppliers, and entrepreneurship, among others (Adler & Kwon, 2002).

Within the present research framework, we find that Pearson et al. (2008) propose that the Social Capital Theory could be employed in family firms. It allows an understanding of this type of firm's unique social and behavioral resources and capabilities. Scholars have examined several unique resources of family businesses and their impact on performance, such as competitive advantage generation or wealth creation.

They consider that social capital can establish how family firms create value under a unique context that this type of firm provides.

2.3.2 Family System

The previous section presents the structure and elements that show the family business. Regarding the relevance of the role of the family in these companies, the family system theory provides a systemic vision of the family relationship (Habbershon et al., 2003a) and of the family coalition, which “generates distinctive familiness for transgenerational value creation” (Chrisman et al., 2003, p. 471).

Considering that the family is the first social (group) system (Putnam, 2000), the continuous and close interaction among family members generates a systemic influence on the family system, and therefore, among family members, interaction patterns are created and represented as a whole (Habbershon et al., 2003a; Jaskiewicz et al., 2019).

Therefore, they create a unique system reinforced through family interactions and transactions in a multigenerational and historical framework. Because of this condition, the difference between family and non-family businesses can be attributed to it. In this sense, the family system is seen as more than a group of individuals, and their attributes; it is a unique group of attributes (Heck et al., 2006, p. 84).

The higher relevance of this “family system in relation to the family business” and entrepreneurial activities is related to the statement of Zachary (2021, p. 52) that it “is paramount and closely related to outcomes such as business success and quality of family life.” A proof of this is the family capital (set of resources), which, when available to the family business, allows it in the short term to achieve positive results and, therefore, sustainability in the long term (Danes et al., 2009).

However, it is relevant to remember that some researchers, such as Olson et al. (2003), have shown that the family and business systems are separate but interdependent. Understanding this dynamic and the family system allows us to find significant aspects such as the sustainability of family businesses and their interaction with the environment.

Following the evolution of the family system model and its influence on the business system, the connection with the community is highlighted, which also affects both systems and can determine the viability or sustainability of the family business over time (Danes et al., 2008; Zachary, 2011).

As mentioned before, it could summarize that the family is a social instrument of great relevance to society. It interacts not only with its business system but also with its environment. Therefore, they mutually influence each other generating impacts over time.

2.3.2.1 Family Business Ecosystem

Although we will deal with the concept of Ecosystems in chapter 3, we need to mention it now as part of the system. The family business system model that Habbershon et al. (2003a) proposed allows for describing the family business's context and the source of its resources' advantage and restrictions.

As Zacharakis et al. (2002) mention, scholars have suggested that an ecosystem model is helpful because it provides insight into development and resource allocation processes.

Scholars have evidenced that the family and the family business are overlapping systems that influence each other (Frank et al., 2010). However, it was unclear until Habbershon's (2007) research on the systemic relationship of resources and capabilities (Habbershon & Williams, 1999a) focused on the results of their actions.

This approach is based on the unique character of the family that arises from the interaction of systems, called the familiness of the business (Habbershon et al., 2003a). The model allows understanding the interactions of the individual family members, the family unit and the family business, providing a broader and embedded approach.

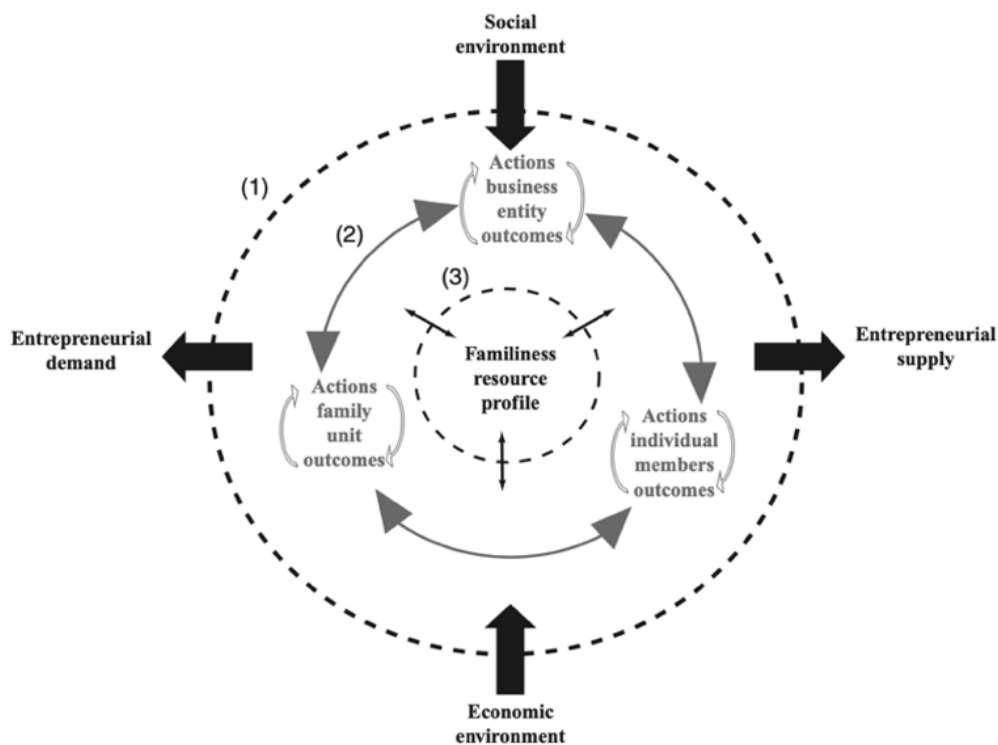
Habbershon's (2006) approach to the model is based on concentric circles and reciprocal input-output relationships (Figure 6). It has three rings representing factors from the external environment to the family's resources.

One of the novelties of the model is precisely the external ring, which represents the social and economic factors of the external environment that influence either the family, the individuals of the family, or the family business. It could indicate that the embeddedness of the family is affected by the context and vice versa.

The model shows an interaction of three rings; the first concentrates on the family's core, called familiness, the second on the actions, and finally, the environment. For this research, the perspective raised on the generation of resources and unique capabilities is a component that calls powerful attention.

The model also shows how the family organization becomes a distinctive context for entrepreneurship nourished by the resources and capabilities generated by the interaction of the subsystems.

Figure 6. Family Business Ecosystem.



Source: Habbershon, (2006)

2.3.2.2 Family and Family Business Embeddedness

Continuing to understand the articulation of the family and the family business as a system, we find the "family embeddedness" approach. This approach is derived from "social embeddedness" and refers to the non-economic ties that shape motivations, perceptions, and actions, influencing economic behavior (Granovetter, 1985, 2005). It is supported by networks of relationships where people live in which information, ideas, and values, for example, are shared (Le Breton-Miller et al., 2011; Le Breton-Miller & Miller, 2009).

The literature on embeddedness has proposed modes of articulation of actors and institutions within social networks. It classifies them as cultural, cognitive, political, and structural (Burt, 1992; Granovetter, 1985; Uzzi, 1996).

Table 4 describes each of these articulation methods, as proposed by (Le Breton-Miller & Miller, 2009).

Table 4. Modes of Embeddedness

Modes of embeddedness	Description
<i>Structural</i> : Pattern of ongoing <i>interpersonal relationships</i> serve as context of economic exchange.	It refers to the context of economic exchange (Burt, 1995; Zukin and DiMaggio, 1990). In this sense, the actors of family businesses, which are integrated into a system of relationships, are influenced by their conditions and presence and how it can affect other actors in the firm.
<i>Cognitive</i> : Regularities of cognition and <i>categories of meaning</i> that shape economic reasoning.	It refers to regularities such as conceptual, routines, assumptions, and modes of reasoning that are transferred into representations, interpretations, and meanings. The above can constrain behavior (Zukin and DiMaggio 1990). In this regard, it is possible to arrive at a kind of "family grammar" concerning the family business's conduct, policies, and strategies.
<i>Political</i> : Economic institutions and decisions shaped by the struggle for <i>power</i> between economic actors and non-market institutions.	It refers to the distribution of power between economic actors and non-market institutions, in this case, the Family (Zukin and DiMaggio, 1990, p. 20). Therefore, because of numerous sources of power, including voting power, by controlling the votes of the firm, the family can determine the firm's direction. Therefore, the distribution of ownership and voting power is essential. (Schulze et al., 2003).
<i>Cultural–normative</i> : Collective <i>values</i> shaping economic goals and strategies.	It refers mainly to cultural values and collective norms that shape economic objectives and strategies (DiMaggio and Powell, 1983). From the family's perspective, norms are related to their ethical and religious beliefs. Furthermore, their social conscience and values as a social unit provide them with a way of relating to the society in which they are inserted.

Source: Adapted of Dimensions of Embeddedness in Family Businesses (Le Breton-Miller & Miller, 2009).

Scholars of social embeddedness recognize the incidence of social relationships on behavior (Granovetter, 2005); however, it has been analyzed from a broad perspective, not from the family's perspective (Putnam, 2000). In this regard, Aldrich and Cliff (2003) adopt a "family embeddedness perspective" to analyze the role of the family in decision-making in the family business, directly influencing its performance (Aldrich & Cliff, 2003; J. H. Astrachan et al., 2003; Cruz et al., 2010).

Zellweger (2018), on the other hand, makes a classification of social relationships, which helps to understand the embeddedness of the family. He poses (Table 5):

Table 5. Social relationship classification

Category	Family Actors	
	Family Members	Family members not directly involved in the Family Firm
Family Members	Intra-family relationships	Intra-family relationships
Non- family individuals or groups	Intra-family relationships	Extra-family relationships
Stakeholders	Extra-family relationships	Extra-family relationships

Source: adapted from Zellweger's (2018) category description.

Moreover, scholars suggest that family firms are immersed in social structures embedded in their local environment (Amato et al., 2020). They take advantage of their local rootedness and differ substantially depending on spatial environments (Backman & Palmberg, 2015; Cucculelli & Storai, 2015) and distinguish them from non-family firms (Steier, 2009).

Basco (Rodrigo Basco, 2015) reinforces the notion of local embeddedness of family businesses supported by the activities of family members inside and outside the boundaries of the family business. In this sense, depending on the density and quality of the proximity dimensions, the impact of the family business can be relevant and even impact regional processes (Crescenzi et al., 2013).

Based on this perspective, Basco (Rodrigo Basco, 2015) proposes the concept of "regional familiarity" and defines it as "the embeddedness of family businesses in social, economic, and productive structures within the spatial context and the type of connections that emerge and interact with regional factors (i.e., tangible and intangible factors) and regional processes (e.g., spillovers, information exchange, learning processes, social interactions, competition dynamics, and institutional dynamics) through regional proximity dimensions (i.e., relational, institutional, organizational, social, and cognitive proximity)."

Continuing with the embeddedness of family firms within the regional community, scholars' evidence that these firms pursue to establish strong links and long-term relationships with stakeholders in their community (J.L. Arregle et al., 2007; Berrone et al., 2010; Miller et al., 2007). According to Bird & Wennberg (2014), it has direct implications for the pattern of business creation in a region.

In this regard, Arregle et al. (2013) highlighted that family ties are an essential resource driver for entrepreneurs. He emphasized that the results will not necessarily be positive, and such resources, embeddedness, and entrepreneurial heritage can foster business continuity and transfer the entrepreneurial mindset (Elo & Dana, 2019).

For instance, they allow entrepreneurs to access mentoring or advice, transferring essential knowledge that generates high value to the entrepreneurs (Davis et al., 1997).

Finally, it should be noted that an important number of scholars have recognized the impact that family businesses have on the territory, mainly because of their entrepreneurial behavior that contributes to development (Zahra et al., 2004).

2.3.3 Social capital perspective of familiness

Some researchers who study family firms and their interaction in their context mention that the members of family firms have strong synergy with stakeholders and support the development of organizational social capital (Arregle et al., 2007; Del Baldo, 2012). Those communities can weave common interests and shared values into their specific environments. Likewise, Arregle et al. (2007) show that family firms are unique because they include two types of social capital: the family's and the firm's (Sharma, 2008).

With the perspective of family firms' social interaction and the level of embeddedness in their "communities" (Lester & Cannella, 2006) and regional communities (Bird & Wennberg, 2014), R. Basco & Bartkeviciute (2016, p. 709) incorporated the "regional familiness model and considering that family businesses' effect on regional development can occur at the firm and regional levels." For this model, they looked inside and outside family firms understand what makes them a potentially different type of organization in the first place, and second their link to the context at the regional level (R. Basco & Bartkeviciute, 2016).

Bird & Wennberg (2014) show that family businesses have a strong relationship between family start-ups and community dynamics due to their firm embeddedness in the regional community. The embeddedness of the family firm in the regional community could be one reason for their longevity (Lumpkin et al., 2010).

Within this approach in fields related to family social capital, Sorenson et al. (2009a) developed a model from the family point of view which provides a competitive advantage (limited, inimitable, and challenging to replicate, that is, non-substitutable (Barney, 1991)) for a family business based on the RBV and familiness. Finally, Sorenson et al. (2009) define variables or elements to support a single family resource. These are social position and family in the community, support from close clients, and independence.

The literature reviewed shows a missing point on family social capital and behaviors that constitute familiness (Pearson et al., 2008); therefore, not much information is available on how they interact with the firm, individual family members, and the family through which they create these unique resources and capabilities. The missing points are potentially special features (family social capital and familiness) in the entrepreneurial family role in entrepreneurship's processes, behavior, and outcomes (Lumpkin et al., 2011). It means

evaluating the significance of related dimensions critical in studying entrepreneurship and family businesses - entrepreneurial family and entrepreneurial family business and their impact.

In addition, as mentioned before, the definition of familiness, as proposed by Arregle et al. (2007) and Cabrera-Suárez et al. (2011), focuses on transforming family social capital into organizational social capital under the perspective of social capital. Likewise, Weismeier-sammer (2013) reaffirms that such transformation of social capital is exclusive to family businesses.

According to the authors, one of the most enduring social contexts of individuals is their families, given that they influence the mindset and attitudes of their members (Martinez & Aldrich, 2014). For example, the parenting model and communication pattern within family institutions encourage or discourage the adoption of entrepreneurial behaviors (Soleimanof et al., 2019).

Family influences individual-level entrepreneurial behaviors (Aldrich & Cliff, 2003; Eddleston et al., 2012; Jaskiewicz et al., 2015; Kotlar & Sieger, 2019; Soleimanof et al., 2019). Indeed, transgenerational entrepreneurship is affected by the transgenerational legacy (Jaskiewicz et al., 2015) or by financial resources (Bierl & Kammerlander, 2019). Most of these scholars consider the family from a systemic perspective as a source of network relationships. Therefore, entrepreneurs from the same family may be embedded (J.L. Arregle et al., 2017) under the family embeddedness perspective (Aldrich & Cliff, 2003).

Family ties provide advice, resources, emotional support (J.L. Arregle et al., 2017; Renzulli & Aldrich, 2005), and financial support (Sieger & Minola, 2017) to entrepreneurs, even if they are not members of a family business, and thus become a focal point for entrepreneurship ecosystems. However, the impact of Family Social Capital on the entrepreneurial network

remains underexplored (A. R. Anderson & Gaddefors, 2016; J.L. Arregle et al., 2017). Following Pearson et al. (2008), the Family Social Capital has been used to open the black box of this unique family firm's bundle of resources and capabilities, called familiness (Habbershon & Williams, 1999) that characterize entrepreneurial families. Therefore, Family Social Capital is "the relationships between individuals and organizations that facilitate action and create value" (J.L. Arregle et al., 2007, p. 75).

According to Arregle et al. (2007), the Family Social Capital involves three dimensions structural, cognitive, and relational. The structural dimension focuses on the "social interactions, including the patterns and strength of ties, among the members of a collective contains the density and connectivity of social ties" (Pearson et al., 2008, p. 957). The cognitive dimension refers to "resources are providing shared representations, interpretations, and systems of meaning among parties" (Nahapiet & Ghoshal, 1998, p. 244). The last dimension is the relational dimension and consists of the resources created through personal relationships improving cooperation, communication, and commitment (Pearson et al., 2008). These resources can be trust and trustworthiness (Tsai & Ghoshal, 1998), norms, obligations, and identity (Nahapiet & Ghoshal, 1998), which allow a common purpose.

Social capital is considered a driver for developing an entrepreneurial environment (R. Basco & Bartkeviciute, 2016) because it involves building bridges for effective exchanges in a specific context (A. R. Anderson & Jack, 2002). In the case of entrepreneurship, networks, values, and vision are exchanged, among others, favorable factors for entrepreneurial activity.

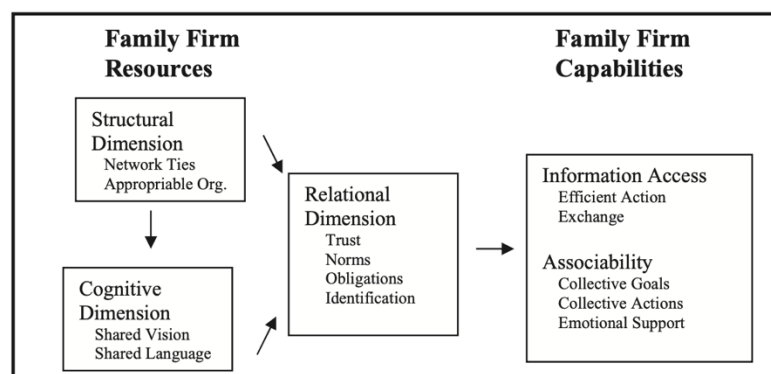
Bridging social capital (Putnam, 2000; Szreter & Woolcock, 2004) is critical from this perspective. Putnam's concept of bridging in social capital refers to social networks between heterogeneous groups, in contrast to bonding social capital, which deals with connecting

members of homogeneous groups with strong ties (Granovetter, 1985; Putnam, 2000; Woodhouse, 2006). Bridging allows heterogeneous groups to share and exchange information, ideas, and innovation and builds consensus among groups representing diverse interests, creating bonds of connectedness across various groups.

Among the variety of Family Social Capital configurations (Sanchez-Ruiz et al., 2019), both kinds of linkages, within the boundary of the firms -"bonding" social capital and beyond the border of the firm—known as "bridging" social capital, are developed. Other agents may gain access to skills, such as creative talent, as a result of the bridging social capital (Florida, 2002) and resources currently unavailable to them, pushing them towards new economic opportunities (Ceci et al., 2019; Woodhouse, 2006).

Pearson et al. (2008) suggest a model consisting of three dimensions that represent the family business's resources that affect the family business's capabilities (e.g., collective goals). They assume in this same model that these dimensions are the result of the manifestation of family social capital and are composed of three: the "structural dimension," the "cognitive dimension," and the "relational dimension" of familiarity (Figure 7).

Figure 7. A Social Capital Perspective of Familiness: family Firm Resources and Capabilities



Source: Pearson et al. (2008)

As shown in the Figure 7, the capabilities of family businesses result from the combination of the structural, cognitive, and relational dimensions of the resources related to the familiness construct. These dimensions are defined according to Pearson et al. (2008).

2.3.3.1 The Structural Dimension of Familiness

This dimension is related to social interaction, which is based on the patterns and strength of bonds among the members of a collective. It is the dimension that contains the density and connectivity of those social relations and analyses the capacity of members to manage social networks.

According to research, Pearson et al. (2008) mention that the family can and does transcend the ties present in the organization because of the structural links that the families own (J.L. Arregle et al., 2007).

They also mention that families are likely to have a more significant number of internal ties because of the established patterns of interaction and family business participation. In this sense, it evidences the relevance of family network ties (Pearson et al., 2008) and how they influence the company and probably its environment.

2.3.3.2 The Cognitive Dimension of Familiness

This dimension comprises the group's shared vision and purpose. This representation allows sharing a unique language and stories, particularly the culture of a deeply embedded collective.

In this regard, the shared vision is a bonding mechanism since it allows communication and integration of ideas and actions (Tsai & Ghoshal, 1998).

The shared purpose generated between the family and the family business creates a collective insight that it is necessary to maintain the family's collaboration to achieve its long-term goals.

According to Pearson et al.(2008), the cognitive dimension of social capital is unique to family businesses since, unlike non-family businesses, it is deeply rooted in the family's history.

2.3.3.3 The Relational Dimension of Familiness

This dimension is framed by the resources created through personal relationships. These resources include identity, trust, norms, and obligations (Nahapiet & Ghoshal, 1998). They are highly significant since they create unique and frequently long-lasting bonds between individuals in a collective. For this reason, they influence behavior, such as communication, commitment, and cooperation to a common purpose.

In this regard, Lansberg (1999) suggests that for a family business to provide its cohesive and value-based purpose, it is necessary to generate debate and interaction within the family and the family business. In this sense, this particularity of the family business can make it possible to have more significant opportunities to share information and work collectively.

2.3.4 Bridging – Bonding Family Social Capital

As shown in previous sections, several authors and empirical works highlight the importance of social capital. The relevance of a distinction between types of social capital has recently become evident (Coffé & Geys, 2007b). This distinction is made between two types of networks, homogeneous (or bonding) and heterogeneous (or bridging).

Within this context, the aim is to determine the flow of family social capital under the bonding and bridging distinctions (Montemerlo & Sharma, 2010; Sharma, 2008).

2.3.4.1 Bonding social capital

According to Montemerlo and Sharma (2010), this type of capital refers to the value of social ties within a collectivity or community (Adler & Kwon, 2002), such as a family, company, or local community. It is based on the cohesion and solidarity of such a community allowing the effective achievement of the mission (Coleman, 1988, 1990).

It also allows, based on shared interests, to pursue collective or common objectives founded on trust (Granovetter, 1985). As a result, a shared identity emerges, and community benefits such as efficiency, commitment, risk reduction, and conflict resolution are obtained (Nelson, 1989; Ouchi, 1993).

2.3.4.2 Bridging social capital

This type of social capital is more likely to generate positive externalities. It relies on the capacity and intermediation or linkage of an individual with unrelated groups (friends, colleagues, contacts in general) beyond the immediate collective (Sharma, 2008). It focuses on how external ties facilitate goals and objectives (Montemerlo & Sharma, 2010).

The accomplishment of aims and objectives is possible because intermediation and transaction facilitate opportunities using financial and human capital (Burt, 1992). Mechanisms such as persuasion, agenda-setting, or interest mobilization, among others, are used (Montemerlo & Sharma, 2010).

2.3.4.3 Bridging and Bonding

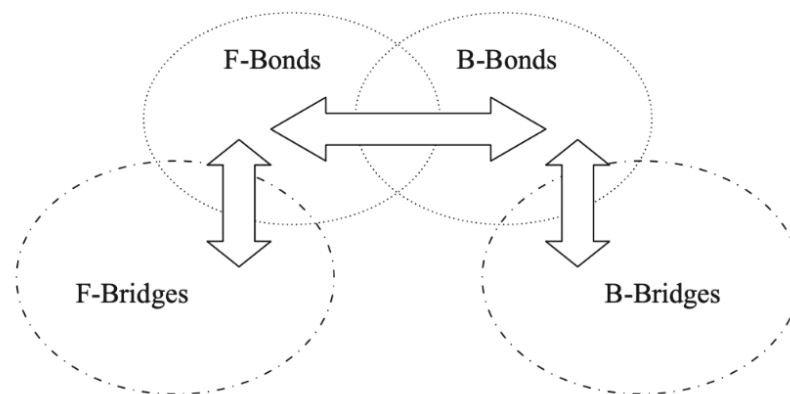
Sharma (2008) and Montemerlo and Sharma (2010) propose the intertwining of family and business systems, evidencing the bidirectionality (see Figure 8) of the flow of capital between

the family, the company, and external actors. This proposal arises from the capital flow analysis Pearson et al. (2008) proposed, based on the stability of belonging, interactions, and interdependence. This proposal complements Arregle et al. (2007) proposal. However, he focuses on the flow from the family to the organization; this flow is only unidirectional.

Motemerlo and Sharma (2010) complement the work done by Sharma (2008, p. 252) by offering an expanded view of the conceptual model. Below are three relevant aspects that complement what was initially stated.

1. Family bonding social capital, i.e., internal family networks involving all family members, regardless of the degree or nature of participation in the company.
2. On the other hand, business bonding social capital focuses on internal business networks, which include family and non-family members involved in the company.
3. The frequent flow of bonding social capital between the family and entrepreneurial subsystems. However, the factors influencing this linkage are not known.

Figure 8. Family and Business—Bonds and Bridges



Legend:
 F-Bonds: Bonding social capital within the Family
 F-Bridges: Bridging social capital of Family with external actors
 B-Bonds: Bonding social capital within the Business
 B-Bridges: Bridging social capital of Business with external actors
 Arrows represent the bidirectional flow of social capital

Source: Sharma, (2008)

In entrepreneurship, the relevance of bonding social capital is also evident (Simoni & Labory, 2007). Within the family, there is the possibility of receiving support from the family itself and the family business. This possibility becomes a driving force for the development of new companies.

Individuals who come from families with family businesses (bonding social capital) or are linked to social networks that foster entrepreneurship (bridging social capital) take advantage of their social capital, generating more successful discovery activities than those who do not.

2.4 Conclusion

In this chapter, social capital is linked to the literature on family businesses and is proposed as the theoretical underpinning of this research. Considering that the family is the first social base, it is possible to establish a unique link with the family business and its environment due to the strong ties supported by its social capital.

As the researchers affirm, the family and the family business are systems in which capacities and resources are created, differentiating them from non-family businesses. The level of the embeddedness of the family business allows it to have a more significant impact on its context and vice versa.

Likewise, from the bridging and bonding theory of social capital, the flow of social capital beyond its capacities and resources toward the family business is evidenced. In this sense, bonding can generate more significant environmental positive externalities.

As a result of the literature review, some authors believe that being in the family is the first social system that enhances or restricts entrepreneurship. It also demonstrates that it is possible

to have a flow of social capital from the family system; finding the relationship between the family and the family business is viable. This point will be developed in the next chapter.

Finally, the theoretical construct adopted for the research is the Social Capital Perspective of Familiness by Pearson et al. (2008), given that it includes the elements of social capital and focuses on the family's aspects that become capabilities and resources as unique differentiators. Additionally, the dimensions of social capital of the theoretical model facilitate its linkage with variables of the theoretical construct of entrepreneurial ecosystems since they have common elements presented in Chapter IV.

Chapter 3: Entrepreneurial ecosystems

3.1 Introduction

Several studies that address entrepreneurship highlight that it is an essential driver of economic development, employment, and productivity growth (Szerb et al., 2013). In this perspective, the focus on the regional level of analysis is a clue because the entrepreneurial businesses operate locally or regionally and exist variations in economic base across regions (Szerb et al., 2013).

Entrepreneurship emerges in a "system" supporting entrepreneurial development (Neck et al., 2004). Spilling (1996, p. 91) introduces the concept of the entrepreneurial system, which "consists of complexity and diversity of actors, roles, and environmental factors that interact to determine the entrepreneurial performance of a region or locality."

With this perspective, the system implies a high level of bidirectional social relations between the actors and the context. For example, in the case of an entrepreneur, he/she is embedded in a social context in which he/she is involved, and this social context is embedded in the entrepreneur (Spedale & Watson, 2014). The first social structure for an entrepreneur is his/her family, and some studies establish entrepreneurship as embedded in the family social structure and vice versa (Aldrich & Cliff, 2003). The family influences the detection of opportunities, relationships, and organizations, as well as how these can influence the family (Randerson et al., 2015).

The primary function of the entrepreneurial system is to pursue the entrepreneurial activity that extends across discovery, analysis, and exploitation of business opportunities (Audretsch & Belitski, 2017; Audretsch & Lehmann, 2005). As well as the creation or strengthening of institutions and the generation of capacities that encourage regional economic development (Feldman, 2014). In an evolution of a system perspective, Isenberg (2010, p. 3) defines entrepreneurship "ecosystem" as "a set of individual elements—such as leadership, culture,

capital markets, and open-minded customers—that combine in complex ways" and establishes six domains: culture, human capital, finance, markets, supports, and policy (Isenberg, 2011). The entrepreneurial ecosystem concept highlights that entrepreneurship happens in a community of interdependent stakeholders. More specifically, the literature on entrepreneurial ecosystems focuses on the role of the (social) context in facilitating or limiting entrepreneurship (Stam, 2015).

Vogel (2013, p. 9) argue about the measurement of entrepreneurial ecosystems: "if we do not measure the effectiveness of the various components in an ecosystem as well as the ecosystem as a whole, we will not be able to improve existing programmes and put in place new and complementary sources." In this way, the perceptions of entrepreneurship measured in the Global Entrepreneurship Monitor (GEM) survey are stable over time (Mason & Brown, 2014a).

From the perspective of measuring entrepreneurship ecosystems, regional entrepreneurship policies are currently evolving, which facilitates an increase in the deal-flow of entrepreneurs. This flow results in an improvement in the profile of entrepreneurs and companies, i.e., from having new businesses and self-employment to achieving growth and innovation-oriented entrepreneurship (Stam, 2015). This view is increasingly emphasized in the literature on entrepreneurship

3.2 Entrepreneurship and entrepreneurial activity

The GEM (Bosma et al., 2021) defines entrepreneurial activity as "the process of starting and running a business — that creates jobs and incomes and thus added value for business and society." Under this orientation, elements such as definitions or evolution of both entrepreneurship and entrepreneurial activity are described below.

3.2.1 Entrepreneurship

Entrepreneurship is a widely studied concept. According to Schwarzkopf (2016), in his study, the word entrepreneur has French roots and was embodied in the works of Jean-Baptiste Say (1821), who defined it as "someone who undertakes an enterprise, especially a contractor, acting as an intermediary between capital and labor." The core characteristic of entrepreneurship assumes the risk and does so to pursue opportunity and profit.

Entrepreneurship can then be considered as the activity performed by an entrepreneur and is in a risky environment due to uncertainty and insufficient resources (Stevenson, 1983). However, according to Acs (2006), entrepreneurship can contribute to economic growth, as it revolves around identifying opportunities and commercializing them by creating a business.

Harvard Business School, for instance, started to use the working definition of entrepreneurship as "the pursuit of opportunity beyond the resources that you currently control" (Stevenson, 1983). Entrepreneurship is defined by GEM "as the act of starting and running a new business" (Bosma et al., 2021, p. 20).

Another well-known definition is that of Timmons (1994, p. 7), stating that "Entrepreneurship is the process of creating or seizing an opportunity and pursuing it regardless of the resources currently controlled."

Finally, Timmons and Spinelli (2009, p. 101) define Entrepreneurship as "a way of thinking, reasoning, and acting that is opportunity obsessed, holistic in approach, and leadership balanced for value creation and capture."

Advances in the study of entrepreneurship and its effects on elements such as job creation, forming new companies, building new industries, innovation and growth venture capital have

reinforced the importance of entrepreneurship in developing regions and countries. In addition, research has allowed understanding that entrepreneurship has generated at least four business transformations (Adams et al., 2016). Consider the following:

First transformation, entrepreneurship as a new management paradigm. Entrepreneurial thinking and reasoning are permeating the strategies and practices of corporate.

The second transformation, entrepreneurship, has generated a new educational paradigm for learning and teaching. As a result, curricula in universities have and are changing to provide new skills.

Third transformation, entrepreneurship as a management model for running nonprofit and social ventures.

Finally, the fourth transformation, entrepreneurship, is transcending business schools; new academic fields are exploring and adopting entrepreneurship in their curricula.

On the other hand, researchers have also analyzed over time the characteristics of an entrepreneur. Several authors have proposed many aspects: innovation, authority, risk, and value creation, among others. Table 6 presents the authors and their proposal of the most relevant characteristics of an entrepreneur in chronological order.

Table 6. Characteristics of Entrepreneurs

Year	Author	Principal characteristics
1848	Mill	Risk assumed
1917	Weber	Formal authority source
1934	Schumpeter	Innovation; initiative
1954	Sutton	Desire for responsibility
1959	Hartman	Formal authority source
1961	McClelland	Risk-taking; the need for achievement, high achiever
1963	Dauids	Ambition, responsibility, self-confidence, desire for independence

Year	Author	Principal characteristics
1964	Pickle	Drive/mental, communication ability, human relationships, technical knowledge
1971	Palmer	Risk measurement
1971	Hornaday and Aboud	Need for achievement, autonomy, power, recognition; innovative, independent
1973	Winter	Need for power
1975	Shapero	Organizer; Initiative taker
1974	Borland	Internal locus of power
1978	Kirzner	Arbitrageur
1982	Casson	Risk; innovation; power; authority
1984	Carland	Strategic thinker
1985	Gartner	Change and ambiguity
1985	Kao and Stevenson	Value creator; opportunity aware
1987	Begley and Boyd	Risk-taking; tolerance of ambiguity
1988	Caird	Drive
1998	Roper	Power and authority
2000	Thomas and Mueller	Risk; power; internal locus of control; innovation
2001	Lee and Tsang	Internal locus of control
2008	Timmons and Spinelli	Leader; holistic; persistent; committed

Source: Adapted from Adams et al. (2016)

The above is directly associated with the entrepreneurial mindset, given that these characteristics of entrepreneurs are translated into action enabling the entrepreneurial process. According to Secundo (2015, p. 282), the entrepreneurial mindset allows "supporting experiential learning, problem-solving, project development, and peer evaluation" and, therefore, increasing motivation, providing entrepreneurial skills and attributes (Gibb, 1996).

To better understand the dynamics of entrepreneurship arising from the characteristics and attitudes of entrepreneurs, we find the model proposed by Morrison (2006) presented below. By applying a systematic framework (see Figure 9) by levels, they can act as "filters" that intensify or dilute the entrepreneurial process.

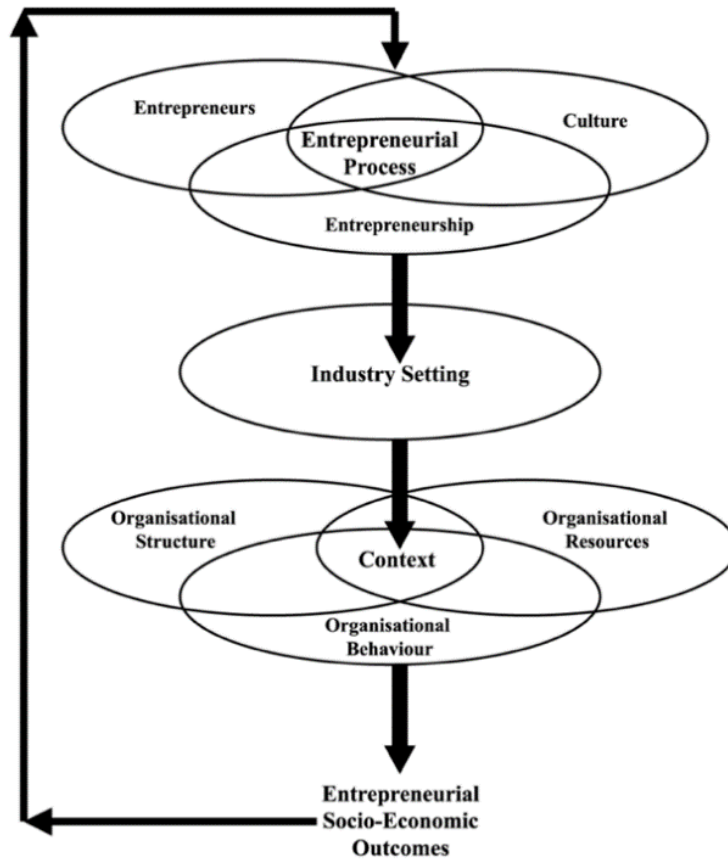
The entrepreneurial process represents the first-level filter (Figure 9) and is a multidimensional and dynamic interaction. On the one hand, there are the individual entrepreneurs with their characteristics and attitudes that represent them; on the other hand, the motivation in entrepreneurship and the culture of their community in which it is embedded allows its social development.

According to (Fredin & Jogmark, 2017), entrepreneurial initiatives are influenced by social expectations, obligations, and ethics. In such a sense, entrepreneurship is often described as a socially embedded phenomenon; therefore, to a large extent, it is influenced by the habits, customs, and conditions of the daily life of the place where they interact.

The industrial environment is the second-level filter. It determines the potential economic sector in which the entrepreneurs can pursue their business process. Entrepreneurs must assess the viability and suitability of the industry in which they have decided to operate against opportunities elsewhere, competitive differentiators, competitive advantages, barriers to entry, among others.

If the entrepreneur successfully addresses the second-level filter of the chosen industry environment, his focus is on the organizational context (Figure 9) of his new venture. Represents the third and final filter level, which allows for the analysis of the relationship between the firm's organizational structure, organizational behavior, and resources. This holistic approach to the multidimensional environment of entrepreneurship will have an impact on socio-economic business outcomes.

Figure 9. Entrepreneurship filter model



Source: Morrison, (2006)

The mentioned model allows providing a frame of reference to understand the impact of entrepreneurship on the economic growth of the context in which it occurs. Therefore, it is possible to say that the outcome of the entrepreneurial process can be measured through entrepreneurial activity.

3.2.2 Entrepreneurial activity

Studies on the relationship between economic growth and entrepreneurial activity are becoming increasingly frequent. The studies are based on entrepreneurship as a driver of change, innovation, and economic growth (Audretsch & Peña-Legazkue, 2011). New firms enhance competition, and by doing so, they contribute to economic development.

Even in times of pandemic, the Global Entrepreneurship Monitor (GEM), in its report Global 2020/2021 (Bosma et al., 2021), mentions that the economic rebound will be marked by new opportunities to live and work. Therefore, innovation will have to be thought differently, and even the role of entrepreneurship. The same GEM report (Bosma et al., 2021) mentions the vital role of entrepreneurship and its contribution to economic development in terms of jobs, income, and added value to society.

The GEM propose a multi-level approach to study entrepreneurial activity, which suggests a relationship between entrepreneurship activity and the Entrepreneurial Framework Conditions influenced by people's opportunity and entrepreneurial capacity perception that, according to Audretsch & Belitski (2017), has been used by different authors (Ács et al., 2014a; Amorós & Bosma, 2014; Levie & Autio, 2008).

Different theoretical orientations exist that measure entrepreneurial activity (e.g. GEM-Total Entrepreneurship Activity, World Bank's Entrepreneurship Survey, Eurobarometer, OECD, COMPENDIA); however, it is difficult to find a single one that allows multidimensional measurement of this activity (Stenholm et al., 2013). For example, Nordqvist (2010) establishes that entrepreneurship activity is oriented towards the creation of a new social or economic value, Davidsson and Wiklund (2001), and Lumpkin and Dess (1996) orient it towards the creation of a new business or new entry.

This concept is so broad that even a new entry can be with new or existing products or services in new or established markets. The new entry is the "act of launching a new venture, either by a new firm through an existing firm, or an internal firm" (Lumpkin & Dess, 1996, p. 136).

It is, therefore, possible to establish that entrepreneurial activity will take place according to the type of venture (replicative vs. high impact), the motivation of the venture (necessity vs.

opportunity) (Stenholm et al., 2013), and the stage of the venture in which it is currently (P. Reynolds et al., 1994). Table 7 shows the description of the stages of entrepreneurship that are presented in entrepreneurship according to Reynolds (1997).

Table 7. Stages of the entrepreneurial process

Stage	Name	Description
1	Conception	In a given context, people decide to start a new business. Whether these budding entrepreneurs are oriented toward self-employment or an enterprise that creates jobs for others, a gestation process is initiated.
2	Gestation and birth	Some budding entrepreneurs complete the gestation process, and a new enterprise is established as a business entity. It is characterized by exchanges with its immediate environment, mainly in its value chain.
3	Infancy and Growth	After start-up, a large proportion of new companies maintain their initial size. Others, a small proportion, enter a higher growth trajectory, providing a substantial proportion of jobs and sales. Some may cease operations soon after inception, allowing the resources to be reallocated to other uses.

Source. Reynolds (1997)

On the other hand, the regional environment is a relevant factor that determines the dynamics or performance of the entrepreneurial activity. In this regard, Audretsch (2011) mentions that there must be a regional environment that encourages start-up new companies and an innovative environment to guide a different type of entrepreneurship or entrepreneurial agglomerations (Kuechle, 2014). It refers to the relevance of networks (formal and informal), the widespread social acceptance of entrepreneurial activity, and the presence and interaction with business angels, venture capital, and traditional banking.

Regarding social acceptance, Davidsson and Wiklund (2001), Thornton (2011), and Fredin (2017) highlight the impact that social and cultural factors have on the creation of new businesses and have therefore led to an improved into entrepreneurial activity, including collective approaches (e.g., family business, community-centered business). In this respect, there is evidence of an evolution that also favors the entrepreneurship of social and cultural factors by concepts of "networks" and "embeddedness" (Granovetter, 1985, 1992).

Audretsch & Belitski (2017), Wright and Stigliani (2012), and Szerb et al. (2013) agree that an entrepreneur's action is the result of aspirations, attitudes, and opportunities generated in a specific context that influences the creation and growth of new ventures (Mason and Brown, 2012). (Mason & Brown, 2012).

Apart from the prominent fields of research, such as the "traits" approach, the resource-based view (human, social and financial capital), Bosma (2013) said that other important determinants of entrepreneurial activity have to do with the environmental context or "contextual factors" according to Pankov et al. (2019), such as the regional culture, regional externalities, and family backgrounds that influence the effectiveness of entrepreneurship. Bosma (2013) determined factors influencing involvement in entrepreneurial activity on both the individual level and the macro-level analyzing GEM-based papers. Both personal effects and regional contexts are essential for entrepreneurial activity (Bosma & Sternberg, 2014). "The study of Entrepreneurial Ecosystem should focus not only on the rate of entrepreneurship – but also on inputs such as local culture, social, and material attributes of entrepreneurial activities" (Li, 2019, p. 943).

