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# ENTREPRENEURIAL ECOSYSTEM, NETWORKS AND ENTREPRENEURIAL CULTURE: A THEORETICAL ESSAY

# ECOSSISTEMA EMPREENDEDOR, REDES E CULTURA EMPREENDEDORA: UM ENSAIO TEÓRICO

# ECOSISTEMA EMPRESARIAL, REDES Y CULTURA EMPRESARIAL: ENSAYO TEÓRICO

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## ABSTRACT

The Entrepreneurial Ecosystem [EE] approach suggests the contribution of various actors to venture creation. However, the way in which the interaction of actors occurs is still inconclusive. Articulating constructs derived from social networks and institutionalism, this theoretical essay formulates propositions that position entrepreneurial culture and social networks as key factors for the articulation of EEs. In the proposed model, entrepreneurial culture is represented by the main types of information transmitted by role models to potential entrepreneurs. Networked firms go through the entrepreneurial process in three phases: discovery of opportunities, securing resources, and gaining legitimacy; influencing a diverse ecosystem. It is argued that network-related EEs influenced by local culture allow for greater contextualization of entrepreneurial activity.

**Keywords:** entrepreneurial ecosystems; networks. culture; institutions; local development.

## RESUMO

A abordagem do Ecossistema Empreendedor [EE] sugere a contribuição de vários atores para a criação de empreendimentos. Entretanto, a forma pela qual a interação dos atores ocorre ainda é inconclusiva. Articulando constructos derivados de redes sociais e institucionalismo, este ensaio teórico formula proposições que posicionam a cultura empresarial e as redes sociais

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como fatores-chave para a articulação dos EEs. No modelo proposto, a cultura empreendedora é representada pelos principais tipos de informações transmitidas por empreendedores-exemplo a potenciais empreendedores. As empresas articuladas em rede passam pelo processo empresarial em três fases: descoberta de oportunidades, acesso à recursos e obtenção de legitimidade; influenciando um ecossistema diversificado. É argumentado que os EEs relacionados em rede e influenciados pela cultura local permitem maior contextualização da atividade empreendedora.

**Palavras-chave:** ecossistemas empreendedores; redes; cultura; instituições; desenvolvimento local.

**RESUMEN**

El enfoque del ecosistema empresarial [EE] sugiere la contribución de diversos agentes a la creación de empresas. No obstante, la forma en que se produce la interacción de los actores aún no es concluyente. Articulando constructos derivados de las redes sociales y del institucionalismo, este ensayo teórico formula proposiciones que sitúan la cultura emprendedora y las redes sociales como factores clave para la articulación de los EE. En el modelo propuesto, la cultura emprendedora está representada por los principales tipos de información transmitidos por empresarios ejemplares a empresarios potenciales. Las empresas en red atraviesan el proceso emprendedor en tres fases: descubrimiento de oportunidades, acceso a recursos y obtención de legitimidad; influyendo en un ecosistema diversificado. Se argumenta que los EE relacionados en red e influidos por la cultura local permiten una mayor contextualización de la actividad emprendedora.

**Palavras clave:** ecosistemas empresariales; redes; cultura; instituciones; desarrollo local.

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## 1 INTRODUCTION

Entrepreneurial activity does not occur in a vacuum (Bosma et al., 2020; Welter, 2011), and the creation of a venture is the result of a process on an individual and contextual level. Individual elements – personal experiences of the entrepreneur (Sorenson, 2003) his or her economic situation (Vale, 2015) – and contextual elements – local culture, economic conditions (Spigel, 2017) and local network (Neumeyer; Santos; Morris, 2019) – are important factors for an entrepreneurial activity to occur.

The local or regional factors that assist in the creation of ventures in each region are extensively addressed in the Entrepreneurship literature. Initially, such discussions were guided by the possible positive externalities that could occur locally, such as cost reduction, labor pooling, and knowledge spillovers (Marshall, 1996). However, since the advent of the knowledge economy (Audretsch *et al*., 2019) regions have gained even more notoriety as catalysts of entrepreneurship, becoming synonymous with innovation and economic development for their countries (Saxenian, 1994). In regions where organizations whose products and/or services are based on knowledge predominate, a culture of innovation developed in the territory by companies and entrepreneurs can be observed (Saxenian, 1994).

After some regions that concentrated high rates of innovative ventures became recognized, researchers and policymakers sought to understand, in a deeper way, the dynamics of these places, in order to replicate them in their own countries, regions, and cities (Brown; Mason, 2017). This effort has stimulated parallel lines of inquiry, such as those on innovation regions and, more recently, Entrepreneurial Ecosystems [EE] (Autio *et al*., 2018; Spigel; Harrison, 2018).

The EEs approach seeks to analyze, from the interaction between various actors, the development of enterprises at local, regional, or national levels, taking the entrepreneur as the key actor in the process (Brown; Mason, 2017; Isenberg, 2011; Spigel; Harrison, 2018). However, due to its practical and innovative character, the term has quickly become a trend (Brown; Mason, 2017) generating research and interventions without the support of a solid theoretical base (Autio et al., 2018; Mack; Mayer, 2016). In this way, gaps were presented, such as the lack of knowledge about how the interaction of the actors in the ecosystem occurs (Mack; Mayer, 2016) or the impact of regional factors on the decision of individuals to create a new business (Spigel, 2017). Furthermore, the literature on EEs has become highly concentrated on developed economies, leaving room for research on the role of ecosystem actors in emerging economies (Cao; Shi, 2021).