3.3 Entrepreneurial ecosystems

An ecosystem is a word originally coming from biology and is a particular form of a biological system. The term system is derived from the Latin word *systema* and the Greek word *σύστημα* *systema*, meaning whole compounded of several parts or members. Today, it can be described as a set of interacting or interdependent components forming an integrated whole (Merriam-Webster, 2016). Systems share characteristics like having parts with a specific structure, behavior between each other, and interconnections. Their functions occur in physics, biology, politics, economics, or social life.

Neck et al. (2004) had tried to design a complete and holistic Entrepreneurial Ecosystem with a model based on studying results of the Boulder and some other venture incubation communities. Some elements that did not allow this model to be holistic (or complete) have to do with the depth of the interactions or regulations of the system, in which they only stick to individual elements and their role. They combined the classic financial and business aspects with cultural aspects, and finally, they did not provide an in-depth explanation of the influence of universities or support entities in this model.

According to Mason & Brown (2014b), the term ecosystem was initially proposed by Moore (1993), who claimed that businesses don't evolve in a 'vacuum' and noted the relationally embedded nature of how firms interact with customers, suppliers, and financiers or investors to create cooperative networks.

Since then, a systemic approach to understanding entrepreneurship has been limited (Ács et al., 2014b; Autio & Levie, 2014), and the entrepreneurial ecosystem approach has only occurred since 2010 (Stam, 2015). According to Stam & Spigel (2016), the concept of business ecosystems has achieved significance due to mainstream business books such as Feld's (2012) and work by Isenberg (2010) in the Harvard Business Review. Still, there is scarce rigorous social science research on entrepreneurial ecosystem.

Given the recentness of this concept, despite its importance, entrepreneurial ecosystem conceptualizations still do not contemplate elements such as the temporal dimension or complexities of the context related mainly to the location and social incidence in which the venture develops (Brown & Mason, 2017). It could be because the research literature on entrepreneurial ecosystems has yet to develop a reliable theoretical background on the entire ecosystem (Aeeni & Saeedikiya, 2019). Wright & Stigliani (2012) argue that there is a need for

a reconfiguration of different approaches to consider the impact of the entrepreneurial ecosystem on entrepreneurial growth, more explicitly focusing on how the entrepreneurial ecosystem is developed, nurtured, adapted, and sustained. Also, Alvedalen & Boschma (2017) identified several weaknesses in the current entrepreneurial ecosystem literature.

Along with this literature, there are different definitions for entrepreneurial ecosystem. For instance, Cohen (2006, p. 3) defined sustainable entrepreneurial ecosystems as a "interconnected group of actors in a local geographic community committed to sustainable development through the support and facilitation of new sustainable ventures. Therefore, the objective of an SEE is to create social, environmental and economic value in a community through the development of sustainable new ventures."

Acs et al. (2014, p. 479) defined entrepreneurial ecosystem as: "the dynamic, institutionally embedded interaction between entrepreneurial attitudes, ability, and aspirations, by individuals, which drives resource allocation through the creation and operation of new ventures."

Mason & Brown (2014b, p. 5) built a definition of an entrepreneurial ecosystem, based on a synthesis of definitions found in the literature, as "a set of interconnected entrepreneurial actors (both potential and existing), entrepreneurial organizations (e.g., firms, venture capitalists, business angels, banks), institutions (universities, public sector agencies, financial bodies) and entrepreneurial processes (e.g., the business birth rate, numbers of high growth firms, levels of 'blockbuster entrepreneurship,' number of serial entrepreneurs, degree of sell-out mentality within firms and levels of entrepreneurial ambition) which formally and informally coalesce to connect, mediate and govern the performance within the local entrepreneurial environment."

Stam (2015, p. 1765) defines entrepreneurial ecosystem as a "set of interdependent actors and factors coordinated in such a way that they enable productive entrepreneurship." Or the one that

Spigel (2015, p. 2) proposed as "combinations of social, political, economic, and cultural elements within a region that support the development and growth of innovative start-up encourage nascent entrepreneurs and other actors to take the risks of starting, funding, and otherwise assisting high-risk ventures." And, later on, Stam & Spigel (2016, p. 1) defined entrepreneurial ecosystem as "a set of interdependent actors and factors coordinated in such a way that they enable productive entrepreneurship within a particular territory." And Roundy et al. (2017, p. 99) described entrepreneurial ecosystem as "communities of agents, social structures, institutions, and cultural values that produce entrepreneurial activity."

According to Spigel's (2017, p. 51) approaches on clusters or innovation systems, "certain attributes exist outside the boundaries of a firm but within a region that contributes to the competitiveness of a new venture." There is a broad acceptance of 12 elements necessary to support regional entrepreneurship: government policy (e.g., policy support, tax incentives), culture, human capital, financial capital, entrepreneurship organizations, education, infrastructure, economic clusters, networks, support services, early customers, and leadership (Chen et al., 2019). Recent work (Isenberg, 2010, 2011; Schwarzkopf, 2016; Spigel, 2017; World Economic Forum, 2013) proposes different entrepreneurial ecosystems pillars, components, domains, or attributes.

Among the eight pillars of an entrepreneurial ecosystem listed by World Economic Forum (2013, p. 6) – "accessible markets, human capital/workforce, funding & finance, support systems/mentors, government & regulatory framework, education & training, universities as catalysts, cultural support" - after surveying over 1,000 entrepreneurs from around the globe, these highlighted accessible markets, human capital/workforce, and funding & finance as the three most important. In the same study, they concluded that entrepreneurs could play multiple

essential roles in an entrepreneurial ecosystem. The top 4 categories of growth accelerators are market opportunity, top management, human resources, and funding & finance.

Spigel (Spigel, 2017) based entrepreneurial ecosystem's structure on attributes classified into three categories: cultural, social, and material. Following this author, the cultural attributes are both beliefs and perspectives on entrepreneurship within a region. Two main cultural attributes in the entrepreneurial ecosystem are identified: cultural attitudes and histories of entrepreneurship. The social attributes include resources integrated or acquired through the social networks within a region. Therefore, networks support entrepreneurs, who can act as mentors and dealmakers (Spigel, 2017), manage knowledge, acquire resources, investment capital, and access customers and suppliers (Greve & Salaff, 2003). Finally, in an entrepreneurial ecosystem, material attributes are tangible elements in the region. This presence can be a physical location or formalized rules, such as public policies. According to Spigel (2017), there are four types of these attributes: universities, support services and facilities, policies and governance, and open markets. These ecosystem's attributes (cultural, social & material) do not exist in isolation. Still, they have relationships among them, and material attributes are unlikely to succeed if they are not underpinned by complementary social and cultural attributes (Spigel, 2017).

Entrepreneurial ecosystem elements for Stam (2015) are systemic conditions and framework conditions. Later, Stam & Spigel (2016) developed an entrepreneurial ecosystem model which includes insights from the previous literature, including bottom-up and top-down causality and intra-layer causal relations, providing greater depth with four ontological layers:

- Framework conditions: refers to the social (informal and formal), cultural, demand, and physical conditions that facilitate or constrain interaction between people.

- Systemic conditions: networks of entrepreneurs, leadership, talent, finance, knowledge, finance, and support services.
- Outputs: entrepreneurial activity.
- Welfare outcomes: value-added creation

Within the entrepreneurial ecosystem framework, Audretsch & Belitski (2017, p. 16) found four out of six domains "important to enhance entrepreneurial activity in European cities: culture and norms, infrastructure and amenities, formal institutions, internet access, and connectivity."

With its combination of social, institutional, and relational characteristics, the entrepreneurial ecosystem concept offers a theoretical framework for analyzing the underlying dynamics of how entrepreneurship happens and is more dynamic, prolific and, above all, growth-oriented in certain geographic locations than others (Brown & Mason, 2017). According to these authors, entrepreneurial ecosystem is a dynamic concept and recognizes the importance of entrepreneurial processes and cognitive belief systems, underpinning interactions' increasing complexity.

The impact of entrepreneurial activity on growth differs across different ecosystems (Content et al., 2020). Governments want to encourage contexts that nourish the economy and try to do so through policy tools. Nevertheless, entrepreneurs admit that conventional policy tools (tax incentives, grants, regulation) have little relevance for them or the vitality of entrepreneurial ecosystem s in contrast to the importance of access to networks, quality of life, and other intangibles (Auerswald et al., 2015).

Policymakers should consider that deep stakeholder engagement in entrepreneurial ecosystem management is needed to align goals and activities. Their interactions collectively co-produce

outcomes, can have cascading effects which may be mutually reinforcing and combined with imperfectly distributed information, can produce a high level of inertia (Autio & Levie, 2017). Acs et al.(2014) highlighted the potential benefits of participative management approaches for ecosystems policy. To take advantage of the opportunities, the entrepreneur needs access to all the ecosystem framework conditions (Autio & Levie, 2014).

The entrepreneurial ecosystem approach recognizes that High Growth Firms prosper in distinctive types of supportive environments (Mason & Brown, 2014). Different entrepreneurial ecosystem facilitates different kinds of entrepreneurial innovation; therefore, the required ecosystem may need to vary accordingly (Autio & Levie, 2014). Entrepreneurial ecosystems need fertile soil to emerge, which often happens in places that attract talent, and the growth in entrepreneurial activity occurs through a virtuous spin-off process (Mason & Brown, 2014). Other initiatives that can help could be core events (regional conferences, expositions, platforms to coordinate activities) which provide venues for the creation, maintenance, and rejuvenation of the relationships, for the temporal coordination of activities, and for turning ideas into reality (Autio & Levie, 2014).

Mack & Mayer (2016) conducted an evolutionary framework of entrepreneurial ecosystem development (birth, growth, sustainment, decline). They integrate essential components from previous work where the vital elements that would propel entrepreneurial ecosystem towards the growth stage are local success stories, dense networks of local entrepreneurs, and mentors. Roundy et al. (2017) highlighted that support organizations (e.g., incubators) increase the coherence of entrepreneurial ecosystem participants' intentions, behaviours, and outcomes by exposing participants to common logic. These findings show that entrepreneurial ecosystem mainly bases on the strong social interaction that supports the relationship between the different actors of the entrepreneurial ecosystem to promote business (Audretsch & Lehmann, 2005),

based on the identification and exploitation of business opportunities (Audretsch & Belitski, 2017).

The conception of an entrepreneurial ecosystem refers to the interaction between a range of institutional and individual stakeholders enabling entrepreneurship, innovation, and growth. Szerb et al. (2013) emphasize the interaction between the system and individual levels of analysis. Cause-effect relationships in an ecosystem are complex; economic incentives alone do not fully explain individual-level motivations to act (Autio & Levie, 2017).

An ecosystem map is a simple relational inventory that indicates who the participants in the ecosystem are (nodes) and how they are connected (edges). Therefore, entrepreneurial ecosystems are highly complex, interdependent environments (Auerswald et al., 2015). Also, Isenberg (2011) agrees that elements of the entrepreneurial ecosystem interact in complicated and specific ways that result in different entrepreneurial ecosystem. "An ecosystem's attributes are sustained and reproduced through their relationships with other attributes" (Spigel, 2017, p. 56). Alvedalen & Boschma (2017) analyzed how the internal structure and their openness to the outside of a region's knowledge networks could contribute to entrepreneurship and proposed considering the structural properties of networks and the nature of network relationships. Aeeni & Saeedikiya (2019) suggested viewing the entrepreneurial ecosystem as a complex system and studying it with the complexity theory lens because we must identify entrepreneurial ecosystem components and theorize their interactions. Entrepreneurial ecosystem are complex socio-economic structures driven by individual-level action embedded in complex interactions between individual and organizational stakeholders (Autio & Levie, 2014).

Also, Motoyama and Knowlton (2017, p. 20) emphasized the "connectivity" between entrepreneurial ecosystem elements, particularly between entrepreneurs and key support

organizations. Their analysis allowed them to identify the connections within the ecosystem at four levels (connections between entrepreneurs, connections between support organizations, connections between entrepreneurs and key support organizations, miscellaneous support connections).

Audretsch & Belitski (2017) understood entrepreneurial ecosystem as a dynamic community of interdependent actors and system-level institutional, informational, and socio-economic contexts, drawing attention to the fundamental interaction between the contextual component of the ecosystem and individual decision making mobilized by attitudes and perception of the context.

There is a relationship between the network connection and innovation/performance (Chen et al., 2019). The degree of tension in the forces of diversity and coherence can influence entrepreneurial ecosystem behaviours and resilience, understood as the "degree to which an entrepreneurial ecosystem can continuously recover from and adapt to exogenous shocks and endogenous pressures" (Roundy et al., 2017, p. 101).

Although in an ecosystem, interaction among its players (driven by high network density or networking events) and access to critical resources such as talent, services, or capital are crucial, entrepreneurs play a fundamental role. Entrepreneurs lead the development of the ecosystem with their ventures and even as mentors or advisors (Stam & Spiegel, 2016).

Given that entrepreneurs are the core players in creating and maintaining the entrepreneurial ecosystem, the entrepreneurial ecosystem approach begins with the entrepreneur rather than the company. Therefore, entrepreneurship occurs in a community of interdependent actors influenced by the entrepreneurship context (Stam, 2015). Rather than established institutions and organizations, individuals are the critical source of radical innovation that re-define a given

region's strengths and weaknesses (Szerb et al., 2013). Entrepreneurial ecosystem differs from markets and systems of innovation by positioning the entrepreneurial individual or team at the center of the system dynamic (Autio & Levie, 2017).

Interactions between entrepreneurs not only act as a source of inspiration and role models, but they can also act as dealmakers who invest in new firms and connect people in their network and act as mentors (Brown & Mason, 2017). These individuals keep involved in the ecosystem, reinvesting their experience and wealth as mentors, investors, and serial entrepreneurs. Sharing their expertise, information, resources, and contacts connect other people and organizations (Mason & Brown, 2014). Entrepreneurial ecosystem approach begins with the entrepreneurial individual instead of the company (Zajkowski & Domanska, 2019). The actions of entrepreneurs contribute to creating an environment that encourages more entrepreneurship and forms a positive feedback loop (Autio et al., 2014).

Table 8 presents the main authors and their proposal of the entrepreneurial ecosystem.

Table 8. Entrepreneurial Ecosystem evolution

Year	Author	Description
2004	Neck et al.	Design a model of entrepreneurial ecosystem
2005	Audretsch & Lehmann	Social interaction of entrepreneurial ecosystem
2006	Cohen	Defined sustainable entrepreneurial ecosystems
2010	Isenberg	Design a complete model of entrepreneurial ecosystem
2011	Merriam-Webster	Concept of entrepreneurial ecosystem
2013	World Economic Forum	Design a complete model of entrepreneurial ecosystem
2013	Szerb et al.	Interaction between the system and individual levels
2014	Mason & Brown	Concept of entrepreneurial ecosystem
2014	Levie & Autio	Relation to ecosystem framework and entrepreneurs needs
2014	Autio et al.	Entrepreneurial ecosystems and entrepreneurial innovation
2014	Acs et al.	Concept of entrepreneurial ecosystem and Analyze the impact of context on entrepreneurial innovations.

Year	Author	Description
2015	Stam	Concept of entrepreneurial ecosystem and Entrepreneurial ecosystem elements
2015	Spigel	Concept of entrepreneurial ecosystem and design a complete model of entrepreneurial ecosystem
2016	Stam & Spigel	Concept of entrepreneurial ecosystem
2016	Schwarzkopf	Design a complete model of entrepreneurial ecosystem
2016	Mack & Mayer	Framework of entrepreneurial ecosystem
2017	Brown & Mason	incorporate the full complexities of the socio-spatial context
2017	Alvedalen & Boschma	identified several weaknesses in the current entrepreneurial ecosystem literature
2017	Audretsch & Belitski	Domains of entrepreneurial activity in cities
2017	Roundy et al.	Support organizations on entrepreneurial ecosystem. theoretical framework introducing the “small town entrepreneurial ecosystems (STEEs)” concept.
2017	Motoyama and Knowlton	Study the connectivity between entrepreneurial ecosystem and entrepreneurs and organizations
2017	Spigel	Model to make up entrepreneurial ecosystems
2018	Spigel and Harrison	Differentiate between entrepreneurial ecosystems, clusters, and regional innovations systems
2018	Autio et al.	The Relational Organization of Entrepreneurial Ecosystems
2019	Content et al.	Entrepreneurial activity in ecosystems
2019	Mubarak et al	Concept of entrepreneurial ecosystem
2019	Aeeni & Saeedikiya	Study entrepreneurial ecosystem as a complex system
2019	Colombelli et al.	Evolution and organization of entrepreneurial ecosystems
2019	Chen et al.	Network connection with innovation
2019	Zajkowski & Domańska	Entrepreneurial ecosystem approach
2019	Colombo et al.	Analyze the governance structures of entrepreneurial ecosystems

Source: own elaboration 2022

3.3.1 Models of entrepreneurial ecosystems

Based on the previous description, the Table 8 presents the most relevant authors regarding the conceptualization and design of entrepreneurship ecosystems, considering the components and structure of the ecosystem.

3.3.1.1 Domains of Isenberg Model

Isenberg (2011) lays out an outline that makes up the entrepreneurial ecosystem and how it evolves. It consists of six domains that interact in very complex ways and are always present if

entrepreneurship is self-sustaining. In his model, he argues that, although the combinations are always unique, self-sustaining entrepreneurship requires enabling:

- Policies,
- Markets,
- Capital,
- Human capital,
- Culture and
- Support

3.3.1.2 Pillars of World Economic Forum

For World Economic Forum (2013b), an entrepreneurship ecosystem is made up of eight pillars, including the individual components of each pillar.

Its approach is based on direct interaction with entrepreneurs, establishing that three entrepreneurs worldwide consider the most important for the growth of their businesses, namely accessible markets, human capital/workforce, and funding and financing.

The eight pillars are:

- Accessible markets,
- Human capital workforce,
- Funding and financing,
- Mentors Advisors Support Systems,
- Regulatory Framework and Infrastructure,
- Education and Training Universities
- Cultural Support

3.3.1.3 Systemic conditions of Stam

Stam (2015) analyses the important aspects of entrepreneurial ecosystem models from previous literature and proposes a new model bringing all aspects together in a holistic manner. This model provides a causal relationship (bottom-up, top-down, inter-layer) with four layers:

- Outcomes: Aggregate value creation
- Outputs: Entrepreneurial activity
- Systemic conditions: Entrepreneurial Ecosystem conditions
 - o Networks
 - o Leadership
 - o Finance
 - o Talent
 - o Knowledge
 - o Support services
- Framework conditions:
 - o Formal institutions
 - o Culture
 - o Physical infrastructure
 - o Demand

3.3.1.4 Ecosystem Circles of Schwarzkopf Model

Schwarzkopf (2016) proposes a new model of entrepreneurial ecosystem. It puts entrepreneurs at the center and provides areas or domains in circles offered from the inside to the outside.

The circles represent almost a timeline in which the entrepreneur interacts with the different elements, starting with the family, then education, and reaching the entrepreneurial world.

The circles (see Table 9) are systems of their own, and together they form the entrepreneurial ecosystem, with its own rules and elements, distinguishing between direct and indirect effects.

Table 9. Circles of Entrepreneurial Ecosystem model

1. Personal	2. Private	3. Educational	4. Public and business
Character	Family	Further education	Culture
Experience	Friends	Internships	Language
Abilities	Coach	Higher education	Media
Skills	Clubs	School	Government
	Neighbors	kindergarten	The economic and business world
			Finance world
			History
			Geography



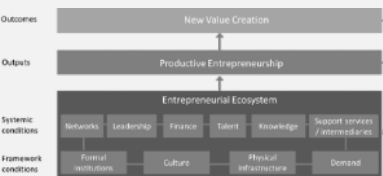
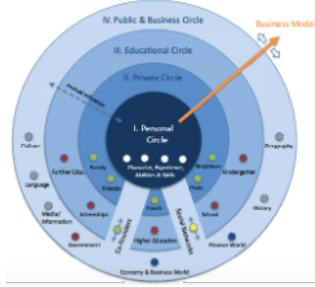
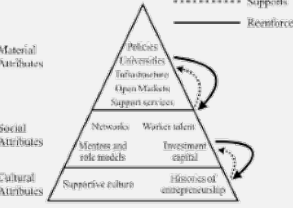
Source: Schwarzkopf (2015)

3.3.1.5 Attributes of Spigel

Spigel (Spigel, 2017) defined three attributes of the entrepreneurial ecosystem: cultural, social, and material attributes. It models a relational structure of these attributes within an ecosystem. It proposes that the success of an ecosystem is determined by how the interaction between these attributes creates a supportive regional environment that enhances the competitiveness of new firms.

In Table 10 we have summarized all these approaches.

Table 10. Models of the description of entrepreneurial ecosystem

Author / year	Isenberg 2011	Word Economic Forum 2013	Stam 2015	Schwarzkopf 2015	Spigel 2017			
Name of components	Domains	Pilars	Systemic conditions	Ecosystem Circles	Attributes			
Components	Markets Networks Early customers	Accessible markets	Framework conditions	Demand	Public & business circle	Economy & Business World	Material	Open markets
	Human Capital Labor	Human capital/workforce	Systemic conditions	Talent Leadership	Personal Circle	Chararcter, experience, abilities & skills	Social	Worker talent Mentors and role models
	Finance Financial capital	Funding & finance		Finance	Public & business circle	Finance world		Investment capital
	Supports Non govermet institutions	Support systems/mentors		Networks	Private Circle	Family, Friends Coach, Clubs, Neighbors		Networks
	Policy Government Leadership	Government & regulatory framework		Supoort services /intermediaries	Public & business circle	Government	Policy and governance	
	Supports Support proffesions	Education & training	Knowledge	Educational Circle	Further Education, intership Higher education, School, Kindergarden	Material	Support services	
	Human Capital Educational institutions	Major universities as catalysts					Universities	
	Supports Infraestructure	--	--	--	--	--	Physical infrastructure	
Culture	Societal norms	Cultural support	Framework conditions	Culture	Public & business circle	Culture	Cultural	Supportive culture
	Success stories					History		Histories of entrepreneurship
Structure								

Source: own elaboration 2021

3.3.2 Attributes of entrepreneurial ecosystem

According to Spigel (2017), entrepreneurial ecosystem is framed in a region that supports the development and growth of enterprises through combinations of social, political, economic, and cultural elements.

In the framework of the development of Spigel's (2017) proposal, he analyzes in-depth the different models of entrepreneurial ecosystem. He concludes that although there are differences, there is agreement that there are specific attributes outside the company's boundaries and region. These attributes contribute to the competitiveness of new companies since they provide resources that they would not otherwise access.

Although the proposal made by Spigel (2017) contemplates the attributes, these do not necessarily have to be present in their entirety in an entrepreneurial ecosystem. They should be understood as the primary factors for having environments supporting entrepreneurial activity, providing external resources to new companies, and facilitating their competitiveness.

Spigel (2017) groups attributes into three categories: cultural, social and material, according to how their benefits are created and governed.

3.3.2.1 Material Attributes

In an entrepreneurial ecosystem, material attributes are those that have a tangible presence in the region. It can be a physical location or formalized rules such as business policies and well-regulated markets that materialize locally.

Table 11 shows the types of material attributes and their description, as proposed by Spigel (2017).

Table 11. Material attributes

Types of Material attribute	Support of Entrepreneurial Ecosystem
Universities	Develop new technology and create entrepreneurial opportunities. They help develop a region's human capital and, at the same time, foster an entrepreneurial mindset in its academic community, especially among students. The presence of universities in the entrepreneurial ecosystem facilitates access to knowledge for established companies through graduates, research, or other non-formal spaces such as lectures, workshops, and seminars.
Support services and facilities	They provide specialized assistance to early-stage companies. Support entities allow new companies to access capabilities they do not have. Incubators, accelerators, and coworking offices are present in the EEs, which, in addition to providing space, offer advice and support to startups.
Policy and governance	Policies are materialized through governmental rules and regulations to support programs to foster entrepreneurship financed with public funds. It becomes a facilitator or mobilizer of the economic and political context for entrepreneurship in a territory.
Open markets	In entrepreneurship, opportunities are provided by the marketplace, and having strong local markets is a crucial part of providing them within the entrepreneurial ecosystem. Having markets in the entrepreneurial ecosystem allows companies to interact with customers, validate, advance, sell and grow.

Source: Spigel (2017)

3.3.2.2 Social attributes

According to Spigel (2017) social attributes are the resources composed of or acquired through the social networks of a region. In this sense, social networks contribute considerably to new businesses in the entrepreneurial ecosystem by facilitating access to resources such as financing, new knowledge, improving entrepreneurial skills and business vision.

In an entrepreneurial ecosystem, the density of social networks is essential to provide opportunities for entrepreneurs. In turn, start-ups require pre-existing capabilities and connections with investors, other entrepreneurs, or other stakeholders to benefit from these social networks.

Table 12 shows the types of social attributes and their description, as proposed by Spigel (2017).

Table 12. Social attributes

Types of Social Attributes	Support of Entrepreneurial Ecosystem
Networks	<p>In an entrepreneurial ecosystem, there are local regional and non-regional networks. The first ones generate denser links since face-to-face interactions are possible. The second one allows the import of new knowledge.</p> <p>An essential contribution of networks is associated with knowledge flows and providing new entrepreneurs with access to knowledge that they would otherwise not access.</p>
Investment capital	<p>One of the essential components of entrepreneurship is investment capital or financing since it provides tools for the growth of companies by combining money and advice. It is related to financing alternatives such as institutional investors, venture capital, angel investors, their own family, or friends.</p> <p>The safest route to access venture capital is through investor networks since they allow investors to identify new companies and vice versa. Through these social networks, the asymmetry of information between the company and the investor is reduced.</p> <p>Therefore, it is advisable to have deeply connected local investors in an entrepreneurial ecosystem as catalysts for the growth of start-ups.</p>
Mentors and dealmakers	<p>This type of attribute highlights the importance of mentors in the entrepreneurial ecosystem given that they improve the performance of entrepreneurs and, according to the literature, can be attributed to increases in the survival rates of start-ups (Lafuente et al., 2007).</p> <p>As mentors, dealmakers in an entrepreneurial ecosystem are generators of connections as they have high levels of social capital. The result of their management is evidenced in improvements in the development and growth of enterprises.</p> <p>Mentors and dealmakers help entrepreneurs build social capital and develop new business skills.</p>
Worker talent	<p>Alcanzar la competitividad empresarial requiere de esfuerzos multidimensionales que el emprendedor debe conocer y controlar. El capital humano en la actualidad es un factor de éxito, y los trabajadores cualificados es uno de los componentes clave de la competitividad y más en las nuevas empresas.</p> <p>Entrepreneurs can access the profile of workers they require through their social networks. If the entrepreneurial ecosystem has dense social networks, it will provide more excellent value by facilitating access to resources otherwise unavailable.</p> <p>The profile of entrepreneurial ecosystem workers must have a mix of technical knowledge, the ability to address day-to-day challenges in new companies, as well as risk tolerance. Therefore, an entrepreneurial ecosystem should be an enabler of this talent.</p>

Source: Spigel (2017)

3.3.2.3 Cultural attributes

Cultural attributes relate to the underlying beliefs and perspectives about entrepreneurship within a region. Spigel (2017) identifies two main cultural attributes in the entrepreneurial ecosystem: cultural attitudes and histories of entrepreneurship.

The influence of the local cultural perspective on the entrepreneur has been studied and demonstrated in the literature. It influences entrepreneurial activities such as the way they assume risk or the practices or norms they employ and even defines the economic trajectories of entrepreneurs and the regions themselves.

Table 13 shows the types of cultural attributes and their description, as proposed by Spigel (2017).

Table 13. Cultural attributes

Types of Cultural attribute	Support of Entrepreneurial Ecosystem
Cultural attitudes	<p>An entrepreneurial ecosystem can accelerate or delay the entrepreneurial dynamic given local cultural attitudes. In some cases, the perspective of entrepreneurship is normalized. Thus, it becomes a "natural" process in a person's career path, or it is not well accepted at other stages. It is considered the "last" alternative because there are no other options available.</p> <p>The cultural attitude of an entrepreneurial ecosystem contributes to creating a favorable environment for entrepreneurship that supports the creation of enterprises and promotes risky entrepreneurial endeavors.</p>
Histories of entrepreneurship	<p>Histories of entrepreneurs are a source of inspiration for new entrepreneurs and are therefore an essential part of these cultural perspectives.</p> <p>It is the responsibility of public and private actors in the US to promote the transmission of stories that inspire younger entrepreneurs to feel motivated to follow the path of others who have become great businesses and leaders in different markets.</p> <p>Giving sustainability to the transmission of entrepreneurial stories guarantees a stable supply of new entrepreneurs, dynamizing the entrepreneurial ecosystem itself.</p>

Source: Spigel (2017)

3.4 Entrepreneurship and entrepreneurial families

In the literature, it is evident that research in both the field of entrepreneurship and family business has been developed independently (López-Fernández et al., 2016). However, recently there has been increasing interest in studying the integration of both areas, analyzing the process of entrepreneurship from the general and family business context (López-Fernández et al., 2016).

For instance, of the research interest integrating the two fields are the results highlighted in such studies, as stated by Manolova (2019, p. 23), referring to family social capital: "a significant positive association between family social capital (in the form of social contacts, introduction into social networks) and nascent entrepreneurial activity."

In this regard, it is possible to suggest, according to López-Fernández (2016), that there is a general agreement among academics on the relevance of the fields of entrepreneurship and

family business. Indeed, even those who affirm that the family is "the oxygen that feeds the fire of entrepreneurship" (Rogoff & Ramona Kay Zachary Heck, 2003). Astrachan, Zahra and Sharma (2003), Zahra (2005) provide evidence with data from different countries on the role of family businesses in the incubation and financing of new companies that create jobs and promote economic and technological progress.

On the other hand, Salvato (2004) shows for the survival, profitability, and growth of a company (Kellermanns & Eddleston, 2006; Zahra, 1991); entrepreneurship is a crucial determinant given that it allows them to visualize new opportunities, enter new markets, among others (Clark et al., 2003; Kellermanns et al., 2008). This is also possible because family businesses can devote resources to innovation and risk-taking, encouraging entrepreneurship (Zahra, 2005).

Zahra (2005), also identifies an essential aspect of this particular family business dynamics process: organizational culture. The author establishes the relevance in creating value in family businesses and its relationship with entrepreneurship under the resource-based view perspective (J. Astrachan & Shanker, 2003). This is an important approach that relates to the objective of the present research.

Although the characteristics of family businesses highlight the importance of organizational culture as a strategic resource (Rogoff & Ramona Kay Zachary Heck, 2003), it is also relevant to mention that the entrepreneurial family permeates this culture. They participate as founders, owners, and family business managers (Westhead & Cowling, 1997).

Manolova (2019) identifies two relevant capitals that the entrepreneurial family relies on and generates appropriate contributions to entrepreneurship from the perspective of the entrepreneurial family when it makes them available.

3.4.1 Family financial capital

This capital is related to property, money, credit, and different types of financial investment. Entrepreneurial families can contribute to the development of new businesses by facilitating the financial transactions of their own or third parties' new ventures.

This capital is mobilized mainly in the early stages when entrepreneurs cannot access traditional sources of financing such as banks. Therefore, the most common financial sources are their family and friends (Manolova et al., 2019).

The relevance of this capital is given to the extent that it closes a gap in the capital market due to the lack of financing from traditional institutional sources for early-stage entrepreneurs.

3.4.2 Family social capital

Manolova et al. (2019) brings family social support into view as actions such as introducing offspring to the networks of relationships in which family members are immersed.

The other aspect in which entrepreneurs benefit through family social capital is access to resources and services that would not otherwise be available. New entrepreneurs "borrow" the social status and reputation of the family.

On the other hand, family connections can provide new entrepreneurs with contacts to business networks or referrals to potential partners or clients, business partners, and customers (Manolova et al., 2019).

As previously described, the literature has been focused on the impact of the entrepreneurial family on firm-level dimensions (Stough et al., 2015), but how does the entrepreneurial family

influence beyond the firm and the family spheres.? Given that entrepreneurial families are active agents in the generation and development of new ventures (Chahine, 2018; Heck et al., 2006; Randerson et al., 2015) and, as explained, potentially unique features of the entrepreneurial family impact the processes, behavior, and outcomes of entrepreneurship (Lumpkin et al., 2011). Entrepreneurial families must also be active and relevant agents in the entrepreneurial ecosystem.

3.5 Entrepreneurial families and entrepreneurial ecosystems

We adopt the definition of the entrepreneurial family understood "as an institution, or social structure, that can both drive and constrain entrepreneurial activities" (Nordqvist & Melin, 2010, p. 214) because it is the closest to entrepreneurial processes and social capital. The literature has been focused on the impact of the entrepreneurial family on firm-level dimensions (Stough et al., 2015), but how does the entrepreneurial family influence beyond the firm and the family spheres?

Interactions we have mentioned, and the critical presence of the individuals show the actors operating in the entrepreneurial ecosystem. And, among other kind of entrepreneurs, we can find entrepreneurial family members.

Although there is not much research on the interaction between the family business and entrepreneurship, we tried to identify in the literature research the possible relationship between the entrepreneurial family, family businesses and, the entrepreneurial ecosystem without finding evidence on this topic (Table 14).

Table 14. Research areas in entrepreneurship, families, and entrepreneurial ecosystem

Year	Area	Contributions	Authors
1998	Entrepreneurship environment and family firm	The decision to start a new business is a complex process involving interaction between the individual and his socio-economic environment; thus, it is imperative to identify the specific needs of the local environments to promote entrepreneurship with local policies.	Dubini, P. (1988)
1994	Entrepreneurship and family firm	Explore intersection overlapping domains: entrepreneurship and family business. Explores family influences on entrepreneurs' careers.	Hoy and Verser, Dyer and Handler
2003	Social Capital and Family Firm	Identify the importance of the resources of the family firm: human capital, social capital, patient capital, survivability capital and provide a potential advantage over other firms	Sirmon et al. (2003)
2003 -2004	Family and entrepreneurship	Highlight the vital role of family on entrepreneurship from an embeddedness perspective, resources, and capabilities, including social networks and predictors of entrepreneurship	Aldrich and Cluff (2003); Rogoff et al. (2003); Zahra, Hayton, and Salvato (2004)
2004	Entrepreneurial System	Explore new venture creation with the context of an Entrepreneurial System	Neck (2004)
2004-2005	Family and entrepreneurship	Develop model between entrepreneurship and family and business and establish the entrepreneurial risk-taking with owner perspective	Salvato (2004); Fletcher (2004); Zahra (2005)
2005	Entrepreneurship and family firm	Identify the resources embedded in the family, beyond the formal boundaries of the family firm	Anderson, Jack, and Drakopoulou-Dodd (2005)
2005	Entrepreneurial Ecosystem	Give components of the formal and informal network contribute to the entrepreneurial ecosystem.	Cohen (2005)
2006 - 2007	Corporate entrepreneurship	Discusses and visualize the important role of family on the start-up or new venture	Kellermanns and Eddleston (2006); Steier (2007)
2007	Family and entrepreneurship	Understand the distinct family context, the <u>Family ecosystem</u> for entrepreneurship to enhance their potential	Timothy G. Habbershon (2007)
2006 - 2008	Familiness	Develop the Familiness Factor from agency interactions. Content and flow of bonding and bridging social capital and capital resource portfolio of family firms.	Habbershon (2006a); Sharma, P. (2008)
2007 - 2019	Family Social Capital	Incorporate a bundle of resources and capabilities that provide a potential agency advantage in new venture creation. Social capital model of familiness Bridging and Bonding social capital and social capital components that make family firms unique.	Arregle et al., (2007); Salvato, C., & Melin, L. (2008); Pearson et al., (2008); Sharma, P. (2008); Chang et al., (2009); Sorenson (2009); Montemero (2010); Kansikas & Murphy (2011); Carr et al., (2011); Discua (2013); Campopiano et al., (2015); Edelman et al., (2016) Aragon-Amonarriz et al., (2017) Estrada - Robles et al., (2018) Monolova (20019)
2010 – 2012	Entrepreneurial families	Integrates the areas of entrepreneurship and family business with the framework around ACTOR+ACTIVITY+ATTITUDE. Analyze the entrepreneurial families in business groups. Family entrepreneurial teams' concept	Nordqvist et al. (2010); Harlaftis, G and Valdaliso M. (2012); Discua et al. (2012)
2011	Family and entrepreneurship	Strategic entrepreneurship concept in the family business	Lumpking et al. (2011)
2011 - 2012	Business ecosystem	Highlight the entrepreneurship in the global innovation ecosystem	Zahara (2011), (2012)

Year	Area	Contributions	Authors
2014 - 2015	Entrepreneurial Ecosystem	Case study start-up system with start-up outcomes from an active region in The U.S.A. Regional entrepreneurship ecosystem concept Influence of the entrepreneurial ecosystem in the entrepreneurship process, a framework to understand their role in supporting new venture creation Analysis of regional policy, the difference from the quantity to the quality of entrepreneurship	Motoyama (2014) Mason (2014) Stam (2015)
2015	Social Capital and Family Firm	Relational form of social capital and its effects on entrepreneurial processes. Family Social Capital	Shi (2015); Sanchez et al. (2015)
2015	Entrepreneurial Ecosystem	Some illustrative cases of national policies of Latin America Countries on entrepreneurship ecosystems	Kantis et al. (2015)
2016	Familiness	A model based on the concept of familiness and family learning mechanisms and impacts on the efficient strategic management of family firms	Barros et al. (2016)
2011 - 2022	Entrepreneurial Ecosystem	Explain the entrepreneurship ecosystem and give the entrepreneurship ecosystem perspective shifts the unit of analysis away from the 'firm' to the entirety of the ecosystem where it is situated. Attributes and domains of entrepreneurship ecosystem and measuring with entrepreneurial ecosystem index. Include revision of emerging literature and give relation with the entrepreneurial ecosystem context, establish outcomes and outputs.	Isenberg (2011); Mason et al. (2013); Vogel (2013); Stam (2015); Mack (2015); Audretsch (2016); Spigel (2016), (2017) (2018); Stam (2016), (2017), Mubarak et al. (2029); Aeeni & Saedikiya (2019); Colombelli et al. (2019); Chen et al. (2019); Colombo et al. (2019); Spigel (2022); Rocha, H and Audretsch (2022)
2019 - 2022	Entrepreneurial Ecosystem	Systematic literature review and research agenda	Kansheba and Wald (2020); Cao and Shi (2021); De Brito and Leitao (2021); Fernandes and Ferreira (2022); Cobben (2022)

Source: own elaboration 2022

This indicates that there are still opportunities for research, which is the primary purpose of our research project. Another sample of the above is evidenced in the review conducted by Lopez-Fernandez (2016, p. 635) which results suggest: "there are many opportunities to improve our knowledge available as to the relationship between the family business and entrepreneurship. This is relevant not only from an academic standpoint but also to help promote entrepreneurial attitudes in subsequent generations of the family business. "

3.6 Conclusion

This chapter identified the relevance of the entrepreneurial ecosystem and its attributes for entrepreneurs, mainly in the possibility of accessing a series of resources that otherwise would not be available to them.

Something similar is happening with entrepreneurial families and family businesses, who have resources and capital that they can make available to entrepreneurs who otherwise would not be able to do so.

Social capital is a common factor between entrepreneurial ecosystems and entrepreneurial families; however, there is no evidence in the literature of research on this subject. Indeed, there is a research gap on the connection between these two explored areas, taking into account that the first social base is the family and that it generates a series of relationships (bridging and bonding) that can influence not only the entrepreneurs but also the competitiveness of new businesses at different stages of maturity or development.

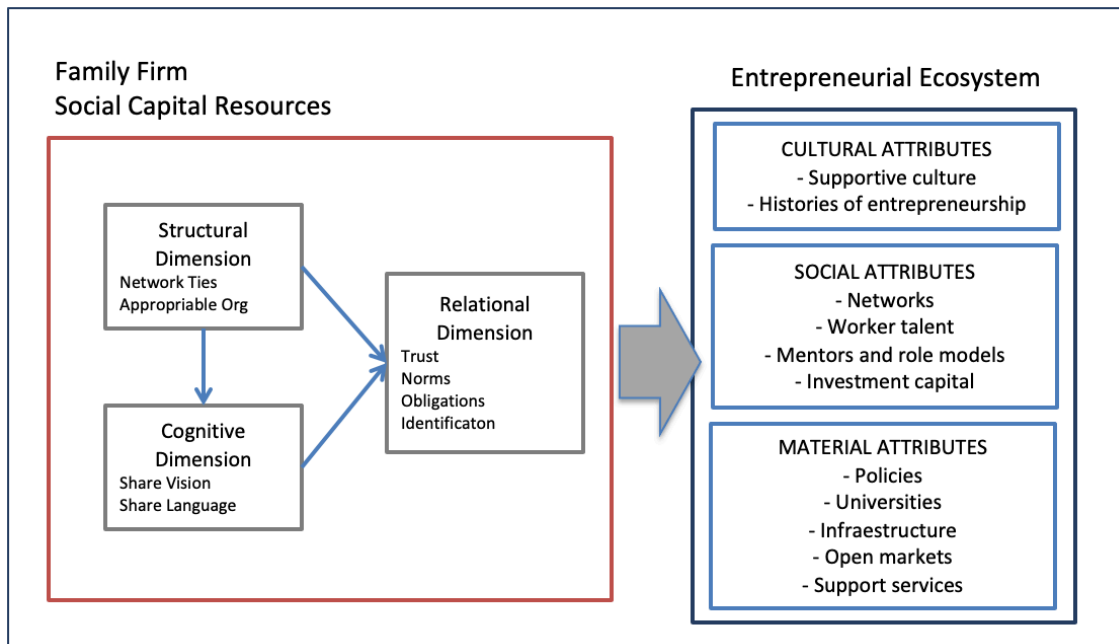
As shown in Chapter 2, Pearson et al. (2008) developed from resource-based view a model of the social capital components of familiness (Habbershon & Williams, 1999a) to clarify the role of the family in three dimensions: structural, cognitive, and relational as establishing an organizational performance outcome.

Within this approach in fields related to family social capital, Sorenson et al. (2009) developed a model from the family point of view which provides a competitive advantage (limited, inimitable, and challenging to replicate, that is, non-substitutable (Barney, 1991)) for a family business by the resource-based view and by familiness. Indeed, family social capital has effects on economic and noneconomic outcomes (Sanchez-ruiz et al., 2019). On the other hand, Spigel (Spigel, 2017) proposes three attributes of material, cultural and social entrepreneurial ecosystem.

A possible relationship or impact between family social capital and the entrepreneurial ecosystem is proposed based on the two theoretical approaches. The analysis allows us to

understand whether it is possible to generate impact and, above all, how it is generated (Figure 10).

Figure 10. Relationship between family social capital and entrepreneurial ecosystem attributes



Source: own elaboration from Spigel, (2017) and Pearson et al., (2008)

Entrepreneurship ecosystems should highlight entrepreneurial families and family businesses as a social component of great relevance in their consolidation and articulation for two reasons: the cohesion of the families' social relations and the level of articulation with their territory. This would allow them to provide other types of resources to new entrepreneurs that are generally not evident.

We adopted Spigel's definition and model of the structure of the entrepreneurship ecosystem because it conceptualizes the entrepreneurship ecosystem itself and incorporates characteristics, including social capital and networks, to demonstrate why some regions can mobilize new successful companies as well as high levels of high-growth entrepreneurial activities.

The above agrees with the purpose of the research, to identify the possible incidence of family social capital in the entrepreneurship ecosystem with its particular characteristics, such as that of Manizales - Colombia.

Chapter 4: Empirical study and methodology

The chapter begins with the methodological description in section 4.1, where the case study is explained. Subsequently, section 4.2. presents the unit of analysis, in which the mechanisms used for data collection and analysis are presented.

4.1 Methodology²

This research was framed within a qualitative methodology (Maxwell, 2008) of the case study type (Yin, 2003) in depth. The case study is a type of research that focuses on understanding the dynamics present within unique scenarios (Eisenhardt, 1983).

The case method is more appropriate for research topics that seek to capture particular situations, for example, if one wants to understand formal or informal instruments that may be used by entrepreneurial families in the entrepreneurial ecosystem (Yin, 2003).

Under this perspective, the object of this empirical research is based on the analysis of the current situation or phenomenon, i.e., it is not a historical case study of the evolution of an entrepreneurship ecosystem. It is a contemporary analysis of the experiences of the actors that can account for the possible impact of entrepreneurial families on the attributes of the entrepreneurship ecosystem in Manizales (Colombia).

According to the above, it is relevant to understand when this method is the most appropriate and it can be established considering the following situations: first, according to the type of

² Parts of the methodology was taken from the paper "The role of entrepreneurial ecosystems: the family social families in entrepreneurial capital approach" published in the Journal of Entrepreneurship in Emerging Economies by authors Benavides-Salazar et.al, (2021). Paper published within the framework of this research.

question to be answered. Second, if the phenomenon under study requires control of events that include behaviors and finally if the study focuses on current or past events. Table 15 indicates that when the causes are more important than the facts, the answer is why; when it is more relevant to understand the particular and complex way in which the facts occurred, the answer is how; and when there is greater relevance to other aspects such as the frequency of variables in multiple cases, the answer is how much.

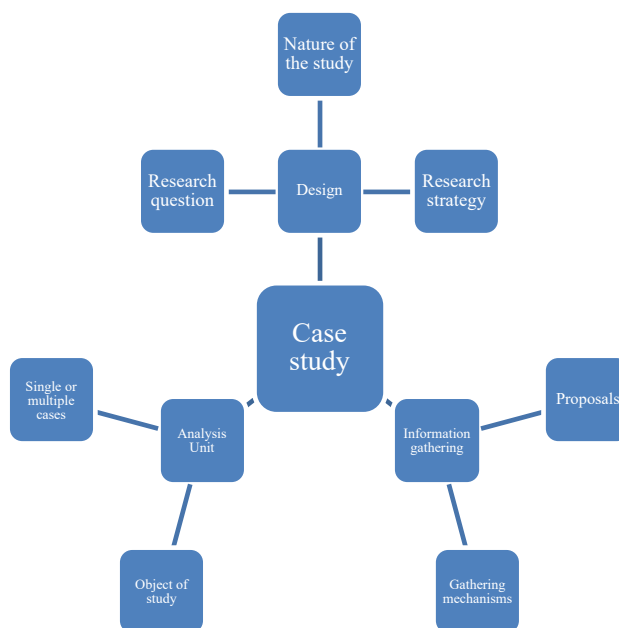
Table 15. Uses of case studies

Suggested method in each relevant situation			
Method	Type of question	Requires control over behavior	Requires control over behavior
Case	How and why?	NO	YES
History		NO	NO
Experiment	Who? What? Where? When?	YES	YES
Survey		NO	YES
Files		NO	Yes/No

Source: Yin, 2003a

On the other hand, it is relevant to confirm that the case method is a scientific method; in this sense, it proposes the following steps: research design, data collection and finally analysis. Figure 11 summarizes the components of the three steps of the case method.

Figure 11. Structure of the case study



Source: own elaboration from Yin, 2003

For this research it is considered as a unique and revealing case (Yin, 2003), since it addresses a problem not seen before, which is the incidence of entrepreneurial families in an entrepreneurial ecosystem.

In the process of gathering information as a source of evidence, multiple sources, formal studies, publications, surveys, and semi-structured in-depth interviews were used, as detailed in the following section of this chapter.

Therefore, it is essential to make it clear that this methodology is characterized by intensive and in-depth studies on a small scale. For this reason, the analysis of particular cases does not seek generalization (Alvarez-Gayou, 2003; J. W. Creswell, 2013); on the contrary, considering that it seeks the singularity of the observed reality, it focuses on the analysis of a limited number of subjects in depth.

Finally, we wish to reaffirm that given that the investigation of the phenomenon addressed by this research - the incidence of entrepreneurial families in entrepreneurship ecosystems - is at

an exploratory and descriptive stage, the single case study was chosen; hoping to open spaces for new lines of research since qualitative research does not seek to test hypotheses, but rather to generate them (Hernández et al., 2014).

4.2 Analysis unit

Due to its exploratory nature, the case study of the entrepreneurship ecosystem of Manizales aims to understand how entrepreneurial families operate in the development of entrepreneurship ecosystems. In this sense, through a detailed analysis of family social capital, the existence or not of processes of linkage of such capital in the development of cultural, social, and material attributes (from the perspective of Spigel (2015)) of the entrepreneurship ecosystem of Manizales is determined.

The unit analyzed in this study is the perception of the actors of the entrepreneurship ecosystem on the impacts that the entrepreneurial families of recognized trajectory in the region have had or have on their main activity and, consequently, on the development of the entrepreneurship ecosystem.

The following are considered as ecosystem actors for the case study:

- Entrepreneurs in growth stage
- Active mentors who are accompanying entrepreneurs in the growth stage.
- Executives of support entities of the entrepreneurship ecosystem with services or programs for entrepreneurs in the growth stage.
- Members of entrepreneurial families of recognized trajectory identified in the data collection.
- Members of family businesses of recognized trajectory identified in the data collection.

4.2.1 Data collection

Next, the research design is explained and the way in which the case study has been approached is specified in a sequential manner. Hence its exploratory nature, the case study of the entrepreneurship ecosystem of Manizales aims to understand how entrepreneurial families operate in the development of the entrepreneurship ecosystem, analyzing in detail the impacts of the dimensions of family social capital that build bridges in the development of cultural, social, and material attributes of the entrepreneurship ecosystem of Manizales.

Thus, the perception from the different actors (for information triangulation purposes) on the impacts that the mechanisms implemented, provided and/or inspired by the entrepreneurial families of the territory have had on their entrepreneurial activity, on their services or entrepreneurship programs, on the institutional articulation and therefore on the development of the entrepreneurship ecosystem, is the unit of analysis under study.

First, and following the method (Yin, 2003) in terms of secondary sources, various documents were analyzed to obtain information on the history of the department of Caldas, the colonizing dynamics of Manizales, the idiosyncrasies of the colonizers and the socioeconomic and political characteristics of the territory. Additionally, quantitative data from the Colombian census, reports on economic dynamics, business composition, analysis of perception of quality of life, public policy on entrepreneurship, results of GEM 2020 (Mendoza et al., 2021), as well as available studies on the entrepreneurial ecosystem of Manizales and its entrepreneurial dynamics were captured.

The data from secondary sources made it possible to understand the characteristics of the territory that influence the entrepreneurship ecosystem in Manizales, such as culture, business

histories, institutional framework, quality of life in the city, as well as the importance of family entrepreneurship in the economic dynamics of the territory.

Table 16 presents a summary of the typology of studies and publications used for the purpose described above.

Table 16. Studies and publications

Type of document	Description
Publication (book, journal, article, thesis or similar)	Published documents of research conducted in Colombia associated with entrepreneurship ecosystems, entrepreneurial families and mainly in Caldas or Manizales, on the same topics.
Reports	City reports, from institutions that allow the establishment of indicators or data of relevance for the purpose of describing the territory from the perspective of culture.
Public policy documents	Official documents generated or promoted by local or national authorities associated with entrepreneurship. These include Development Plans, Entrepreneurship Policy, CONPES ³ documents.

Source: own elaboration 2021

To collect data from primary sources and determine the perception of the different stakeholders, as explained in section 4.1, two techniques were used, as described in Table 17.

³ CONPES. National Council for Economic and Social Policy. Created by Law 19 of 1958, it is the highest national planning authority and serves as an advisory body to the Government in all aspects related to the country's economic and social development. Retrieved from <https://www.dnp.gov.co/CONPES> January 2022.

Table 17. Data Collection from Primary Sources

Primary source ⁴	Type of method	Purpose of use
Ecosystem entrepreneurs	388 surveys and 62 answers	Filtering of entrepreneurs in acceleration stage, with relationship or knowledge of entrepreneurial families and who were interested in the in-depth interview. Initial list of entrepreneurial families referenced by entrepreneurs
	16 in-depth interviews with 19 hours of interviewing	Entrepreneurs in the acceleration stage who agreed to the interview to identify the possible impact of entrepreneurial families and their mechanisms. Visibility of entrepreneurial families of recognized trajectory.
Mentors	10 in-depth interviews with 11 hours of interviewing	Mentors interested in attending the interview and who were related to entrepreneurial families in the city to complement the perception of the entrepreneurs.
Ecosystem agents	23 in-depth interviews with support entities with 34 interview hours	All the entities of the entrepreneurship network that serve entrepreneurs in the acceleration stage to complement or contrast the perception of the entrepreneurs and confirm the entrepreneurial families of recognized trajectory.
Entrepreneurial families	8 in-depth interviews with referenced families with 8 hours of interviewing time.	Members of entrepreneurial families identified or referenced by entrepreneurs, mentors, and agents of the ecosystem to determine the possible impact and make visible the instruments used, in case this impact occurs.
Employees of family-owned companies	6 in-depth interviews with 5 hours of interviewing	Employees of the family businesses referenced by the family members contacted, to complement the vision of the family and the mechanisms or bridges of transmission from the family social capital.

Source: own elaboration 2022

4.2.1.1 Survey of entrepreneurs in the entrepreneurship ecosystem of Manizales

As mentioned above, one of the objectives of this survey was to identify the entrepreneurial families in the city from the point of view of the entrepreneurs and mentors, as well as the current or past, direct, or indirect link as entrepreneurs, with these families.

⁴ It should be noted that the wealth of information captured in this study is due, in part, to my extensive experience in the entrepreneurship ecosystem of Manizales. I have more than 20 years of experience in the management of an ecosystem support entity, the incubator of technology-based companies, and, therefore, I have a strong and broad relational capital with the main agents of the entrepreneurship ecosystem of Manizales.

A survey was conducted to the entire population directed to all entrepreneurs and mentors who participated in formal entrepreneurship programs aimed at supporting ventures in strengthening, growth, or acceleration stages in the entrepreneurship ecosystem of Manizales. We found 8 formal accompaniment programs, promoted by 5 ecosystem support entities, of which 63% are focused on supporting business growth and 37% on start-ups.

It was possible to access these entrepreneurs thanks to the help of the managers or directors of these formal entrepreneurship programs. An online survey was sent to 388 entrepreneurs, ultimately obtaining 62 responses (a 16% response rate).

The survey included a list of the most preeminent entrepreneurial families operating in the territory. This preliminary list of entrepreneurial families was prepared in collaboration with managers of some of the city's business associations representing large and medium-sized companies in the industrial, services, commerce, and construction sectors. Considering that the traditional companies are affiliated to the guilds and that most of them are family businesses, the managers of these entities clearly refer to the entrepreneurial families required for this research.

The process began in March 2019 by sending emails to request the completion of the survey and ended in April 2019, when the last response was received.

For triangulation purposes, the results of this survey, in terms of entrepreneurial families, were validated with the Federation of Non-Governmental Organizations. This is an organization that groups, among others, 4 family foundations of entrepreneurial families. Contact was made by telephone and the same questions were asked as in the survey, which made it possible to corroborate the results obtained.

4.2.1.2 In-depth interviews

As mentioned above, these interviews were conducted in three moments, the first with entrepreneurs and mentors, the second with entities or programs that support entrepreneurs in the entrepreneurial ecosystem of Manizales and finally with members of entrepreneurial families and employees of family businesses.

To clarify the process, the following is the way in which the interviews were applied according to each group.

a. Entrepreneurs and mentors

In the case of the entrepreneurs and mentors, the 62 responses mentioned above were used as a starting point. 18 entrepreneurs declared having had a relationship with and perceived some impact from 6 entrepreneurial families and one entrepreneurial family (the Restrepo Family) and agreed to continue collaborating with the study; of these, 16 entrepreneurs were finally able to conduct the interview and the remaining 2 could not be scheduled for the two hours required to conduct the interview.

In addition to the entrepreneurs, 10 mentors who have been members of the first mentoring program in the city since its inception were contacted by e-mail and telephone. All of them participated in the in-depth interview. As mentioned above, the mentors were included in order to triangulate and complete the vision of the entrepreneurs since they work closely with them; additionally, they have a broad knowledge of the daily reality of the entrepreneurs and, therefore, of the mechanisms that they want to make visible. Mentors are usually entrepreneurs with more than 20 years of entrepreneurial experience, some of them have family businesses

and most of them have a great knowledge of family businesses in the territory and in general terms of the entrepreneurship ecosystem in Manizales.

With the final group mentioned (16 entrepreneurs, see Table 18 and 10 mentors, see Table 19), the fieldwork was conducted between May and June 2019. Semi-structured in-depth interviews were used as a technique for collecting information. The interviews were recorded, transcribed verbatim, translate, and complemented with a field notebook.

Table 18. Interviewing entrepreneurs: Characteristics and profile

Respondent	Date of interview	Interview duration	Management position	Time in the management position	Venture's level of development	Entrepreneurial ecosystem Program
1	27/03/19	72 min	Director	13 years	Growth	HPV*
2	03/04/19	60 min	Director	15 years	Growth	HPV*
3	01/04/19	50 min	Director	8 years	Growth	HPV*
4	05/04/10	54 min	Director	16 years	Growth	HPV*
5	24/04/19	68 min	Director	9 years	Growth	HPV*
6	23/04/19	102 min	Director	8 years	Growth	HPV*
7	29/04/19	60 min	R&D	30 years	Growth	HPV*
8	19/06/19	48 min	Director	8 years	Growth	HPV*
9	09/04/19	92 min	Director	7 years	Strength	HPV*
10	28/03/19	86 min	Director	8 years	Growth	Adventure Mas
11	27/04/19	67 min	Director	12 years	Strength	Adventure Mas
12	25/04/19	57 min	Director	3 years	Strength	Adventure Mas
13	06/06/19	92 min	Administrative Director	3 years	Startup	'Curso Concurso'
14	17/06/19	66 min	Director	3 years	Startup	'Andi del Futuro'
15	18/06/19	76 min	Growth Director	3 years	Startup	'Andi del Futuro'
16	20/05/19	93 min	Founder Director	3 years	Startup	'Andi del Futuro'

Source: Benavides-Salazar et.al, (2021)

* High Potential Venture

Table 19. Mentor Interviews: Characteristics and Profile

Mentor Respondent	Date of interview	Interview duration	Time as mentor	Years of Experience	Main Sector Experience
1	10/04/19	91 min	5 years	30+ years	Financial sector

Mentor Respondent	Date of interview	Interview duration	Time as mentor	Years of Experience	Main Sector Experience
2	25/04/19	67 min	6 years	20+ years	Industry
3	30/05/19	64 min	5 years	25+ years	Hotel and tourism sector
4	6/06/19	86 min	4 years	30+ years	Technology industry and consultant
5	16/05/19	72 min	5 years	30+ years	Multilateral organizations and services
6	17/05/19	63 min	6 years	30+ years	Financial sector
7	20/05/19	60 min	6 years	30+ years	Industry
8	20/05/19	49 min	5 years	25+ years	Construction industry
9	11/06/19	59 min	6 years	30+ years	Industry
10	10/06/19	39 min	3 years	30+ years	Industry and agricultural

Source: Benavides-Salazar et.al, (2021)

All interviews were conducted in person following the interview guide (Table 20) that was adjusted throughout the process of the first interviews. The approximate duration of the interviews was between one and one and a half hours. They were conducted in Spanish, the first language of both the interviewees and the interviewer, and then translated into English to share and publish the results. The nature of the semi-structured interviews allowed for the emergence of relevant themes, not necessarily to follow or comply with the interview guide (Reay & Zhang, 2014). The structure of the interview guide followed questions related to context (Entrepreneurship ecosystem and knowledge of entrepreneurial families in Manizales), cultural attributes (entrepreneurship stories and cultural support) and social attributes (networks, investors and mentors or role models).

Table 20. Interview guide for entrepreneurs and mentors

A. Manizales Entrepreneurial Ecosystem and Entrepreneurial Family

-
1. Do you consider that Manizales has an entrepreneurial ecosystem? Provide evidence to be able to argue it
 2. Which agents do you consider that support entrepreneurship in the territory?
 3. To what extent do you think these agents support entrepreneurship in the territory? From 1 to 5.
 4. Do you know of any entrepreneurial families that influence the entrepreneurial ecosystem in the territory?
 5. Do you know the RF? Do you consider them to be an entrepreneurial family?
 6. How do you think that RF has affected that entrepreneurial ecosystem?
-

B. Cultural Attributes

Entrepreneurship Stories

-
1. Do you consider that there are successful stories or entrepreneurial experiences in the territory?
Examples
 2. How have you learned about these stories? How are they transmitted in the territory? Which agents do you consider communicate or channel the knowledge of these experiences/stories?
 3. In the case of the RF and its activities, do you think they contribute family experiences? they encourage the transmission of experiences outside the family? How have they influenced the enterprise in the territory?
 4. In your specific case, how have they influenced your venture? (Inspiration, motivation...)
 5. How would you have liked them to be shared/visible or what have you missed in this process of the territory to promote the venture? How would you make them more visible, for example?
-

Cultural Support

-
1. Do you think that there is a culture in the territory that favours entrepreneurship? Specifically, could you cite the values of that entrepreneurial culture? Note, if you do not mention our three values (innovation, risk taking, initiative), ask him specifically about them.
 2. Which actors do you consider that promote these values/culture? (Give ecosystem options) How are the values transferred to the entrepreneurs of Manizales?
 3. In the case of the RF and their activities (cite them) do you think they promote these values?
 4. How are the RF's values transferred to the ecosystem?
 5. In your specific case, how have they influenced your venture?
 6. Do you think that they may or have caused any harm in general or to you in particular?
 7. What do you think the RF could do or have done to encourage these values, and that these values would be a greater incentive to entrepreneurial activity?
-

C. Social Attributes

Networking

-
1. Do you consider there are networks in the territory that support entrepreneurship? Which are they?
 2. How have you accessed these networks? How are they organised in the territory?
 3. In the case of the RF and its activities, do you think that they are network generators? do they promote knowledge of these networks? to what extent? do they encourage participation in these networks? how have they influenced entrepreneurship in the territory?
 4. In your specific case, how have they influenced your venture?
 5. Which agents do you consider that hinder the knowledge and participation in these networks?
 6. How would you have liked them to be or what have you missed in this process of the territory to promote entrepreneurship? How would you like these networks of contacts to be promoted and/or dynamized and/or made known to encourage entrepreneurial activity, for example?
-

Mentors and Role models

1. Do you consider there are models or mentors in the territory who support entrepreneurship? Can you give examples that particularly you or other entrepreneurs have been influenced positively or negatively?
2. How did you access these mentors/models? How are they organized in the territory? Which actors in the territory do you think promote the knowledge of and access to these mentors/models? (Give ecosystem options)
3. In the case of the RF and their activities, do you think they are role models, or do they act as mentors? do they promote awareness of this figure? to what extent? how have they influenced the venture in the territory?
4. In your specific case, how have they influenced your venture?
5. Do you think that they may cause or have caused, in general or to you, some damage? Which agents do you consider that hinder the knowledge and participation of these mentors/models?
6. How would you have liked them to be or what have you missed in this process of the territory to promote entrepreneurship?

Investment capital

1. Do you consider that there is investment capital in the territory and how is it organized? Can you give examples that particularly you or other entrepreneurs have been influenced positively or negatively?
2. How did you gain access to this investment capital? Which actors in the territory do you consider that promote knowledge and access to this capital?
3. In the case of the RF and its activities (cite them), do you think they contribute investment capital to the territory? do they promote knowledge of this figure (whether they are owned by the family or not)? to what extent? how have they influenced entrepreneurship in the territory?
4. In your specific case, how have they influenced your venture?
5. Do you think that they can or have caused, in general or to you, some damage? Which agents do you consider that hinder the knowledge and access to that investment capital?
6. How would you have liked them to be or what have you missed in this process of the territory to promote entrepreneurship? How would you like new ventures to be financed (subsidies, venture capital, business angels, loans in advantageous conditions...), for example?

Source: Benavides-Salazar et.al, (2021)

According to Spigel (2017) within the three attributes of an entrepreneurship ecosystem is the material attribute that describes it as "material attributes of an ecosystem are those with a tangible presence in the region", which can be evidenced in Table 21, where there is indeed the presence of universities, non-financial support actors or agents, public policy of entrepreneurship, among others.

Table 21. Agents or entities supporting entrepreneurs in the entrepreneurship ecosystem

Nro	Institution	Program(s)	Own	Early stage	Growth	Accelerate
1	National University of Colombia, Manizales Campus	Adventure Mas	No		x	
		Startup Mas	No	x		
		Parque de Innovación	Yes		x	
2	Incubar	Curso Concurso	No	x	x	
		Elévate	No			x
		Inqb2	Yes		x	

Nro	Institution	Program(s)	Own	Early stage	Growth	Accelerate
		Negocios verdes	No		x	x
3	FINANFUTURO	Apoyo	Yes	x	x	
4	ANDI Y ANDI DEL FUTURO	Andi del Futuro	Yes		x	x
5	SENA	Fondo Emprender	Yes		x	
		Tecnoparque	Yes	x		
6	Católica University of Manizales	Adventure Mas	No		x	
		Startup Mas	No	x		
		Programa de emprendimiento	Yes	x		
7	Mayor's Office of Manizales	Curso Concurso	Yes	x	x	
		Elevate	Yes			x
		Mesas de competitividad	Yes			x
8	BANCOLOMBIA	Aceleración empresas de alto crecimiento	Yes			x
9	Autónoma University of Manizales	Adventure Mas	No		x	
		Startup Mas	No	x		
		Programa de emprendimiento	Yes	x		
10	Caldas University	Adventure Mas	No		x	
		Startup Mas	No	x		
11	Manizales University	Adventure Mas	No		x	
		Startup Mas	No	x		
		Programa de emprendimiento	Yes	x		
12	FENALCO	Fortalecimiento empresarial	Yes			x
13	MANIZALES MÁS	EAP	Yes			x
		Adventure Mas	Yes		x	
		Startup Mas	Yes	x		
		Vender Mas	No		x	
		Chec Innova	No	x		
14	CENTRAL HIDROELECTRICA DE CALDAS CHEC	Chec Innova	Yes		x	
15	Caldas Government	Vender Mas	No		x	x
16	Manizales Chamber of Commerce for Caldas	Empréndelo	Yes	x		
		Monarca	Yes		x	
		Conexión 49	Yes	x	x	

Nro	Institution	Program(s)	Own	Early stage	Growth	Accelerate
		Empresas en trayectoria Mega	Yes			x
		Desarrollo de proveedores	Yes			x
		Fabricas de productividad	Yes			x
17	Center for Bioinformatics and Computational Biology - BIOS	Biofábrica	Yes	x	x	
18	Corpocaldas	Negocios verdes	Yes		x	x
19	ACOPI Caldas	Fortalecimiento empresarial	No		x	
20	Caldas Entrepreneurial Network	Articulación	Yes	x	x	x

Source: own elaboration 2022

In this regard, although this attribute is a tangible support of the ecosystem and taking into account that the research incorporates the perspective of the entrepreneurial family from the Family Social Capital, in this first stage with entrepreneurs, the analysis focused on the cultural attributes that are "the underlying beliefs and outlooks about entrepreneurship within a region", and the social attributes that are "the resources composed of or acquired through the social networks within a region".

In the first stage, the aim was to concentrate the focus of the entrepreneurs and mentors on the elements that could be most closely linked to family social capital and thus facilitate future processes of triangulation and improvement of the in-depth interview of the following two groups.

As the research progressed, taking interviews simultaneously between entrepreneurs and mentors, a level of saturation was reached, demonstrated by the interviewees who expressed recurring responses. Creswell (2014) states that, in qualitative studies, a general guideline for sample size is not only to study a few individuals, but also to collect extensive details about them. Hence, sufficient high-quality data were collected (Reay & Zhang, 2014).

The entrepreneurs and mentors interviewed are based in Manizales - Colombia, which became a relevant requirement to understand the incidence or relationship with both the territory and the entrepreneurship ecosystem. Table 18 provides an overview of the entrepreneurs interviewed in the ecosystem in relation to the entrepreneurial families, the state of development of the companies (the focus of the entrepreneurs, they are called "scaleups", since this type of companies have greater interaction with the actors of the entrepreneurship ecosystem), position of the person interviewed, time in the position, economic sector, and program in which he/she has participated.

Additionally, Table 19 presents a summary of the mentors who participated in the interviews, showing the time they have been participating in the mentoring program, the name of the mentoring program and the years of experience and the economic sector in which they have the most experience.

b. Support agents of the entrepreneurship ecosystem in Manizales.

In the case of financial and non-financial support agents or entities of the ecosystem, we started from those registered in the Caldas Entrepreneurship Network⁵ analyzing which of them had programs or services for entrepreneurs in the growth or acceleration stage, in order to generate consistency with the same stage as the entrepreneurs interviewed in the previous stage. As a result of this analysis, out of the 53 entities, 22 were identified as having at least one program

⁵ A network of public and private institutions working together, created because of Law 1014 of 2006, which meet to promote entrepreneurship in a unified manner in the region. In the Caldas entrepreneurship network, companies are accompanied from the identification of the opportunity, the materialization, execution, and follow-up of the business idea. Taken from <https://redemprendimientocaldas.com/quienes-somos/> January 2022.

or service in the stage of interest, and in the last filtering, 19 were identified as being more closely related to the area of interest.

For the interviews, the directors or coordinators of entities or programs of the entrepreneurship ecosystem of Manizales were sought, and that have in their scope the support to entrepreneurs in growth and acceleration stages.

With the final group of 19 entities, 23 interviews were achieved from 17 entities, the fieldwork was conducted between September 2021 and June 2022⁶ (see Table 22). As in the previous group, semi-structured in-depth interviews were used as a technique for collecting information. The interviews were recorded, transcribed verbatim, translate, and supplemented with a field notebook.

Table 22. Supporting Entity Interviews: Characteristics and Profile

Support Entity Respondent	Date of interview	Interview duration	Time in the office	Position	Type of support entity	Number of programs	Entrepreneurial experience
1	25/09/21	74 min	9 months	Leader	Academic	1	No
2	27/09/21	94 min	5 years	Coordinator	Guild	2	No
3	29/09/21	97 min	5 years	Coordinator	Guild	1	Yes
4	12/10/21	79 min	8 years	Executive Manager	Financing	2	Yes
5	4/10/21	68 min	1 year	Coordinator	Financing	1	Yes
6	8/11/21	76 min	7 years	Project Manager	Investment	1	Yes
7	8/11/21	81 min	4 years	Zone Manager	Bank	1	No
8	1/12/21	72 min	10 years	Director	Program	7	Yes

⁶ It is clarified that there was an important gap between the last interview of 2019 and the first one of 2021 due to the Pandemic and the ecosystem actors were focused on resolving the situation, looking for different strategies so that the entrepreneurs would not close or could improve their business models. For this reason, it was not possible to conduct the required interviews during this period.

Support Entity Respondent	Date of interview	Interview duration	Time in the office	Position	Type of support entity	Number of programs	Entrepreneurial experience
9	14/12/22	95 min	4 years	Coordinator	Academic	1	Yes
10	19/01/22	70 min	1 year	Executive Manager	Guild	1	Yes
11	20/01/22	72 min	1 year	Coordinator	Investment	1	No
12	21/01/22	65 min	4 years	Coordinator	Academic	1	Yes
13	24/01/22	72 min	9 months	Coordinator	Academic	1	No
14	26/01/22	78 min	4 years	Vice rector	Academic	3	Yes
15	27/01/22	78 min	4 years	Scientific Director	Research and development	1	Yes
16	26/01/22	103 min	9 years	Executive President	Guild	6	No
17	31/01/22	101 min	6 years	Executive Manager	Guild	1	No
18	1/02/22	120 min	11 years	Project Manager	Government	9	No
19	9/02/22	143 min	2 years	Coordinator	Public Company	1	Yes
20	22/03/21	165 min	7 years	Coordinator	Program	1	Yes
21	20/06/22	148 min	5 years	Executive Manager	Coworking	2	Yes
22	19/06/22	163 min	3 years	Coordinator	Incubator	4	Yes
23	30/06/22	165 min	2 years	Director	Government	5	Yes

Source: own elaboration 2022

The interviews were mostly conducted virtually (due to public health conditions due to the pandemic) following the interview guide (Table 23) that was adjusted from the interviews of the first group and the incorporation of the material attribute of Spigel's (2017) entrepreneurship ecosystem model that was not incorporated in the first interviews. The approximate duration of the interviews was between an hour and an hour and a half.

They were conducted in Spanish, the first language of both the interviewees and the interviewer. The nature of the semi-structured interviews allowed for the emergence of relevant themes, not necessarily to follow or comply with the interview guide (Reay & Zhang, 2014). The structure of the interview guide followed questions related to context (Entrepreneurship ecosystem and knowledge of entrepreneurial families in Manizales), cultural attributes (entrepreneurship

stories and cultural support), social attributes (networks, investors and mentors or role models) and material attributes (training entities, support entities, public policy, and market).

Table 23. Interview guide for entrepreneurship ecosystem support entities

A. Manizales entrepreneurial ecosystem and entrepreneurial family

-
1. Do you consider that Manizales has an entrepreneurship ecosystem? Provide evidence to argue it
 2. Which agents do you consider that support entrepreneurship in the territory? (If they are part of the entrepreneurship network, just mention that instance of articulation).
 3. From the point of view of the entrepreneurs supported by the ecosystem, in which of the following areas do you consider that the ecosystem makes the greatest contribution to the development of the entrepreneurship?
 Strategy: it has had an impact on the definition of the focus of the business and its long-term projection.
 Mentality: it has contributed to the change in the entrepreneur's mentality, generating greater possibilities for growth.
 Organization: it has had an impact on internal processes, mainly administrative, accounting, and financial.
 Growth: It has had an impact on the effective growth of the company, during its participation in ecosystem actions.
 4. Identify entrepreneurial families in the territory
 5. Would you say that entrepreneurial families have a positive influence on the entrepreneurial ecosystem of the territory, promoting the creation of companies? why?
 6. Do you know any entrepreneurial family that influences the entrepreneurial ecosystem in the territory?
 When naming the family, ask: Do you know family xxx, what kind of relationship do you have, or have you had with them? Do you consider them an entrepreneurial family? Provide evidence to be able to argue it."
-

B. Cultural Attributes

Entrepreneurship Stories

1. Do you consider that there are successful entrepreneurial stories or experiences in the territory? ¿Can you give examples? and unsuccessful ones?
 2. Do the programs that your organization coordinates or operates communicate or channel the knowledge of these experiences/stories (mention the media, formalized, printed, oral, etc.)? can you refer to other agents of the ecosystem that channel them?
 3. Is it possible to evidence in family xxx, activities that allow to say that they contribute with family experiences or that encourage the transmission of stories from third parties? In case the answer is positive, explain some examples and how do you think it has influenced the entrepreneurship in the ecosystem?"
 4. (in case of answering if family stories are transmitted in the ecosystem) In the group of companies that your program has accompanied, how do you think these stories have influenced them? Is it possible to measure or evidence this influence (inspiration, motivation...)?
 5. Do you consider that, in the case of the Manizales ecosystem, there is any difference between the transmission of stories of entrepreneurial families of recognized trajectory or of non-family entrepreneurs also of recognized trajectory?
 6. How would you like them to be shared/visibilized to promote entrepreneurship in the territory? How would you make them more visible, for example?
-

Cultural Support

1. Do you consider that there is a culture in the territory that favors entrepreneurship? Specifically, could you cite the values of this entrepreneurial culture? Note, if you do not cite our three values (innovation, risk-taking, initiative), ask you specifically about them...
 2. Which agents do you consider that promote these values/culture? (Give ecosystem options) How are the values transferred to entrepreneurs in Manizales?
 3. In the case of the xxxx family and their activities, do you think they promote these values? How do you think they do it, do they transfer the values to the ecosystem (formal or informal instruments)?
 4. In your specific case, in the programs that your organization operates, are entrepreneurial culture values mobilized (in general or for entrepreneurial families)? If the answer is yes, which values and how do you promote or transfer them, and how have they influenced the entrepreneurs that your program supports? Is it possible to measure or demonstrate this influence?
-

-
5. Do you consider that, in the case of the Manizales ecosystem, there is any difference between the transmission of values from entrepreneurial families of recognized trajectory or from non-family entrepreneurs also of recognized trajectory?
-

C. Social Attributes

Networking

1. Do you consider that in the territory there are networks that favor entrepreneurship? Which are they? Can you give examples that particularly favored you or other entrepreneurs (connection with investors, with human talent)?
 2. Do you or your program or entity participate in any of these networks? How are they organized in the territory? Which agents of the territory promote knowledge and participation in these networks? (Give options of the ecosystem).
 3. Is it possible to evidence in the xxx family, activities that allow us to say that they are generators of networks or promote the knowledge of these? In case the answer is positive, explain some examples and how do you think it has influenced the entrepreneurship in the ecosystem? Is it possible to measure or evidence that influence?
 4. In your specific case, as an agent of the ecosystem, (if you evidence activities of entrepreneurial families) how have they influenced you, and how have they influenced the entrepreneurs that your programs have accompanied?
 5. What would you like to see in this process of the territory to promote entrepreneurship? How would you like to see the dynamics to make these networks of contacts known in order to encourage entrepreneurial activity, for example?
-

Mentors and Role models

1. Do you consider that in the territory there are models or mentors that favor entrepreneurship? Which are they? Can you give examples that particularly influenced you or entrepreneurs, either positively or negatively?
 2. Do any of the entrepreneurship programs you coordinate have a mentoring program, can you mention them, and how are your program and those of other ecosystem agents organized and promoted (knowledge and access) in the territory?
 3. In the case of family xxx, do they have activities that allow us to say that they are role models or act as mentors? do they promote the knowledge of this figure (whether their own or from outside the family)? to what extent? how? how have they influenced entrepreneurship in the territory?"
 4. In your specific case, in the programs that your organization operates or that you know of from other actors in the ecosystem, how has mentoring or role models influenced your entrepreneurs? Is it possible to measure or evidence that influence?
 5. How would you like it to be in the territory to promote entrepreneurship? How would you like these models/mentors to be known, for example?
-

Investment capital

1. Do you consider that investment capital exists in the territory? How is it organized? Can you give examples of entrepreneurs who have received investment capital and who have had a positive or negative influence?
 2. Do the entrepreneurship programs that your organization leads promote or mobilize investment capital? Which agents of the territory do you consider that promote knowledge and access to this capital? (Give options of the ecosystem)
 3. In the case of family xxx, do they have activities that allow us to say that they contribute to or promote investment capital in the territory? do they promote knowledge of this figure (whether their own or outside the family)? To what extent? how? how have they influenced entrepreneurship in the territory?
 4. How would you like this process to be in the territory to promote entrepreneurship? How would you like new ventures to be financed (prizes, subsidies, venture capital, business angels, loans with advantageous conditions...), for example?
-

D. Material Attributes

Universities, SENA, or training entities

1. Do you consider that in the territory there are Universities or technical training or similar entities that favor entrepreneurship? Which are they? Can you give an example of a program or activity that has clearly favored the ecosystem (connection with investors, with human talent,...)?
-

-
2. Do you, your program or entity participate or articulate with any entrepreneurship program or activity of (other) Universities or training entities? How do you describe this articulation? Which agents of the territory promote knowledge and participation in these programs? (Give options of the ecosystem).
 3. Is it possible to evidence in the family(ies) mentioned above, activities that allow to say that they are generators of entrepreneurship programs or activities of universities or training entities or promote knowledge of them? In case the answer is positive, explain some examples and how do you think it has influenced entrepreneurship in the ecosystem? Is it possible to measure or evidence that influence?
 4. In your specific case, as an agent of the ecosystem, (if you evidence activities of entrepreneurial families that promote programs in universities or training entities) how have they influenced you, and how have they influenced the entrepreneurs that your programs have accompanied?
 5. How would you like it to be in this process of the territory to promote entrepreneurship activities in universities or training entities? How would you like the dynamics to make these networks of contacts known to encourage entrepreneurial activity, for example?
-

Support services, entities, and facilities

-
1. Do you consider that in the territory there are services of support entities and support facilities that favor entrepreneurship? Which are they? Can you give any example that particularly a support entities or facilities that have clearly favored the ecosystem (incubators, accelerators, coworking spaces, agents of advice or support to entrepreneurs,...)?
 2. Do you, your program or entity participate or articulate with any support entity, service or support facility for entrepreneurship present in the entrepreneurship ecosystem? How do you describe this articulation? Which agents of the territory promote the knowledge and participation of such services or facilities? (Give options of the ecosystem).
 3. Is it possible to evidence in the family(ies) mentioned above, activities that allow to say that they are generators of entities, services, or facilities to support entrepreneurship or promote knowledge of them? In case the answer is positive, explain some examples and how do you think it has influenced the entrepreneurship in the ecosystem? Is it possible to measure or evidence that influence?
 4. In your specific case, as an agent of the ecosystem, (if you evidence activities of entrepreneurial families that promote support services, entities, or facilities) how have they influenced you, and how have they influenced the entrepreneurs that your programs have accompanied?
 5. How would you like to see the dynamics to promote services, entities, or facilities to support entrepreneurship in the territory?
-

Public policy and governance

-
1. Do you consider that in the territory there are public policies and institutional articulation that favor entrepreneurship? Which are they? Can you give some examples that have clearly favored the ecosystem (policy or governance)?
 2. Do you, your program or entity participate or articulate to public policy or governance instances present in the entrepreneurship ecosystem? How do you describe this participation? Which agents of the territory promote the knowledge and participation of these decision spaces? (Give options of the ecosystem).
 3. Is it possible to evidence in the family(ies) mentioned above, activities that allow us to say that they are generators of public policy or promote awareness of it? In case the answer is positive, explain some examples and how do you think it has influenced entrepreneurship in the ecosystem? Is it possible to measure or evidence that influence?
 4. In your specific case, as an agent of the ecosystem, (if you evidence activities of entrepreneurial families that promote public policy or strengthen governance) how have they influenced you, and how have they influenced the entrepreneurs that your programs have accompanied?
 5. How would you like to see the dynamics in the territory to promote public policy or strengthen governance in entrepreneurship?
-

Open markets

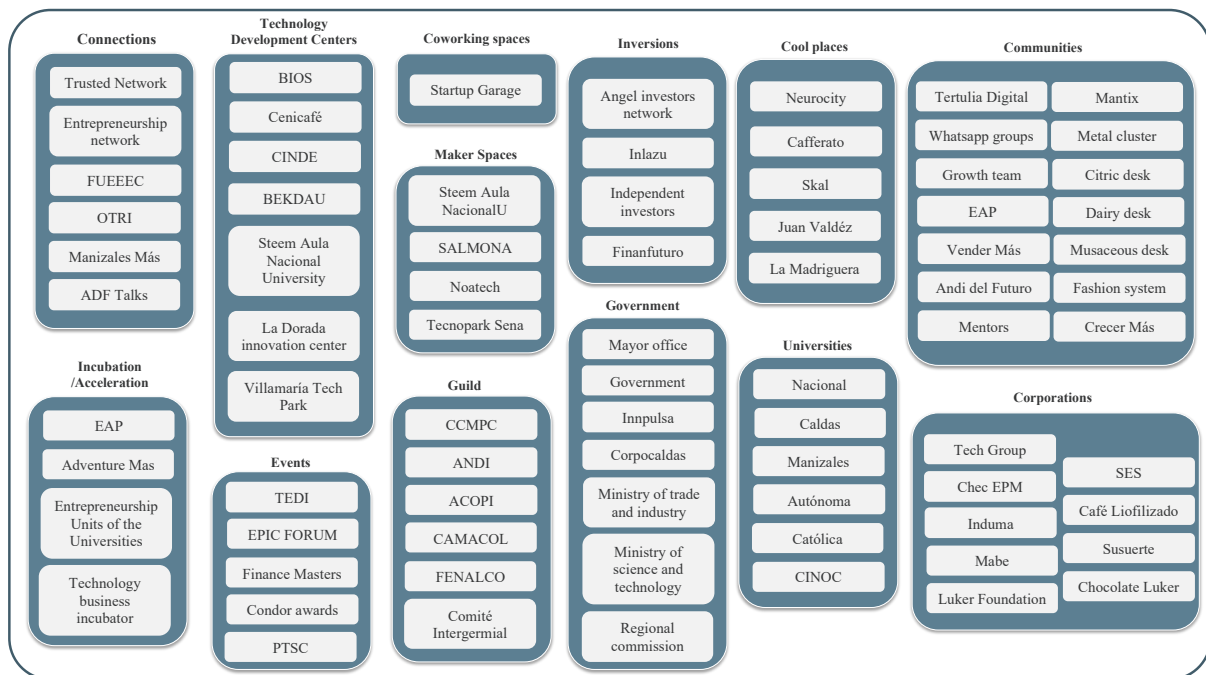
-
1. Do you consider that there is a market in the territory that favors entrepreneurship? Can you give any example of opportunities provided by the local market that have clearly favored the ecosystem (interaction with customers, validate, advance, sell and grow,...)?
 2. Do you, your program or entity analyze or promote access to local market opportunities in the entrepreneurship ecosystem? How do you describe your participation? Which agents in the territory promote knowledge and participation in market opportunities? (Give ecosystem options).
 3. Is it possible to evidence in the family(ies) mentioned above, activities that allow us to say that they generate market opportunities or promote awareness of them? In case the answer is positive, explain some examples and how do you think it has influenced the entrepreneurship in the ecosystem? Is it possible to measure or evidence that influence?
 4. In your specific case, as an agent of the ecosystem, (if you evidence activities of entrepreneurial families that promote market opportunities) how have they influenced you, and how have they influenced the entrepreneurs that your programs have accompanied?
-

-
5. How would you like to see the dynamics to promote market opportunities for the entrepreneurship ecosystem in the territory?
-

Source: own elaboration 2020

The managers and entrepreneurship programs interviewed are based in Manizales - Colombia and operate mainly in the city's entrepreneurship ecosystem. Figure 12 provides an overview of the entrepreneurship programs and entities that operate in the entrepreneurship ecosystem, among which some were interviewed in the ecosystem, remembering that the focus is on the acceleration stage or "scaleups". Likewise, in Table 22, not only the stage is relevant, but it is also visible whether the entrepreneurship program is its own or a third-party operation or in partnership.