As a way to elaborate a more solid theoretical body and answer the questions raised, recent research suggests, in order to better position the EE approach, some possibilities: (i) the adoption of research that analyzes the formation and use of social networks in the entrepreneurial process (Neumeyer; Santos; Morris, 2019; Spigel; Harrison, 2018), still considered a theoretical gap in the field, in view of the need to analyze the relationship between entrepreneurship and networks in depth (Burt, 2019) and; (ii) the role of local institutions – formal and informal – for the performance of regional entrepreneurs and how they stimulate or inhibit entrepreneurship (Audretsch et al., 2019; Spigel, 2017) indicating the role of context in entrepreneurial action (Bosma et al., 2020; Welter, 2011).

Moreover, it is noteworthy that EEs in emerging economies are recognized for their institutional void which, in general, means absence of legal or cultural norms, including social structures and market structures (Cao; Shi, 2021). This factor is also present in Brazil since the country ranks 47th among 54 countries in the social and cultural norms category (Bosma et al., 2020). Moreover, the country has a low performance in innovative ventures and of national or international scope, but stands out as to the number of nascent entrepreneurs, a phenomenon identified in developing economies in Latin America, in which the precarious socioeconomic condition favors the search for self-employment (Amorós et al., 2019; Bosma et al., 2020).

From the above context, this essay aims to analyze the role of social networks and local entrepreneurs – key actors of the entrepreneurial ecosystem (Spigel; Harrison, 2018) – in the formation of the networks that constitute the ecosystem, as well as the construction of the local entrepreneurial culture. The segregation of enterprises into distinct networks, the need for specific types of support for each group, and their impact on an ecosystem, emerge as important constructs for this debate (Neumeyer; Santos; Morris, 2019) and its impact on an ecosystem formed by heterogeneous organizations (Morris; Neumeyer; Kuratko, 2015) and not only characterized by fast-growing companies. Thus, the essay was organized as follows: after this introduction, the theoretical framework, divided into two subsections, is presented, where the main debates on the entrepreneurial ecosystem approach, the role of social networks in entrepreneurship, and their relationship with institutions and culture are presented. The third section presents the theoretical model elaborated from the theoretical framework developed, aligning the main constructs presented in the essay and the establishment of propositions that may guide future empirical research. Finally, there are some final considerations and possibilities of application of the proposed framework.

## 2 THEORETICAL FRAMEWORK

### 2.1 ENTREPRENEURSHIP, ECOSYSTEM AND TERRITORY

The discussion about the relationship between organizations and territories is not recent (Marshall, 1996). Initially, the decisions of organizations to establish themselves in each region or territory derived from the advantages that could be accessed by them, forming clusters – agglomeration of similar firms. As advantages for the agglomerated companies, cost advantages, labor concentration, and, finally, knowledge spillovers, the catalysts of innovation are cited (Marshall, 1996; Sorenson, 2003). However, with the advent of new technologies and the strengthening of the knowledge economy, changes have occurred (Audretsch et al., 2019). Among the changes stands out, for example, that traditional locational advantages have become secondary to guide the decision of organizations to establish themselves in certain regions (Sorenson, 2003).

In this scenario, the relationship between organizations and territories was directed to small technology-based companies. After all, early-stage entrepreneurs would hardly have the capabilities and resources necessary for the prior identification of complex information such as regional advantages and disadvantages (Sorenson, 2003). Thus, nascent technology-based companies became the target of investigations seeking to assess the entrepreneurial decision to cluster in a territory. Moreover, elements such as culture and social relations among entrepreneurs could motivate not only the establishment of firms in each location, but also their superior performance (Saxenian, 1994). Even those regions that had similar embryonic characteristics – such as direct relationship with universities and presence of venture capitalists – distinct managerial aspects would demonstrate differences between more and less innovative regions (Saxenian, 1994).

From the above, it is observed the realization that many factors could influence the relationship between ventures and regions. Therefore, a new way of conceiving such a relationship is required. Thus, the metaphor of Entrepreneurial Ecosystem [EE] (Colin Mason; Brown, 2014) emerged to recognize the myriad of elements that facilitate entrepreneurial

action. The ecosystem metaphor starts from the assumption that organizations will not rely solely on their own resources, knowledge, and capabilities in order to perform their activities in a way superior to their competitors. In an environment permeated by the knowledge economy, strategies and competitive advantages will be linked to shared resources, networks, government support, and other elements (Audretsch et al., 2019). The structure formed by local and regional conditions will influence the formation and performance of the enterprises, as well as being influenced by them.

The perspective of evaluating territories from an integrated ecosystem of entrepreneurship support became a trend in the field (Mack; Mayer, 2016; Spigel, 2017) and attracted the attention of public figures aimed at developing their economies (Isenberg, 2011; Mack; Mayer, 2016). With the growth in the volume of research, different definitions and classifications for the same concept have also emerged. Simply put, Mason and Brown (2014, p.5) define the entrepreneurial ecosystem as "a set of interconnected entrepreneurial actors" such as firms, investors, banks, universities, serial entrepreneurs, and others, who come together formally or informally to connect and coordinate the performance of entrepreneurship in the local environment. However, the model proposed by Isenberg (2011) postulates that the entrepreneurial ecosystem will consist of six domains, which can stimulate and foster entrepreneurial activity, facilitating the development of a given region. These are: culture, support institutions, markets, public policies, financial capital, and human resources – the latter also including universities and research institutes.