Figure 12. Entrepreneurial ecosystem programs



Source: Manizales MIT Reap report 2022

c. Members of entrepreneurial families and employees of family businesses.

In the case of the entrepreneurial families, the starting point was the identification of these families in the four moments developed up to that moment of the research, that is, the list of

entrepreneurial families reported by the entrepreneurs in their answers to the survey, the list of entrepreneurial families made visible in the in-depth interviews of both mentors and entrepreneurs and finally, the list of entrepreneurial families made visible by the agents of the entrepreneurship ecosystem of Manizales. This information is shown in Table 24, obtaining a total of 8 families.

Of the total number of data sources, 25 entrepreneurial families were reported, of which 11 had more than one interviewee who made them visible, as can be seen in the same table.

Table 24. Entrepreneurial families in the entrepreneurial ecosystem of Manizales

#	Entrepreneurial Family	Year family business founded	Family generation	Entrepreneurs and mentors			Entrepreneurship ecosystem agents		
				No. of respondents identify family	%	perceived contribution to the ecosystem	No. of respondents identify family	%	perception of strategy contribution to the ecosystem
1	Restrepo	1904	Fourth	24	56%	Si	18	95%	Si
2	Arango	1940	Second	4	9%	No	15	79%	Si
3	Mejia	1974	Second	5	12%	Si	14	74%	Si
4	Hena	1948	Third	7	16%	No	13	68%	si
5	Villegas	1954	Second	0	0%	No	13	68%	si
6	Toro	2000	First	0	0%	No	10	53%	si
7	Rivas	1957	Second	3	7%	No	8	42%	si
8	Trujillo	1956	Second	0	0%	No	3	16%	No
9	Muñoz	1987	Second	0	0%	No	3	16%	No
10	Olarte	1998	First	0	0%	No	3	16%	Si
11	Jaramillo	1986	First	0	0%	No	2	11%	No
TOTAL				43		-	19		-

Source: own elaboration 2022

For the interviews, it was first confirmed that it met the description of both entrepreneurial family and family business. As described in chapters 2 and 3, the Nordqvist & Melin, (2010, p. 214) definition was adopted for the case of entrepreneurial family, which they describe as "as an institution, or social structure, that can both drive and constrain entrepreneurial activities." For the case of family business, the definition made by Miller (2007, p. 831) was assumed, who

states that "the typical family business has been characterized as an organization controlled and usually managed by multiple family members (Lansberg, 1999; Shanker & Astrachan, 1996), often from multiple generations (Anderson and Reeb, 2003; Gomez-Mejia et al., 2007)."

As a result, of the 8 families that were most visible to the interviewees, only 1 did not meet these characteristics, leaving 7 families. For the interviews, we first looked for a member of the entrepreneurial family who was linked to the company, i.e. who held a managerial position, regardless of whether it was the first, second, third or more generation.

In order to contrast the information, the interview was complemented with a managerial employee of the family business, mainly to understand from his perspective, the mechanisms of transmission or linkage of his family's social capital.

Fourteen interviews were conducted with seven entrepreneurial families, the fieldwork was carried out between October 2021 and June 2022. As in the two previous groups, semi-structured in-depth interviews were used as a technique for collecting information. The interviews were recorded, transcribed verbatim and supplemented with a field notebook.

The interviews were mostly conducted face-to-face, following the interview guide (Table 25) that was designed especially for this interest group and as in the previous group, the material attribute of Spigel's (2017) entrepreneurship ecosystem model was incorporated. The approximate duration of the interviews was between half an hour and an hour.

Table 25. Interview guide for entrepreneurial families and employees

A. Ecosystem Entrepreneurship and entrepreneurial families

-
1. Do you consider that Manizales has an entrepreneurship ecosystem? Provide evidence to argue it
 2. Do you or your company consider yourself or your company as an agent that supports entrepreneurship in the territory? And why?
 3. "If the previous answer is positive, in which of the following areas do you consider that you make the greatest contribution to the development of the venture?"
-

-
- a. Strategy: it has had an impact on the definition of the business focus and its long-term projection.
 - b. Mentality: it has contributed to a change in the entrepreneur's mentality, generating greater possibilities for growth.
 - c. Organization: internal processes have been impacted, mainly administrative, accounting and financial.
 - d. Growth: The effective growth of the company has been impacted during its participation in the ecosystem actions.
 - e. Investment, market or other"
4. Do you identify other entrepreneurial families in the city that are in some way related to the city's entrepreneurship or innovation ecosystem? Do you have a relationship with each other?
-

B. Cultural attributes

Entrepreneurship Stories

1. What unique characteristics, resources and/or capabilities do you consider your company has that can be a source of competitive advantage? Which of these do you consider to be unique to your company as a family business?
 2. Do you consider that your entrepreneurial story is known in the entrepreneurial ecosystem? How has your story or that of other entrepreneurial families been transmitted?
 3. (many entrepreneurs do not identify or differentiate stories of entrepreneurial families) Why do you think that stories of family entrepreneurship are not told or are not visible in the entrepreneurial ecosystem?
-

Culture of support

1. Do you consider that there is a culture in the territory that favors entrepreneurship? Specifically, could you cite the values of this entrepreneurial culture (e.g. innovation, risk-taking, initiative)?
 2. In your family and in your company, what values/culture do you promote, and could they be related to values associated with entrepreneurship? How are these values transferred to the entrepreneurship ecosystem in Manizales?
 3. Do you consider that, in the case of the Manizales ecosystem, there is any difference between the transmission of values from entrepreneurial families with a recognized trajectory or from non-family entrepreneurs also with a recognized trajectory??
 4. Does your company promote corporate entrepreneurship (intrapreneurship or innovation leveraged with entrepreneurs), how do you do it and can you give an example? Have you generated new companies? Have you supported employees who have become entrepreneurs? Have you received support directly from the company or from the family and also from any entity of the ecosystem?
-

C. Social attributes

Networking

1. Do you consider that in the territory there are networks that favor entrepreneurship? Give examples, either formal or informal, and what do you think they bring to entrepreneurs?
 2. Do you identify any support agents in the ecosystem that promote knowledge and participation in these networks (e.g., chamber of commerce, incubator, Manizales +)?
 3. In your specific case, do you or your family business participate in any networks that support entrepreneurs? If so, how do you think they have influenced entrepreneurs (financing, mentoring, talks, conferences, investment, etc.)?
-

Mentors and role models

1. Do you consider that in the territory there are models or mentors that favor entrepreneurship? Can you give examples that particularly influenced you or entrepreneurs, either positively or negatively?
 2. Do you or any member of your family is or has been a mentor? In which program or from which ecosystem agent, how are they organized and fostered (knowledge and access) in the territory?
 3. In your specific case, if you have been a mentor, how has mentoring or role modeling influenced your entrepreneurs? Is it possible to measure or evidence that influence?
-

Investment Capital

-
1. Do you consider that there is investment capital in the territory, and do you consider that it is organized? Can you give examples of entrepreneurs who have received investment capital and have had a positive or negative influence?
 2. In your family/company do you have activities that allow you to say that they contribute or promote investment capital in the territory? do they promote the knowledge of this figure (whether their own or from outside the family)? To what extent? how? how have they influenced entrepreneurship in the territory?
-

D. Material Attributes

Universities, SENA, or training entities

1. Do you consider that in the territory there are Universities or training entities with programs that favor entrepreneurship? Can you give an example of a program or activity that has clearly favored the ecosystem (connection with investors, with human talent)?
 2. Do you, another member of your family or your company participate or articulate with any entrepreneurship program or activity of Universities or training entities? If yes, how do you describe this articulation? If not, what is the reason for not having a relationship?
-

Support services, entities, and facilities

1. Do you consider that in the territory there are services of support entities and support facilities that favor entrepreneurship? What are they? Can you give any example that particularly support entities or facilities that have clearly favored the ecosystem (incubators, accelerators, coworking spaces, consulting agents or support to entrepreneurs,)?
 2. Do you, another member of your family or your company participate or articulate with any support entity, service or support facility for entrepreneurship present in the entrepreneurship ecosystem? How do you describe this articulation? Which agents of the territory promote the knowledge and participation of such services or facilities? (Give options of the ecosystem).
-

Public policy and governance

1. Do you consider that in the territory there are public policies and institutional articulation that favor entrepreneurship? Which are they? Can you give some examples that have clearly favored the ecosystem (policy or governance)?
 2. Do you, another member of your family or your company participate or articulate to the public policy on entrepreneurship or to governance instances present in the entrepreneurship ecosystem? How do you describe this participation? Which agents of the territory promote the knowledge and participation of these decision spaces? (Give options of the ecosystem).
-

Open markets

1. Do you consider that there is a market in the territory that favors entrepreneurship? Can you give any example of opportunities provided by the local market that have clearly favored the ecosystem (interaction with customers, validate, advance, sell and grow)?
 2. Do you, another member of your family or your company promote access to local market opportunities in the entrepreneurship ecosystem?
-

Source: own elaboration 2020

4.2.2 Data analysis⁷

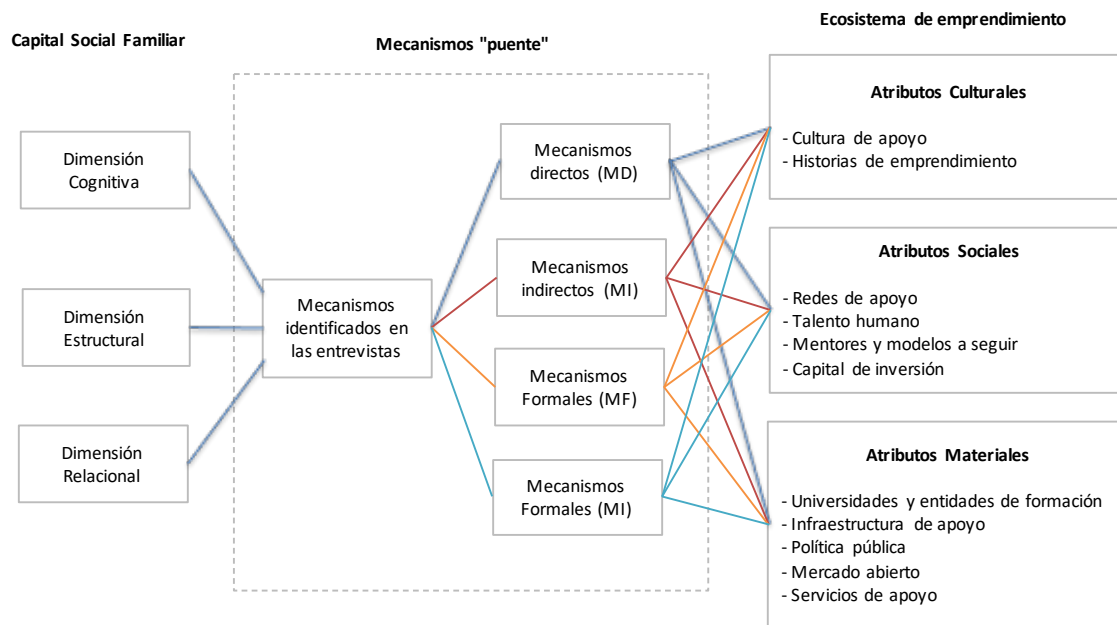
With the result of the interviews and their transcription, the inductive nature of the research focused on discovering situations and patterns (formal and informal) regarding the mechanisms associated with the dimensions of Family Social Capital and their articulation with the attributes of the ecosystem provided by Spigel (2017).

The total transcripts, summaries and notes were analyzed through an open coding process constructed in a first version and independently reviewed by the authors (J. W. Creswell, 2013) to understand the transmission mechanisms of Family Social Capital formally or informally employed by entrepreneurial families and were analyzed in the framework of the attributes of the entrepreneurship ecosystem for the case of Manizales. According to Bryman (2012), coding reliability was consistent to avoid coder bias.

The detailed structure of the data analysis based on the interview questions that guided the findings is illustrated in Figure 13. This data analysis scheme was performed by reviewing and comparing the results of the three groups of actors allowing to ensure the reliability of the coding, analyze the relationship of the data obtained with the interview, identify the nature of the relationships and, finally, develop the narrative (Maxwell, 2008; Silverman, 2005).

⁷ Parts of data analysis was taken from the article "The role of entrepreneurial ecosystems: the family social families in entrepreneurial capital approach" published in the Journal of Entrepreneurship in Emerging Economies by authors Benavides-Salazar et.al, (2021). Paper published within the framework of this research.

Figure 13. Data analysis structure



Source: Adapted from Benavides-Salazar et.al., (2021)

4.2.2.1 Data coding

Version 8 of the licensed Atlas TI software was used for data analysis. The inductive process carried out in the study was based on the discovery of areas and patterns. According to Bryman (2012), coding reliability should be consistent and structured to avoid coder bias. Because of the above, first, data were analyzed through transcripts of interviews with entrepreneurs, mentors, directors of support entities or programs, and members of entrepreneurial families; in parallel, individual summaries of the interviews were created from notes collected after each interview and compared. That is, transcripts and notes were used through an open coding process (Strauss & Corbin, 1998) to understand family resources and capabilities, and dimensions of family social capital on the attributes defined for the entrepreneurship ecosystem (Spigel, 2017).

The open coding process allowed supporting the interpretive structure of the study and constant iteration throughout the process (Hall et al., 2005). Open coding is a process that opens the text

and exposes the thoughts, ideas, and meanings of the data collected, allows conceptual labels to be assigned and then combined to define concepts and discover categories (Strauss & Corbin, 1998).

As such, this coding scheme was carried out with different revisions and adjustments identifying the mechanisms with which entrepreneurial families influence the entrepreneurial ecosystem, which allowed reliability in the identification of emerging themes from the data of the interviews with entrepreneurs, mentors, support entities and the same families and their employees, which allowed developing the narrative.

Thus, this coding scheme was carried out with different revisions with two coder profiles from 423 codes. To adjust, a manual with definitions and first categories (J. W. Creswell, 2013) was made, this document was analyzed by the other coders considering the mechanisms with which entrepreneurial families potentially influence the entrepreneurial ecosystem, impacts, among others. The result, 11 main categories and 34 first-order codes, allow to reliably identify the emerging themes from the interview data that allowed the development of the narrative (Silverman, 2005).

The result of this identification and grouping allowed us to determine the categories and main categories shown in Table 26.

Table 26. Data coding

Nro.	Interview categories	Identified groups	Description
1	Entrepreneurship ecosystem	Recognition of the existence of the entrepreneurship ecosystem.	Existence of an entrepreneurship ecosystem, given the institutional articulation, with examples to prove it.
		Visibility of ecosystem support agents or actors	Actors in the city that provide financial and non-financial support services to entrepreneurs.

Nro.	Interview categories	Identified groups	Description
		Visibility of entrepreneurial families	Visibility of entrepreneurial families, an example for the new generation of entrepreneurs who impact the entrepreneurial ecosystem.
		Recognition of the incidence of entrepreneurial families	Knowledge of the RF and its impact on the entrepreneurial ecosystem.
2	Impacts on the mechanisms of the entrepreneurship ecosystem	Business strategy	The advice received has impacted on the definition of the business focus
		Mentality	The advice received has contributed to the change of mentality of the entrepreneur.
		Organization	The advice received has had an impact on internal processes, mainly administrative, accounting, and financial.
		Business growth	The advice received has impacted the effective growth of the company because of its participation in ecosystem programs.
3	Social Attribute - Support Networks	Perception of the presence of networks (investors, talent and agents)	Perception of the presence of formal or informal networks that connect entrepreneurs, advisors, investors, among others to share knowledge and skills.
		Institutionalized networks	Entrepreneurial families with formal instruments that allow them to extend their resources to local agents and entrepreneurs.
		Effective connection	FR with strong relationship networks that allow exchange with local agents and entrepreneurs.
		Family promoted networks	FR with instruments that allow them to extend their resources to local agents and entrepreneurs.
4	Social Attribute - Mentors and role models	Perception of presence of mentors or mentoring programs	There are mentors with sufficient capacity to provide advice and accompaniment to entrepreneurs.
		Institutionalized programs	Presence of a formal mentoring program with a method that facilitates the accompaniment of entrepreneurs.
		Impact of Mentors promoted by FR	FR with identity based on entrepreneurial orientation that allows to extend it, being mentors or advisors to entrepreneurs.
5	Cultural Attribute - Stories of entrepreneurship	Recognition of the local stories	Presence of stories of entrepreneurship, told by the interviewees, where success and failure cases of companies of relevance to the region.
		Institutionalization of the transmission of stories	There are evident mechanisms of transmission of stories, oral, written, virtual or similar.
		Stories that capture the experiences of the RF	FR with an identity based on entrepreneurial orientation, which allows them to extend their experience to other entrepreneurs in the entrepreneurial ecosystem.
		Stories that capture non-family experiences	FR with an identity based on entrepreneurial orientation, which allows them to extend their resources, promoting or facilitating the transmission of non-family experiences to entrepreneurs in the entrepreneurial ecosystem.
6	Cultural Attribute - Supporting Culture	Culture that supports entrepreneurship	Presence of cultural attitudes that support and normalize business activities, risk taking and innovation.
		Institutionalization of the transmission of values	Formal mechanisms for transmitting the values of the entrepreneurial culture to entrepreneurs in the entrepreneurial ecosystem are evident.
		Values of the RF	FR with deep-rooted values of excellence, industriousness, initiative clearly visible to the entrepreneurs of the ecosystem.

Nro.	Interview categories	Identified groups	Description
		Transmission of family values	Entrepreneurial families that extend their values to entrepreneurs in the ecosystem directly or through their resources to entrepreneurs.
7	Social Attribute - Capital investment	Existence of local investment capital	The availability of investment capital from family and friends, angel investors and venture capitalists and are made available to the entrepreneurial ecosystem
		Institutionalization of the Financial Support Instruments	The institutionalization of investment capital programs, such as angel investors and venture capitalists, is evident in the entrepreneurial ecosystem.
		Family Financial Support Instruments	Entrepreneurial families with shared vision in the business portfolio and promote or seek investment in entrepreneurs.
8	Material Attributes - Universities	Recognition of the existence of universities or entities with training programs.	Presence of training entities and visibility of entrepreneurship training programs individually or in partnership.
		Formalization of the programs and their articulation with entrepreneurial families or support entities.	There are evident mechanisms for entrepreneurial families to promote or participate in entrepreneurship or similar training programs.
9	Material Attributes - Support services, entities and facilities	Recognition of support services or entities and facilities present in the ecosystem.	Presence of incubators, incubation programs, consulting firms, entrepreneur services, coworking spaces or similar in the entrepreneurship ecosystem.
		Formalization of articulation with support programs or facilities	There are evident mechanisms for the formal participation of entrepreneurial families in entrepreneurship programs, incubators, or services to entrepreneurs.
10	Material Attributes - Public Policy and Governance	Acknowledgement of the existence of a public policy that supports entrepreneurship and governance	Public policy approved and in operation at the local or national level that is visible and leverages entrepreneurship.
		Active participation in the construction and follow-up of public policy.	There are evident mechanisms for the participation of entrepreneurial families in the construction of public policy and in its follow-up and implementation.
11	Material Attributes - Open Markets	Recognition of the existence of a market that favors entrepreneurship	Presence of a market that stimulates local entrepreneurship, culture that favors entrepreneurship.
		Active participation that enables the opening of markets for entrepreneurs	Formal mechanisms for entrepreneurial families to link entrepreneurs in their value chains or supplier development strategies with entrepreneurs in the ecosystem.

Source: Own elaboration

Chapter 5: Results

This chapter presents the results of the research that sought to determine how entrepreneurial families influence the development of entrepreneurial ecosystems using the family social capital approach. As mentioned above, the Manizales entrepreneurial ecosystem was analyzed as a case study and is presented according to the different perspectives, i.e. those of the entrepreneurs and mentors, those of the actors or agents supporting entrepreneurship, and those of the entrepreneurial families and employees of these family businesses.

As a result of the case analysis, it was possible to establish how entrepreneurial families, through their family social capital, can influence the development of entrepreneurial ecosystems. This impact could be determined through the visibility of "bridging" mechanisms that impact or fit with the social and cultural attributes of the entrepreneurial ecosystem, driving the entrepreneurial dynamics.

The results presented below also indicate the importance of the rootedness of entrepreneurial families and the degree of institutionalization of family social capital in the promotion of entrepreneurship within the entrepreneurial ecosystem.

As a common element, the joint result of the perception of the entrepreneurial ecosystem and entrepreneurial families is presented first, followed by the incidence of family social capital in each of the attributes of the ecosystem for each stakeholder group that was interviewed.

5.1 The Manizales entrepreneurial ecosystem and entrepreneurial families

For all the interviewees and all the stakeholders, it is evident the existence of an entrepreneurship ecosystem; around 62% mentioned that it became more visible since the beginning of the program promoted by the Luker Foundation of the Restrepo family, called Manizales Mas.

There is a coincidence in determining the reasons for which the interviewees evidence the existence of the ecosystem; the most relevant are: the presence of entities and universities, the articulation between actors and support programs, and the presence and visibility of Manizales Más as the significant institutional articulator of the city. According to Spigel's (2017) articulation model, in the narrative of the actors, there is a lack of evidence of components that are found but not mentioned.

Table 27 shows the results of the interviews for each of the attributes and components of Spigel's (2017) model from the actors of the entrepreneurship ecosystem's point of view. There, it is also possible to identify the gaps or links that are less developed and clear for the actors; however, it is still not clearly established how this gap is resolved, as is the case of investment capital.

Table 27. Evidence of entrepreneurship ecosystem of Manizales

Attribute	Component	Evidence Manizales Entrepreneurship Ecosystem
CULTURAL	Culture of support	The ecosystem's actors show that the culture of support for entrepreneurship has evolved today; being an entrepreneur has status; however, there is still a conservative culture coming from colonization, resilience, and coffee culture that considers working a value. It is required to work more on risk by doing business. Values: resilience, collaboration, well-done work, solidarity, honesty, civility, teamwork, trust, respect, responsibility, and keeping one's word.
	Entrepreneurship stories	There is evidence of visible stories of entrepreneurship as a tradition in a city that is characterized by being highly industrial, unlike other regions in the area. Contemporary stories prevail or are more visible than those of traditional companies, examples provided mainly by entrepreneurs and managers of support entities; only in the case of mentors, traditional companies, and cases of failure from more than two decades ago were visible.
SOCIAL	Networking	Most interviewees evidenced the existence of networks; however, their emphasis is on institutional networks that house the institutional support in the ecosystem. Networks focused on entrepreneurs have had intermittent development; sustainability is complex.
	Human resources	It is reflected in the presence of universities in a university city; however, it is not visible to the interviewees how the ecosystem promotes or mobilizes the flow of talent to new companies. In some sectors, such as ICT, a gap is evident for entrepreneurs, and given the high labor supply, they go to work in large companies.
	Mentors and role models	It is one of the strongest points of the ecosystem from the interviewees' point of view, mainly because of the contribution made by Manizales Mas. It is the first mentoring program; entrepreneurs make it visible and perceive a lot of value. In the ecosystem, there are five other mentoring programs; however, they are not visible to the different actors.

Attribute	Component	Evidence Manizales Entrepreneurship Ecosystem
		The recommendation is to expand the mentoring programs so that more entrepreneurs can benefit from them.
	Investment capital	It is the most critical gap in the ecosystem. There is evidence of a financing table as one of the instruments; however, it stopped working due to the pandemic. There is a network of angel investors; however, it is still not visible to all the agents of the ecosystem. All the interviewees consider that this point should be urgently addressed in the ecosystem.
	Public policy	For interviewees and mainly for the support entities, the existence of the public policy on entrepreneurship is visible, first in the country, from the CONPES on entrepreneurship and the Entrepreneurship Law, as well as the policy of the Mayor's Office of Manizales on Entrepreneurship, Competitiveness, and Employment. Some interviewees mentioned that Manizales is one of the few cities in the country with a local public policy on entrepreneurship.
	Universities training programs	Universities and entrepreneurship training programs are clear, visible, and convincing for all interviewees (support entities and entrepreneurial families). For entrepreneurs, mentors, and entrepreneurial families, the detail regarding specific programs is not so easy, mainly because some call the oversupply of training programs or services to entrepreneurs. The SUMA alliance (Manizales University System), which has existed in the city for more than ten years, facilitates its visibility and articulation in different fields, including entrepreneurship, as evidenced in the interviews.
	Infrastructure	It is an ecosystem component with less visibility or clarity for the interviewees. For the vast majority, it is mainly associated with the infrastructure of entities such as Universities or the Chamber of Commerce; some show evidence of prototyping laboratories, and only 7 out of 34 interviewees identified coworking spaces in the city. It is another critical gap in the ecosystem since it is a virtual space for entrepreneurs to network.
MATERIALS		Although for most of the interviewees (support entities and entrepreneurial families), there is both a business incubator and a program such as Manizales Mas, university programs from the entrepreneurship units are much more evident.
	Support Services	Despite the existence of an accompaniment route, half of the interviewees mentioned that there is a saturation of programs for entrepreneurs, mainly in the early stages, and that the services for business acceleration are fewer, and therefore there is a deficit of support programs or services at this stage of the entrepreneurial process. Only three people interviewed mentioned the intellectual property services that exist in the ecosystem. Can evidence that the knowledge is focused on the benefits of the entities that are part of the entrepreneurship network and not on other articulated actors that are not so visible.
	Open Markets	Manizales is a small city with a limited market and arguably cannot mobilize the market for new enterprises, much less for more sophisticated ventures. From the side of family businesses, although they mention their interest in linking entrepreneurs in their value chain, they cannot meet the supply conditions in terms of technical requirements or quantity. On the other hand, most of those interviewed mentioned the need for entrepreneurs to open up to global markets and generate global solutions, given that the city does not create conditions conducive to scalable growth. Manizales is possibly the first natural market, but it is not the right one for growth.

Source: Own elaboration 2022

Another relevant element of the ecosystem and the coincidences of the responses to the interviews has to do with the differentiator compared to other regions of the country, which makes it much easier to cooperate and work with, described by its own actors as a team. The

vast majority sees it as a value within the culture of support for entrepreneurship, which is why the Manizales ecosystem has been cataloged by Innpulsa Colombia⁸ as one of the most articulated ecosystems "with the most important alliance for entrepreneurship at a national level. Which integrates a dozen local and national public and private institutions, supervised, and directed by the Babson Entrepreneurship ecosystem project" (Innpulsa Colombia & Universidad Nacional de Colombia, 2017, p. 199).

From the perspective of the support agents in the entrepreneurship ecosystem, although it exists, it is dynamic and vibrant compared to other regions of the country, and it is still developing. It requires much more visualization of its outcome, i.e., entrepreneurs. Although there are elements that show progress, as can be seen in Table 28, there are still gaps to be improved given that "...there are some difficulties in the type of entrepreneurship that is carried out, it is useful for the current type of entrepreneurship, however, for the technology-based one we are lacking." [INT56/EA14].

Table 28. Area of contribution of entrepreneurship ecosystem programs to entrepreneurial activity.

Area of contribution	Types of entrepreneurial ecosystem support program	Number of citations	Description of the contribution (a cite example)
Strategy	Mentoring Program	44	It contributes to the strategy, from the "resolution of business problems", in the "focusing of the business".
	Entrepreneurial Stories	48	"Knowing stories is inspirational and aspirational", given that awareness is generated by knowing the mistakes and learnings of others.
Mindset	Mentoring Program	28	"It changes the mindset of the minds by asking themselves questions and guiding them in their solution".

⁸ Entrepreneurship and innovation agency of the National Government, which, together with the Ministry of Commerce, Industry and Tourism, accompanies the acceleration of high-potential ventures and innovative and financing processes that allow the country's companies to scale to generate more economic development, equity and opportunities for all Colombians. Retrieved from <https://innpulsacolombia.com/nosotros> March 2022.

Area of contribution	Types of entrepreneurial ecosystem support program	Number of citations	Description of the contribution (a cite example)
Organization	Mentoring Program	36	It provides support when it allows errors to be evidenced and allows "increasing the speed at which decisions are made".
Growth	Mentoring Program	21	It applies to companies in their growth "measured mainly by sales and jobs".
	Support networks	17	It allows "to be visible and in force, leveraging our growth, support for the closing of businesses".

Source: Adapted from Benavides-Salazar et.al., (2021)

Entrepreneurial families and family businesses in Manizales, as well as in Colombia and the world, are of great importance. In the specific case of this city, the tradition of family businesses comes from its first settlers. A large majority of the entrepreneurial families mentioned above own a portfolio of companies. Their relevance in the territory is evidenced by the number of companies they own and the employment they represent (54%, as seen in Table 29). There is also an essential difference in longevity, with family businesses tending to be older than non-family businesses.

Table 29. Distribution of family and non-family businesses in the entrepreneurship ecosystem of Manizales

Type of business	Family Business			Non-Family Business			Total Firms num	Total Employees
	Firms num	Emplo yees	Age >50*	Firms num	Employ ees	Age >50*		
Large Business	38	16.309	6	50	12.653	4	88	28.962
Midsize Busines	110	2.967	2	137	4.100	0	247	7.067
Total	148	19.276	8	187	16.753	4	335	36.029
%	44%	54%	66%	56%	46%	33%	100%	100%

Source: Benavides-Salazar et.al., (2021)

* More than 50 years since it was founded

Indeed, the rootedness of entrepreneurial families in Manizales is based not only on the longevity and permanence of the firms in the territory, creating businesses and generating employment, but also on their effective participation in the dynamics of the entrepreneurial ecosystem and their relationships with the entrepreneurs of the same ecosystem. As Table 29

shows, at least 11 outstanding entrepreneurial families, out of 148 medium and large family businesses in the region, were recognized by all respondents and interviewees.

The family businesses of the entrepreneurial families identified by the interviewees are among the first, second, third, or fourth generations of family ownership. The oldest business is 116 years old, while the most recent is 36 years old. Family businesses rooted within the region have high levels of interaction of a different nature than non-family businesses (Baù et al., 2019). In this sense, some interviewees recognized a personal relationship with some entrepreneurial families that influenced their entrepreneurship beyond their business interactions.

As mentioned above, some entrepreneurial families have played relevant roles in the generation and development of the entrepreneurship ecosystem in Manizales due to their strong links with local community stakeholders (Bird & Wennberg, 2013).

Restrepo, Arango, Mejía, Henao, Villegas, Toro, and Rivas are the entrepreneurial families with the highest degree of activity in the ecosystem with different strategies. Due to the visibility of the Manizales Más program, the Restrepo family is the most relevant in the ecosystem. This family (who founded the Luker Foundation) is the family that stands out for its representation in terms of contribution to the ecosystem and has a clear perception of having a institutionalize intermediation strategy in the entrepreneurship ecosystem of Manizales (Table 30).

In 1994, the Restrepo family founded a non-profit organization called Fundación Luker to develop strategies and actions related to corporate social responsibility. This foundation supports social programs based on education and entrepreneurship. From this foundation, the

Restrepo family articulates and energizes the Manizales Más program, which is an alliance for the integral development of the entrepreneurship ecosystem in Manizales.

The program, as mentioned earlier, generates the necessary conditions to create and grow companies, supported by knowledge and action that transform the economic model. It has also mobilized other entrepreneurial families to participate and be active in the ecosystem by being mentors, investing in startups, participating in innovation programs, or telling entrepreneurship stories with local universities.

The "Restrepo family operates through the Luker Foundation (LF)" [INT18/M8] and supports the city's entrepreneurship program. As can be seen in Table 30, there is a strong link between the family and the Luker Foundation. Their contribution is evident in the "creation of a portfolio of projects" [INT7/M4], in the "generation and permanence of jobs". [INT4/E4], in social projects, and, more recently, in the generation of knowledge and entrepreneurship "the creation of the entrepreneurial ecosystem (Manizales Más program) they found fertile ground for promotion, supported by the entrepreneurial spirit that exists in the city". [INT14/M10].

Table 30. Institutionalization: Ties between the Restrepo family and the Luker Foundation.

Components	Luker Foundation	Tie with Restrepo Family (RF)
Corporate Board	Ten board members	Six board members
Strategic direction	Mission and vision with a focus on entrepreneurship	Orientation and approval of the M+ program with the support of Babson College. At least once a year, for the last seven years.
M+ program	Promoter, funder, and articulator of other actors to achieve the program's operation.	At least two family members from the board of directors participate in the planning process of M+

Source: Own elaboration based on annual management accounting <https://fundacionluker.org.co/informes-de-gestion/>

Indeed, the program has endowed more than 90 companies for more than six years and has generated 2,500 new formal jobs (Luker Foundation, 2019). In 2020 they achieved 570 new

jobs the high-potential companies accompanied that year, with an average growth of 5.2% (Luker Foundation, 2020). The deep roots of the Restrepo family in the territory, as well as the high level of institutionalization of their family social capital in the entrepreneurship ecosystem of Manizales, in contrast to non-family businesses (Martínez-Sanchis et al., 2020), explain why this family has been identified by most of the interviewees as an entrepreneurial family that has positively impacted the entrepreneurship ecosystem individually and collectively in general.

It does not necessarily mean that other entrepreneurial families are not relevant in the ecosystem; however, as mentioned above, Restrepo is the most visible. The following sections will show the role of other families that complement the role played by the Restrepo family and its clearest instrument, the Luker Foundation.

5.2 Entrepreneurs and mentors' perspective⁹

One of the research objectives is to identify, from the perspective of entrepreneurs and mentors, the incidence of entrepreneurial families in the entrepreneurship ecosystem of Manizales, as a case study. For this reason, each of the attributes of the ecosystem is shown below to facilitate its understanding.

⁹ Parts of Entrepreneurs and mentors' perspective was taken from the article "The role of entrepreneurial ecosystems: the family social families in entrepreneurial capital approach" published in the Journal of Entrepreneurship in Emerging Economies by authors Benavides-Salazar et.al, (2021). Paper published within the framework of this research.

5.2.1 Effect of "bridging" mechanisms on cultural attributes

As mentioned in chapter 2, bridging capital is the type of social capital most likely to generate positive externalities. Fundamentally, it is based on an individual's ability to intermedate with unrelated groups (friends, colleagues, contacts in general) beyond the immediate collective (Sharma, 2008).

The achievement of goals and objectives is possible because the accomplishment of intermediation and transaction facilitates opportunities using their financial and human capital (Burt, 1992). Mechanisms such as persuasion, agenda setting, or interest mobilization, among others, are used (Montemerlo & Sharma, 2010).

5.2.1.1 Entrepreneurship stories

Entrepreneurship stories are a straightforward tool with which entrepreneurial families can potentially bridge by conveying their experience (positive or negative) to positively influence entrepreneurs and the entrepreneurship ecosystem in general (Spigel, 2017) as well as engage in entrepreneurship (Isenberg, 2010). Likewise, these same entrepreneurial families can extend their entrepreneurial values to support and formalize entrepreneurial activities, risk-taking, and innovation (Spigel, 2017).

As shown in Table 31, entrepreneurship stories are one of the most relevant and heterogeneous linking mechanisms. The interviews with entrepreneurs and mentors reveal the existence and visibility of entrepreneurship stories derived mainly from entrepreneurial families rather than non-family businesses.

As seen in the same table, the relationship of entrepreneurial families is both by promotion and direct participation, being their own stories, the ones transmitted or shared in the ecosystem. Most of the programs are developed through the involvement of entrepreneurial families and mainly through those promoted by the Luker Foundation, that is, by the Restrepo family itself, with a great diversity of methods for transmitting entrepreneurial stories.

In this regard, the primary transmission mechanism is word-of-mouth oral communication, followed by training and talks, participation in networks, and mentoring; however, all these mechanisms are limited since their reach depends on the level of relationship with the respective actor or instrument. Other more extensive means are also used, such as printed media through books and newspapers or television through news or programs.

Table 31. Mechanisms for transmitting entrepreneurship stories: participation of entrepreneurial families and perceived impacts.

Bridging mechanism	Description	EF* Involvement	Num. of citations mention impact on entrepreneurial ecosystem
M+** -Book	15 HPV+ cases written by HPP++	Yes	23
University Alliance - Book	Systematization of the M+ experience	Yes	1
Casa Luker – Book	Relates the 100 years of history of Casa Luker (2006).	Yes	1
La Patria (Newspaper)	Communication of cases of local companies with M+	Yes	12
M+ Training	HPV, Adventure Mas, with the support of Babson College	Yes	2
Universities “Alianza SUMA” Training	HPP and Entrepreneurship units, Case entrepreneurship histories	Yes	7
M+ Training	Growth Team: team trained by Babson College to support business growth	Yes	1
M+ Networking – Meet-ups	Opportunities to present the stories	Yes	9
M+ - Mentoring	Mentoring program where stories are transmitted	Yes	13
Andi del Futuro – Networking Happy Hour	Present the success stories of the city's entrepreneurs	No	9
Tradition - Voice to voice	Knowledge through links with traditional EF	No	27

Bridging mechanism	Description	EF* Involvement	Num. of citations mention impact on entrepreneurial ecosystem
Tradition - Voice to voice	Linking employees with traditional companies	No	10

Source: Benavides-Salazar et.al., (2021)

*EF: Entrepreneurial Family

** M+: Manizales Mas, the entrepreneurial program promoted by the Luker Foundation of the RF in alliance with other institutions in the city.

+ HPV: High Potential Venture

++HPP: High Potential Professor

According to the results of the interviews, Manizales Más is the agent with the most story transmission mechanisms in the city's entrepreneurship ecosystem. Manizales Más participates in 9 of the 16 mechanisms identified, either as an ally or as a promoter. It is relevant to mention that entrepreneurs participating in the programs promoted by the Luker Foundation were able to identify a more significant number of story transmission mechanisms than other entrepreneurs.

As it is known (Roundy, 2016), the own stories of each entrepreneurial family and their entrepreneurial journey are one of the most own capitals that can be counted on; it is also clear the relevance of these stories for entrepreneurs. Like mentoring, listening to entrepreneurial stories generates a high value for entrepreneurs in the ecosystem, mainly in their mindset, "...the stories are a great promoter of change and have brought me to think globally" [INT16/E12].

The most highlight attribute for all entrepreneurs interviewed is associated with an aspirational dimension. They perceive that the entrepreneurship stories "...allow them to understand that everyone goes through the same problems, the same mistakes and, despite this, they have come out ahead" [INT2/E2].

It translates into greater visibility of entrepreneurial activity in entrepreneurial ecosystems (Table 32), which, while an aspiration of each entrepreneur, has led to a change in the collective

mindset. Until a few years ago, "it was thought that in Manizales it was difficult to make progress" [INT10/E9]. Today, "being an entrepreneur is a source of pride for the city" [INT16/E12].

5.2.1.2 Supportive culture

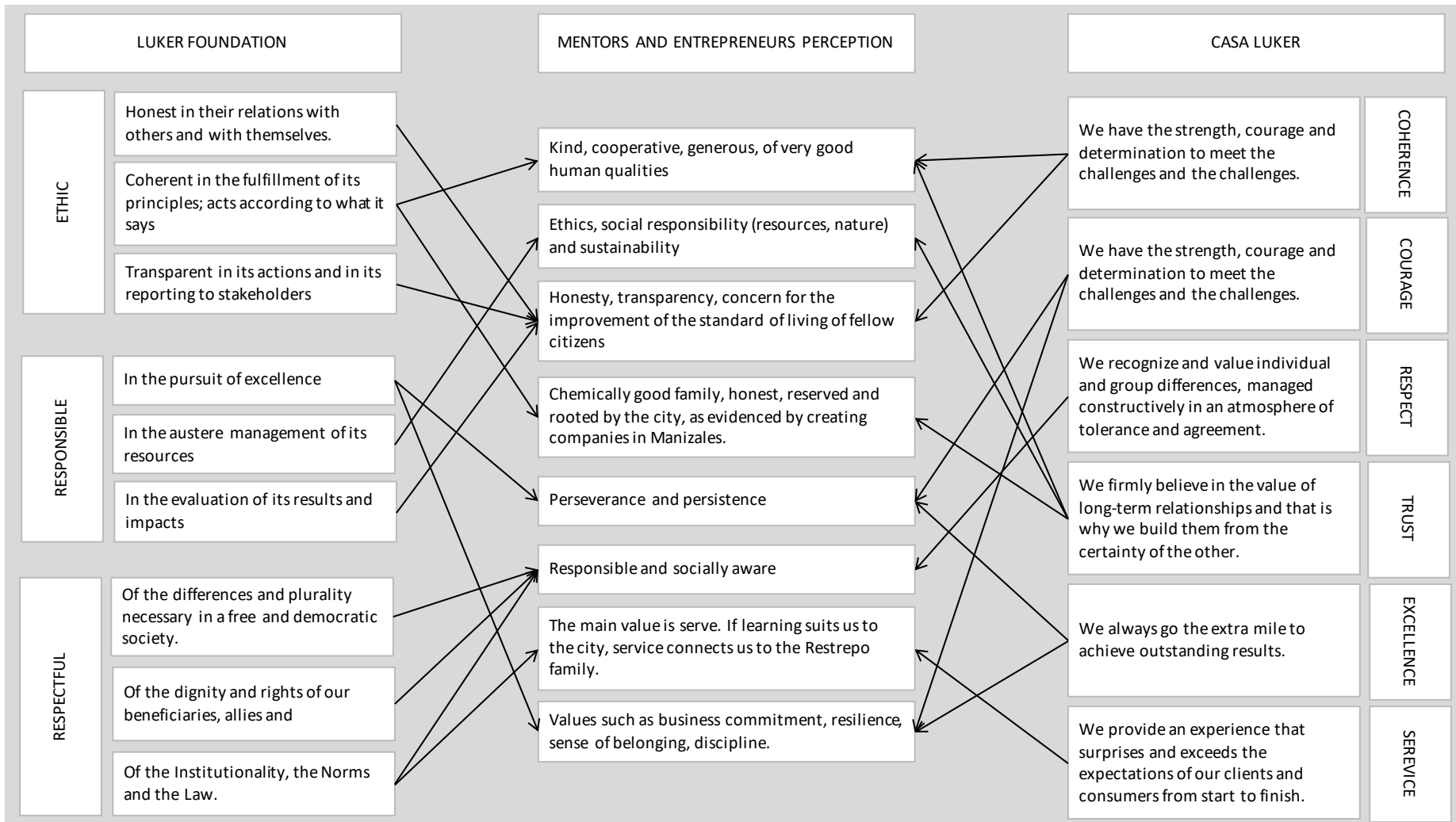
The culture of support in the entrepreneurship ecosystem, mainly its set of values (Roundy, 2016), is influenced by the culture and values of the entrepreneurial families present and primarily rooted in the territory (Martínez-Sanchis et al., 2020). In particular, for entrepreneurs and mentors, the Restrepo family seems to influence the entrepreneurship ecosystem in Manizales strongly. Although values are difficult to capture explicitly, they are perceived and felt.

Values are generally transmitted through example since family values influence or influence corporate values.

It is possible to establish from the research that in the case of the Restrepo family, one of the essential instruments for transmitting values (both family and corporate) is the social projects promoted through the Luker Foundation. An approximation to this result was sought, which is shown in Figure 14, in which there is a clear relationship between the perceived values of the family and the values of the Luker Foundation and those of the family business Casa Luker, mainly given the social ties they have with its members.

Entrepreneurs not linked to the programs promoted by the Luker Foundation did not identify these values, in contrast to those related to Manizales Mas, who mentioned the importance of service when asked about the values of the Restrepo family "...the main value is to serve if learning is linked to the city, service connects us with the RF" [INT5/E5].

Figure 14. Values of the Restrepo family in the entrepreneurial ecosystem.



Source: own elaboration 2021

As a complement and example of how this value is rooted in the city's entrepreneurs, and mainly in the entrepreneurs who have participated in Manizales Más programs, it is evident in their perception of its transmission: "Now we are looking for people with the capacity to learn and serve" [INT5/E5]. A tangible result of this statement is that high-potential enterprises (HPEs), after receiving advice, mentoring, and growing at an accelerated pace, "have also become mentors" [INT4/E4].

A more detailed analysis reveals that entrepreneurial families have mechanisms to transmit values. Specifically, the Restrepo family has three through which it shares its values: the first is the Luker Foundation, the second is the entrepreneurship program called Manizales Mas, and the third is through direct interactions (Table 32). In the case of the Manizales entrepreneurship ecosystem, the transmission of values is mainly perceived through two of the mechanisms and their related activity, namely the Luker Foundation and the Manizales Más program, both formal mechanisms developed by the Restrepo family.

Table 32. Mechanisms that support the transmission of entrepreneurial values in the entrepreneurship ecosystem.

Bridging mechanism	Description	EF* Involvement	Num. of citations mention impact on entrepreneurial ecosystem
Institutionalized Programs launched by Fundación Luker	University in your School program generates seedbeds of entrepreneurs as well.	Yes	3
	M+, with entrepreneurship supported by Babson College.	Yes	19
	Social programs such as cocoa-producing families.	Yes	1
	Civic Programs	Yes	3
	Training, workshops, talks.	Yes	9
	Book 'Changing the entrepreneurial culture with facts' 15 EAP cases written by PAP.	Yes	23
	Mentors: as a mentor, 'I feel responsible transmitting values (persistence, social commitment).'	Yes	1
Non-institutionalized transmission of EF values	Through its actions, it supported and created companies, generating employment.	Yes	12
	It transmits its values to a very close group.	Yes	4
	With the experiences of the daily life of the companies where they have interests.	Yes	8

Source: Benavides-Salazar et al., (2021)

*EF: Entrepreneurial Family

The transmission of values is appreciated by entrepreneurs, the most critical being innovation (69% of entrepreneurs), followed by risk-taking and growth (Roundy, 2018), creating a culture, and even a code of conduct.

As a result of the above findings, the entrepreneurial stories of entrepreneurial families and their values, such as innovation, risk-taking, and innovative entrepreneurship within entrepreneurship ecosystems (saving relational family social capital), are mainly transmitted by formal mechanisms and enrich their cultural attributes, decisively influencing entrepreneurs in entrepreneurship ecosystems.

5.2.2 Effect of "bridging" mechanisms on social attributes

The strength, but mainly, the institutionalization and capillarity of the family network ties allow and facilitate the exchange (bridging) of crucial resources such as advice, financial and support, as well as connections with critical actors such as investors, workers, and suppliers (Spigel, 2017).

5.2.2.1 Networks

The entrepreneurs and mentors interviewed identified that family social capital influences the networks of the entrepreneurial ecosystem through different mechanisms mobilized by their relational capital (Pearson et al., 2008). A sample of this is shown in Table 33, in which, of the 14 mechanisms identified by the interviewees, an entrepreneurial family, specifically the Restrepo family, participates in 8.

The above establishes that the family contributes to the entrepreneurial ecosystem networks through various mechanisms that feed these relationships, such as training programs and

advisory services—an essential difference between non-family businesses given their strong local roots (J. H. Block & Spiegel, 2013). Likewise, it is possible to establish that it not only achieves this with its relational capital but also with its vision and language, that is, the cognitive capital that it transmits to the Luker Foundation, and this, in turn to its programs and projects.

As an example of the impact of entrepreneurial families in the networks, for the entrepreneurs interviewed, it is related to access to capital; in this regard, one of the interviewees stated that "there is another way to access sources of financing, not only commercial banking" [INT9/E8]. For the mentors, the result of these networks is also evident; in this regard, one of them stated that "it is known that other entrepreneurs are making alliances" [INT2/E2], which is a motivating factor for strengthening the networks.

Table 33. Mechanisms that support networks and relationships in the entrepreneurship ecosystem.

Bridging mechanism	Type	Description	EF* Involvement	Num. of citations mention impact on entrepreneurial ecosystem
Mentoring program (mentors' network)		Connect with talent, workers, and customers	Yes	11
HPV (**M+)		Connect entrepreneurs, recently with investors	Yes	30
Adventure Mas	Training program		Yes	9
Start-up Mas		Connect entrepreneurs	Yes	1
Growth Team			Yes	2
'Vender Mas'		Connect entrepreneurs and market	Yes	1
Alianza SUMA		Connect entrepreneurs	Yes	8
Meet-ups	Informal meetings	Connect entrepreneurs and investors	Yes	11
'Andi del Futuro'	Training and advisor	Commercial network	No	25
City Associations		Connect entrepreneurs	No	4

Bridging mechanism	Type	Description	EF* Involvement	Num. of citations mention impact on entrepreneurial ecosystem
‘Incubar Manizales’		Connect entrepreneurs and investment	No	15
‘Emprendedores anónimos’	Training and informal meetings	Connect entrepreneurs	No	2
‘Red de Emprendimiento’	formal meetings and forums	Connect entrepreneurs	No	14
‘Mesas de competitividad’		Connects companies with universities and the public sector	No	3

Source: Benavides-Salazar et.al., (2021)

* EF: Entrepreneurial Family

** M+: Manizales the Mas, an entrepreneurial program promoted by the Luker Foundation of the RF in alliance with other institutions in the city.

When analyzing the participation and visibility of the different networking mechanisms in the entrepreneurship ecosystem, although it was found that the entrepreneurs participating in Manizales Mas programs had a natural relationship with the networking mechanisms promoted by the Restrepo family through its programs, it was not possible to show that they are the family's own networks made available to the ecosystem, but that it is done through the Luker Foundation.

It is also important to mention that it was found that entrepreneurs who have not participated in support programs of Manizales Mas related to and mentioned in lower proportion the mechanisms mobilized by the entrepreneurship ecosystem of Manizales. Regarding the impact of participation in networks, entrepreneurs mainly said growth, knowledge, and business contacts, including contacts with suppliers (Table 33).

From the mentors' point of view, the networks promoted by the entrepreneurial families, particularly the Restrepo family, are visible and directly related to the High Potential Enterprises program. From the point of view of the entrepreneurs, this program is a "mechanism

for the development of networks, articulated with partners, suppliers, buyers" [INT6/E6]. It is a valuable component to achieve accelerated growth of the enterprises.

5.2.2.2 Mentors and role models

According to the entrepreneurs and mentors interviewed, many entrepreneurs and members of entrepreneurial families in the entrepreneurial ecosystem can be considered role models. However, entrepreneurs, they are not particularly visible. Some do not even know whether it is a family business or not, or they know that it is a family business but cannot identify which entrepreneurial family it belongs to; however, the case of the Restrepo family is different; this family is recognized as a successful entrepreneurial family, and for some entrepreneurs, "...the Restrepo family has become a role model" [INT15/M].

The most critical mechanism promoted by the Restrepo family through the Luker Foundation is the business mentoring program, the first program of this type in the city and currently the only program with a model transferred by MIT, which has extensive experience in the subject (Table 34). Likewise, this program now has the largest number of mentors with significant experience in the entrepreneurship ecosystem.

When analyzing the mentoring program and the profile of mentors (Table 19), entrepreneurs have family businesses; that is, they are part of entrepreneurial families, clear the participation and incidence in the entrepreneurship ecosystem. In this regard, mentoring programs generate a high value for entrepreneurs, whether or not they participate in the institutionalized programs of entrepreneurial families or the mentors themselves (Table 34). From the perspective of influence on entrepreneurs, mentoring "has been the most valuable program topic because of the knowledge and experience of the mentors" [INT4/E4]. Mentoring "has substantially supported the ecosystem; it is a fundamental pillar" [INT7/M4].

Table 34. Bridging mechanisms for role models and mentors in the entrepreneurship ecosystem.

Bridging mechanism	Description	EF* Involvement	Num. of citations mention impact on entrepreneurial ecosystem
High Potential Venture (HPV) mentoring program	MIT methodological transfer, "52 mentors, linked by meetings and method". ≥ 30 YoE**	Yes	26
Adventure Mas mentoring program	EAP graduates. Entrepreneurs from EAP ≥ 10 YoE	Yes	4
Empréndelo – Chamber of Commerce	No evidence of method or structure Ecosystem Businessmen ≥ 10 YoE	No	2
Incubar Manizales (Apps.co, Curso Concurso)	No evidence of method or structure Ecosystem Businessmen ≥ 10 YoE	No	5
Andi del Futuro	No evidence of method or structure ≥ 30 YoE Businessmen	No	8
Trayectoria Mega – Chamber of Commerce	No evidence of method or structure People in the business of the city ≥ 20 YoE	No	1

Source: Benavides-Salazar et.al., (2021)

*EF: Entrepreneurial Family

**YoE : Years of Experience

It is important to note that, although there are other business mentoring programs in the entrepreneurship ecosystem (Table 34), the only mentoring program mentioned by both interviewed mentors and entrepreneurs was the Manizales Mas program. In terms of perceived impact by entrepreneurs, such mentoring program covers more potential areas of contribution to entrepreneurship (Table 19), such as growth ("the most important influence on entrepreneurs is the organization for growth" [INT15/M2]), strategy and organization ("contributes to the entrepreneurs' strategy by helping to solve business problems" [INT16/E12]), and mindset ("enables a change in mindset by asking questions and guiding their solutions" [INT10/E10]).

Indeed, the results show that entrepreneurs perceive family social capital linking mechanisms and influence their businesses by generating resources compared to non-family businesses (Cucculelli et al., 2014). Therefore, entrepreneurs' perception and identification of the

mechanisms by which entrepreneurial families bridge their family social capital influence the social attributes of the entrepreneurship ecosystem.

Finally, it can be evidenced that there is an excellent dynamic in entrepreneurial mentoring. In the entrepreneurship ecosystem, mentors come from entrepreneurial families, members of the entrepreneurial families, and mentors promoted by entrepreneurial families (Table 35). All of them overlap in the entrepreneurship ecosystem (it is the clearest bridge of the structural dimension of family social capital). The described dynamics demonstrate that it is possible to enrich the social attributes of the entrepreneurship ecosystem and provide advice, professional contacts, critical knowledge, and skills that can decisively influence entrepreneurs interacting with the entrepreneurship ecosystem.

Table 35. Mentors or role models identified in the entrepreneurial ecosystem.

Nro.	Name	Rol	Sector	Entrepreneurial family
1	Bruno Seidel	Mentor	Business	No
2	Pablo Renato Gutiérrez	Mentor	Business	No
3	Kenny Gómez	Mentor	Academic and business	Yes
4	Carlos Hugo Gómez	Mentor	Business	Yes
5	Sergio Ocampo	Mentor	Business	Yes
6	Gaby Muñoz	Mentor and role model	Business	Yes
7	Sebastián Díaz	Mentor	Business	No
8	Luis Elberto Martínez	Mentor	Business	Yes
9	Juan David Builes	Mentor and role model	Business	No
10	Daniel Restrepo	Mentor and role model	Business	No
11	Augusto Londoño	Mentor	Support entity	No
12	Oscar Giraldo	Mentor and role model	Business	No
13	Felipe Henao	Mentor and role model	Business	Yes
14	Margarita Arango	Mentor	Business	Yes
15	Claudia Benavides	Mentor	Support entity	No
16	Marcelo Echeverry	Mentor	Business	No
17	Sebastián Aristizábal	Mentor	Business	No
18	Carlos Holmes	Mentor	Business	Yes
19	Mario Valencia	Mentor and role model	Business	Yes
20	Lina Ramírez	Mentor	Support entity	No
21	Eduardo Villegas	Mentor and role model	Business	Yes
22	Paula Toro	Mentor	Government	No
23	Carlos Eduardo Jaramillo	Mentor and role model	Business	No
24	Mentores de EAP	Mentor	Business	--
25	Luis Fernando Franco	Mentor	Business	No
26	Jorge Iván Ospina	Mentor	Business	Yes
27	Luis Enrique Velasco	Mentor	Business	No

Nro.	Name	Rol	Sector	Entrepreneurial family
28	Oscar Villegas	Mentor and role model	Business	Yes
29	Nicolás Llano	Mentor	Support entity and business	No
30	Marcela Escobar	Mentor	Support entity	No
31	Sandra Molano	Mentor	Business	Yes
32	Mauricio Trujillo	Mentor	Business	Yes
33	Felipe Montes	Mentor	Business	No
34	Germán López	Mentor	Business	No
35	Beatriz Robledo	Mentor	Business	Yes
36	Beatriz Olarte	Mentor	Business	No
37	Jhon Jairo Granada	Mentor	Business	No
38	Eduardo Botero	Mentor	Business	Yes
39	Germán Maldonado	Mentor	Support entity	No
40	María Elena Gómez	Mentor	Business	Yes
41	Fernando Toro	Mentor	Business	Yes
42	María Emilia Arango	Mentor	Business	Yes

Source: Own elaboration 2022

5.2.2.3 Investment capital

The interviews with mentors and entrepreneurs reveal that, according to their perception, there are resources such as investment capital in the entrepreneurship ecosystem. However, it is not organized, it is not visible, and, therefore, they do not know how to access these resources. The same happens on the investors' side, "there is investment capital; however, investors do not know how to access entrepreneurs" [INT22/M1].

Despite the above, interviewees identify mechanisms of financing schemes at different stages of business development. These resources include seed capital, business angels, commercial banks, and funding committees (Table 36).

Table 36. Bridging mechanisms between financial institutions and shared vision in the entrepreneurship ecosystem.

Bridging mechanism	Description	EF* Involvement	Num. of citations mention the impact on entrepreneurial ecosystem by entrepreneurs	Num. of citations mention the impact on entrepreneurial ecosystem by support entities
M+	Bureau of financing (non-financial instrument)	Yes	4	6
	Angel investors	Yes	19	0

Bridging mechanism	Description	EF* Involvement	Num. of citations mention the impact on entrepreneurial ecosystem by entrepreneurs	Num. of citations mention the impact on entrepreneurial ecosystem by support entities
Incubar Manizales with Curso Concurso	Seed Capital	No	1	6
Fondo Emprender		No	2	4
Incubar Manizales with Gestión de Inversión - ELÉVATE	Angel Investors and Investment networks	No	1	3
Commercial bank	Financial loans	No	6	0
Invest In Manizales	Investment Promotion Entity	No	1	1
Inlazu	Investment Boutique	No	1	6
Red de Angeles inversionistas	Angels Investors and Investment networks	No	0**	8
Otros	Finaktiva, Finanfuturo, Ascenso, Manizales Innova, Andi del Futuro	No	0	5

Source: Adapted from Benavides-Salazar et.al., (2021)

* EF: Entrepreneurial Family

** : At the date of the entrepreneur's interview, the network was not operating

As mentioned above, this is the component of the attributes of the entrepreneurship ecosystem that requires the most attention from the different actors and agents present. A sample of this is that only two of the eight mechanisms mentioned by the interviewees are promoted by an entrepreneurial family, specifically by the Restrepo family through the Luker Foundation.

Despite the above, it is evident that the Restrepo family has left a great legacy as an entrepreneurial family that has invested and invested in the region almost since its creation (e.g., "the acquisitions of companies in the past, small and medium, have helped them to grow" [INT14/M10]; investment in "new ventures is their strategic core" [INT15/M2]; and "the funding of the Luker Foundation in the entrepreneurship ecosystem itself" [INT15/M2]); being relevant factors that are deeply rooted in the entrepreneurship ecosystem of Manizales.

These same results show that the interviewees perceive that the roots of the region's family business (Casa Luker) have been generated thanks to the drive of the entrepreneurial family,

the Restrepo family, and their vision. This vision transcends the purely business sphere given that since its founders have been interested in and have contributed to the development of the region; in the past, for example, the Restrepo family "was a great promoter of development with the creation of financing instruments such as the Banco de Caldas, the Corporación Financiera de Caldas, and Seguros Atlas, which unfortunately do not exist today" [INT7/M4]. They have always been present and have often participated in "transformative projects" [INT23/M9].

According to the interviewees, the most recent transformative project is financing the entrepreneurship ecosystem. The Restrepo family "allocates resources through the Luker Foundation for the operation of the Manizales Mas program, mobilizing more actors for its sustainability" [INT20/E22]. It is based on a shared vision of "going out into the world to find the best entrepreneurship model for the city" [INT5/E5], which is achieved given its social capital.

In conclusion, the mental models and shared vision of entrepreneurial families throughout the entrepreneurship ecosystem (represented in cognitive family social capital) enrich their social attributes and provide the dynamics of financial support for ventures, which decisively influence entrepreneurs within the entrepreneurship ecosystem of Manizales.

5.3 Supportive entities' perspective

The second objective of the research is to identify, from the perspective of the support entities, the incidence of entrepreneurial families in the entrepreneurship ecosystem of Manizales, as a case study. For this reason, each of the attributes of the ecosystem is shown below to facilitate its understanding.

5.3.1 Effect of "bridging" mechanisms on cultural attributes

The strength, but mainly, the institutionalization and capillarity of family network ties allow and facilitate the exchange (bridging) of stories of entrepreneurship, supportive culture, and values (Spigel, 2017).

5.3.1.1 Entrepreneurship stories

As evidenced in the interest group of mentors and entrepreneurs (Table 31), entrepreneurship stories are indeed one of the most relevant and heterogeneous linking mechanisms, evidencing the same mechanisms referenced by mentors and entrepreneurs.

For the support entities in the entrepreneurship ecosystem, entrepreneurship stories have a significant influence given that companies with recognition are referents since they enjoy respectability and admiration (structural social capital). There is also a consensus that a well-told story mobilizes entrepreneurs to inspire them and show them that successful entrepreneurs make the same mistakes and overcome them.

Also, it is referred that they have learned to write cases and, therefore, entrepreneurship training is possible to do differently; in this regard, "Babson College comes with play, empathy, things that you normally do not use when you are in a class" [INT10/EA12].

For the agents of the entrepreneurship ecosystem, the existence and visibility of entrepreneurship stories become clear because these agents somehow promote their transmission in their support programs. In this regard, due to the more significant presence of family businesses, it is evident that the examples are mainly from entrepreneurial families rather

than from non-family businesses; however, for all the interviewees, it is not a differentiated strategy.

Comparing the responses of mentors, entrepreneurs, and support entities can be inferred that for the entrepreneurs, it is more evident to refer mainly to stories of entrepreneurial families with companies of at least 30 years of creation since they know them through the support entities. These promote stories of entrepreneurs' "graduates" of their programs as a motivational factor and that they do not see the entrepreneurial process as distant. "Those examples we take that our users see a possibility to grow, we do not put them so far from their capacity" [INT15/EA12]. Unlike the mentors who know them by their level of relationship, the primary transmission mechanism is oral word-of-mouth communication.

In this regard, it is confirmed, according to the responses of the interviewees, that all these mechanisms are limited, given that their scope depends on the level of relationship with the respective actor or instrument. An example of this is that within the support entities, there is a clear difference in knowledge according to the type of entity and the role of the person interviewed. For example, a trade union has a closer relationship with the business sector and therefore has more in-depth knowledge of the stories of entrepreneurial families. On the other hand, the director or manager has a higher level of relationship, due to their relational capital, than the person in charge of the entrepreneurship program and, therefore, provides greater detail on the entrepreneurial families and their stories.

On the academic side, only people linked to the university created by entrepreneurs have a detailed knowledge of the history of entrepreneurial families and a wide range of transmission mechanisms, given that many graduates have businesses. Clear evidence is the book 40 stories of entrepreneurship (V. Molina & Gómez, 2019), edited in celebration of the 40th anniversary

of the university. "We generate every year with several instruments. One focused on our graduates, who become Graduatam advisors, a kind of mentors" [INT8/EA9]. It is an entity that highly promotes the culture of entrepreneurship and strategies with conference formats so that the university community and the city.

Specifically, regarding the instruments generated by the support entities, it is evident that most of them are temporary, i.e., they do not achieve sustainability over time. [INT8/EA12]"It was a program called management community, and it is no longer operating, approximately two years," [INT8/EA2] "From Empréndelo, we do it for our entrepreneurs as part of the program and as part of the motivation. [INT7/EA3] "In Andi del Futuro, we do it through the space "Happy Hour" it is a light space to talk about a success story where the process is shown, and a conversation is generated because of the pandemic we stopped doing it. We should take it up again."

According to the results of the interviews, for the support entities in the ecosystem, it is evident that Manizales Más is the program that has the most significant number of mechanisms and is the most visible in the transmission of stories in the city's entrepreneurship ecosystem. Although most have story transmission tools, they are not visible to the other support entities.

In the case of the entrepreneurial families, it is unanimous among the interviewees in this group that the families are not given to telling their stories on their initiative; they accept invitations and do so generously. It is a reserved and modest society and culture that prefers to work and not show their results, and even [INT10/EA14] "they do not believe they have achieved greater results." However, it is also visible that third-generation entrepreneurs are a little more open to articulate with the ecosystem [INT9/EA10] "the Super de Alimentos case with Andrés, for example, has a different vision, much more receptive to tell" as well as those of Flota el Ruiz,

[INT10/EA10] "the second generation that set up Taxia Live, they are very given to tell their experiences, the founders very reserved."

While Manizales Mas has many instruments, for some interviewees, the relationship of the Restrepo Family with Fundación Luker and Manizales Mas is seen as an indirect impact since it is promoted. Still, it is seen as a separate space, as an example of this is that in everything Manizales Mas does [INT9/EA12], "there is a relationship of the family, it launched us into a new world, a new way of approaching entrepreneurship, however, the family rarely acts directly." [INT9/EA9] "it is not a strategy of the family; it is a methodological strategy of Manizales Mas. Luker extends that practice exercise in cocoa; in the cocoa farm, they do it very well". It reinforces that the instrument of the Restrepo family is the Luker Foundation.

Likewise, for this group of interviewees, other entrepreneurial families that have instruments and that, of course, depend on the family are visible [INT9/EA9] "the case of Induma that has Casa Induma (Arango family) that is not only commercial but an experiential center to tell their business story and its promotion for innovation and projects."

From the interviews, other entrepreneurial families that transmit their stories through strategies associated with innovation projects with universities also become visible, for example [INT10/EA9] "Riduco (Rivas family) also Super de Alimentos (Henaó family) participate in academic events in different universities with research groups with Innovation Rallies."

Finally, there are other mechanisms mentioned by the interviewees, and they are associated with word-of-mouth, for example [INT11/EA9] "Don Hector (Mejía family) tells his company stories in his close circle, in family relationships." Another mechanism is also mentioned, and it is through the companies' web pages; "Sumatec's page (Villegas family) is a repository of stories, forming managers or entrepreneurs in the hardware world as a podcast."

5.3.1.2 Supportive culture

For the support entities in Manizales and, therefore, in the entrepreneurship ecosystem, there is a culture that favors entrepreneurship. For the interviewees, it is visible and can even be measured by the results in indicators such as Doing Business or by seeing that there are "articulated processes mainly between universities" [INT12/EA2], being the entities that for most of the interviewees most promote the culture that favors entrepreneurship. It is also evident that it has been a process, and evolution is noticeable, "today being an entrepreneur and businessman in Manizales have a reputation and a good reputation" [INT13/EA14]. However, it is unanimous that "there is no articulated work of the support entities in the entrepreneurship ecosystem on common values in the entrepreneurship ecosystem" [INT13/EA5] [INT12/EA7]; they agree because of the condition of the territory, but not because of a deliberate work "that channels towards a common goal" [INT13/EA6].

Despite what has been expressed regarding the advances in culture, there is also agreement that "we are still too conservative" [INT11/EA8], "we are very local, the vision is small, it is difficult to have undertakings such as Unicorn in this region" [INT13/EA12]. Therefore, considering that training has an impact on mentality and culture, there should be a collective imaginary that is consolidated from training.

The evolution referred to by the interviewees is associated with the condition of Manizales as a university city, which has not only a high density of students but also researchers (2nd place nationally; DNP, 2021), and that precisely from the university's entrepreneurship is promoted decisively, is a substantial foundation for the culture of entrepreneurship. A clear example is the "Universidad Autónoma, which has been training entrepreneurs since its foundation" [INT13/EA12].

Continuing with what was made visible by the entrepreneurs and mentors, the values evidenced by the supporting entities are very similar, confirming that they are values rooted in the territory transmitted mainly by non-institutionalized mechanisms; that is, they are transmitted through example. The values mentioned in the interviews are presented in a word cloud¹⁰ (Figure 15) to better visualize the prevalence of the reported value. It has been highlighted as a value since the city's founding; there is work well done, respect, and honesty. It is an ecosystem, and because of the contribution of Manizales Mas (a mechanism promoted by the Luker Foundation of the Restrepo family), collaboration and companionship have been consolidated.

Figure 15. Values present in the entrepreneurship ecosystem of Manizales according to support entities.



Source: own elaboration 2022

Specifically in the participation of entrepreneurial families in the entrepreneurship ecosystem, as a result of the interviews with the support entities, it is indicated hem the families transfer their values in a certain way. They do it through their companies, employees, and their foundations, and this effect is shared externally and in the ecosystem. It indicates that foundations are a valid and visible mechanism through which entrepreneurial families influence the territory and, therefore, the entrepreneurial ecosystem. The foundations that the

¹⁰ The frequency of words associated with entrepreneurship culture in the ecosystem, mentioned by all the interviewees, was used, and the free tagcloud application was used for the graph.

interviewees evidenced are mainly "the Luker Foundation of the Restrepo family and the Arme Foundation, of the Mejía family" [INT90/EA3], as well as "Fundación Super and what Induma¹¹ does" [INT15/EA9], as well as "the TEC Group¹²" [INT15/EA10].

It validates what was evidenced in the group of entrepreneurs and mentors: the mechanisms through which entrepreneurial families transmit values are formal mechanisms such as their family businesses and foundations (those who have them). Other informal ones, through direct interactions or in "associative or trade union spaces" [INT16/EA17]. The relevance of this point is that those support entities better account for this attribute because of their level of relationship with the ecosystem.

As well as members of entrepreneurial families who do it through mentoring programs, the transmission of values from example and guidance "Eduardo Botero, who is a mentor, promotes in the companies he accompanies" [INT13/EA8], as reaffirmed by an interviewee: "I have been in his mentorships, and he transmits his values in those spaces" [INT16/EA20].

Finally, another way of transmitting values is responsibility towards suppliers and customers, an example being Cauchosol (family business) which feels it must "protect those who buy from me and those I sell to, an impressive responsibility" [INT16/EA16].

¹¹ Super Foundation of the company Super de Alimentos of the Henao family. Induma Company of the Arango family.

¹² Holding business of the Sumatec company owned by the Villegas family.

5.3.2 Effect of "bridging" mechanisms on social attributes

The strength, but mainly, the institutionalization and capillarity of family network ties allow and facilitate the exchange (bridging) of networks, mentors and role models, and investment capital (Spigel, 2017).

5.3.2.1 Networks

From the perspective of family social capital, specifically in the structural dimension (links through relational and collaborative networks), it is possible to identify whether there is an influence of entrepreneurial families on the collaborative networks of the entrepreneurship ecosystem and even if they do so through different mechanisms mobilized by their relational capital (Pearson et al., 2008). To this end, it is necessary to establish the presence of support networks in the ecosystem from the perspective of the support entities, which are the ones that mobilize, promote, or manage these networks.

With this perspective, the networks presented in Table 33 are confirmed. According to the entrepreneurs and mentors, 14 mechanisms are present in the ecosystem, and the Restrepo family participates in 8 of them through the Luker Foundation and its program Manizales Mas. A difference compared to what was reported by the entrepreneurs is the presence and visibility of the angel investors network. At the time of the interviews did not yet exist in the ecosystem, despite the recentness (2020) reported by 12 of the 22 interviewees, the "Tertulia Digital¹³" [INT18/EA6], which is conceived as the closest to the entrepreneurs and their needs

¹³ Community created in 2020 for entrepreneurs in the ICT sector in which stories of companies in the sector are transmitted, networking is generated to attract talent, investment, and business.

(connections, supply, and support) and companies in the MEGA¹⁴ trajectory. Likewise, although the entrepreneurship network is reported as an essential network in the ecosystem, it is not directly available to entrepreneurs.

There are also particular networks, i.e., sectoral, where those who report them are in those sectors or even those who coordinate them. These are the orange "economy node" [INT16/EA2], "competitiveness roundtables, business clusters" [INT16/EA8], and business roundtables with ACOPI and the Chamber of Commerce of Manizales for Caldas.

There is an evident need to improve the networks, either because of their focus, because they are not present, or are still very recent. According to the interviewees, although the network of angel investors exists, the relationship between entrepreneurs and investors still needs to be strengthened; they are "failing to establish strategies" [INT17/EA5]. On the other hand, for some support entities, the networks are more of an academic or even mainly institutional nature, i.e., entities are articulated but not entrepreneurs [INT18/EA10]. Finally, they mention that there should be more significant "institutional discipline so that the spaces are more organic and natural in their collaboration dynamics" [INT18/EA19].

The relationship between the entrepreneurial families and the ecosystem is evidenced through their relational capital and support networks; the interviewees visualize the Restrepo family and the entrepreneurs. Just as they make the family visible, the evidence that the contribution is through different mechanisms, whose "main mechanism is the Luker Foundation"

¹⁴ Program that seeks to transform the mentality and culture of the country's entrepreneurs. To create a community of entrepreneurs who think big and achieve MEGA goals for an increasingly competitive Colombia. Retrieved from <https://www.trayectoriamegacolombia.com/Experiencia-MEGA/Proposito> July 2, 2022.

[INT15/EA3] that feed or strengthen the networks in the ecosystem ("it does not actively participate in certain things; that is precisely an incalculable contribution, the freedom to operate" [INT20/EA9]) and that not only achieves this with its relational capital but also with its vision and language, therefore, the cognitive capital can also be transmitted to the Luker Foundation and this in turn to its programs and projects. As a non-formal and indirect mechanism, they make visible the network of mentors, who "become network facilitators and also a channel to open the way" [INT20/EA4].

Outside the Restrepo family, the next family with greater recognition in its contribution to the ecosystem networks, according to the support entities interviewed, is the Villegas Velásquez family, as evidenced through the "formation of the TEC group in which they associate 5 or 6 new companies, promoting collaborative networks" [INT20/EA4]. Another way is by participating in "innovation challenges with the academic sector" [INT20/EA9] [INT20/EA12]. For most of the interviewees, it is not accessible to evidence the participation of the other families, even one of them considers that "they are in a higher layer, they are above and the networks below and it is difficult to see if there are links" [INT18/EA21], which could mean that the ties are very close.

Finally, a positive factor for the future of the networks, the ecosystem, and the participation of entrepreneurial families and their companies, is that there is a higher speed in the change in the vision of the entrepreneur, "previously, it had a role only to generate profits, employment and when they were associated with other things it was in social responsibility. Now that the world is more open and these companies, which are very traditional because of their creation, have had to open, I always see the willingness to work for the city" [INT21/EA14].

5.3.2.2 Mentors and role models

Although for the support entities, as well as for the entrepreneurs and mentors interviewed, many people in business and members of entrepreneurial families in the entrepreneurial ecosystem can be considered role models, for the former, they are much more visible, differentiating more quickly whether it is a family business or not (Table 35). The visibility and relevance of the Restrepo family are reaffirmed.

The list in Table 35 is only a sample of the people who, for the interviewees, can be mentors. Several interviewees have shown that the entrepreneurial families of Manizales are reserved and, in some cases, do not participate directly but through their instruments. It may be the case for the Restrepo family. Although it is visible as a family and its main instrument, the Luker Foundation, no member is referenced either as a mentor or a role model.

In terms of mentoring, the evolution of this strategy in the ecosystem is clear; in 2019, when entrepreneurs and mentors were interviewed, they mainly visualized the mentoring program of Manizales Más ("it works, and it is a successful case" [INT22/EA4]). However, in 2021 and 2022, the entities with these programs were expanded, such as Incubar Manizales (Elévate, Explora, and Sofisticate), the Chamber of Commerce of Manizales for Caldas (Mega trajectory, sell more), Neurocity, the Autonomous University (UAM Counselor). However, many of the ecosystem's support entities are not so visible; they mainly refer to the Manizales Más program.

It confirms what mentors and entrepreneurs reported: mentoring is valuable for the ecosystem, entrepreneurs, and mentors. Some samples of this are evidenced as follows: "it allows to identify that an external vision manages to expand expectations" [INT39/EA1], it enables entrepreneurs to "expand the network of contacts, it becomes a sponsor" [INT18/EA2]; "I would not call it a mentor but an inspirer" [INT23/EA6]. "The mentor gives a floor to the dream,

the entrepreneur must dream, and the mentor gives him/her a floor, supports and shows him/her the way to follow that dream" [INT23/EA9].

From the ecosystem, the fact that there are mentors and several mentoring programs in the city contributes to "relational capital, influences the growth mindset of the companies and how they should function from the strategy and the organization" [INT22/EA19]. Although the relevance of mentoring, mentors, entrepreneurs, and some support entities states that sometimes "mentees do not take advantage of mentoring, they do not feel it as a contribution" [INT21/EA21].

As mentioned by mentors and entrepreneurs, the essential mechanism promoted by the Restrepo family through the Luker Foundation is the business mentoring program (Table 11). It is a program that "provides guidelines and fields of action, as well as the impact on the development of entrepreneurship" [INT23/EA7]. It is one of the most visible and relevant mechanisms in the ecosystem.

As mentioned above, the support entities interviewed evidenced the participation of members of the entrepreneurial families in the mentoring programs, mainly Manizales Mas, such as "Mariana Villegas, Gaby Carolina, Nicolás Restrepo" [INT20/EA2], "Enrique Jaramillo, Andrés Calderón mentor of Mega trajectory" [INT25/EA9]. It is also evident for the interviewees that there are members of entrepreneurial families of recognized trajectory who are not mentors in formal programs of the ecosystem; for example, "Alejandro (Mejía family)" [INT24/EA5], "Felipe (Henoa family), José Alfredo and Felipe Román (Restrepo family)" [INT25/EA9]. However, some families are seen as mentors or investors in their innovation or entrepreneurship strategies.

Concerning the above, although there is little participation, it is recognized (by the interviewees) the interest of the entrepreneurial families' companies in giving back or

contributing to the territory. However, given that the instruments they use are formal (foundations), at the level of mentoring, they prefer not to be so visible, and it is even more, the "civic contribution that they deliver than an economic retribution for the business" [INT24/EA10].

An additional reason for the low participation of some entrepreneurial families in topics such as mentoring is that "the first generation is already in another moment of life" [INT24/EA17], they are retired from the entrepreneurial activity, and their participation is focused on talks or conferences when they are invited. The active second generation also does not participate because of their lack of time, "it is a lack of commitment and their responsibility that I will not fail" [INT24/EA17]. For the entrepreneurs, this is not visible, probably because at the interview, they were mostly active receiving mentoring, a situation that did not allow them to evidence a gap that the support entities did since they feel that more mentors are needed in the entrepreneurship ecosystem.

Finally, for support entities, entrepreneurs, and mentors, family social capital linkage mechanisms influence their businesses by generating resources compared to non-family businesses (Cucculelli et al., 2014). Therefore, the perception and identification by support entities of the mechanisms by which entrepreneurial families bridge their family social capital influence the social attributes of the entrepreneurship ecosystem.

5.3.2.3 Investment capital

The results of the interviews with the support entities, as well as with the mentors and entrepreneurs, reveal that, according to their perception, resources such as investment capital exist in the entrepreneurship ecosystem (70% say that there is the capital, 26% mentioned that there is the capital, but it is scarce and only 4% that it does not exist). However, it is not

organized, it is not visible, and, therefore, they do not know how to access these resources. However, there is a clear difference in knowledge or perception depending on the role or type of services offered by the program.

Those who mention that it is scarce refer to the culture of the city, where two complicated issues are combined; in the first place, the "shyness to invest, they invest in what is safe, and it is mixed with the low profile that conservatism gives, that in Colombia it is not known that they have money. It is challenging to map them and reach them" [INT27/EA10], and even that they are "awful at investing in risk" [INT26/EA4].

Despite the above, it is also recognized that this is changing and that "it is beginning to have a visible traction of training, and it is possible to make an investment match to work" [INT29/EA20], even the presence of entrepreneurial families with available resources that are becoming interested is evident, what happens is that "they do not go to the meetings of the formal ecosystems, there is a lack of investment culture in this type of issues. Not all of us are like Oscar Villegas, who also invests and goes to meetings" [INT25/EA21].

According to what is reported in Table 37, it is possible to say that if at the stage in which it offers services, the interviewed entity is not oriented to the growth or acceleration of companies, then it does not have an investment orientation and, therefore, responds sometimes based on intuition or does not have information. Only the actors of these programs with management positions respond with a higher level of knowledge due to their level of relationship in the ecosystem, as mentioned above.

Table 37. Bridging mechanisms for investment promotion and shared vision in the entrepreneurship ecosystem.