The model proposed by Isenberg (2011) became the target of criticism and gaps in the study of entrepreneurial ecosystems were quickly identified. These included a lack of establishing causal links between actors and their interactions (Isenberg, 2011; Mack; Mayer, 2016) and the absence of a consistent theory that structures the systemic approach (Neumeyer; Corbett, 2017; Neumeyer; Santos; Morris, 2019). In this way, researchers have positioned themselves in order to stimulate the theoretical basis of this approach. The body of theory concerning EEs seeks, for example, to avoid the mere replication of attributes identified in other ecosystems, without the proper contextualization (Mack; Mayer, 2016; Neumeyer; Corbett, 2017). Consequently, efforts have been made to delineate the differences between this concept and its similar ones, such as regional innovation systems and, more broadly, clusters (Autio et al., 2018; Neumeyer; Corbett, 2017; Spigel; Harrison, 2018).

Overall, the fundamental difference between EE and the other approaches lies in the key actors that participate in the process (Autio et al., 2018; Neumeyer; Corbett, 2017; Spigel; Harrison, 2018). In clusters and regional innovation systems, for example, large companies, public agencies, and universities are taken as the main actors. In the EE perspective, entrepreneurs themselves are considered key actors in their region, individuals who will innovate and test new business models (Spigel; Harrison, 2018). However, actors recognized as important in promoting entrepreneurial activity, such as public authorities and universities, are still crucial to the dynamics of the ecosystem (Bosma et al., 2020; Silva et al., 2021; Spigel, 2017).

From the advancement of discussions about EEs, new perspectives have been arranged. These include idiosyncrasies and specificities of ecosystems, which will take different forms depending on the local context (Spigel, 2017; Stam; Spigel, 2016). This perspective allows us to conceive, for example, that ecosystems will consist of diverse companies, and not only of

high-growth companies, preserving the possibility of different kinds of enterprises (Brown; Mason, 2017; Cao; Shi, 2021; Neumeyer; Corbett, 2017).

Moreover, although entrepreneurial activity has long been recognized as an activity immersed in socioeconomic and cultural contexts (Bosma et al., 2020; Stam; Elfring, 2008), the local context in which entrepreneurial activity occurs is undersized and limited (Baker; Welter, 2018; Welter, 2011). This limitation reveals itself by not recognizing the aspects that concern the context where individuals live – such as the norms, values, and practices that exist in the region – establishing gaps in the understanding of entrepreneurial behaviors and the way local organizations act (Yuko, 2009).

Morris, Neumeyer, and Kuratko (2015) argue that several types of companies make up the ecosystem, that is, it is possible to observe the coexistence of high-growth organizations and modest and traditional ventures. In this way the ecosystem would be composed of four types of organizations: (i) survival, companies that aim at the subsistence of the entrepreneur; (ii) lifestyle, companies that have some formal structure and can provide the entrepreneur with a stable income; (iii) managed growth companies, which periodically seek new markets and have local and regional reach; and, finally, (iv) high growth companies, with great innovative potential and national and international reach (Morris; Neumeyer; Kuratko, 2015; Neumeyer; Santos; Morris, 2019).

But this is not the only argument supporting the need for greater contextualization of entrepreneurial activity. Stam and Spigel (2016) argue that EEs are inherently geographic – characteristics of given localities and spatial distance between actors (Stam; Elfring, 2008). Thus, the ecosystem will focus on cultures, institutions, and networks that "emerge in a region over time, rather than the emergence of order within globalized markets" (Stam; Spigel, 2016, p. 2). According to Spigel (2017, p. 66), studying the relationship between cultural, social, and material attributes is crucial to understanding EEs in regional economies, given that:

> An entrepreneurial ecosystem is not simply a region with high rates of entrepreneurship; this mistakes the effect for the cause. Instead, ecosystems are defined by connections between the attributes that produce them and the benefits they provide to entrepreneurs. These benefits and relationships can differ between regions.

Looking at the cross-country context, Cao and Shi (2020) show that EEs are distinct between developed and developing economies. In the case of ecosystems present in developing economies, these are mainly recognized by their deficiencies, such as: (i) institutional voids – absence of rules or legal, cultural, and social provisions, which influence the performance of organizations and provide stability and meaning for social coexistence (Amorós et al., 2019; Spigel, 2013; Stam, 2007); (ii) lack of resources, such as lack of human and financial capital, besides the absence of physical structure, including those aimed at the digitalization of the economy, fundamental to technological entrepreneurship (Sussan; Acs, 2017) and, finally, (iii) structural gaps, such as the lack of entrepreneurial support organizations, great importance given to already established private companies – which actively influence the local entrepreneurial context –, as well as the lack of integration and cooperation between enterprises and university institutions, a fact also recognized in Brazil (Inácio Júnior et al., 2016; Silva et al., 2021).

Also, in the case of developing economies, institutional voids are seen as one of the main challenges to entrepreneurial activity (Acs et al., 2018; Amorós et al., 2019) whether they

are formal institutions – regulatory frameworks, property rights – or informal – traditions, social and cultural relations (North, 1991). On a macro level, formal and informal local institutions are responsible for providing the local institutional context, as well as the general rules and norms prevailing in each place (Spigel, 2013), providing stability, and meaning to the conviviality of the local community (Stam, 2007). Formal institutions – government policies and support networks for entrepreneurs – together with informal institutions, such as role-model's networks and mentors, will influence the overall cultural context of the locality (Spigel, 2013) and can contribute to the formation of the identity of a given EE (Neumeyer; Santos; Morris, 2019). However, for an entrepreneurial action to occur and become frequent, organizations and institutions rooted in the region are indispensable, such as incubators, accelerators, regional telecommunications infrastructure (Spigel; Harrison, 2018; Sussan; Acs, 2017) and universities (Fritsch; Aamoucke, 2017).

Although present in several models proposed for the analysis of EEs (Foster et al., 2013; Isenberg, 2011; Spigel, 2017) for a university to acquire relevance in the regional entrepreneurial dynamics, it is necessary that it acts together with the public authorities, industry, society, and the community (Thomas; Pugh, 2020). Thus, it is expected that universities impact on the formation of human capital, creation, and transfer of knowledge, increase in technological innovation, in addition to fostering entrepreneurial activity (Fritsch; Aamoucke, 2017). Thus, it is possible that positive effects occur with relevant consequences in terms of increased number of jobs and higher regional GDP (Schubert; Kroll, 2016).

However, Spigel (2017, p. 67) points out that initiatives aimed at fostering entrepreneurial activity in each region "are unlikely to succeed if they are not underpinned by complementary social and cultural attributes". Li, Bathelt, and Wang (2011, p. 2) point out that, "without changes in networks and conventions" of the region, certain regional development may become somewhat fleeting. Therefore, the role of networks is emphasized at this point (Neumeyer; Santos; Morris, 2019). Social networks have been pointed out as being of great relevance in facilitating entrepreneurship (Sorenson, 2003), for entrepreneurs to capture and use the knowledge coming from the ecosystem to create innovations, besides providing valuable resources to the ventures located within the ecosystem (Spigel; Harrison, 2018) and help sustain the ecosystem itself, as well as its various actors.

## 2.2 ENTREPRENEURSHIP AND SOCIAL NETWORKS

Economic relations are contained in social relations through the ties formed between individuals (Granovetter, 2005). Generally seen as a conduit in which resources flow between organizations (Podolny, 2001) networks will differentiate themselves depending on the content that flows through the interconnected actors and their configuration, or the way they are structured (Greve; Salaff, 2003).

Regarding the Entrepreneurial Ecosystem [EE], it will be argued that the influence of networks for venture development in each ecosystem is complex and broad (Neumeyer; Santos; Morris, 2019) encompassing networks at the personal level – the informal networks, such as family and friends – and the formal networks, such as universities and research institutes (Neck et al., 2004). In general, networks will influence ventures from their conception, being integrated with other actors – nodes – or, concomitantly, excluding actors during the birth,

development, and sustainable phase of the venture (Elfring; Hulsink, 2007). This fact demonstrates one of the ways in which individual and more informal networks influence and help the composition of organizational networks (Li; Bathelt; Wang, 2012; Moliterno; Mahony, 2011). This dynamic is also present in EE. The networks established among individuals can be activated, depending on the needs of each actor (Greve; Salaff, 2003) but they will depend on some variables, such as the strength of the ties, the size of the network formed and its intensity (Burt, 1992).

The strength of ties will be understood between the weak-strong duality, depending on the length of interaction, emotional intensity, intimacy of ties, and the reciprocity of ties (Granovetter, 1973). Strong ties, for example, will be potential conditionals for redundant information and knowledge, while weak ties may bring new information to the network, generating new knowledge (Burt, 1992; Granovetter, 2005). In this sense, strong and weak ties will be important for entrepreneurial activity by providing valuable resources at various moments of the entrepreneurial process (Burt, 1992; Greve; Salaff, 2003; Uzzi, 1997). In this case, we emphasize both aspects linked to the operation of the enterprise – investment, recruitment of employees – and cultural aspects, such as the possibility of the network influencing the perception of the individual to pursue entrepreneurship as a career (Light; Dana, 2013; Sorenson, 2018; Stam; Van de Ven, 2018).

Greve and Salaff (2003) point out that social networks will have various uses to entrepreneurs, depending on their (i) size, (ii) positioning of those involved, and (iii) the relationship structure of the network. In the case of the first two, the size of the network may reflect the frequency that new information is accessed, through strong and weak ties (Granovetter, 2005, 1973) and through the exploitation of structural holes – the interaction between non-redundant contacts (Burt, 1992) –, raising the need for the entrepreneur to have strategic contacts at various points in the network. The "cultivation" of structural holes may provide less redundancy of information and resources (Burt, 1992; Podolny, 2001).

In a dense network, formed by numerous strong ties, there is a greater propensity for similar norms, ideas, and forms of behavior to circulate (Baker; Nelson, 2005; Burt, 2019; Granovetter, 2005). The broader relationship structure of the network, on the other hand, will determine how each actor relates to the others, in a unique way – simple ties –, or interacting through varied content and various types of ties, since each actor can assume different roles in the network, in a complex relationship – multiplex (Greve; Salaff, 2003).

Uzzi (1997) points out that there are many ways to structure a network of relationships. In a simplified way, a network will have a structural formation considered appropriate when formed by immersive relations – based on trust, which allows to generate a flow of valuable tacit information – and procedural relations, documented and based on economic rationality (Uzzi, 1997). The balance in the network structure seeks to avoid an exaggerated immersion (Uzzi, 1997) or entrapment in the network, which can lead to negative effects similar to those observed by excessive relationships based on strong ties (Baker; Nelson, 2005; Granovetter, 2005). This can lead to negative effects like those observed by excessive relationships based on strong ties, such as access to redundant knowledge or dependence on key actors.