Support Entity Respondent	Code of Interview	Stage offer program	Identify Investment capital	Instruments	Promotes investment	Entrepreneurial families
1	EA1	Strength	Yes	Curso concurso, Manizales innova, Finanfuturo, Fondo Emprender, Red de Angeles Inversionistas	Yes (Fondo Emprender)	Don't Know
2	EA2	Strength	Yes	Ascenso, Red de Copilotos	No	Don't Know
3	EA3	Growth	Yes	Fondo Emprender, Red de Angeles Inversionistas, Finaktiva, mentores	Scarce (Epic Forum)	Arango
4	EA4	Strength	Yes	-	No	Villegas Velasquez
4	EA5	Strength	No	Red de Angeles Inversionistas	No	Restrepo (Luker Foundation)
5	EA6	Growth	Yes	Red de Angeles Inversionistas	Yes (Elevete, Red de Angeles)	Don't Know
6	EA7	Growth/accelerate	Scarce	Mentores, inversión en Helppo	Yes	Restrepo (Luker Foundation)
7	EA8	Strength	Yes	-	Scarce (finance master)	All entrepreneurial families
8	EA9	Strength	Scarce	Fondo Emprender, Red de Angeles Inversionistas, Inlazu	No	Buitrago, Giraldo
9	EA10	Strength	Yes	-	No	All entrepreneurial families
10	EA11	Strength	Yes	Red de Angeles Inversionistas	Yes	Restrepo (Luker Foundation), Mejía, Buitrago
9	EA12	Strength	Yes	-	No	Don't Know
11	EA13	Strength	Scarce	Red de Angeles Inversionistas	No	Families with Foundations
12	EA14	Strength	Yes	Entrepreneurial Families	No	All entrepreneurial families
13	EA15	Strength	Yes	-	No	Don't Know
2	EA16	Strength	Scarce	-	No	Families with Foundations
14	EA17	Strength	Yes	-	No	Villegas Velasquez
15	EA18	Strength	Yes	Elévate, Red de Angeles Inversionistas	Yes (Elevete, Red de Angeles)	Buitrago
16	EA19	Innovation	Scarce	Red de Angeles Inversionistas, Andi del futuro	No	All entrepreneurial families
8	EA20	Strength	Scarce	-	Scarce (Finaktiva)	Villegas Velasquez, Normandy
17	EA21	Growth/accelerate	Yes	Entrepreneurial Families	No	Villegas Velasquez
18	EA22	Growth/accelerate	Yes	Elévate, Red de Angeles Inversionistas	Yes (Elevete, Red de Angeles)	All entrepreneurial families

Support Entity Respondent	Code of Interview	Stage offer program	Identify Investment capital	Instruments	Promotes investment	Entrepreneurial families
19	EA23	Government	Yes		No	

Source: Own elaboration 2022

Another element to highlight is the instruments or examples given regarding investment (Table 38); the vast majority responded about programs or entities of the entrepreneurship ecosystem. Only 4 of the 23 interviewees identified specific cases of investment in companies. It reaffirms what the entrepreneurs and mentors said about the little information on investment in entrepreneurship in the ecosystem.

Despite the above, the interviewees identify mechanisms of financing schemes in the different stages of business development. These resources include seed capital, business angels, commercial banks, and financing committees (Table 38).

Table 38. Bridging mechanisms between financial institutions and shared vision in the entrepreneurship ecosystem.

Bridging mechanism	Description	EF* Involvement	Num. of citations mention impact on entrepreneurial ecosystem by entrepreneurs	Num. of citations mention impact on entrepreneurial ecosystem by support entities
M+	Bureau of financing (non-financial instrument)	Yes	4	6
	Angel investors	Yes	19	0
Incubar Manizales with Curso Concurso	Seed Capital	No	1	6
Fondo Emprender		No	2	4
Incubar Manizales with Gestión de Inversión - ELÉVATE	Angel Investors and Investment networks	No	1	3
Commercial bank	Financial loans	No	6	0
Invest In Manizales	Investment Promotion Entity	No	1	1
Inlazu	Investment Boutique	No	1	6
Red de Angeles inversionistas	Angels Investors and Investment networks	No	0**	8

Bridging mechanism	Description	EF* Involvement	Num. of citations mention impact on entrepreneurial ecosystem by entrepreneurs	Num. of citations mention impact on entrepreneurial ecosystem by support entities
Otros	Finaktiva, Finanzfuturo, Ascenso, Manizales Innova, Andi del Futuro	No	0	5

Source: Own elaboration 2022

*EF: Entrepreneurial Family

** : at the date of the interview the network was not operating

Specifically, in the case of the participation of entrepreneurial families, there is an essential difference in the entrepreneurs' responses, and that is that, in addition to mentioning instruments, they identify entrepreneurial families that promote investment in entrepreneurs (Table 37). Five entrepreneurial families with interest or concrete cases of investment in the entrepreneurship ecosystem, one family through its instrument Fundación Luker (Restrepo family) invests in the ecosystem but not in local companies. This family promotes only two of the 11 mechanisms mentioned by the interviewees.

Finally, only 5 of the 23 respondents from the support entities mentioned that they were not aware of whether entrepreneurial families invest in companies in the ecosystem. The others either identify families and specific cases of investment or mention that, in some way, all entrepreneurial families invest (7 of the 23 interviewed); however, they do so mainly in their value chain or their area of interest.

In conclusion, the importance of mental models and the shared vision of entrepreneurial families is reaffirmed not only in the territory but throughout the entrepreneurship ecosystem (represented in the cognitive family social capital), enriches its social attributes, and provides the dynamics of financial support to the ventures. If this relevant role in the ecosystem were understood, it would be possible to mobilize better the decisive influence on entrepreneurs within the entrepreneurship ecosystem of Manizales.

5.3.3 Effect of "bridging" mechanisms on material attributes

According to Spigel (2017), in an entrepreneurship ecosystem, material attributes have a tangible presence in the territory. There are different alternatives to evidence such presence. One is the physical location as universities or formalized standards, another is through approved and current policies, and it can even be with well-regulated markets that materialize locally.

The following is a description of the attributes according to the support entities interviewed in the entrepreneurship ecosystem of Manizales.

5.3.3.1 Universities and training institutes

In the first place, universities provide support to develop a region's human capital and, at the same time, foster the entrepreneurial mentality of their students, encouraging them to create new companies or to work in them (Wolfe, 2005).

On the other hand, because one of their mission axes is the generation of knowledge, universities develop new technologies and create business opportunities (Lawton Smith et al., 2014). This is a fundamental role in entrepreneurship ecosystems since university entrepreneurs can mobilize these opportunities by taking their products or services to the market through licensing or spin-offs (Kirchhoff et al., 2007; Scott, 2004).

In the case of the ecosystem under study, which is immersed in a university city (Acebedo Restrepo, 2011), it is evident to the support entities interviewed that there is an academic institutional strength. Therefore, they refer to the physical presence of universities and technical training entities and their entrepreneurship training programs (Table 39).

Table 39. Report of Academic entities with entrepreneurship training programs.

No	Academic Entities	Description ¹⁵	Num. of citations
1	SUMA	The Manizales University System is made up of 7 universities, 2 public (Universidad de Caldas and Universidad Nacional de Colombia, Manizales campus) and 5 private (Universidad de Manizales, Universidad Autónoma, Universidad Católica, Universidad Luis Amigó, and Universidad Antonio Nariño).	19
2	Sena	National Apprenticeship Service offers free training with technical, technological, and complementary programs focused on the country's economic, scientific, and social development.	22
3	Universidad Nacional de Colombia Sede Manizales	A national public university that was consolidated with the creation of the School of Engineering in 1948, it has Faculties of Engineering and Architecture and Science and Administration.	4
4	Universidad Autónoma de Manizales	A private regional university created in 1979, it has Faculties of Health, Social and Business Studies, and Engineering.	5
5	Universidad de Caldas	A national public university created in 1943 has Faculties of Arts and Humanities, Agricultural Sciences, Exact and Natural Sciences, Legal and Social Sciences, Health Sciences, and Engineering.	4
6	Universidad de Manizales	A private, regional university created in 1972 has Faculties of Science, Economics, Accounting, Administration; Science and Engineering; Social and Human Sciences; Legal Sciences, and Health Sciences.	2
7	Universidad Católica de Manizales	A private regional university created in 1954, it has the Faculties of Social Sciences, Humanities, Theology; Health Sciences, Engineering, and Architecture.	2

Source: own elaboration 2022

Of the above universities and training entities present in the territory, six instruments are reported that contribute to entrepreneurship through training, the most cited being the "entrepreneurship route" promoted by Manizales Mas, i.e., by the Luker Foundation (Restrepo family) and Fondo Emprender, a program of SENA, a public entity of technical training in Colombia (Table 40). It shows the level of institutional articulation under an integrated entrepreneurship training program.

Table 40. Mechanisms for the formation of academic institutions in the entrepreneurship ecosystem.

No	University Mechanisms	Entity	Num. of citations mention
1	Entrepreneurship Route	SUMA	17

¹⁵ The other universities that are part of the SUMA Alliance, i.e., Universidad Católica Luis Amigó and Universidad Antonio Nariño, are not visible in the table, since they are not reported as active in entrepreneurship.

No	University Mechanisms	Entity	Num. of citations mention
2	Fondo Emprender and Tecnoparque	Sena	16
3	Entrepreneurship seedbeds	Universidad de Caldas	1
		Universidad de Caldas	3
		Universidad de Manizales	3
4	Entrepreneurship units	Universidad Autónoma de Manizales	6
		Universidad Católica	2
		Universidad Nacional de Colombia	3
5	Innovate	CHEC ¹⁶	2
		Unitécnica	3
		UniRémington	1
6	Entrepreneurship training	IES Cinoc	1
		Colegios	2
		Comité de Cafeteros	1

Source: Own elaboration 2022

Regarding high-value services such as laboratories, consulting, or knowledge transfer for creating companies, only two entities report it. It may indicate a low specialization or orientation in the innovation of the support entities in the entrepreneurship ecosystem examined.

Regarding the articulation between the support entities, it is relevant to observe (Table 41) that the entities that are most articulated in the ecosystem are the academics/universities; however, their articulation is between themselves and is mainly done through the strategies of Manizales Mas, as mentioned by one of the interviewees, "we cooperate institutionally in all the programs of Manizales Mas, such as startup Mas, adventures Mas, EAP, High Potential Professors, Mentors. Including members of the Chamber of Commerce such as Sell More and Grow More" [INT32/EA9].

¹⁶ Caldas Hydroelectric Power Plant. Public utilities company

Table 41. Articulation between support entities in the entrepreneurship ecosystem.

Type of entities	Sena - Fondo Emprender	Manizales Mas	Entrepreneurship Route	Students in practice	University lectures and conferences	Business Incubator	Entrepreneurship Network	Universidad Autónoma	Government	Total
Academic	0	0	0	0	0	0	0	0	1	1
University	0	1	1	1	0	1	0	0	0	4
University	1	0	0	0	0	0	1	0	0	2
University	0	1	1	0	0	0	0	1	0	3
University	0	1	1	0	0	0	0	0	0	2
Subtotal	1	3	3	1	0	1	1	1	1	12
Guild	1	0	0	0	0	0	0	0	1	2
Guild	0	0	0	0	0	0	0	0	0	0
Guild	0	0	0	0	0	0	0	0	0	0
Guild	0	1	0	0	0	1	0	0	1	3
Guild	0	1	0	0	1	0	1	1	1	5
Subtotal	1	2	0	0	1	1	1	1	3	10
Financial	0	0	0	1	0	0	0	0	0	1
Financial	0	0	0	0	1	1	0	0	0	2
Investment	0	1	1	0	1	1	0	0	1	5
Financial	0	0	0	0	0	0	0	0	0	0
Investment	0	0	0	0	1	1	1	0	1	4
Subtotal	0	1	1	1	3	3	1	0	2	12
Company	0	1	0	0	1	0	0	0	0	2
Investigation	1	0	0	0	1	0	0	1	1	4
Program	0	1	1	0	0	1	1	0	1	5
Program	0	0	1	0	0	0	0	1	0	2
Support	0	0	0	0	0	0	0	0	1	1
Incubator	1	0	0	0	0	0	1	0	1	3
Subtotal	2	2	2	0	2	1	2	2	4	17

Type of entities	Sena - Fondo Emprender	Manizales Mas	Entrepreneurship Route	Students in practice	University lectures and conferences	Business Incubator	Entrepreneurship Network	Universidad Autónoma	Government	Total
Public	1	1	0	0	1	1	1	1	0	6
Public	1	1	1	0	0	1	1	1	0	6
Subtotal	2	2	1	0	1	2	2	2	0	12
Total	6	10	7	2	7	8	7	6	10	63

Source: Own elaboration 2022

The mechanisms that the support entities have greater articulation towards the formation of entrepreneurs or generation of entrepreneurship from the knowledge of the universities are the entrepreneurship route of the SUMA universities and the talks and conferences of the universities, given that in some way they have invited the different actors of the entities of the ecosystem to participate. Regarding the entities or strategies and their programs, the most referenced are Manizales Mas and the government entities, followed by the Business Incubator. In this regard, in the interviews, the need to improve the articulation becomes visible, given that "a clear and consistent purpose is lacking, strategies such as the one-stop shop are proposed and are not carried out, each one does its work, but on-demand" [INT31/EA4].

The participation of the Manizales Mas strategy and the institutional articulation it achieves in the ecosystem is evident, mainly in the Material Attribute in the university's component. This is reinforced in Table 42, where the Restrepo family is the one with the highest visibility with 16 references with three instruments, university in your school, Manizales Mas, and scholarships for training at the Magister's level; followed by the Arango family with two strategies articulation with universities and "Casa Induma" from open innovation.

Table 42. Training mechanisms promoted by entrepreneurial families in the entrepreneurial ecosystem.

Code of Interview	Entrepreneurial family					Academic or educational mechanisms
	Restrepo	Mejía	Rivas	Arango	Henao	
EA1	0	0	0	0	0	No evidence
EA2	0	0	0	0	0	No evidence
EA3	1	0	0	0	0	Universidad en tu colegio
EA4	1	0	0	0	0	Universidad en tu colegio
EA5	1	1	0	0	0	Universidad en tu colegio, University Training
EA6	1	0	0	0	0	Manizales Mas
EA7	0	0	0	0	0	Universidad en tu colegio
EA8	1	0	0	0	0	Manizales Mas, Universidad en tu colegio
EA9	1	0	1	0	1	Universidad en tu colegio
EA10	0	0	0	1	0	Universidad Autónoma

Code of Interview	Entrepreneurial family					Academic or educational mechanisms
	Restrepo	Mejía	Rivas	Arango	Henaó	
EA11	0	0	0	0	0	No evidence
EA12	1	0	0	0	0	Manizales Mas
EA13	1	0	0	0	0	Manizales Mas
EA14	1	0	0	0	0	Universidad en tu colegio
EA15	1	0	0	0	0	Universidad en tu colegio, Master's Scholarships
EA16	0	0	0	0	0	No evidence
EA17	0	0	0	0	0	No evidence
EA18	1	0	0	0	0	Manizales Mas
EA19	1	0	0	0	0	Manizales Mas
EA20	1	0	0	1	0	Casa Induma, Manizales Mas
EA21	1	0	0	0	0	Manizales Mas
EA22	1	0	0	0	0	Manizales Mas
EA23	1	0	0	1	0	Casa Induma, Manizales Mas, Universidad en tu colegio
Total	16	1	1	3	1	

Source: Own elaboration 2022

The above can be noted that the rooting of the entrepreneurial families in the territory is oriented towards an intervention or direct relationship with the entrepreneurs, but not mainly through programs or strategies with universities. The Restrepo family is the only one that has a straightforward instrument of articulation from training. There are no references from the interviewees regarding clear strategies for creating companies based on research results promoted by the entrepreneurial families operating in the territory.

5.3.3.2 Infrastructure and support services

According to Spigel (2017), support services and facilities offer specialized assistance to entrepreneurs, mainly in their initial stages. While there are services such as accounting, legal in patents, and human management, among others; there are also support entities or facilities such as incubators, accelerators, and coworking that offer essential services for startups, office space, consulting, financing management and networking support (Tötterman & Sten, 2005).

In the entrepreneurship ecosystem of Manizales, there is the Entrepreneurship Network of Caldas¹⁷, which brings together 30 public, private and academic entities to offer three services to entrepreneurs: identification, validation, consolidation, and scaling up. Of the 30 support entities interviewed, 20 are the most visible (Table 43), the most relevant being Manizales Mas and the Luker Foundation, followed by the Manizales Chamber of Commerce and its programs. It is essential to highlight that, once again, the contribution of the Restrepo family has been fundamental in the dynamics of the support services in the entrepreneurship ecosystem of Manizales.

Table 43. Entities and support programs visible in the entrepreneurship ecosystem.

Nro	Entity or Program	Number of Programs	Number of citations
1	Manizales Mas	7	13
2	Fundación Luker	2	9
3	Cámara de Comercio	4	8
4	Incubar Manizales	6	7
5	Alcaldía de Manizales	12	4
6	Red de Emprendimiento	8	4
7	Andi del Futuro	1	4
8	Acopi	2	3
9	Finanfuturo	2	3
10	Bios	2	3
11	Parque Tecnológico	1	2
12	Sena	2	2
13	Bancolombia	1	2
14	Fundación Universidad Empresa Estado	1	2
15	Fenalco	2	2
16	Inlazu	1	1
17	Cemprende	3	1
18	Coworking	1	1

¹⁷ A network of public and private institutions working together, created as a result of Law 1014 of 2006, which meet to promote entrepreneurship in a unified manner in the region. In the Caldas entrepreneurship network, companies are accompanied, from the identification of the opportunity, the materialization, execution and follow-up of the business idea. Retrieved from <https://redemprendimientocaldas.com/quienes-somos/> on July 2, 2022.

Nro	Entity or Program	Number of Programs	Number of citations
19	Neurocity	1	1
20	Tertulia digital	1	1

Source: Own elaboration 2022

In terms of the articulation between the support entities of the entrepreneurship ecosystem, Table 44 reports the programs that, according to the interviewed entities, are related, either because they develop actions jointly or because they execute joint projects, showing that the articulation is "fluid and positive" where it is evident that articulating with "private universities is a little easier than with public universities" [INT33/EA18]. In this regard, it is again confirmed that the strategy generated by the Restrepo family through the Luker Foundation is the one with the best articulation in the entrepreneurship ecosystem.

Table 44. Entities and support programs that have the best articulation in the entrepreneurship ecosystem.

No	Entity or Program	Number of Articulations	FB/NFB/AFB
1	Manizales Mas	10	FB
2	Chamber of Commerce	7	NFB
3	Entrepreneurship network	5	NFB
4	Mayor's Office	3	NFB
5	Incubar Manizales	3	NFB
6	Fenalco	2	NFB
7	Epic Forum	2	NFB
8	Luker Foundation	2	FB
9	Government	2	NFB
10	Coworking	2	NFB
11	Bancolombia Foundation	1	NFB
12	OTRI	1	NFB
13	Competition tables	1	NFB
14	Fundación Universidad Empresa Estado del Eje Cafetero	1	NFB
15	Sena	1	NFB

Source: Own elaboration 2022

Despite the above, it can be established that probably the concentration of the relationship is generated between the universities and the entities allied to the Manizales Mas program;

however, the articulation between the entities of the Entrepreneurship Network of the Department of Caldas is no longer as strong or as articulated as evidenced in some interviews.

From the linkage of the entrepreneurial families in the promotion or contribution to the development of services or support programs for entrepreneurs, for the interviewees, only three families are visible, the first and most relevant, "the Restrepo family with the Luker Foundation being the most tangible and visible with Manizales Mas" [INT30/EA3], where 20 of the 22 interviewees identify as a mobilizer of this strategy followed by the Arango family and finally by the Villegas Velasquez family. We begin to differentiate the participation of the families, the first, the Restrepo family, through the ecosystem itself; the second, the Arango family, through open innovation; and finally, the Villegas family, through investment.

From the cognitive and structural dimensions of the Familiness (Pearson et al., 2008) of the entrepreneurial families, it can be established that at least three entrepreneurial families have a presence that can provide some orientation of their vision contributing to the ecosystem. However, only the Restrepo family has generated a direct intervention with programs and concrete actions in support services that articulate to other entities in the ecosystem itself; that is, its high incidence from philanthropy with the Luker Foundation achieving significant changes in the ecosystem itself.

Finally, and according to the support entities interviewed, "there is no need for more support actors, they are the ones that should be, there is a need for more articulation and communication" [INT31/EA2] as well as "interaction and focus on the programs we want to target" [INT37/EA7]. From the point of view of the potential contribution of entrepreneurial families, it is evident that there is a direct mechanism, and it is "through mentoring, which can

be strengthened with more mentors from entrepreneurial families if they participate" [INT37/EA4].

As mentioned in the university component, where there is no evidence of progress or actions associated with technological ventures, the support entities recommend that there should be "more sophisticated ventures, which are scalable, with global impact and focused on Innovation" [INT39/EA12]. Finally, it is observed that a significant challenge for the support entities would be to achieve strategies to "add large entrepreneurial families to belong or to articulate in a better way with the entrepreneurship ecosystem, such as investing in ventures for example" [INT40/EA20].

5.3.3.3 Policies

The materialization of policies and governance in entrepreneurship ecosystems occurs through government regulations and laws, which promote, facilitate, or mobilize the creation of publicly funded support programs (Huggins & Williams, 2011; Mason & Brown, 2014). The policy is articulated or conditioned to the economic and political context of the territory and, therefore, frames the context in which the venture develops. For this reason, it may involve improving conditions for business creation and mobilizing resources from different sources to implement entrepreneurship support programs, support networks, or business incubation.

In the case of the entrepreneurship ecosystem of Manizales, in Colombia, public policy has a local scope and another at the national level; the most visible for the interviewees is the public policy of Entrepreneurship, Competitiveness, and Employment of Manizales (Alcaldia de Manizales, 2019) approved in 2019.

Regarding this policy of local scope, 21 of the 23 interviewees (Table 45) identify it and consider it relevant for developing entrepreneurship in the city. However, "the challenge is that it is not only a document but can be operationalized." Therefore, an entrepreneurship observatory provides "recommendations to update public policy and becomes an iterative process that evolves" [INT41/EA13].

Table 45. Governance and public policy of the entrepreneurship ecosystem.

	Governance		Public policy			
	Entrepreneurship network	Manizales Mas	Law 2069 of 2020 (Entrepreneurship Law)	Law 1014 of 2006	ECE Public Policy - Mayor's Office	Government
Number of citations	10	7	13	2	21	8

Source: own elaboration 2022

Concerning the above, the National Entrepreneurship Policy of Colombia, approved in the year 2020, mentions in the analysis of the problem that "Colombia lacks sufficient information to characterize entrepreneurship, recognize its needs and evaluate the impacts of its policy instruments, which makes it difficult to make informed decisions" (DNP, 2020, p. 52)—reaffirming what a good part of the interviewees mentioned regarding the implementation and measurement of results.

On the other hand, the national policy that affects the entrepreneurship ecosystem in Manizales, referenced by the interviewees, is the National Entrepreneurship Policy, CONPES 4011 of 2020 (DNP, 2020), "on which we are governed. The mayor's and governor's offices support and sponsor entrepreneurship programs, subject to the national Entrepreneurship Law" [INT40/EA12]. For the interviewees, part of the policy's importance lies in the actors' participation in its construction; therefore, "the actors were linked from the formulation until reaching the instrument: a four-year action plan and an annual action plan." [INT42/EA18].

In terms of governance, based on the regulations of the national policy and the level of institutional articulation in the entrepreneurship ecosystem, the interviewees identify the Caldas entrepreneurship network and Manizales Mas as the bodies that represent or contribute to this component. They evidenced an excellent functioning of "the entrepreneurship network, it gives visibility to the entities that support entrepreneurship, governance is outstanding, it works very well" [INT40/EA12].

It was challenging for many interviewees to evidence the participation of the entrepreneurial families' members in constructing the public policy; 14 of the 23 interviewees did not provide any information. Those who did provide evidence of participation only mentioned the Luker Foundation with Manizales Mas, given that its "director participated in the sessions for the construction of the public policy on entrepreneurship" [INT41/EA17]. For the actors directly related to the construction of public policy in Manizales, the influence of the Restrepo family is direct, given that "it is born directly from there. Public policy sometimes becomes fashionable and comes from many sources or motivations; it might have been arrived at over time. But since it was conceived in Manizales, it was based on what was learned in Manizales Mas" [INT44/EA18].

Concerning the above, there remains a relevant gap in policy and governance. It has to do with communication, both in the formation of strategies, their implementation, and their monitoring and measurement. The lack of measurement and communication can lead to situations such as institutional imbalance, where it is felt that one "entity has greater participation than another, or it is possible to concentrate the power of influence that may not be used correctly. There has been a negative influence towards other actors who are not in some programs" [INT40/EA6]; a situation that could be reduced or avoided by making decisions based on information and data.

5.3.3.4 Open markets

According to Stam & Spiegel (2016), solid local markets enable the generation of key business opportunities for venture ecosystems. Such opportunity creation can come from local customers who have specialized needs and therefore mobilizes ventures and can foster the creation of new spin-offs (Spilling, 1996; World Economic Forum, 2013).

Entrepreneurs benefit from a privileged position to identify opportunities when a territory has such conditions because they can more easily interact with potential customers and test solutions. Early-stage ventures mobilize sales and thus develop capabilities for growth.

According to the Cities Competitiveness Index (Consejo Privado de Competitividad, 2021), Manizales is a city with 518,094 inhabitants; it is the capital of the department of Caldas whose population in 2021(p) is 1,027,314 inhabitants (Mincomercio, 2022). According to this information, the participation in the total population in 2021(p) is 2%, and concerning the national GDP in 2020(p), the weight is 1.69%. It shows that Manizales has a small market compared to other cities or territories in Colombia.

It is evident that most of the support entities' interviewees confirm it. Manizales is a city with "a small market that often limits, for example, the creation of networks, which is essential to reach other markets" [INT34/EA2]. Therefore, entrepreneurs "cannot stay here, they must become more sophisticated, and we must help them open borders to open up to other markets" [INT37/EA5]. This situation becomes more complex "when we talk about scaling and growing, the market is no longer sufficient, nor is it developed enough to generate sustained growth processes in the long term" [INT40/EA7].

In this sense, for most of the interviewees, the limitation of the Manizales market may be a combination of size ("although it is normal for an intermediate city" [INT44/EA19]), closed culture, the territory with economic niches. Therefore, it does not facilitate the growth of specific sectors, mainly the more sophisticated ones.

Due to the above, and to be aware of the market limitation, there is also a consensus on the need to have a global mentality, "to think that Manizales does not buy from Manizales and that Manizales sells to the world" [INT46/EA9], therefore, "there is no reason to think that because you are in Manizales, the market is Manizales" [INT42/EA16]. It is mentioned because the "ceiling is clear and depends on the business are you belong. The company must think about big business if it wants to be big. It is a cultural issue; the best clients are not from this city" [INT31/EA21].

In this regard, the city has recent examples showing that market conditions do not substantially influence entrepreneurship; it depends on the service, the need they solve, and the entrepreneur's vision. Although it is a "traditional city, it also has a lot of talent; for example, Playvox is a company whose founder is from Manizales, it was installed in Manizales and had a team from Manizales, but its clients are outside Colombia" [INT36/EA11].

One instrument mentioned by the interviewees to support entrepreneurs from large companies is the development of suppliers since it allows "expanding the market and strengthening the local supply as their first option." For example, the Andi del Futuro demo day is a space for "large companies to meet entrepreneurs" [INT33/EA3].

For the support entities interviewed, it is crucial to support entrepreneurs to open markets, mainly because their services are focused on the strengthening and growth stages. For this reason, the support entities promote access to market opportunities in the entrepreneurship

ecosystem through different strategies aimed at the commercial connection of the companies they support with other markets; 14 of the 20 entities reported having at least one strategy, which can be seen in Table 46.

Table 46. Mechanisms for market promotion in the entrepreneurial ecosystem.

Number	Entity	Instrument	FB/NFB/ABF typology*	Description
1	Cámara de comercio de Manizales por Caldas	Commercial antennas	NFB	Cross-cutting program to open markets in other cities or countries. INT35/EA2, INT43/EA16
2	Andi del Futuro	Demoday	AFB	Interaction space, the last one, was held in the last quarter of the year. INT34/EA3, INT44/EA17
3	Finanfuturo	Digital square	NFB	Digital strategy for microentrepreneurs to reach other markets. INT38/EA5
4	Inlazu	Elévate	NFB	Acceleration program with an emphasis on market and investment INT44/EA6
5	Bancolombia	Your Business App	AFB	Social and commercial platform at the local and national level for all types of entrepreneurs INT41/EA7
6	Universidad Nacional	Direct contact	NFB	Internal exploration seeking links with the University through outreach. INT45/EA13
7	Universidad de Caldas	Spin-Off	NFB	Program to connect technologies with the market. INT49/EA14
8	BIOS	Biofactories	NFB	Product development and commercialization process to bring products to market. INT42/EA15
9	Mayor's Office of Manizales	Exporting companies	NFB	Gap-closing program to reach other markets. INT47/EA18
10	Chec	Innovatechec	NFB	Open innovation program to develop ventures that solve business problems. INT45/EA19
11	Manizales Mas	Networking, Marketplaces, Meetups, Innovatechec, EAP, Scale UP Guatemala y Panamá	FB	One-to-one business articulation, impact partnerships, and business management for other countries. INT46/EA20
12	Startup Garage/Tertulia Digital	Networking	NFB	One-to-one business articulation, impact alliances and business management. INT40/EA21
13	Incubar Manizales	Elévate	NFB	Acceleration program with an emphasis on market and investment INT42/EA22
14	Government of Caldas	Crece Mas	FB	Program to increase and grow company sales. INT38/EA23

Source: Own elaboration 2022

* **FB.** Family Business
NF. Non-Family Business
AFB. Articulation with Family Business

Regarding the strategies, mechanisms, or instruments developed by the support entities of the 14 strategies, only two are promoted by the Restrepo family through the Luker Foundation and Manizales Mas. 2 mechanisms facilitate the articulation with family businesses; however, they

do not come from programs promoted by entrepreneurial families. Entrepreneurial families do not promote the remaining ten mechanisms. It may indicate that the commercial and market dynamics are closely linked to the enterprises' natural supply and value chain dynamics, as seen in Table 47.

Table 47. Market promotion mechanisms promoted by entrepreneurial families in the entrepreneurship ecosystem.

Support Entity Respondent	Code of Interview	Entrepreneurial family's mechanism	%
1	EA1	I have no evidence	
4	EA4	I do not believe	
4	EA5	I do not perceive it	
8	EA9	I do not perceive it	30%
15	EA18	I have no evidence	
8	EA20	I do not perceive it	
6	EA7	I do not believe	
2	EA16	Through Demoday	
2	EA2	I guess	
10	EA11	Through suppliers and their value chain	
9	EA12	Through suppliers and their value chain	
9	EA10	Through suppliers	
11	EA13	Through suppliers and their value chain	52%
12	EA14	Through suppliers and their value chain	
13	EA15	Through suppliers and their value chain	
16	EA19	Through suppliers	
17	EA21	Through suppliers	
18	EA22	Through suppliers	
19	EA23	Through suppliers and the Villegas family	
5	EA6	Restrepo Family	
7	EA8	Mucho, Riduco, Induma, Luker	17%
14	EA17	Mejía, Restrepo	
3	EA3	Arango	

Source: Own elaboration 2022

For most interviewees (69%), there is evidence or specific examples of entrepreneurial families developing activities that allow us to say they are generators of market opportunities or promote knowledge. When giving cases of entrepreneurial families, the Restrepo, Rivas, Villegas, Mejía, and Arango families are the ones mentioned with actions oriented to the generation of supply in their value chain.

Regarding the family social capital of the Restrepo Family, in the case of markets, their contribution through the Luker Foundation or Manizales Mas is not so visible; the examples mentioned are related to the supply and value chain. Although no specific cases are known, for 12 interviewees, supply is the most relevant mechanism for providing market opportunities to entrepreneurs.

Therefore, it could be that the generation of market opportunities "is not institutional or methodological, the important cases of market growth are because they are contacted in a business scenario, not because they have met in an entrepreneurship program." Suppose there is a lack of local connection. In that case, it could be generated by weaknesses of the entrepreneur himself, i.e., there may be "a quality problem, a higher level of demand for demanding markets and entrepreneurs do not challenge themselves to that level of demand" [INT32/EA21].

5.4 Entrepreneurial families' perspective

The last objective of the research is to identify their impact on the entrepreneurship ecosystem of Manizales as a case study from the perspective of the entrepreneurial families. For this reason, the following section not only shows each of the attributes of the ecosystem to facilitate its understanding, starting with the perspective of the entrepreneurial families regarding their role in the ecosystem and the economic dynamics of the city, but also an approach to the structure of the family social capital of each of the entrepreneurial families interviewed.

Entrepreneurial families of recognized trajectory, rooted or embedded in the territory, are promoters of development (Rodrigo Basco, 2015; Bird & Wennberg, 2014), and from their natural business exercise, they contribute to the dynamics of entrepreneurship as can be seen in Table 21, where 8 out of 12 interviewees identify that their contribution to the ecosystem is

through the supply in their value chain (for example: "we have a program called productive chains, we look for entrepreneurs and our brand to scale these products to new markets" [INT2/FE12]).

It is very relevant to see the contribution mechanism to entrepreneurship development in Manizales, one of the families with the most significant entrepreneurial tradition (Casa Luker¹⁸). It has evolved initially through the investment and industrialization of the territory. As the company becomes more global and international (moving to other cities both family members and companies), the contribution is made from "philanthropy and capacity building" [INT2/FE2] in the territory ("there have been several ways to contribute, one by creating a company from the Azucenos, being a catalyst of a certain industry, from the rooted in Manizales, then the great contribution since ten years ago thinking about the region from that shore" [INT2/FE1]). The significant contribution since ten years ago, thinking about the region from that shore" [INT2/FE1]). The entrepreneurial families still have their home and operation in Manizales. They are in the previous stage of the family with the most extended trajectory, i.e., through investment, financing, "networking, consulting" [INT2/FE5], and market with its value chain.

Although the mechanisms are those shown in the previous paragraph, half are informal mechanisms, and half are formal, i.e., they have a program within the family business, one of the instruments being foundations.

¹⁸ The company was founded in 1904 and has been in operation for 118 years. Information taken from <https://casaluker.com/historia>. July 2022

Finally, the entrepreneurial families recognize each other as contributors to entrepreneurship, and the same seven families mentioned in chapter 4 are evidenced. Likewise, the areas of the most significant contribution of the ecosystem agents mentioned by the entrepreneurs are confirmed (Table 6), which was validated by the support entities. However, networking is a contribution that stands out and in which most entrepreneurial families (those who are in the city participating) active in the relationship with entrepreneurs (5 out of 7) generate more significant contributions due to their social (Carr et al., 2011) and relational capital (Habbershon & Williams, 1999a).

5.4.1 Approach to the familiness of the entrepreneurial family business

The search for bridging relationships between entrepreneurial families and the entrepreneurial ecosystem was based on the theoretical construct of Family Social Capital and Familiness (Habbershon & Williams, 1999a; Nordqvist, 2005; Pearson et al., 2008). The authors' structural, cognitive, and relational dimensions of social capital shape the behavior and the relevant social phenomena within a family business (Habbershon & Williams, 1999). In addition, in the concept of familiness, the capabilities of the family business are presented, being the integral configuration of the construct of familiness.

According to the theory and from the answers given in the entrepreneurial families' interviews, the following approximates the Familiness of each of them.

It is clarified that it is an approximation since it is not the purpose of this research to measure or identify the familiness; however, it is possible to make a first version based on the answers to the following five interview questions:

1. Do you or your company consider yourself or your company an agent supporting entrepreneurship in the territory? Why?
2. What unique characteristics, resources, and capabilities do you consider your company to have that can be a source of competitive advantage? Which of these do you consider unique to your company as a family-owned business?
3. In your family and your company, what values/culture do you promote, and could they be related to values associated with entrepreneurship? How are these values transferred to the entrepreneurship ecosystem in Manizales?
4. In your specific case, do you or your family business participate in any networks that support entrepreneurs? How do you think they have influenced entrepreneurs (financing, mentoring, talks, conferences, investment, etc.)?
5. In your family/company, do you have activities that allow you to say they contribute or promote investment capital in the territory? Do they encourage the knowledge of this figure (whether their own or outside the family)? To what extent? How? How have they influenced entrepreneurship in the territory?

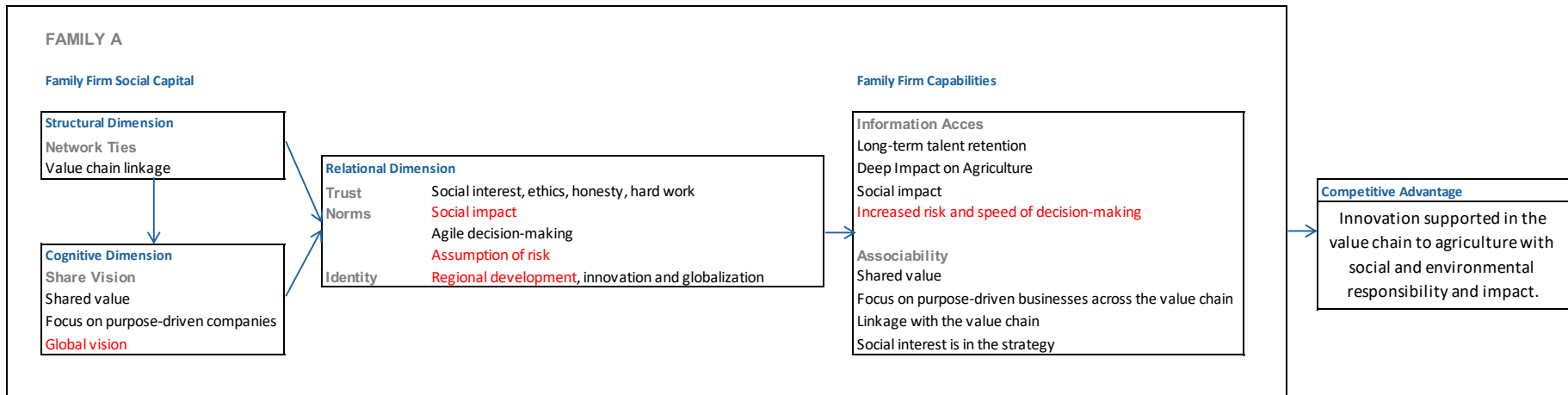
The following illustrations show the proposed structure for each family.

a. *Familiness of the entrepreneurial family A*

Its competitive advantage is represented in the great sense of generating social impact that implies a contribution to regional development in its city and department of origin (Manizales) and the other places where it operates or intervenes. The link between the value chain to agriculture, the community, and the territory is a great differentiator in their sector.

The shared value, together with the relevance of the social impact, becomes a value of significant differentiation inherited from generation to generation. Innovation and speed of decision-making are a constant, supported by triple impact results (Figure 16).

Figure 16. Familiness approach of family A.



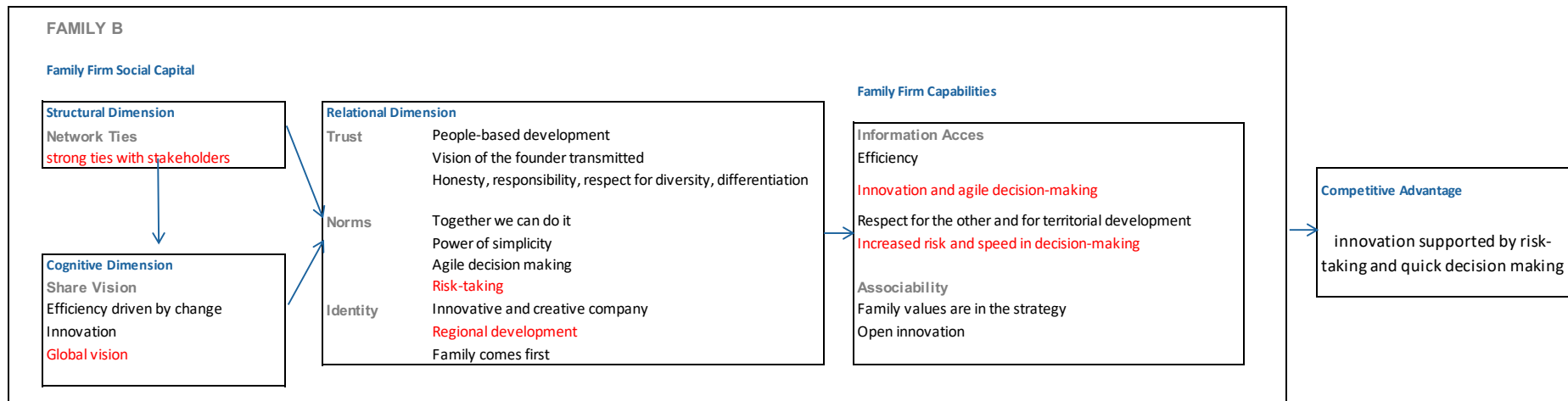
Source: own elaboration 2022

b. Familiness of the entrepreneurial family B

In the case of family 2, innovation is at the core of the company's development. It is part of the founder's vision that is transmitted to the next generation and the entire company. They are also deeply rooted in the development of the territory in which they are located and manage it through a strong link with their stakeholders, open innovation linking entrepreneurs and small people in the city's business.

They are characterized by agile decision-making and trust in senior management that allows them to take risks that have allowed them to grow (Figure 17).

Figure 17. Familiness approach of family B.