However, the attributes of each network, as well as the positions of the actors, "can only be understood relative to a particular context" (Ahuja, 2000, p. 451), as demonstrated in the orchestration of innovation networks (Lobo et al., 2024). Thus, in the case of entrepreneurs who

seek to access social networks in search of resources for their ventures, the context in which they are inserted will also be relevant (Ahuja, 2000; Li; Bathelt; Wang, 2012). To this end, it is assumed that networks influence the entrepreneurial process at various stages, such as discovering opportunities, obtaining, and retaining resources, and obtaining legitimacy (Elfring; Hulsink, 2003). The network, for the entrepreneurs, may become the means to access resources, or assist them in the combination and transformation of already existing resources (Baker; Nelson, 2005; Brush; Gieene; Hait, 2001).

Furthermore, Elfring and Hulsink (2007) demonstrate how the initial network condition of entrepreneurs and the nature of the innovation they pursue affect their network development. According to the authors, network preconditions lead entrepreneurs to add, update, or delete ties during the entrepreneurial process. The continuous evolution of the network ends up, in turn, generating distinct effects in each venture, such as the incessant search for weak ties, evolution of a few as strong ties, and the subsequent exclusion of the remaining weak ties (Elfring; Hulsink, 2007).

However, Neumeyer et al. (2019) point out that the network of relationships of entrepreneurs can also erect barriers to organizations, producing sanctions to the participants of an EE and delimiting their possibilities for action. Neumeyer et al. (2019) emphasize that, in each ecosystem, it is possible to observe what is identified as the "segregation" of entrepreneurs, i.e., separation of businesses by categories, with greater emphasis on the distance between entrepreneurs who manage high-growth ventures and the others. Also according to Neumeyer et al. (2019), entrepreneurs with distinct socioeconomic trajectories, such as those with a history of poverty, become disconnected from formal networks – institutional arrangements created to foster entrepreneurial activity, such as universities – and from groups of technological entrepreneurs, since entrepreneurs in unfavorable economic situations may present deficits in advanced technological knowledge (Neumeyer; Santos; Morris, 2019) a phenomenon also observed in other developing economies (Venkatesh et al., 2017).

Such a fact could impact the formation of broad networks, conditioning them to dispersed forms, such as the center-periphery relationship or the formation of a rich-club – a small core of highly connected members that are connected to each other (Csermely; London; Uzzi, 2013). The segregation observed in networks of entrepreneurs (Neumeyer; Santos; Morris, 2019; Venkatesh et al., 2017) is also observed in Latin America (Amorós; Poblete; Mandakovic, 2019) and, more specifically, in Brazil, since individuals in unfavorable socioeconomic situations face greater challenges to become entrepreneurs (Vale, 2015). Moreover, this fact becomes even more relevant since personal and close relationships influence the attraction and formation of resources necessary for the development of organizations (Brush; Gieene; Hait, 2001; Elfring; Hulsink, 2003; Light; Dana, 2013) and the constitution of multilevel networks. Thus, the way networks at the personal level are structured will reverberate on the formation of networks at the organizational level (Moliterno; Mahony, 2011) and may condition segregated networks both at the individual and organizational levels.

In contexts of peripheral regions that are experiencing acute economic crises or that exhibit resource scarcity, for example, family support – financial and non-financial – will be important for the creation of a new firm, since the assets to start the entrepreneurial process are scarce (Venkatesh et al., 2017). Moreover, peripheral regions that have few resources available to support entrepreneurs may rely on the participation of individuals who have been successful in the entrepreneurial process, becoming role-models and key actors in the network capable of

promoting change (Isenberg, 2011). Observing other individuals in their entrepreneurial careers ends up encouraging entrepreneurship, increasing the legitimacy of the initiatives (Sorenson, 2018). In this case, points out Burt (2005), information and guidance have more legitimacy when coming from an actor of that same context. Thus, it is expected that, by reaching a high rate of entrepreneurship in a region, it ends up legitimizing the entrepreneurial action of nascent entrepreneurs in this locality (Sorenson, 2018; Stam; Spigel, 2016).

## 2.3 INSTITUTIONS AND ENTREPRENEURSHIP

As exposed above, the regional context may, from the stimulation of networking and cooperation practices, promote the entrepreneurial culture (Fritsch; Wyrwich, 2018; Yuko, 2009). The cultural context is admittedly complex (Neck et al., 2004; Spigel, 2017) described as one of the factors that influence the entrepreneurial process and present in research that portrays the Entrepreneurial Ecosystem [EE] (Isenberg, 2011; Stam; Spigel, 2016), but still needs to be further explored in research works (Fritsch; Wyrwich, 2018; Spigel, 2013) in order to better understand the importance of local culture in business creation rates. Despite the acknowledged significance of culture as an economic factor, linked to the development of public policies (e.g. Tereza et al., 2019), the cultural context will henceforth be explored through the lens of institutions.

According to Scott (2013), the cultural dimension – named cognitive-cultural – together with two other dimensions – regulatory and normative – form the basis of institutional structures. Institutions, in general, enable and constrain individual action (Bruton; Ahlstrom; Li, 2010; Meyer, 2010; Scott, 2013), directing individuals around a certain conduct, but which need to be "brought to life" via human action (Scott, 2013, p. 57).