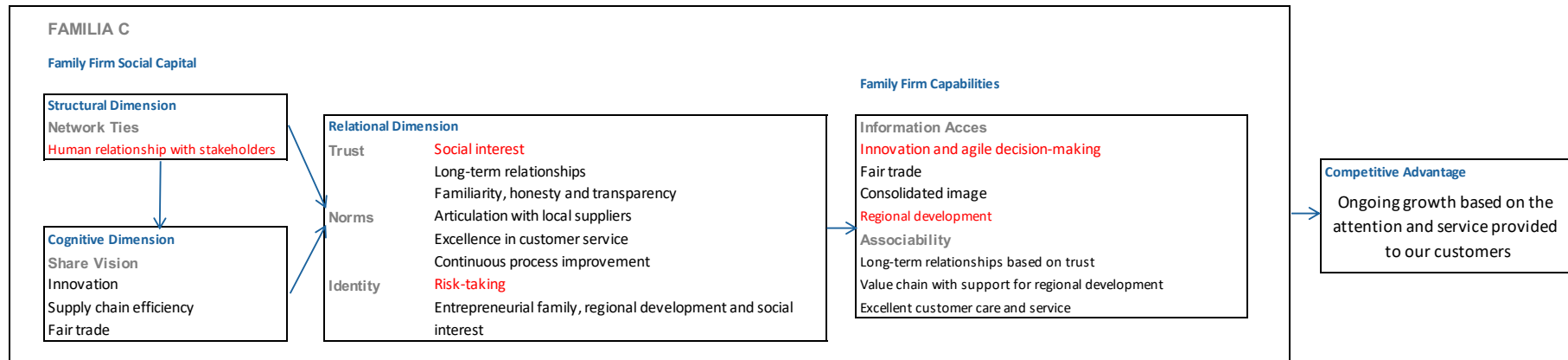


Source: own elaboration 2022

c. *Familiness of the entrepreneurial family C*

Family business in the commercial sector is characterized by being an entrepreneurial family interested in the region's development and manages it by providing market opportunities to entrepreneurs in the territory under the brand name of "Origen Caldas"¹⁹. The values of honesty and transparency are reflected in fair trade in its relationship with suppliers and familiarity and trust through humane treatment with each stakeholder. Innovation is also a constant and translated into growth focusing on customer service (Figure 18).

Figure 18. Familiness approach of family C.



Source: own elaboration 2022

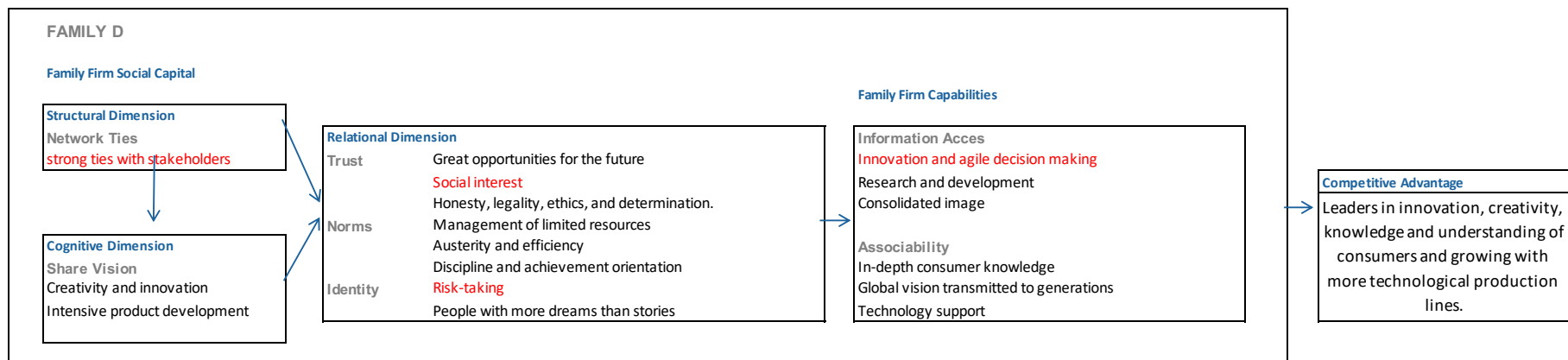
¹⁹ It is a rural development strategy with territorial identity that was designed by the Secretary of Agriculture of the Department of Caldas to promote and boost the marketing of agricultural and agro-industrial products. Taken from <https://origencaldas.co/nosotros/> july 2022.

d. *Familiness of the entrepreneurial family D*

The dynamics of the business group managed by the three generations of this entrepreneurial family are permeated by the global vision transmitted from its founder. It is characterized by great bets for the future that always makes them look ahead more than their history or the road they have traveled, without losing sight of the social interest and the commitment to the territory since they reward local talent and their ability to work.

The growth and positioning of the company are the results of its leadership in innovation, creativity, research, and intensive development toward product design. Its primary values of honesty, legality, and determination are oriented towards the administration of scarce resources; productivity is a promoter of its results (Figure 19).

Figure 19. Familiness approach of family D.



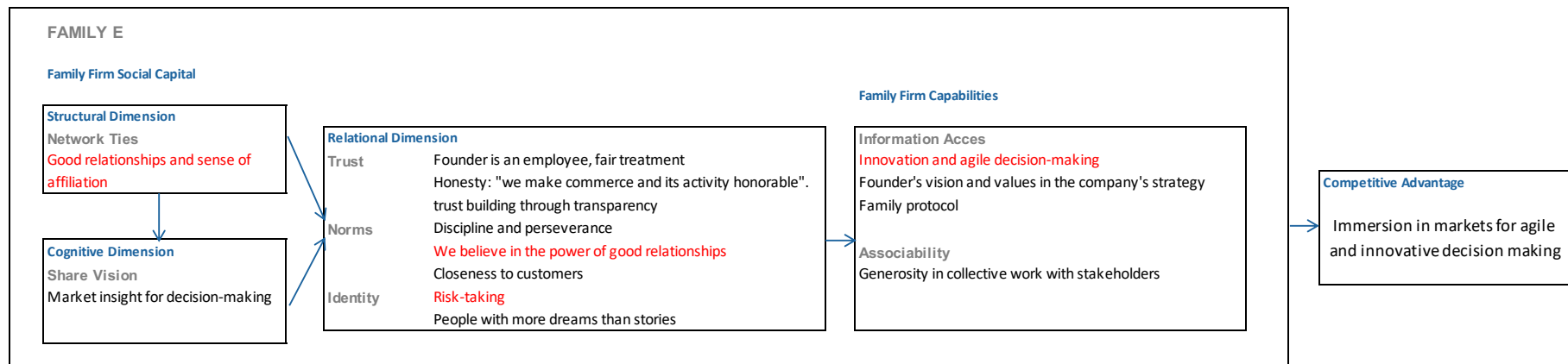
Source: own elaboration 2022

e. *Familiness of the entrepreneurial family E*

A second generation of the entrepreneurial family with a clear vision of the founder, in which values are transmitted from the family to the company. Their values of honesty and honorability are complemented by discipline and perseverance to achieve their goals. The differentiating factor is based on good relationships and a sense of belonging with customers and suppliers, as well as basing its decisions on a process of immersion in the markets that have given successful results.

Their entrepreneurial responsibility transmitted by the family is oriented towards developing the sector in which they are located, including suppliers, customers, and their competitors. This group includes entrepreneurs and small and medium-sized people in business (Figure 20).

Figure 20. Familiness approach of family E.



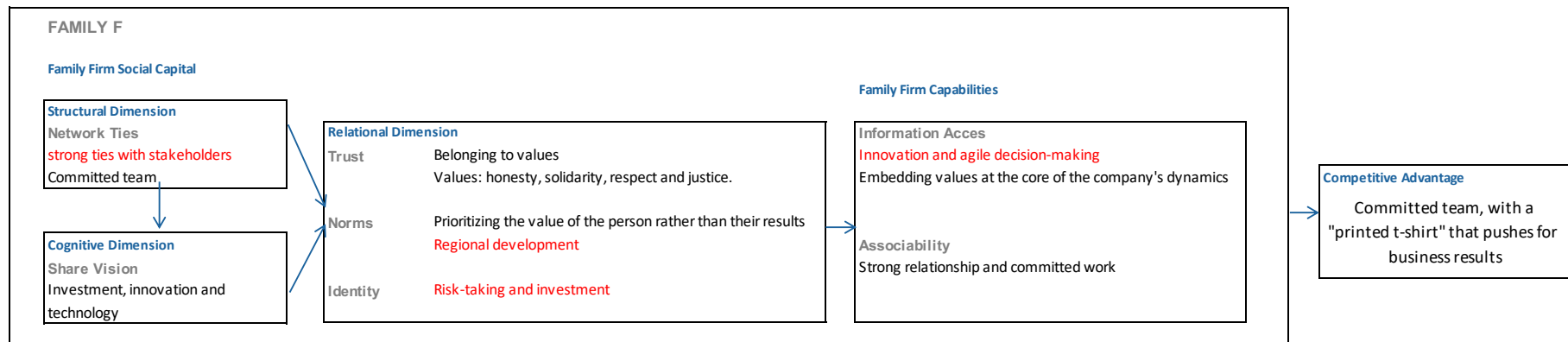
Source: own elaboration 2022

f. Familiness of the entrepreneurial family F

In family 6, as in the other families interviewed, the transmission of values from the founders is the axis of the business dynamics. *Therefore*, adherence to them becomes the operational and decision-making model in the companies in which they participate. It has a strong relationship with all its stakeholders based on honesty, solidarity, respect, and fairness, which makes it available to the team. *Therefore*, respect for the *person's value*, more than their results, has allowed them to have a cohesive and committed work team that supports them in the business dynamics.

The family's deep-embeddedness in the territory means that within the relational dimension, there is a permanent concern and generation of actions for regional development. This contribution, unlike the others, is made with a clear investment orientation that moves its cognitive dimension towards spaces that others do not cover, and the assumption of risks is achieved with the support of third parties (Figure 21).

Figure 21. Familiness approach of family F.



Source: own elaboration 2022

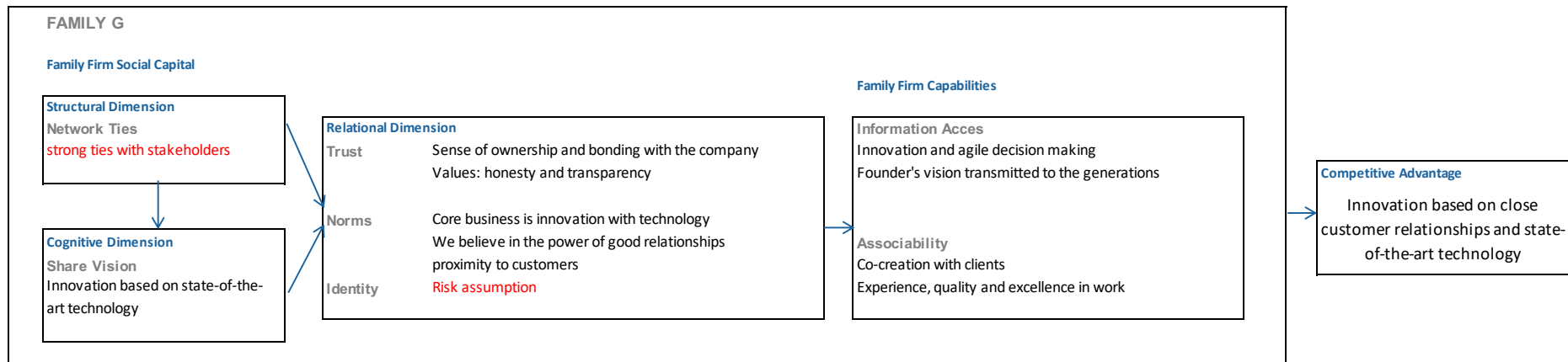
g. *Familiness of the entrepreneurial family G*

Finally, innovation is its mobilizing factor for the seven families, with a clear technological orientation. The values, which are honesty and transparency, are transmitted from the founder, as well as the long-term global vision.

Their strong relationship with customers has allowed them to be very close to them and, therefore, to co-create and participate in new markets.

They are characterized by experience, quality, and excellence in their work (Figure 22).

Figure 22. Familiness approach of family G.



Source: own elaboration 2022

Under the above perspective, each of the ecosystem's attributes, according to Spigel (2016), are presented.

5.4.2 Effect of "bridging" mechanisms on cultural attributes

The strength, but mainly, the institutionalization and capillarity of family network ties allow and facilitate the exchange (bridging) of stories of entrepreneurship, supportive culture, and values (Spigel, 2017).

5.4.2.1 Entrepreneurship stories

For the entrepreneurial families interviewed, it is evident, as for the actors interviewed in the ecosystem, that there are many examples and stories of entrepreneurship in the territory that are known and transmitted. Likewise, it is confirmed that voice-to-ear is the most used method to transmit these stories.

Specifically, in the case of their own stories of entrepreneurship, it is unanimous that in Colombia, entrepreneurial families handle what is known as "low profile." It has been given as a result "of a difficult time of security, and therefore, today we are paying the consequences when we see the reputation surveys, that is part of the low profile" [INT6/FE1]. For this reason, they are not allowed to tell their stories openly or with any formal strategy; they do it when invited. They all state that there is "openness to share our stories in forums. We go when we are invited, we are always happy to go to universities" [INT6/FE2].

Few entrepreneurial families have systematized their stories; some have descriptions on their websites, and others, as part of the celebration of significant anniversaries, have generated strategies such as a business museum, "INT5/FE9], a book telling the "100 years of the

company" [INT6/FE2] or in a few occasions when "The family has been awarded, and in those spaces, the history and its trajectory is told" [INT6/FE7]. Strategies that have not been so public for the ecosystem.

The above was evidenced by entrepreneurs and support entities, who did not report strategies of systematizing stories by the entrepreneurial families. Only two strategies were developed from academia (Manizales Mas and the Autonomous University).

There is a permanent case of transmission of the history of a family business, which has generated great recognition (mentioned by entrepreneurs and support agents of the ecosystem) given that they complement it with articulation with universities and other companies. It is the "MI CASA INDUMA strategy, and we want people to go and know the history; there is no additional effort" [INT6/FE12].

They also recognize that the knowledge they have of the companies is given by "their trajectory, the positioning of the brand and the knowledge of their products, deeply rooted in the consumers of Colombia and Manizales" [INT6/FE4]. However, details of the stories are transmitted to closer circles, whether family, friends, in the sector itself or business associations [INT6/FE3][INT8/FE10] and can be easily transmitted "because this city is tiny and we all know each other" [INT6/FE8].

Finally, there is a relevant factor that is visible in the entrepreneurship ecosystem analyzed, and it is that the focus of the transmission of stories in a formal way by the support entities has been mainly towards companies that are contemporary to the current entrepreneurs or graduates of the entrepreneurship programs as a motivating factor. It seems that for this reason, despite having stories of the remarkable trajectory of relevant companies in the city, they do not invite them to tell them. For example, "we have been invited many times from universities in

Colombia and internationally where we have gone to tell our story, but we have never been invited from a university in Manizales" [INT6/FE2], not even from the Manizales Mas program itself.

5.4.2.2 Supportive culture

For the interviewees, the evidence that there is a culture of support in Manizales can be translated into three main aspects, the first one due to the values of the territory; a culture of work, service, and help (also expressed by entrepreneurs, mentors, and support agents), where communication is facilitated, and ideas are shared (Tsai and Ghoshal, 1998).

Being a small city, expressions such as "I think it is an ecosystem where there are not 6 degrees of separation but 2 or 3, you contact whoever you want, we have a collaborative culture to help you but not to associate you, there are interesting elements, but at the same time, there are cultural barriers that prevent it from flourishing more" [INT8/FE1]. It shows that trust between individuals is facilitated in the ecosystem, so they cooperate better (Fukuyama, 1995).

The second is due to the educational and support entities of the entrepreneurship ecosystem that, through training and different programs, contribute to the development of the culture (Mason & Brown, 2014; Shepherd et al., 2010) since they involve students in the processes of "promoting entrepreneurship, innovation and collaboration" [INT9/FE11]. Likewise, they mention that being a more united society, there are more possibilities for exchange and social mobility (Dahl & Sorenson, 2009). Today it is easy to see that a person with scarce resources "can dream of creating a company in Manizales, unlike other cities where this does not happen, in the city I feel that everyone can have the same opportunities" [INT9/FE11], one feels in the city "a positive attitude towards the opportunities and programs of the city and always with a lot of openness" [INT9/FE4].

The third and last through the business and entrepreneurial dynamics of the city. The interviewees evidenced a great industrial tradition in the city almost since its foundation, compared with nearby towns, and even in "recent years, it has stood out more" [INT7/FE9]. It is because the city, from the point of view of the interviewees, offers a favorable environment for setting up a company, starting from its inhabitants, who are becoming more and more entrepreneurial with "desire and drive to set up a company, many people want to stay here and grow in Manizales" [INT9/FE6].

Regarding the values of the entrepreneurial support culture of the entrepreneurial ecosystem, the interviewees of the entrepreneurial families agree with most of them, both with the entrepreneurs (Table 32) and support entities (Figure 15). The most relevant are associated with "work as a value" [INT7/FE9], "hardworking culture, capacity to fight, insist, persist" [INT9/FE5], and the achievement orientation that comes from "tradition and that persistence or stubbornness that we handle in Caldas, if or if you have to do things and get things done" [INT9/FE12].

The above values are fully identified and linked to the entrepreneurial families' values, as can be seen in illustrations 1 to 7, specifically in the relational dimension. "Responsibility, honesty, and transparency" [INT8/FE9] are those in most families interviewed as part of their structure and family heritage. It is stated that "family comes first, honesty is in the teat" [INT10/FE6].

A relevant value that is present in all entrepreneurial families is related to supporting the "transformation of society" [INT10/FE5], growth, and "support for the region" [INT7/FE6]. For example, some mention staying in the city "here we are, and here we stay" [INT12/FE8], through business growth or "supporting the local supplier, the small entrepreneur" [INT9/FE7] and they have a relevant role in the entrepreneurial ecosystem (Table 48). The strategy that

stands out the most is that of the Restrepo family, where the contribution to the region's development is made through the Luker Foundation, which, upon restructuring, made entrepreneurship one of its mission pillars, creating a "robust investment from the philanthropic side, hoping to generate capacity in the city and that they will gain some traction" [INT2/FE2]

Table 48. Vision of entrepreneurial families as agents that support entrepreneurship in the territory.

Interviewee	Role	Entrepreneurship support agent	Mechanism	Family Social Capital	Mechanism type
FE1	Entrepreneurial family member	Yes	Investment, philanthropy	Embeddedness, social responsibility	Formal
FE2	Entrepreneurial family member	Yes	Investment, supply, philanthropy	Embeddedness, social responsibility	Formal
FE3	Family Business Employee	Yes	Supply	Social responsibility	Informal
FE4	Family Business Employee	Yes	Investment, supply	Growth vision	Informal
FE5	Entrepreneurial family member	Yes	Investment, supply, networking	Social capital, business vision	Formal
FE6	Entrepreneurial family member	Yes	Financing, supply	Embeddedness, social responsibility, business vision	Formal
FE7	Family Business Employee	yes	Supply	Social capital	Formal
FE8	Entrepreneurial family member	yes	Supply	Social capital	Informal
FE9	Family Business Employee	more or less	Supply	Social capital	Informal
FE10	Entrepreneurial family member	yes	Financing, networking, share vision	Share vision	Informal
FE11	Entrepreneurial family member	yes	Investment, advising	Social capital, business vision	Informal
FE12	Family Business Employee	EA11	Financing, networking, share vision	Embeddedness, share vision	Formal

Source: Own elaboration 2022

For all the entrepreneurial families interviewed, the values of the company "are close to the values of the family" [INT7/FE1] (Allen et al., 2021; Danes et al., 2008; Estrada-Robles et al., 2018), and they are evidenced "in the company's strategy" [INT9/FE3]. It is translated into concrete actions such as, for example, that of the Restrepo family, whose historical interest in

social issues is evidenced in "the shareholders' meetings; it is what matters most and therefore, what the companies have always counted on is their social impact, as well as what the Luker Foundation does" [INT10/FE2].

Associated with the culture of support and values, for all the people interviewed in the group of entrepreneurial families, the main transmission mechanism is "example" [INT10/FE6], which is consistent with what was mentioned by the previous stakeholders interviewed. For this reason, they say the relevance of the "active participation of the families in the companies; it is reflected in the corporate governance" [INT12/FE10]. It is how in the Restrepo family, having active members in the company again, it is felt that "that great recognition returns, the essence was being lost, and it seems that it is only to be present while working, it is transmitted" [INT9/FE1].

In addition, it is difficult for the entrepreneurial families interviewed to establish a formal mechanism for transmitting culture and values other than their companies and direct actions with stakeholders [INT10/FE4]. Even the mechanism of Fundación Luker, identified by entrepreneurs, mentors, and support agents of the ecosystem, in some cases, is not so precise regarding the direct transmission of values. It could even be said that it would not be the same values that are transmitted but "potentialized values, a better version of the entrepreneurial family from how it operates and that we try to take care of, given that we always work (from the strategic point of view, measuring the organizational climate) first in the Luker Foundation and then in the company, because it is the closest point of connection with the community of Manizales" [INT10/FE1].

Finally, in the case of incorporating corporate (intra) entrepreneurship strategies as a precise mechanism to support the entrepreneurial ecosystem, most entrepreneurial families have not

yet included it as a strategy, much less formally (Table 49). It is a recent mechanism that they are beginning to configure.

Table 49. Intra-entrepreneurship in the interviewed family businesses.

Family Business	intra-entrepreneurship	Bonding or Bridging mechanism	formal	current
FE1	yes	New markets, investment	no	yes
FE2	launching	The corporate venture, open innovation	no	yes
FE3	yes	spin-off	yes	no
FE4	no	supplier support	no	yes
FE5	yes	corporate venturing	yes	yes
FE6	yes	employee support	no	yes
FE7	launching	Corporate venture	no	yes
FE8	launching	Corporate venture	no	yes
FE9	no	supplier support	no	yes
FE10	no	supplier support	no	yes
FE11	yes	investment in new companies	no	yes
FE12	yes	The corporate venture, open innovation	no	yes

Source: Own elaboration 2022

5.4.3 Effect of "bridging" mechanisms on social attributes

The strength, but mainly, the institutionalization and capillarity of family network ties allow and facilitate the exchange (bridging) of networks, mentors and role models, and investment capital (Spigel, 2017).

5.4.3.1 Networks

To identify the existence of the effect of bridging mechanisms from the perspective of entrepreneurial families in the collaboration networks of the entrepreneurship ecosystem of Manizales, we start firstly from what was mentioned by entrepreneurs, mentors, and support entities interviewed; who not only identify mechanisms but differentiate between family initiatives from their social capital (promoted mainly by the Restrepo family) and non-family initiatives (promoted primarily to unions and government).

From the perspective of the entrepreneurial families, the Restrepo family is indeed the one that promotes the most significant number of mechanisms through its program, Manizales Mas, managed by the Luker Foundation. Followed by GrupoTec of the Villegas Velásquez family; this is evident in the reason why it is not easy to visualize the participation of the other families (Table 50) for the groups of entrepreneurs and support agents in the entrepreneurship ecosystem.

The identified result could be generated given the size and trajectory of the family businesses, and their articulation or participation in business associations (INT15/FE4, INT16/FE5, INT14/FE7, INT12/FE8) make them refer to the mechanisms in a general way. However, when it comes to providing details of their knowledge about specific programs, they do not know about them, as entrepreneurs do (Table 50). The latter because they participate directly and are beneficiaries of these programs and support networks.

Table 50. Bridge mechanisms of collaboration networks in the ecosystem identified by the entrepreneurial families.

Family Business	Networks promote entrepreneurship	Bridging mechanism	Formal	Promotes by Entrepreneurial Families	Main focus on entrepreneurs
FE1	yes	Manizales Mas, Fundación Luker	yes	yes	yes
FE2	no	No identity	no data	no data	no data
FE3	yes	Business guilds, Andi, and competitiveness committees	yes	no	no
FE4	yes	Manizales Más, Chamber of Commerce, Bios, Confa y Chec	no data	One of them	no
FE5	under development	Chamber of Commerce, ANDI, Manizales Más, Universidades, Finanfuturo, Grupotec	no	One of them	yes
FE6	yes	Chamber of Commerce, Manizales Más and ANDI	yes	One of them	no
FE7	yes	Chamber of Commerce, ANDI, Manizales Mas, Origen Caldas, Fenalco, Universidad Nacional y Sena	yes	One of them	yes
FE8	no	No identify	no data	no data	no data
FE9	Yes	Incubar, Sena, Universities (Caldas y Nacional)	yes	no	no

Family Business	Networks promote entrepreneurship	Bridging mechanism	Formal	Promotes by Entrepreneurial Families	Main focus on entrepreneurs
FE10	yes	Red de Angeles Inversionistas	yes	no	yes
FE11	under development	Incubar, Manizales Mas	no data	no data	no data
FE12	yes	Red de Confianza de la Andi, Business Guilds	yes	no	no

Source: Own elaboration 2022

In the specific case of the mechanism of an entrepreneurial family with which they have generated a network of 10 entrepreneurs and have succeeded because they saw it as an opportunity, as evidenced in one of the interviews: "at some point of difficulty they looked for us, and we have supported them with some capital, and much more in guidance and accompaniment, Networking; and that is where one contributes the most because we do not have significant capital to contribute, but we have a lot of relationships" [INT2/FE5]. It is a strong example of family social capital made available for the development of entrepreneurs, in this case, of interest to the family business.

In the case of another family whose mechanism is institutionalized, the family and its vision set in the family business has allowed them, as they have done in Manizales today, in other geographies where they have operations (in different territories of Colombia and other countries), "to take root in the value chain of the company, specifically in rural areas, making agricultural investments with a series of programs in these places" [INT2/FE2]. In contrast to this way of contributing with support networks (Rodrigo Basco, 2015), most cases of other entrepreneurial families in the city are found.

Another recurrent example entrepreneurial families provide regarding the generation of support networks is through their chain of suppliers, in which they identify some entrepreneurs. "In this non-formal strategy" [INT2/FE3], they provide networking and advice in areas such as finance,

marketing, and organization through the employees of the family businesses to improve their business profile. Thus, they can continue to be suppliers of their companies.

Another way to articulate in a personal way in the generation of support networks is through "mentoring in Andi del Futuro and Manizales Más" [INT14/FE6] and in "companies in Mega trajectory" [INT14/FE7] however, and as seen in the section on mentors, the participation of this group of entrepreneurial families in this strategy is low.

Finally, as a result of the interviews, most participants mentioned the need to articulate networks proposed or generated by the support entities of the entrepreneurship ecosystem. They also say, "it seems to me that it would be beneficial for businessmen who were entrepreneurs in their time to participate more in these networks." The support would be "not to lose focus of the business and maintain that discipline" [INT17/FE10]. Regarding the latter, it seems that there is no apparent intention of the support entities to invite entrepreneurial families of recognized trajectory in their strategies or "they have not known how to communicate them correctly" [INT16/FE11], being the non-family members more aware of the details of the mechanisms of the ecosystem.

5.4.3.2 Mentors and role models

As mentioned in this research, mentoring is one of the most valuable support mechanisms for entrepreneurs in the entrepreneurship ecosystem analyzed. In this regard, both entrepreneurs, mentors, and support agents interviewed mention and make visible the participation as mentors of many people in business and members of entrepreneurial families. They also mention the referents or models to follow as visible cases in Manizales and outside the city. However, for the second, third, and even fifth-generation entrepreneurial families, their referents or role models are the founders, that is, their parents and grandparents who have guided them and who

have been mentors at the same time: "I am what I am because I had a great mentor, my father." [INT17/FE6].

Table 51 shows that half of the interviewees (entrepreneurial families and employees of family businesses) have been mentors at some point. Of these, only 3 are still mentors today, and only one of them is in Manizales. Despite this, all of them are interested or motivated to be a mentor; however, the second generation mentioned "lack of time and need to focus on the business strategy" [INT10/FE2], and the third generation have not been invited (it could be because of their "age and lack of experience") and all of the employees of the family businesses have not been invited. It confirms what was mentioned by the support entities in the ecosystem that although there is little participation, the interest of the entrepreneurial family businesses in giving back or contributing to the territory is recognized.

Table 51. Bridging mechanisms for mentoring by entrepreneurial families.

Family Business	has been a mentor or similar	Formal /program	Program promote by Entrepreneurial Family	Currently /where	limitations to mentoring	Bridging mechanism
FE1	yes	no	no	yes/outside Manizales	Responsibility and limited time	Manizales Mas
FE2	yes	no	no	yes/outside Colombia	No	Manizales Mas
FE3	no	no	no	No	Responsibility and limited time	Manizales Mas
FE4	no	no	no	No	limited time	Manizales Mas
FE5	yes	yes	yes	no/in Manizales	limited time	Manizales Mas, Trayectoria Mega,
FE6	No	no	no	No	not invited	Manizales Mas, Andi del futuro
FE7	yes	no	no	yes/in Manizales	limited time	Manizales Mas, Trayectoria Mega
FE8	No	No	no	No	not invited and limited experience	Manizales Mas
FE9	No	no	no	No	not invited	Manizales Mas
FE10	Yes	yes	yes	no/in Manizales	limited time	Manizales Mas, Chamber of Commerce
FE11	No	no	no	No	not invited	Manizales Mas
FE12	Yes	yes	yes	no/in Manizales	limited time	Manizales Mas, Trayectoria Mega,

Source: Own elaboration 2022

Some additional arguments for mentoring are "knowledge; it is a way to promote innovation, if a venture is asked three good questions, the value of that is tremendous, questioning through questions is fundamental" [INT15/FE1]. Likewise, the experience of being a mentor and mentee "brings interesting advice and provides relevant connections; if there is someone who has more world than the entrepreneur through his travels and experiences, it is a huge curve gained, at a fundamental psychological level, because the loneliness of the leader is important, venting is key" [INT10/FE2]. In other words, there is sufficient motivation to be a mentor and for members of entrepreneurial families and employees of family businesses to participate as an extension of their family social capital; however, apparently, there is a gap between supply and demand.

Finally, as previously mentioned by the mentors, specific gaps in the process are visible for the members of entrepreneurial families who have been mentors, mainly because some mentees do not value the space. It may be because "they are in love with their product, they spend their time on the product and market and consider that administrative, accounting and tax issues are not important, they are not able to interpret the value of the information on what is happening to the company, money leakage, profits, they leave it as the obligation of an accountant" [INT20/FE5]. The above could be a space for improvement in mentoring programs, the services of the support entities of the entrepreneurship ecosystem, and the entrepreneurs themselves.

5.4.3.3 Investment capital

As a result of the triangulation of the interviews of entrepreneurs and mentors, support entities, and finally, entrepreneurial families, there is a coincidence in three points. First, in the entrepreneurship ecosystem, there are resources such as investment capital (for entrepreneurs and entrepreneurial families to a lesser extent than support entities/agents). Second, this capital

is not so visible; it is not formal and, therefore, it is not organized; third, they do not know how to access these resources, which can be seen in Table 52; companies and entrepreneurial families invest mainly in their value chain and in what moves them to open markets, not necessarily thinking first of entrepreneurs in Manizales.

Table 52. Mechanisms for linking investment resources and shared vision of entrepreneurial families in the entrepreneurial ecosystem.

Family Business	Entrepreneurial Ecosystem				Entrepreneurial Family			
	Investment capital	Formal	Bridging mechanism	limitations to invest	family investment in entrepreneurship	Focus to invest	Invested in Manizales ventures	Bridgin mechanism identify
FE1	yes	no	no formal family offices	Fear of losing a good friendship (culture)	Yes	Where the solution is without it being first in Manizales	No	Open innovation
FE2	Lack	no	Venture Capital	Current traditional mechanisms	Yes	Relevant ventures for the company's value chain	No	Manizaleña's diaspora
FE3	yes	yes	Red de Ángeles inversionistas	Focus on the family's own business	Yes	Open new markets and business opportunities	Yes	No data
FE4	Lack	no	international conextions	Unawareness	Not yet	Open new markets and business opportunities	No	No data
FE5	yes	yes	Yes	Preference for less risky investments (culture)	Yes	New business opportunities	Yes	Open innovation
FE6	yes	No	No	Profile of the venture	Not yet	No progress	No	No data
FE7	Yes	No	Family Office	No identity	Not yet	No progress	No	New foundation
FE8	No	No	no	Unawareness	Not yet	No progress	No	New foundation
FE9	Yes	no	Family Business	Focus on the family's own business	No	No progress	No	No data
FE10	Lack	no	Venture Capital	Lack of formal mechanisms	Yes	Relevant ventures for the company's value chain	Yes	Value chain
FE11	yes	no	no	Profile of the venture	Yes	Relevant ventures for the company's value chain	Yes	Value chain
FE12	Lack	yes	Fondo Emprender	Insufficient resources	No	No progress	No	Open innovation

Source: Own elaboration 2022

It coincides with the illustrations of the approach to familiness of the entrepreneurial families interviewed (figures 16 to 22), whose shared vision of growth and global mindset generates motivation towards investment. Given this motivation, mechanisms to bring investment closer to entrepreneurs and their solutions could be "open innovation, where members of entrepreneurial families like Sergio, with a deep Manizales' soul, if embedded in the ecosystem, will be able to map solutions that generate challenges, we will be able to reconnect investment with the ecosystem, from the people" [INT17/FE1] and even the Manizales diaspora, that is, "Manizaleños in the world, who are doing very relevant things, people from outside that we have not made visible here and that connect with the ecosystem although they are not physically in Manizales" [INT12/FE2].

From the relational dimension of family social capital, it can be seen that regional development is a great motivator; therefore, a shared vision of entrepreneurial families rooted in the territory (Martínez-Sanchiz, 2021) has allowed them to provide funding with mechanisms that facilitate entrepreneurs to increase their working capital, for example, instruments such as "entrepreneurs' fair to articulate with our products although they are then presented with restrictions to grow" [INT2/FE6] to others, they are "taught about the business and the sector, they are supported financially with credit and in some cases the administration" [INT4/FE10] and even "with advice for investment to entrepreneurs in Manizales and elsewhere" [INT2/FE11]. All of the above is not visible in the entrepreneurship ecosystem, as shown in the previous interviews.

Regarding risk-taking, they mention that, in addition to being high, they can do it because it is a family business, and they oversee it because of the trust of their family nucleus and the speed in decision-making. This investment risk is mainly in the core company or its associated investments; it does not extend to new entrepreneurs, unlike the mechanism used by the

Villegas family. However, several families mentioned in the interview that it is a topic of interest and that "members of the third generation have talked about creating companies, where the family would provide the resources" [INT19/FE7]; they are thinking of creating "foundations to mobilize strategies" [INT17/FE8], probably motivated by the Restrepo family and the Luker Foundation.

With the above, it could be said that the time is ripe to extend the connections of family social capitals and connect them with the mechanisms or the generation of new ones in the entrepreneurship ecosystem. There is interest, success cases (Grupotec), and different mechanisms depending on the type of company (intra-entrepreneurship [INT23/FE11], working capital financing [INT22/FE10], creation of companies with former employees, open innovation [INT23/FE12]), but above all the profile of the entrepreneurial family, their beliefs, values, and visions (Habbersshon, 2003).

5.4.4 Effect of "bridging" mechanisms on material attributes

The strength, but mainly, the institutionalization and capillarity of family network ties allow and facilitate the exchange (bridging) of universities, infrastructure and support services, public policies and open markets (Spigel, 2017).

5.4.4.1 Universities and training institutes

As mentioned above, universities are relevant in entrepreneurship ecosystems since they contribute to the development of human capital in a region and, at the same time, foster an entrepreneurial mindset; this is recorded by the interviewees in the group of entrepreneurial families, as well as by support entities, mentors, and entrepreneurs.

However, a strong relationship between family businesses and entrepreneurial families with universities or training entities is not present and, therefore, does not allow them to mention details about programs or actions focused on entrepreneurship training or the promotion of business creation from research results (Spigel, 2017).

They know about the Manizales University System - SUMA²⁰ and the universities that are part of it, recognize that there are "advances in educational issues" [INT14/FE9] and the existence of subjects in entrepreneurship, "in-depth studies in the last years of their careers in administrative and entrepreneurial areas" [INT24/FE10]. They also mention articulation strategies among other entities such as the Luker Foundation in an emblematic program called "University in your school" [INT19/FE1] in which they train students from rural areas to articulate with technical and technologist programs with an entrepreneurial component [INT19/FE2].²¹

From specific experiences, the Autonomous University, the National University, the Catholic University, and the University of Manizales stand out as the most active, despite the low number of reported experiences, as shown in the following Table 53.

Table 53. Articulation of universities with family businesses.

Interview	Universidad Autónoma	Universidad Nacional	Universidad de Manizales	Universidad Católica
FE11	Innovation program	-	-	-
FE4	Training program for Super de Alimentos managers	-	-	Innovation challenges with students

²⁰ <https://www.ucm.edu.co/suma-movilidad/#:~:text=Sistema%20Universitario%20de%20Manizales%20%E2%80%93%20SUMA,Cat%C3%B3lica%20de%20Manizales%2C%20con%20el>. Taken July 17, 2022

²¹ www.fundacionluker.org.co

FE6	Internships and training students in Induma	Innovation challenges - Rallys	-	-
FE9	Internships	-	Internships	-

Source: own elaboration 2022.

From the above table, it could be deduced that the profile of the company and its top management, permeated by the vision of its relational dimension, allows greater proactivity to relate or generate strategies that are bidirectional, i.e., they are articulated with mechanisms developed by the universities, as well as by the needs of the companies themselves. Unlike other company profiles in which it is recognized that "they have never looked for us and neither have we" [INT22/FE7].

It is also relevant to mention that the University with a business orientation, as mentioned in the interviews of the supporting entities and which is the one that has the administrative coordination of Manizales Mas, is the one that has the highest level of relationship with the companies.

As well as strengths from the entrepreneurial families towards the universities and training entities, some voices expect much more than what they are doing, based on the collective vision of what is expected to be achieved with the entrepreneurship ecosystem. Progress has been made in the academic chapter, for example, with the entrepreneurship route, "however, I believe that the conversation must be given in terms of quality and relevance" [INT18/FE1]. The conditions that Manizales has for attracting so many students from "different cultures contribute to this heterogeneity of composition, helping such a conservative city to get out of the box a little bit, dynamism and precious cultural exchanges" [INT18/FE1]. For this reason, the role must be more proactive and challenging.

Finally, in line with the above, due to the global connections generated by several members of entrepreneurial families who have been able to train outside Manizales and the country, they

mention that they perceive more significant relationships not only at the business level but also "according to the interests and needs of individuals" [INT14/FE2].

5.4.4.2 Infrastructure and support services

For the entrepreneurial families and employees of the family businesses, it is evident that, within the entrepreneurship ecosystem of Manizales, there is an exciting network with entities and programs of great relevance (Table 18), as well as for the support agents interviewed, Manizales Mas and the Luker Foundation, followed by the Chamber of Commerce of Manizales and its programs. For this reason, the contribution of the Restrepo family in the dynamics of support services in the entrepreneurship ecosystem of Manizales is confirmed.

Given the strong articulation of the family businesses with the business associations, the entrepreneurship programs of these entities are much better known to them than those of others in the entrepreneurship network. Thus, the "Chamber of Commerce (Mega and Neurocity trajectory), Andi (Andi of the future and innovation), Fenalco" [INT24/FE7] are mentioned; however, when they are not part of the guild, "we do not know about it" [INT21/FE8]. Given the above, it is evident that they mention the programs offered for their type of companies, not for entrepreneurs; probably because of this, the "coworking spaces I do not know about entrepreneurship" [INT28/FE11].

A vision of the entrepreneurship ecosystem and support services are presented, considering that "an ecosystem matures as soon as it has several intervention routes. I do not think there is only one like Manizales Mas because each takes its personality and manages to reach some entrepreneurs or others" [INT20/FE1]. This vision of an entrepreneurial family generates an openness to the dynamics of the ecosystem that could be shared with other entrepreneurial families to have greater diversity and relevance.

When trying to identify mechanisms of articulation or extension of the family social capital and its capabilities with the ecosystem support entities, we found that there is almost no articulation, with the only two programs mentioned being "Manizales Mas and Andi with Innovación más país and Andi del Futuro" [INT19/FE3]. The main reason cited for this situation is due to the business level they have reached, which leads them to "seek resources at their level" from their capacities and connections [INT26/FE6].

Despite the visible low articulation with actors or support agents in the entrepreneurship ecosystem, there is also a kind of "new relationship" between the Restrepo family and Casa Luker with the entrepreneurship ecosystem. The transfer of not only one family member to Manizales but two managers from Bogota to Manizales; will allow them to eventually articulate. Therefore, it is identified that they have "a challenge, to paint the ecosystem and services to determine the update of the role from Luker and see how it can be a market creator and how it generates value for us from the value proposition of the ecosystem; incredibly we are not protagonists and at some point, in life, we will arrive" [INT21/FE1].

Concerning the other entrepreneurial families, it seems that their ease in generating connections, advice, mentoring, and even investment (Chrisman, 2005; Chirico, 2011; Baldo, 2012) does not motivate them to seek support entities in the entrepreneurship ecosystem; unlike strategies such as open innovation (Table 3).

5.4.4.3 Policies

While public policy, according to Spigel (2017), is a facilitator and the "tangible" component of government guidelines within the material attribute in entrepreneurship ecosystems and knowing that both national and local policy exists, as evidenced in Table 7; for the entrepreneurial families interviewed it is almost unknown. Only four of the 12 interviewees

mentioned that they knew it existed, and only one knew about it or had read it, saying that it is "fragmented" [INT28/FE10].

Due to their vision and orientation from the relational dimension of their family Social Capital, the entrepreneurial families mention being interested in participating ("if we are invited, we participate" [INT26/FE7]); however, from the 2019 Entrepreneurship, Competitiveness and Employment public policy they did not participate, only one person mentioned that they did. Probably they were not invited, or the communication to participate was not very effective, given that "I like to participate in all this, and that's why they have to tell me no more. Unfortunately, I didn't hear about this process" [INT28/FE6].