Starting with the regulatory pillar, this is defined from a perspective of explicit regulatory processes, such as rule-making, monitoring, and sanctions (Scott, 2013) with greater prominence from the economic school of thought (North, 1991; Scott, 2013). The normative pillar, in turn, originates in the first sociological schools and, through a perspective that emphasizes norms of a prescriptive nature to social life, postulate discussions about the role of individuals in social action. In this case, the individual would not only question himself about which choice would be in his interest, but would take into consideration, when making a choice, both the situation in question and his role in it (Scott, 2013).

Specifically in relation to the cognitive-cultural pillar, compliance will be guided by attitudes perceived as correct, in addition to understandings about the world shared among individuals (Scott, 2013). Specifically in relation to entrepreneurship, Hwang & Powell (2005, p. 180) point out that "while much entrepreneurial activity is purposive, it is not necessarily directly intentional." In this way, studies have used the cognitive-cultural perspective to analyze the act of entrepreneurship – focused on business creation (Bruton; Ahlstrom; Li, 2010). However, these studies, mainly quantitative in nature, used a cultural perspective at the national level and, by means of surveys, sought to objectively access the cognitive nature of the entrepreneurial aspirations of individuals.

However, it is possible to question the operationalization of culture by the studies. According to Scott (2014), cultural systems operate at multiple levels, including the shared definitions of locality-specific situations to the shared assumptions that define economic

systems at national or other levels. This perspective, positioning culture as patterns of action and thought, takes as possible the association of patterns – or templates – for the diffusion of specific actions.

More objectively, the cultural aspects and their importance in the entrepreneurial process are clarified by Spigel, (2013, p. 805):

> Culture is defined here as the collective ways of understanding the world common to a group of people […] From this perspective, entrepreneurial cultures are those outlooks that shape the actions of actors connected with the entrepreneurial phenomenon, including the entrepreneur herself as well as other entrepreneurial actors such as investors, advisors, employees, and customers.

The perception that the actions of connected actors are seen as desirable in a social context portrays one aspect of the legitimacy of entrepreneurial activity (Kuratko et al., 2017), since ventures can be directed to operate in a certain way. Examples are acts taken to avoid sanctions (Bruton; Ahlstrom; Li, 2010) or the relationship between family influence and the propensity to be an entrepreneur (Hwang; Powell, 2005; Sorenson, 2018; Vale, 2015).

Influence towards decision making to initiate the entrepreneurial process can also be communicated and fostered by example entrepreneurs or role-models. It is recognized that this category of entrepreneurs, notably successful ones, can impact the local entrepreneurial culture (Sorenson, 2018; Spigel, 2017) becoming examples – or templates (Scott, 2013) – to potential local entrepreneurs. According to Wyrwich, Stuetzer, and Sternberg (2015), role-models are sources of two specific pieces of information to their recipients, in this case, potential entrepreneurs: (i) knowledge about entrepreneurial tasks and skills, and (ii) the attractiveness of entrepreneurship as a career option (observing well-being and financial returns). In addition, it is possible to highlight the fact that attractive modes of behavior may accelerate the diffusion of behaviors within a given population (Strang; Meyer, 1993). Thus, aware of the possibility of becoming an entrepreneur, we consider that potential local entrepreneurs may observe the role-models in the environment as "models for their own action" (Strang; Meyer, 1993), extracting insights about the rules and impositions necessary for them to reach the position of entrepreneur and start – or not – an entrepreneurial trajectory (Light; Dana, 2013).

Concomitantly, Zucker (1991, p. 83) points out that the body of knowledge generated in each locality, such as the collective understanding of behaviors and norms, once institutionalized – that is, established and relatively permanent – comes to exist as a fact: it will be "enough for one person to simply tell another that this is how things are done". In this way, certain logics of individual action will be taken as correct and well-accepted, equivalent to the rules of the game (Zucker, 1991) or simply "rules" (Ostrom, 2011) and directing actions toward isomorphism, that is, a certain similarity (Scott, 2013).

It is noteworthy here that following the rules is not easy to predict, since they are subject to the acceptance of the same, which, in turn, can be influenced by contextual changes, such as technological transformations. In this sense, Ostrom (2011) defines some rules, of exogenous nature, that may affect the individual's action, such as: (i) boundary rules, or the recognition of what actions a new participant must take to be part of a network; (ii) choice rules, that is, what options and choices individuals have about, for example, the tools they must use and (iii) position rules, recognized as the actions that must be taken for a participant to reach new positions.

However, Wyrwich, Stuetzer, and Sternberg (2015) justify that different environments and contexts may recognize entrepreneurial activity in different ways, which may influence its social acceptance and credibility (Scott, 2013). In the case of regional EEs, the process of legitimacy of organizations becomes even more complex. Kuratko et al. (2017) argue that the legitimacy of entrepreneurial activity in an EE will be diffused in four phases – innovation, local validation, diffusion of innovation, and widespread validation. However, the authors point out that this legitimation process suffers from a paradox. While highly innovative companies face more complex and demanding processes to become legitimate and have their products or services accepted in the market, other companies that develop existing technologies and products face lower barriers to validation. When the ecosystem is considered, less innovative firms are the target of passive judgment, since nothing new or relevant would be in evidence.