5.4.4.4 Open markets

As mentioned above, Spigel (2016) mentions that having solid local markets allows the generation of key business opportunities for entrepreneurship ecosystems. However, the conclusion for the totality of entrepreneurial families in Manizales could be summarized in one of the mentioned phrases "Manizales is not the target market for entrepreneurship, the entrepreneur believes it is so, but the minimum market must be national, even if it is located in Manizales" [INT30/FE12].

With the trajectory of the family businesses, their experience in the Manizales market, and what has evolved in the entrepreneurship ecosystem in the last ten years, it is considered that "Manizales recognized and we all learned that the domestic market is not the most important and therefore, the limitation was to think globally, the city can only be a laboratory. It is evolving to a much more global mentality" [INT26/FE1].

In this regard, there are many examples, the recent and most emblematic is Playvox (technology-based company) of Oscar Giraldo is impressive; "the vision of being a global company staying in Manizales. La Meseta (coffee producer and exporter) is also impressive; it is a spectacular case. Going out to look for clients we would never have thought of is impressive" [INT23/FE4]. More traditional cases were also mentioned from a long time ago in more conventional sectors where logistics and physical connection have not been a limitation, such as "Buena café, Luker, Super de Alimentos, and today they reach N countries in the world" [INT30/FE6].

Faced with this component, entrepreneurial families extend their family social capital from two perspectives (Table 54), the first with a global mentality and vision that they introduce in their companies' work teams. They mobilize and motivate them towards growth, innovation, and global markets, transmitted to the ecosystem in their articulation with entrepreneurs from their value chain and with entrepreneurship programs such as Manizales Mas. The second, through its institutional mechanisms with family businesses, to mobilize the market, i.e., Luker Foundation, Manizales Mas, family business stories, buying products from entrepreneurs, mentoring programs, local suppliers, and serving as a commercial channel.

It seems that the restriction, more than market size because it is a small city, is the mentality of the entrepreneurs that leads them to markets of more significant dynamics and size with global solutions, which does not necessarily make them move from Manizales. Therefore, "limiting sales to Manizales is not necessarily a good idea, but it depends on each industry and business opportunity and therefore must be looked at independently. Nor should we export for the sake of exporting; we must keep scalability in mind" [INT18/FE2].

As well as better sales capacities by improving capabilities to serve more sophisticated markets, such as those of the family businesses interviewed. Therefore, being clear about the "size of their capacity, since they are very restricted, they should solve it, but they tell us that they cannot serve us" [INT30/FE6]. In this sense, the call is to support entities with programs such as mentoring or acceleration since entrepreneurs do not want to leave Manizales and must be kept in understanding what open markets means.

Table 54. Open markets and their articulation mechanism with entrepreneurial families.

Family Business	Entrepreneurial Ecosystem				Entrepreneurial Family		
	Open Market	Limitations to entrepreneurial process	Bridging mechanism	Opportunity	Promotes Market with entrepreneurs	Bridging mechanisms enable open market	Contribution
FE1	No	No	Mindset and support entities	Global solutions	Yes	Fundación Luker and Manizales Más History of the family business	Ecosystem mindset Connect with Manizales and ecosystem
FE2	Depends	No	Match with market problem	Manizales as laboratory	Yes	Manizales Mas	Connect with Manizales
FE3	No	Yes	No data	No data	Yes	B2B with ventures	Match with business needs
FE4	No	No	Match with market problem	Success stories in Manizales - Playvox	No	Mentoring programs	Improving the offer of entrepreneurs or ventures
FE5	No	Yes	Global solutions	Success stories in Manizales - Buencafé, Super de Alimentos	Yes	Grupo Tec	Connect with the market, advise and financing
FE6	No	No	Global solutions	Open mind	Yes	Open innovation and network of suppliers	Connect with solutions
FE7	No	No	Mindset and support entities	Global solutions	Yes	Commercial channel	Sales, formalization, and growth
FE8	No	No	Global solutions	Open mind	Yes	Commercial channel	Sales, formalization, and growth
FE9	Depends	Yes	Mindset and support entities	Open mind to growth	No	No data	No data
FE10	No	No	Global solutions	Open mind to growth	Yes	Local suppliers	Sales and growth
FE11	No	Yes	Support entities	Internationalization	Yes	Local suppliers	Sales and growth
FE12	No	No	Mindset and support entities	Manizales is the location; the market is the world	No	Global suppliers	Match with business needs

Source: Own elaboration 2022

Finally, this component of the entrepreneurship ecosystem could mobilize in the future an essential articulation of the family social capital and its potential from the relationship, vision, and capabilities (seen from the same entrepreneurial family). The opportunity in what has been generated, but above all what can be achieved in the future, "the starting point could be the problems of the territory identifying business opportunities connecting entrepreneurs who solve with a focus on the creation of shared value or triple impact" [INT19/FE2]. With this focus of interest defined by an entrepreneurial family, it would mobilize its resources and capabilities towards innovative entrepreneurship with a global vision and probably could even channel investment.

Chapter 6: Conclusions

6.1 Conclusions about the entrepreneurial ecosystem and its evolution²²

By considering three different perspectives, that of entrepreneurs and mentors, support entities in the entrepreneurial ecosystem, and entrepreneurial families, this research sheds light in a triangulated manner on how entrepreneurial families influence the development and consolidation of entrepreneurial ecosystems in a country where the entrepreneurial ecosystem at the national and territorial level faces significant challenges (DNP, 2020).

In chapter five, we have shown the results of each of these collectives grouped by mechanisms, and, in this one, we are going to highlight those coincidences and differences between them grouped about the entrepreneurship ecosystem, the entrepreneurial families, and the attributes of the ecosystem to end up formulating propositions according to what was observed that, in future lines of research, could be verified in other ecosystems and family businesses or, even, their generalization.

As mentioned, to establish this possible impact, from the perspective of entrepreneurial families, the approach called familiness (Pearson et al., 2008) was used, which relates the three basic dimensions of Social Capital. The family's resources and capabilities provide relevant competitive advantages to family businesses: structural (process resources), cognitive (human resources), and relational (organizational resources). On the other hand, from the perspective of the entrepreneurship ecosystem, the so-called attributes of entrepreneurship ecosystems were

²² Parts of Entrepreneurs and mentos' perspective was taken from the article "The role of entrepreneurial ecosystems: the family social families in entrepreneurial capital approach" published in the Journal of Entrepreneurship in Emerging Economies by authors Benavides-Salazar et.al, (2021). Paper published within the framework of this research.

used (Stam & Spigel, 2016), which provide relationships and advantages that promote or facilitate entrepreneurial development: social, cultural, and material.

By articulating resources and capabilities (familiness) with attributes (ecosystem), it was possible to identify bridging mechanisms that made it possible to determine how there is effectively an incidence of entrepreneurial families in each entrepreneurship ecosystem (Manizales). In this sense, it was necessary to confirm the existence and dynamism of an entrepreneurship ecosystem (Cao & Shi, 2020; Manimala & Wasdani, 2015) framed in the three attributes mentioned with their respective components and subsequently demonstrate the presence and dynamism of entrepreneurial families (Discua Cruz et al., 2013; James et al., 2020) with family businesses. Highlight their competitive advantages (familiness (Habbershon et al., 2003; Sorenson, Goodpaster, Hedberg, & Yu, 2009) and embeddedness in the territory (Rodrigo Basco, 2015; Dahl & Sorenson, 2009) that had some interaction with the entrepreneurial ecosystem.

In this regard, and after the interviews conducted and contrasted not only with four types of observers but also with secondary sources, it was possible to identify an active entrepreneurial ecosystem. Although Manizales is not a new ecosystem, since the tradition of business creation has always existed, it was organized and made visible ten years ago with the establishment of Manizales Más, a program mobilized by the initiative of an entrepreneurial family.

The cultural attribute has been one of the most changing and evolving in the entrepreneurship ecosystem. Being an entrepreneur today has "status" mentors and stories of entrepreneurship with a vision of the future (A. R. Anderson & Jack, 2002) have been decisive for this change, as well as becoming mobilizers for others to follow this path. The mentioned before may be related to the cognitive dimension, the difference in attitudes about entrepreneurship in the

region, which, although it had already begun some time ago, has accelerated in the last ten years due to the decision of an entrepreneurial family that, through the generation of capabilities and global articulation, provides greater openness to a traditionally conservative region.

Although it is an intermediate city ecosystem where the level of relationship is very high, given that one of its values is collaboration, the interviewees (mentors, entrepreneurs, support entities, and entrepreneurial families) agree that they should improve the articulation approach to generate higher impacts in programs or actions. Despite being articulated through an instance called "Caldas Regional Entrepreneurship Network," there is no in-depth knowledge of the services offered by one or the other in the entrepreneurship ecosystem. The main articulators are Manizales Más through its network of allies and funders, the Mayor's Office of Manizales and the Government of Caldas (government) through the financing and execution of public policy, and the University System of Manizales (SUMA) training in entrepreneurship through the "entrepreneurship route."

To the above, it is relevant to mention that, as the level of the embeddedness of the agents involved in the territory increases, and therefore, in the entrepreneurship ecosystem, relationships become more substantial, and the exchange of resources and support becomes increasingly fluid (Jack, 2005; Porras-Paez & Schmutzler, 2019; Sequeira et al., 2007), thus increasing the number of start-ups (Bird & Wennberg, 2013). In this context, the sense of community increases, and bridges can become links within the entrepreneurial ecosystem.

Although, as mentioned above, there are apparently "enough" entities and services to support entrepreneurs in the ecosystem, however, in the light of some support entities, these overlap with each other and focus on the early stages of entrepreneurship, leaving uncovered areas that also require attention such as business acceleration, innovation or investment. Coworking

spaces are still not strong enough in the ecosystem, nor are they given the relevance they generate in terms of networking and connections.

Finally, it is an ecosystem that knows its limitations (Autio & Levie, 2017; Content et al., 2020) and seeks to improve and evolve, which denotes its dynamism from the institutionalization (support agents) and the entrepreneurs themselves. As the research progressed, the emergence of new programs, services, and instances that contribute to closing gaps in each of the attributes of the ecosystem was evidenced, such as networking (StartupGarage promoted by entrepreneurs - social attribute), investment (network of angel investors promoted by support agents - social attribute) and open markets (MIT Reap and EcosystemBT promoted by support agents - cultural and material attributes).

6.2 Conclusions on entrepreneurial families

The research aimed to determine the presence of entrepreneurial families with some incidence in the entrepreneurial ecosystem. According to a study (Sirmon & Hitt, 2003), the existence of the three dimensions of family social capital as well as the resources of the companies is required to constitute a business competitive advantage known as familiness. This advantage could be considered the differentiator in articulating the entrepreneurial ecosystem.

In the case of the entrepreneurship ecosystem analyzed, not only was the presence of at least six entrepreneurial families visible, but the people interviewed within the family businesses identified four "focuses" in which their capabilities and advantages are supported; these are (1) social impact, (2) value chain, (3) innovation and (4) growth with investment. Although these foci are present, there is a common characteristic for all. It is the rootedness with the territory (Martínez-Sanchis et al., 2022) inherited from the founders which gives them a clear vocation to contribute to the development of the region with significant exchanges (Baù et al., 2019) and,

therefore, the motivation for the generation of strategies that directly or indirectly mobilize the entrepreneurship ecosystem; which generates a mutual and reinforced influence of the entrepreneurial families to the entrepreneurship ecosystem and vice versa.

In the first "focus," social impact, an entrepreneurial family has transmitted to its companies a strong growth orientation supported by sustainability and corporate social responsibility without uprooting from the territory. For this reason, even though companies today serve international markets and clients, they have mainly formal mechanisms that allow them to have a direct link and, above all, the generation of capacities in the territory (Ascani et al., 2012) and, more specifically, in the entrepreneurial ecosystem. Entrepreneurs, mentors, and support agents of the ecosystem identify the family and its mechanism, given its high incidence not only in entrepreneurship but also in other social spaces of intervention, such as education.

In the second, called the chain value, there are two entrepreneurial families that, based on their interest in contributing to the territory, seek strategies for the development of mainly local suppliers; they provide advice, quality management, and even financing for working capital. In this strategy, the family businesses report that entrepreneurs have participated; however, it is not the primary purpose. There is one family that stands out the most, given that the type of family business, being in the commerce sector, facilitates greater articulation with a more

significant number of entrepreneurs of different sizes; this is recognized by mentors, entrepreneurs, and support agents in the entrepreneurship ecosystem.

The third, called innovation, is headed by two entrepreneurial families whose primary motivation is growth based on innovation and speed of management without uprooting themselves from the territory. Their growth has been, is, and will be in Manizales. In this sense, they generate a strong relationship with the Universities through open innovation strategies, participate as mentors and mobilize themselves to the entities' invitations, support agents, or entrepreneurship programs such as Manizales Más. It is recognized by the entrepreneurs, mentors, and the great majority of the support entities in the entrepreneurship ecosystem.

Finally, the fourth focus, called growth with investment, is found only in one entrepreneurial family, which from its vision and values (cognitive dimension and relational dimension), mobilizes the dynamics of the ecosystem (Isenberg, 2010; H. D. Kantis et al., 2020; Spigel & Harrison, 2018; Stam, 2018) through the diversification of markets with start-ups and investing in some of them. Regarding the relational dimension, the entrepreneurial family's rootedness explicitly allows the family to interact and create appropriate values for the region (Bird & Wennberg, 2013). Although it is the only one mentioned by the support entities, it is not so visible by the large proportion of these agents. It is a recent strategy, given that it was not yet present at the time of conducting the interviews with mentors and entrepreneurs.

From the four focus areas, these six entrepreneurial families generate actions based on their competitive advantages, using formal and informal mechanisms to set an example for other entrepreneurs, which motivates them to support entrepreneurship in the ecosystem. This situation has been presented in entrepreneurs who benefit from the support of the same entrepreneurship ecosystem and now share their stories to inspire entrepreneurs or have become

new mentors; generating a bi-directional relationship between the actors of the ecosystem and thus reinforcing what is already a fundamental asset in a vibrant entrepreneurship ecosystem (Isenberg, 2010).

Regarding the formalization or institutionalization of the family social capital and its bridging mechanisms of the entrepreneurial families, the significant influence of the institutionalization (Tolstykh et al., 2020) of the business support to entrepreneurship is evident. Of the total number of entrepreneurial families that are visible in the ecosystem by the entrepreneurs, mentors, and support entities interviewed, the role of three of them stands out, and the one with the most significant role or presence is the one that has an institutionalized strategy that formalizes its link or intervention in the entrepreneurship ecosystem.

For the last case, the institutionalization of family social capital has double implications since the formalized action implies the entrepreneurial family's sustained commitment to economic development and its willingness to contribute to the ecosystem by generating capacities in the territory. In this regard, because of the institutionalized mechanism, the entrepreneurial family's objectives have been achieved (i.e., the cognitive dimension of family social capital), thus also allowing the formalization of family values (i.e., the relational dimension of family social capital) and the creation of stable links between the institutionalized mechanism and the community (i.e., the structural dimension of family social capital) (Aragón-Amonarriz et al., 2019). Likewise, institutionalization (different from the family business) allows bridging the entrepreneurial social capital of the entrepreneurial family and the entrepreneurs through a broad set of mechanisms in the entrepreneurship ecosystem, which the entrepreneurs, mentors, and support entities interviewed remarked. The scope of these mechanisms is focused on medium-sized entrepreneurs with high growth potential in the region.

Though the institutionalization of an entrepreneurial family makes relevant contributions (Aragón-Amonarriz et al., 2019; Abländer, 2013), non-institutionalized but visible mechanisms in the entrepreneurship ecosystem have rooted a kind of moral mutuality among entrepreneurs (Janjuha-Jivraj & Spence, 2009). Have benefited from the ecosystem, leading to the creation, in the long run, of a new group of entrepreneurial families willing to enrich the entrepreneurship ecosystem. Therefore, it is relevant to show that bridging family social capital endures beyond individual dynamics (A. R. Anderson & Jack, 2002), amplifying its influence.

The big difference between the family that consolidates its family social capital through its institutionalized mechanism with those that still do not have it is that it becomes a strong link with the territory. It allows it to sustain its bridge to the entrepreneurship ecosystem, and it does so because a large part of its administrative operation has moved to another city. The above indicates that, in this case, the direct intervention of the family has not necessarily been required to support entrepreneurship. However, in the case of entrepreneurial families that do not have an institutionalized mechanism, the intervention of the family is direct, which generates support for the entrepreneurship activity in the ecosystem with actions such as telling their stories, being mentors, investing, contributing to the network of suppliers, among others; being the two schemes an excellent complement for the strengthening of the entrepreneurial ecosystem.

Therefore, it is possible to visualize and highlight those entrepreneurial families with solid family social capital and established bridging mechanisms that are an actor in the promotion of entrepreneurship in entrepreneurial ecosystems under specific territory characteristics such as culture, population size, business development, and institutionalism, among others. In particular, the interviewees (entrepreneurs, mentors, and support entities) highlighted the primary mechanisms of the entrepreneurial stories, family values transmitted by example, exchange networks, mentoring and mental models shared with entrepreneurs.

Based on the above, it is possible to generate the following proposition:

Proposition 1: The institutionalization of entrepreneurial family instruments makes their influence more relevant to entrepreneurs in the entrepreneurship ecosystem than informal instruments.

6.3 Conclusions on the attributes of the entrepreneurial ecosystem

Concerning the cultural attributes of the entrepreneurship ecosystem, our findings have shown that in the entrepreneurial ecosystem analyzed, the stories of the entrepreneurial families are transmitted by different mechanisms, the most used being oral and from generation to generation (tradition). It is perhaps why, although this level of recognition of the families by the entrepreneurs, mentors, support entities, and families interviewed, their stories are not known in depth and have not even been transmitted recently by the entrepreneurial families themselves in the entrepreneurship ecosystem (Bichler et al., 2022). It was confirmed in interviews with entrepreneurs, mentors, and support agents, including the families, who mentioned that ecosystem actors had not invited them to tell their stories.

The transmission of stories by tradition or from activities promoted by agents or support entities of the entrepreneurial ecosystem leads to a powerful dynamic reinforced by new entrepreneurs in the entrepreneurial ecosystem itself, with new narratives that inspire more entrepreneurs (Roundy et al., 2017). Likewise, it is confirmed that family values are directly transferred through interactions with family members and their employees, family members and their participation in formal entrepreneurial programs, which was also recognized by both entrepreneurs, mentors, and support entities. However, families' main mechanism for transferring values is by example, which is done directly to their stakeholders.

Through this exchange of family values and entrepreneurial stories, entrepreneurial families can bridge their visions and interpretations (i.e., the cognitive dimension of family social capital) and are thus facilitated in communicating their values and norms to entrepreneurs through both formal and informal mechanisms (i.e., the relational dimension of family social capital). This outreach process is usually carried out mainly by mentors, who may or may not be members of entrepreneurial families or have close relationships with an entrepreneurial family (i.e., the structural dimension of family social capital).

Based on the above, it is possible to generate the following proposition:

Proposition 2: The stories or examples of entrepreneurship of entrepreneurial families, as well as their values, can transmit throughout the entrepreneurship ecosystem (relational Family Social Capital bridge) and enrich their cultural attributes, decisively impacting the entrepreneurial spirit of the entrepreneurship ecosystem.

Considering the social attributes, of the entrepreneurial ecosystem, it is evident in the first place the remarkable capacity of relationships and networks that an entrepreneurial family has and that, according to its family social capital, the focus of interest and the level of institutionalization of mechanisms, makes them available to the entrepreneurial ecosystem.

Hence, with its institutionalized mechanism, the entrepreneurial family has solid international networks that it offers to the entrepreneurial ecosystem's capabilities. In the case of those that do not have institutionalized mechanisms, the networks of these families are intensified and expanded thanks to the fact that they support or participate in training programs, mentoring, informal meetings, and advisory services that provide meeting spaces for entrepreneurs and support or support entities (i.e., the structural dimension of entrepreneurial social capital) in

which the values and entrepreneurial mindset of entrepreneurial families are shared (i.e., the relational and cognitive dimensions of family social capital).

From the mentors' perspective, most of those who formally participate in the entrepreneurship ecosystem is linked to the mentoring program of Manizales Más, which promotes entrepreneurial families through its institutionalized mechanism. This group of mentors provides entrepreneurs with input on strategic opportunities, business problem solving, or mindset changes (A. Anderson et al., 2007). They have also supported entrepreneurs in overcoming the constraints of most new or growing businesses (A. R. Anderson & Jack, 2002). This mechanism is so relevant that it combines the three dimensions of family social capital, as mentors enable entrepreneurial families to share their networks (structural dimension), mindset (cognitive dimension), and values (relational dimension) with entrepreneurs in the entrepreneurship ecosystem.

Surprisingly, half of the entrepreneurial families interviewed rarely perceive themselves as promoters of investment capital in the entrepreneurial ecosystem. It is possible to mention that the focus of action of the entrepreneurial family with its family social capital may influence the efforts it takes in its entrepreneurial growth and its relationship with the entrepreneurial ecosystem. It may also be due to the novelty of this mechanism in the entrepreneurship ecosystem or to the fact that it has been used relatively less often by entrepreneurial families to promote entrepreneurship.

Those mentioned above may also be due to the divergent purposes of family investment capital (i.e., the cognitive dimension of family social capital) concerning entrepreneurial projects in the entrepreneurial ecosystem. In this regard, entrepreneurs, mentors, support entities, and entrepreneurial families identify three main focuses associated with investment or financing.

The first one is the family with the institutionalized mechanism, which provides funding in alliance with other entities to strengthen the entrepreneurial ecosystem's capacities with the Manizales Mas program. Such a program has been operating for more than ten years, providing it with significant incidence and concentration (Chahine, 2018; Provan & Kenis, 2008). Therefore, it becomes evident that, since it is not a focus of interest of the entrepreneurial family until now, no processes or decisive actions have been presented by Manizales Mas for closing the capital investment gap in the ecosystem's ventures. The second is the family with orientation or focus on innovation, where financing is focused on providing solutions generated by innovation challenges. And finally, the family with a clear direction toward investment as a mechanism to grow and enter new markets, innovate, and develop value. Although these valid mechanisms complement each other, their low participation generates a critical gap in the entrepreneurial ecosystem.

Based on the previous, it is possible to suggest the following proposition:

Proposition 3: The mental models of entrepreneurial families and the shared vision throughout the entrepreneurship ecosystem (cognitive Family Social Capital bridge) enriches its social attributes, providing the dynamics of financial support to ventures, which decisively impacts the ventures of the entrepreneurship ecosystem.

Finally, regarding the material attributes of the entrepreneurship ecosystem, both mentors, entrepreneurs, support entities, and entrepreneurial families show the strong presence and leadership of universities and training entities, with a high level of articulation between them, generating network programs such as the entrepreneurship route. Although progress has been made on the subject, they also show the need to continue betting on the path of the change of mentality with challenging actions, given their position in the entrepreneurship ecosystem, as

stated by Stam & Spiegel (2016). In this same line, the same author also determines the relevance of this attribute in terms of having the potential to generate new companies from research results or the dynamics of developing new knowledge. However, in the interviews, there is no clear relationship between the entrepreneurship units, their purpose, and orientation or focus on entrepreneurship with technological innovation.

Regarding the support entities, there is a presence and a specific concentration in three entities or programs that generate more excellent articulation with the other actors; Manizales Más (program promoted by an entrepreneurial family), the one with the most significant presence, recognition, and articulation. As mentioned above, the ecosystem is evolving (Isenberg, 2011), evidenced by the creation of 4 new programs or support entities that emerged in 2 years and right in the middle of the pandemic.

While the above is positive, from a close relationship that could exist between entrepreneurial families and their mechanisms of transmission of their family social capital (author) or their strategies to promote entrepreneurship, this relationship is neither frequent, bidirectional, nor sustained. Participation is through the mentoring program and, sometimes, by telling their stories from the program's invitation to the entrepreneurial family or family business. However, the interest or motivation from the family seeking services or articulations with entrepreneurship programs has not been present, even in the most well-known program promoted by an entrepreneurial family.

Just this year, after ten years of operation of the Manizales Mas program, the entrepreneurial family is considering actions aimed at articulating their business needs with entrepreneurship processes; outside its institutionalized mechanism that operates powerfully in the territory. Their initial focus was more on social responsibility than other profit-oriented interests.

According to the above, it is possible to suggest the following proposition:

Proposition 4: The capacities of family businesses consolidated by the family social capital of entrepreneurial families (familiness) facilitate the articulation with universities or support entities strengthening bidirectional relationships and the entrepreneurial ecosystem.

Regarding public policy, which is the materialization of the intervention of government strategies and actions (Stam & Spigel, 2016), the city has a public policy with a component on entrepreneurship, being one of the few cities in Colombia that has one. It is a result of institutional articulation, the Entrepreneurship Network, and local interest in consolidating a long-term strategy (H. D. Kantis et al., 2020) that transcends public administrations every four years. It shows that the ecosystem has reached a certain level of maturity because of the collective conversations that took place to design the public policy. The ecosystem's actors, entrepreneurs and mentors, support entities, and entrepreneurial families do not recognize that they are aware of the progress of implementing the public policy. In this sense, there is no evidence of transmission or bridging mechanism of entrepreneurial families from their family social capital in this aspect. Only the Manizales Mas program, which comes from a strategy generated by the entrepreneurial family, has participated in these spaces.

It is relevant to mention that there is interest in the participation of entrepreneurial families in the construction and monitoring of public policy since they consider that from their experience, vision (cognitive dimension), and relationship (structural dimension) (Pearson et al., 2008; Theodoraki et al., 2018), they have much to contribute, especially to the development of the region (Backman & Palmberg, 2015; Mason & Brown, 2012; Roundy, 2016). In other words, their beliefs and values allow them to orient their actions towards strengthening the entrepreneurial dynamics of the territory.

Finally, in terms of open markets, the size of the city does not facilitate business growth processes or even the demand for sophisticated services and products (Calderón-Hernández et al., 2020; Fischer et al., 2018; Kakouris et al., 2020). However, it has not been an impediment for large companies to settle or develop in Manizales and make their markets globally. There are recognized cases in the city that demonstrate this in the industrial, food, and ICT sectors. Therefore, most of the interviewees (entrepreneurs, mentors, and support entities), and mainly the entrepreneurial families, show that what is relevant is the mentality (cognitive dimension) but not the local market restriction. It may be the most significant competitive advantage of the entrepreneurial families interviewed. Having taken risks and investments to reach global markets (Acs & Szerb, 2007; Zahra & Nambisan, 2011), solving solutions to global problems with ambitious projects, and this has allowed them to grow without having to move from Manizales (deep roots to the territory - (Westlund & Bolton, 2003) in most cases. Its conviction is the one that should be promoted or transmitted from the entrepreneurial families to the actors through mechanisms such as stories, mentoring, or investment, among others.

The conditions of the city in terms of size, quality of life, education, safety, and culture (cooperation, work well done), among other characteristics, have generated that many inhabitants do not want to move to other cities and even motivated them to want to return to Manizales. For this reason, in terms of open markets for entrepreneurship, it is evident that both Manizales and its entrepreneurial ecosystem can be considered a "laboratory" to validate and test products or services that will later allow them to enter larger markets.

Entrepreneurial families and family businesses can be an actual vehicle, from the extension of their networking, that is, the structural dimension, to leverage newly created companies (Discua Cruz et al., 2013; Habbershon & Pistrui, 2002; Le Breton-Miller & Miller, 2018). There are

still cases where the business maturity, the quality of products, and, above all, the capacity of entrepreneurs limits the possibilities of articulation.

According to the above, it is possible to suggest the following proposition:

Proposition 5: The vision and mental model of the entrepreneurial families (cognitive dimension) has allowed them to grow to global markets regardless of the market size of the territory in which they are located, the mindset that positively influences entrepreneurs in the ecosystem, therefore, the transmission of their stories is of great relevance.

The above conclusions can be summarized as follows: the incidence of entrepreneurial families in the entrepreneurship ecosystem studied is evident. Different mechanisms generate this incidence; institutionalized mechanisms present the most outstanding visibility and impact. These mechanisms result from competitive advantages of family businesses created by the vision, values, beliefs, and networking of the entrepreneurial families, that is, their familiness. The mechanisms provided by the entrepreneurial families complement and contribute to the entrepreneurship ecosystem; however, there are specific attributes that, by their nature, have greater ease of generating bridges from and with the entrepreneurial families; these are stories of entrepreneurship, mentoring, and culture and open markets.

6.4 Implications

6.4.1 Theoretical implications

The engagement of family members in entrepreneurship ecosystems starts from a resource called familiness, which has been accepted and studied in the literature (K. Cabrera-Suárez et al., 2001; Pearson et al., 2008; Rutherford & Holt, 2008; Thomas M. Zellweger & Nason, 2002).

This resource is based on family social capital, a concept also studied in the literature (Pearson et al., 2008). We sought to make it visible with a first approach to the actors of the entrepreneurial ecosystem (entrepreneurs, mentors, and support entities) and in the entrepreneurial families interviewed present and embedded in the territory (Rodrigo Basco, 2015b; Martínez-Sanchis et al., 2020; Stough et al., 2015). However, more research is required to fully understand the nature of familiness and its components (Chrisman et al., 2005; Moores, 2009) and, thus, confirm some bridging mechanisms with the entrepreneurial ecosystem that were not sufficiently evidenced in the present research.

The results presented in this research provide evidence of an articulation that theory had not made before entrepreneurial ecosystems with entrepreneurial families. We have shown how Family Social Capital offers a helpful approach for articulating two social systems, such as the family and its business and entrepreneurship, from the concept of the entrepreneurial ecosystem. We started from the Family Social Capital model (Habbershon & Williams, 1999a; Pearson et al., 2008; Sirmon & Hitt, 2003), relating the three fundamental dimensions: structural (networks), cognitive (shared vision), and relational (norms, identity, and trust) and, therefore, the influence of the entrepreneurial family through these dimensions of resources, provides a theoretical body that can help to understand the impact of familiness in an entrepreneurial ecosystem.

Based on previous research (Sirmon & Hitt, 2003), where the mere presence of the three dimensions mentioned earlier does not in itself constitute a competitive advantage, it is also necessary to understand the capabilities of family businesses to understand how these families transfer their advantages and capabilities to the territory. In this sense, it is the bridging mechanisms and their characteristics, resulting from the resources of the families that support

them, that help to clarify the conditions associated with the family advantage, their capabilities, and their particular way of influencing the entrepreneurial ecosystem.

The most significant contribution to the field of literature on the relationship between familiness and entrepreneurial ecosystems is that each dimension analyzed in our research (relational, structural, and cognitive) is related to how each entrepreneurial family and its family business uses and transforms its resources to turn them into a competitive advantage and at the same time into an entrepreneurial capability. When supported by the territory, this capacity becomes a bidirectional strengthening that benefits both the entrepreneurial ecosystem and the entrepreneurial family.

From the perspective of the entrepreneurial ecosystem, a concept widely studied in the literature (Pankov, 2019; Colombelli, 2017; Spigel, 2016; Isenberg, 2011)(Isenberg, 2011; Stam & Spigel, 2016), the relationship that exists between the attributes and the need for their presence in the entrepreneurial ecosystem to be "balanced" is confirmed. Although it is not easy to have them all at the same time and the same level of development, the scarce or null presence of any of them substantially affects the others.

Another contribution to the literature articulates entrepreneurial families with entrepreneurial ecosystems is that there may be a "catalyst" in the ecosystem. It makes it visible or highlights it, imbues it with vitality, and, therefore, dynamizes the "cascade effect" type actions that detonate towards a dynamic and vibrant ecosystem. Consequently, it could be included in future research to determine the presence of this type of catalyst by establishing their relevance and, therefore, motivating their existence and participation.

In summary, our study answers the question of "how" to establish the mechanisms in which an entrepreneurial family can influence the entrepreneurial ecosystem's attributes, which can serve

in future theory-building exercises. This influence through its resources and capabilities, called familiness, from three dimensions.

6.4.2 Practical implications

As demonstrated in the ecosystem studied, entrepreneurial families highly support entrepreneurship and do so differently depending on their vocation and profile. This interaction makes it possible to significantly influence many new entrepreneurs and small business leaders with intentions to grow, as they embrace various mechanisms to capillary family social capital in the entrepreneurial ecosystem. However, one potential area for enhancement is working with small business leaders who are not yet involved in the entrepreneurial ecosystem, helping them develop an entrepreneurial mindset and culture to drive their growth orientation.

The results presented have implications both for entities supporting the entrepreneurial ecosystem and for regional and national policymakers seeking to mobilize the development of entrepreneurial ecosystems. First, the case study shows or evidences the presence of a set of mechanisms deployed by entrepreneurial families that enhance entrepreneurship in the ecosystem. Therefore, it could be proposed to develop promotional programs so that more families aligned with these purposes can deploy new mechanisms or replicate existing ones to strengthen the ecosystem.

The case study also shows the relevance of the narratives of entrepreneurial families and new entrepreneurs in the ecosystem (Isenberg, 2010; Roundy, 2018). Therefore, it could be motivated not only to programs of social responsibility for entrepreneurial families with deep roots within the region but to a more significant proportion of formal instruments to increase the transmission of stories of entrepreneurial families in entrepreneurial ecosystems.

Moreover, the conclusions should encourage entrepreneurial ecosystems to facilitate and sustain the active and continuous participation of entrepreneurial families in the same ecosystems, through programs or actions, either directly or through support entities. It is because, as illustrated, the impact of the contribution of entrepreneurial families, especially when the relationships between entrepreneurial families and entrepreneurial ecosystems have been formalized, is multiplied in entrepreneurs due to the moral reciprocity effect. Moreover, this study shows evidence that the promotion of entrepreneurship by entrepreneurial families not only benefits the entrepreneurs within the entrepreneurial ecosystem but also benefits the entrepreneurial ecosystem itself and the embeddedness of the entrepreneurial families.

In this sense, this research provides some indications that can guide programs to support the activities of the entrepreneurial ecosystem, such as strategies to mobilize the stories, culture, or investment of entrepreneurial families; and mainly to promote the formalization of family business mechanisms according to the orientation of their family social capital (K. Cabrera-Suárez et al., 2001).

Further to the above contributions, this dissertation sheds light on some lessons that the entrepreneurship ecosystem of Manizales can learn from in its dynamics and articulation (Isenberg & Vincent, 2016; Molina-Osorio & Maya, 2018; V. Molina & Valbuena, 2019). The entrepreneurial ecosystem of Manizales has been recognized for its institutional framework, the relationship of its business framework, the collaborative dynamics, and the culture (Morales et al., 2019) that has been forged since its founding. Despite the outstanding performance of the entrepreneurial ecosystem in Manizales, some of the gaps observed in the Colombian context of the entrepreneurial ecosystem (DNP, 2020) have also been identified in some way in the entrepreneurial ecosystem itself, such as the difficulty of consolidating entrepreneurial

networks, the low presence of innovative financing mechanisms and lack of articulated institutional support.

First, the difficulty in consolidating business networks that promote entrepreneurship initiatives stands out. In this sense, even in the entrepreneurial ecosystem of Manizales, where there is a very active and institutionalized entrepreneurial dynamic, the continuity of relationships between actors remains a problem. Regardless, the findings show some evidence of entrepreneurs who benefited from the support of the entrepreneurial ecosystem by sharing their stories or becoming mentors to inspire or support others; however, these dynamics are not generalized or formalized.

In this context, promoting the embedding of new entrepreneurs and their families within the community can be a relevant strategy to strengthen the investment made in this business asset. This type of retroactive dynamics should be actively promoted by the institutional policies of the entrepreneurial ecosystem to ensure their continuity over time. Indeed, new entrepreneurs and potential family entrepreneurs are the seeds of future actors who contribute to the territory (Rodrigo Basco, 2015), and to sustain or promote their local rootedness (Bichler et al., 2021), it is necessary to establish bidirectional relationships between entrepreneurial families and the entrepreneurial ecosystem. Consequently, entrepreneurial ecosystem policies are expected to increase entrepreneurial families' cognitive, cultural, structural, and political embeddedness, as recommended in recent research (Martínez-Sanchis et al., 2020; Martínez-Sanchis, Iturrioz-Landart, et al., 2021).

Second, the risk of polarization of the entrepreneurship ecosystem due to the influence of one or few prominent actors is observed in the case. Among the formal and informal institutions of the entrepreneurial ecosystem, main actors may emerge to fill some of the existing gaps,

rallying around other members of the network (Adner, 2006; Clarysse et al., 2014). It is not unusual, especially in developing countries (Mansour & Apa, 2018; Porrás-Paez & Schmutzler, 2019). When it occurs, these prominent actors may develop high-concentration decision-making behaviors as intermediary agents operating governance networks (Porrás-Paez & Schmutzler, 2019; Provan & Kenis, 2008).

In the entrepreneurial ecosystem of Manizales, the prominence of some entrepreneurial families may trigger their support to entrepreneurs or the development of actions in specific sectors or areas of their interest, biasing the vocation or specialization of the entrepreneurial ecosystem (Zacharakis et al., 2002). Indeed, in these cases, to avoid biased decision-making by a few agents, entrepreneurial ecosystem policies must ensure support to all actors (Colombelli et al., 2019) and different work foci of the entrepreneurial ecosystem, regardless of their links with the other agents of the entrepreneurial ecosystem. Leading entrepreneurial families can reduce the kaleidoscopic interests and perspectives contained in the entrepreneurial ecosystem. Recognizing this situation and avoiding its potential risk is one of the primary endeavors of the entrepreneurial ecosystem.

Third, alternative financing mechanisms in an entrepreneurial ecosystem in Manizales could be the search for more entrepreneurial families to adopt the strategy of one of the interviewees. Who considers that the way for their growth is the articulation and investment in entrepreneurs that gives them speed, innovation, young talent, and flexibility (Fischer et al., 2018; Stam & Spiegel, 2016). As shown above, there are other focuses of interest of families in the entrepreneurial ecosystem. However, if this case could be taken as a reference to motivate other entrepreneurial families and turn it into a development strategy, it would be a relevant way to generate investment or financing results.

Entrepreneurial families and their family businesses have a tradition of consolidating business foundations within their corporate social responsibility mechanism or similar strategies. Although in the entrepreneurial ecosystem of Manizales, this institutionalized mechanism has generated significant impacts. In the case of investment in ventures or start-ups, it is not the vehicle (Acs et al., 2017; Isenberg & Vincent, 2016; Roundy, 2016); therefore, leading more entrepreneurial families to employ direct strategies or consolidating business groups or family offices (Bierl & Kammerlander, 2019; Fiegner et al., 2000) would be relevant for the entrepreneurial ecosystem. It can be a task from a transformation of the financing table that, at one point, the ecosystem operated but stopped meeting without a clear motivation.

Moreover, it is evident in the entrepreneurial ecosystem that some entrepreneurial families are still very conservative. If they do not obtain quick wins or do not see strong positive signs in the execution, they tend to leave the plan or reduce the investment. In this regard, an entrepreneurial family interviewed has worked on this from its cultural transformation (Laspita et al., 2012) and identified that the culture limited the innovation and investment processes. Therefore, they chose values such as "united we can do it, the power of simplicity; we privilege innovation"; achieving a collective behavior (Bettinelli et al., 2014; Chirico, Sirmon, et al., 2011) and, to the extent that it is acted upon and by doing it every day, it became a habit. These business practices can not only be replicated in other family businesses or not, new, or not, and thus scale to different scenarios where the transformation of the culture of the ecosystem is a collective purpose, articulated and with a common aim.

Finally, and among the main lessons learned for the context of Manizales, we point out, firstly, the strengthening of relationships between the stakeholders of the entrepreneurial ecosystem to reinforce their commitment and reciprocity with the territory (Capello, 2011) (motivating the embedding and local commitment while maintaining a global vision). Secondly, to guarantee

support to the ecosystem actors, avoiding the potential polarization of the same around the prominent agents, and third, to make visible and motivate the different mechanisms with which the entrepreneurial families influence (consciously or unconsciously) the entrepreneurial ecosystem. Trying to exchange experiences and good practices (Clinton et al., 2020) to accelerate those other entrepreneurial families are motivated to implement them, influencing in a better way the entrepreneurial ecosystem and, therefore, the regional development (Mack & Mayer, 2016; Oh et al., 2016; Stimson et al., 2011).

Although can apply these recommendations to similar entrepreneurial ecosystems, ad-hoc policies based on an understanding of each region's specific nature, capabilities, and risks (Villegas-Mateos, 2020) are required to maximize the potential of entrepreneurial ecosystems.

6.5 Limitations and further research

The limitation of our study is its specificity, a condition that could address by analyzing case studies in other entrepreneurial ecosystems. In addition, it could further strengthen its complementary interviews with other members of the entrepreneurial families or more employees of family businesses. More entrepreneurial families and other stakeholders (e.g., from the viewpoint of national actors that interact with the entrepreneurship ecosystem of Manizales, universities, unions, and the public sector, among others) to avoid possible biases due to the adoption of a very local perspective on the topic.

In this sense, deepening the analysis of broadening the perspectives of entrepreneurial families could be helpful to test, for example, the requirements of entrepreneurial families to sustain family social capital and its impact on the entrepreneurial ecosystem or the potential differences in the effect of family social capital on family entrepreneurship compared to non-family entrepreneurship within an entrepreneurial ecosystem. Some possible lines of research to

deepen the incidence of entrepreneurial families in entrepreneurial ecosystems could be a comparative analysis of the effects in different regions or a comparison between different sizes of companies and industries.

It would also be possible to study the potential adverse effects of the incidence of entrepreneurial families that could mobilize or influence decisions that affect the entrepreneurial ecosystem in general in their interest and outside of that of the business community. They could influence issues such as access to talent, prioritization of economic sectors, and institutional articulation, among others, and thus identify how can avoid this situation. Finally, longitudinal analysis to identify the different stages of the entrepreneurial ecosystem and the role of entrepreneurial families in each of them would further enrich the current knowledge base on the impact of entrepreneurial families on the entrepreneurial ecosystem.

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