On the other hand, highly innovative firms, which require cultural and social changes, undergo an active trial, and the diffusion of information about the most innovative firms is perceived as risky. Such a fact may lead knowledge diffusers to decide to circulate the information about the innovative organizations in a network external to the ecosystem, making the local legitimization of the innovative firm more costly. In the Brazilian context, where organizations have difficulty in nationalizing or internationalizing their operations (Bosma et al., 2020) the lack of regional legitimacy may negatively impact the ventures.

## 3 DISCUSSION: PROPOSITIONS AND THEORETICAL MODEL FOR FUTURE STUDIES

From the discussion on Entrepreneurship, Ecosystems and Networks, a theoretical model was developed to represent the Entrepreneurial Ecosystem [EE] in a regional context. To do so, it was based on the need to deepen the theorization about EEs (Spigel, 2017; Stam; Spigel, 2016) especially with respect to the form of interaction among the actors (Mack; Mayer, 2016). Thus, we have chosen social networks (Burt, 1992; Granovetter, 2005; Podolny, 2001) to analyze the EE, a theoretical framework propitious to the analysis of the relationship between the actors present in the ecosystem (Neumeyer; Santos; Morris, 2019; Spigel; Harrison, 2018).

In recognizing EE as a network of interconnected actors in a region, some actors are recognizably important. The key actor is the entrepreneur himself (Audretsch et al., 2019; Autio et al., 2018; Isenberg, 2011), represented through the business models that are built by them. In contexts of developing economies, we highlight the possibility of organizations arising from the entrepreneurial process resulting in companies of different types, which have innovative proposals and a broad scope of action, or the proposal of subsistence and local action (Morris; Neumeyer; Kuratko, 2015; Neumeyer; Santos; Morris, 2019).

However, as advocated by the systemic approach to EE (Audretsch et al., 2019) the actors relate to each other in an interactive way. In this way, entrepreneurs and the organizations formed by them can be supported by other organizations. Among them are anchor organizations – such as universities (Inácio Júnior et al., 2016; Silva et al., 2021) – which may provide technological and infrastructural resources to entrepreneurs, and other support organizations, such as incubators and accelerators, which may offer training and support to the entrepreneurial network (Spigel; Harrison, 2018). As previously emphasized, the process occurs in an

interactive way, providing, among the activities, the recycling and creation of new resources (Brush; Gieene; Hait, 2001; Spigel; Harrison, 2018). Thus, the first proposition of the study is suggested:

**Proposition 01:** Different types of ventures will make up the ecosystem, and entrepreneurs are the key actors to connect different organizations.

Through the networks formed in a regional EE, entrepreneurs can access resources (Burt, 1992; Elfring; Hulsink, 2007; Spigel; Harrison, 2018) such as new knowledge, technologies, or new social relationships, and transform them into other organizational resources, such as financial capital (Brush; Gieene; Hait, 2001). Taking the perspective of entrepreneurial activity as a process (Mcmullen; Dimov, 2013), recognizing that "before there is a company, there is an entrepreneur with an idea" (Brush et al., 2001, p. 70), the social interactions of individuals may influence networks at the organizational level (Elfring; Hulsink, 2003; Light; Dana, 2013; Moliterno; Mahony, 2011), and may lead to segregated networks of entrepreneurial individuals and firms within the ecosystem (Neumeyer; Santos; Morris, 2019). Elfring and Hulsink (2003) specifically emphasize three phases of the entrepreneurial process in which networks may interact and influence the entrepreneur and his new organization: discovery of opportunities, securing resources, and gaining legitimacy. Thus, the second proposition of the study is suggested.

**Proposition 02:** The networks formed by entrepreneurs, at a personal level, will decisively influence the formation and segregation of organizational networks in the ecosystem.

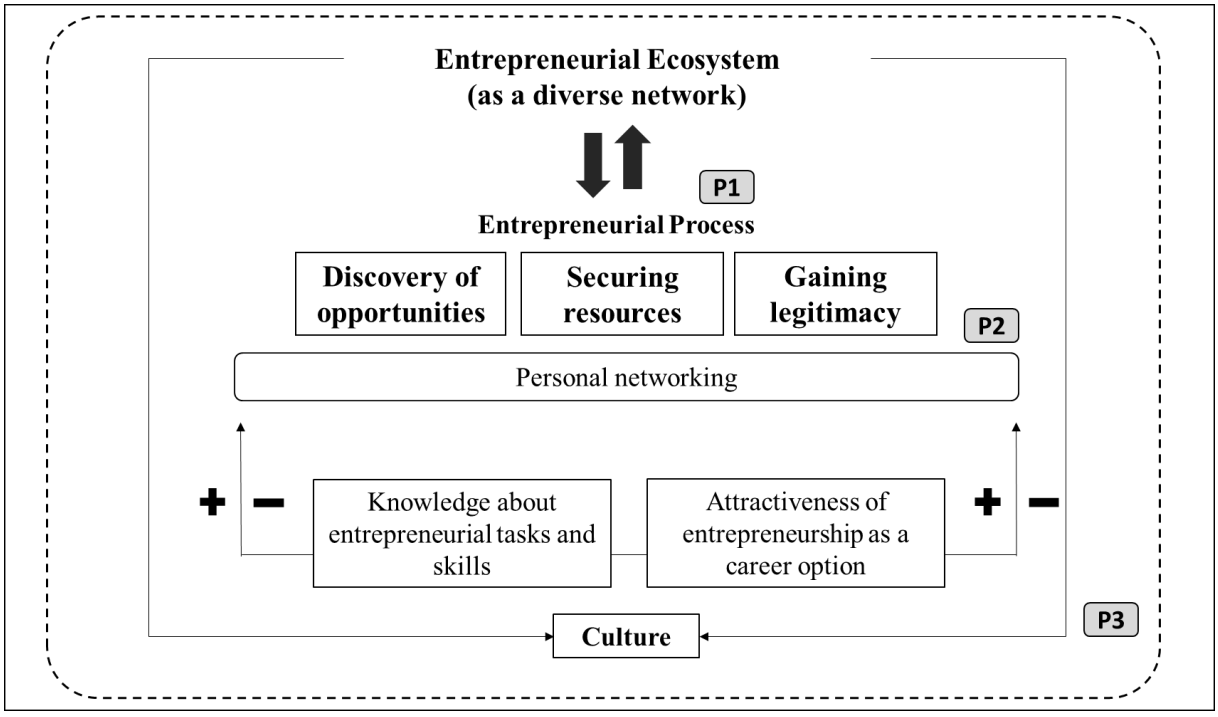
Furthermore, networks, depending on their density and structure (Burt, 1992; Granovetter, 2005) may also influence regional institutions – formal and informal (Scott, 2013) as well as the regional entrepreneurial culture (Sorenson, 2003; Spigel, 2013; Stam, 2007) and the very legitimization of the enterprises (Elfring; Hulsink, 2003; Kuratko et al., 2017). The creation and dissemination of culture and rules of behavior (Scott, 2013) may be accessed through successful entrepreneurs, who may become references for potential entrepreneurs in the region, passing on to them knowledge about entrepreneurial tasks and capabilities, as well as the attractiveness of entrepreneurship as a career option, emphasizing the well-being and its financial aspect (Wyrwich; Stuetzer; Sternberg, 2016). Rules – shared understandings among individuals – can be visualized from their exogenous influence on the individual behavior of the potential entrepreneur, such as boundary, position, and choice rules (Ostrom, 2011). This influence process is also interactive, in a way that the regional context may influence the regional entrepreneurial activity and this will return to the local context, contributing in a positive or negative way to the region (Fritsch; Wyrwich, 2018; Light; Dana, 2013).

Finally, it is emphasized that in a low-density EE, a single attribute or characteristic may sustain the flow of opportunities, but at the cost of greater risk to the actors present in the network (Granovetter, 2005; Morris; Neumeyer; Kuratko, 2015) which can impact the legitimacy of local organizations (Kuratko et al., 2017) and even the influence of the network over the entrepreneurial process of local organizations (Elfring; Hulsink, 2007). Finally, the third and last proposition of the study is suggested:

**Proposition 03:** The networks formed by entrepreneurs, at the individual or organizational level, will decisively influence the formal and informal institutions of the local context or ecosystem.

Finally, Figure 1 visually demonstrates a regional EE. The interaction among the key actors – anchor organizations, enterprises, and other support actors – are part of the network ecosystem. The ventures, linked to the ecosystem, go through the entrepreneurial process, characterized by three phases: discovery of opportunities, securing resources, and gaining legitimacy. The ecosystem will be impacted and, reflexively, will impact the local entrepreneurial culture, recognized as one of the local institutional factors. In this essay, we propose that the two main types of information passed on by role-models to potential entrepreneurs in a region be taken as examples of creation and dissemination of entrepreneurial culture – knowledge about entrepreneurial tasks and capabilities, and attractiveness of entrepreneurship as a career option.

Figure 1 – Proposed Theoretical Model




Source: elaborated by the authors

## 4 CONCLUDING REMARKS

This essay sought to analyze the role of social networks and local entrepreneurs in the formation of the networks that constitute the ecosystem and construction of the local entrepreneurial culture. Both themes – social networks and culture as an institutional aspect – constitute alternative of theoretical deepening relative to the Entrepreneurial Ecosystem [EE] approach (Spigel, 2017; Spigel; Harrison, 2018).

It has been argued that EE can be represented by diverse firms – beyond those characterized as high-growth firms (Morris; Neumeyer; Kuratko, 2015) – and networked (Spigel; Harrison, 2018). However, considering the possible segregation of networks into specific groups of enterprises (Neumeyer; Santos; Morris, 2019) and the role of networks as

tools to access resources in different stages of the entrepreneurial process (Elfring; Hulsink, 2007; Light; Dana, 2013). It was also pointed out that the entrepreneurial process and network formation at the individual and organizational levels have been influenced – and influence, in a reflexive manner – the local entrepreneurial culture, mainly through the role-models (Wyrwich; Stuetzer; Sternberg, 2016).

Thus, a theoretical model has been proposed in which the above discussions have been laid out in a visual manner. It is argued that the proposed theoretical model can be visualized as a form of dynamic understanding of the cultural institutional aspect in a regional EE, observing how the cultural context influences and is influenced by the individual entrepreneurial process of each of the entrepreneurs, who are related to each other. Moreover, the understanding of a regional EE, composed of diverse firms, may facilitate, and enable the observation of entrepreneurial phenomena in networks and in contexts other than those often portrayed in the entrepreneurial literature, such as developing economies (Welter, 2011) and that exhibit institutional voids (Cao; Shi, 2021).

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