Towards Understanding Culture in Entrepreneurial Ecosystems

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Abstract

Entrepreneurial ecosystems (EE) are a set of interdependent actors that coordinates effective entrepreneurial activities within a particular territory. Previous literature on the entrepreneurial ecosystem did not sufficiently address the influence on the culture within the EE. Thus, this paper seeks to examine the performance of culture affects in the EE. The critical research question highlighted in this paper is: What are the determinants and their effects on the culture within the entrepreneurial ecosystem? To answer the research question, determinants of the organizational culture (Allaire & Firsirotu, 1984) is extended and used as the theoretical lens in this paper. This study contributes to the importance of culture in EE. It also examines the applicability of the theory of organizational culture to the context of EE. Furthermore, the study highlights the four likewise determinants: External factor, cultural system, socio-structural system, and individual actors in the context of EE. The study assumed that these determinants influence and support each other.

Keywords: Culture, Entrepreneurial ecosystem, Organizational culture, Startup ecosystem,

1 Introduction

1.1 Practical Relevance

Entrepreneurial ecosystems (EE) are emerging parlance within the academia and the business sphere. EE has currently emerged as a famous theory in the circle of entrepreneurship strategy and business environment. To be precise, they are considered as economic development techniques that primarily based on the absolute development of innovative and supportive environments that nurture revolutionary startups. They depict the kinds of cultural, social, monetary, and political environments in the vicinity that guide the high-boom of entrepreneurship.

EE is a conceptual model for the benefits and resources produced by a cohesive regional network of entrepreneurs and their supporters that assist in nurturing new ventures to stay on and grow. EE is seen as a set of interdependent actors and factors coordinated in a kind of manner that permits effective entrepreneurship within a selected territory (Spigel & Harrison, 2018). Furthermore, they are viewed as ongoing processes of the development and flow of entrepreneurial resources, such as human and financial capital, entrepreneurial know-how, market knowledge, and cultural attitudes.

Previous scholars have studied EE with extensive research work on the field, but the culture within the EE has not been deeply touched on. Therefore, the following research question is developed:

What are determinants and their effects on the culture within entrepreneurial ecosystems?

To answer the research question, this paper transmits the determinants of the organizational culture (OC) to the EE to close the gaps and increase the understanding of the culture in the ecosystem. Furthermore, the effects of the cultural components are illuminated. Therefore, the concepts of EE and OC build the basis in this research work. After presenting these, a framework for OC is consulted. In the next chapter, the transferability and differentiation between both concepts are exposed. On this basis, the chosen framework of OC is used to develop a framework for the culture in the EE. This leads to the research propositions and ends up with a discussion and conclusion.

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The paper seeks to unmask how culture affects performance in the EE. It is essential for apprehension and building of knowledge in the subject field by the academia and the practitioners of EE. Actors of the EE can adopt the conceptual framework of the paper to experience the effectiveness of the model.

1.2 Research Relevance

The purpose of this paper seeks to examine the culture within the EE. It contributes to the unique social and psychological environment of EE by considering its determinants and the effects on startups and the ecosystems as well. The research work focuses on the understanding of the main determinants of culture within entrepreneurial ecosystems.

The culture within the EE has a significant impact on the success of the EE (Jovanovic & Petkovic, 2018). The supportive role of the culture in EE is undertheorized, and it has great potential for research. In order to increase the knowledge of culture in EE, this research work forms the first approach. The review of the literature will broaden the horizon about the theoretical model of the EE, and the conceptual framework of OC in EE will serve as a roadmap for future researchers.

2 Conceptual Backgrounds

2.1 Entrepreneurial Ecosystems

Through the approach of the EE, it is possible to develop an innovative perspective of entrepreneurial enterprise in a certain region. It is innovative as the approach of the EE underlines the external environment of a business. It offers a holistic comprehension by transferring the firm-based perspective to a unity-based view with focusing on the environment in a region. EEs can be constituted of different industries or be branch-specific. In general, EEs arise in regions with certain assets. Furthermore, they are exclusive and vary from one another (Mason & Brown, 2014).

Ecosystems are the union of localized cultural outlooks, social networks, investment capital, universities, and active economic policies that create environments supportive of innovation-based ventures (Hoang & Antoncic, 2003). These regional elements are supportive as they advance the growth of new startups located in the EE. Furthermore, risk-taking, starting an enterprise, providing financing, and further ventures are emboldened among the actors of the EE by the preceding elements (Spigel, 2017). An EE is a vibrant network, as well as self-controlling consisting of various actors. Thus EEs, are affected by different influences that are not always induced by entrepreneurs (Isenberg, 2014). The intertwining actors and aspects of the EE align in some way that results in a positive outcome by facilitating prolific entrepreneurship (Stam, 2015). Spigel (2017) ascertained the most frequently cited attributes in the literature of EE. These attributes can be clustered into three groups depending on how the utility is constituted, which are as follows: cultural attributes, social attributes, and material attributes.

2.2 State of Research of Culture in EE

To answer the research question, it is first necessary to shortly map the current state of research of culture in EEs and give a brief definition.

Entrepreneurial Ecosystems are based on four elements: social, political, economic, and cultural elements. Those determinants can support the development and growth of startups, reduce uncertainty, and encourage actors to take part within the EE (Spigel, 2017). This research has its focus on the culture within entrepreneurial ecosystems while ignoring the other elements and the interdependencies between them.

According to Hofstede et al., (2001), culture in an entrepreneurial ecosystem is defined as "the collective programming of the mind that distinguishes the members of one organization from another" (p. 520). The culture is shaped by norms, institutions, outlooks, and underlying beliefs about entrepreneurship within a region (Spigel, 2017; Stuetzer et al., 2014). This points out the high exertion of influence by the regional image of entrepreneurship. As well, the perception of the ecosystem, referring to risk attitudes, failures, and success are important cultural characteristics.

Each region has its cultural attitudes towards startup activities and risk-taking. These distinctive differences showed by comparing the development of two different EE (Saxenian, 1994). He argued

that the sharing of information and knowledge, experience as well as expertise embraces the culture and lead to a more successful ecosystem.

2.3 Organizational Culture

To answer the research question, Organizational Culture (OC) is used as a theoretical background. The theory was examined by many researchers, which leads to multiple existing definitions for OC. One famous definition gives Edgar Schein. He defines OC as:

integration means the conventional communication system, the universal language, the definition of relation, and openness for discussion (Schein, 2004). In general, OC refers to shared assumptions, values, and norms and is named by some researchers as an imminent factor for organizational effectiveness (Sharifirad & Ataei, 2012).

2.4 Framework for Organizational Culture

A selected framework for OC is presented in the following chapter. It was developed by Allaire and
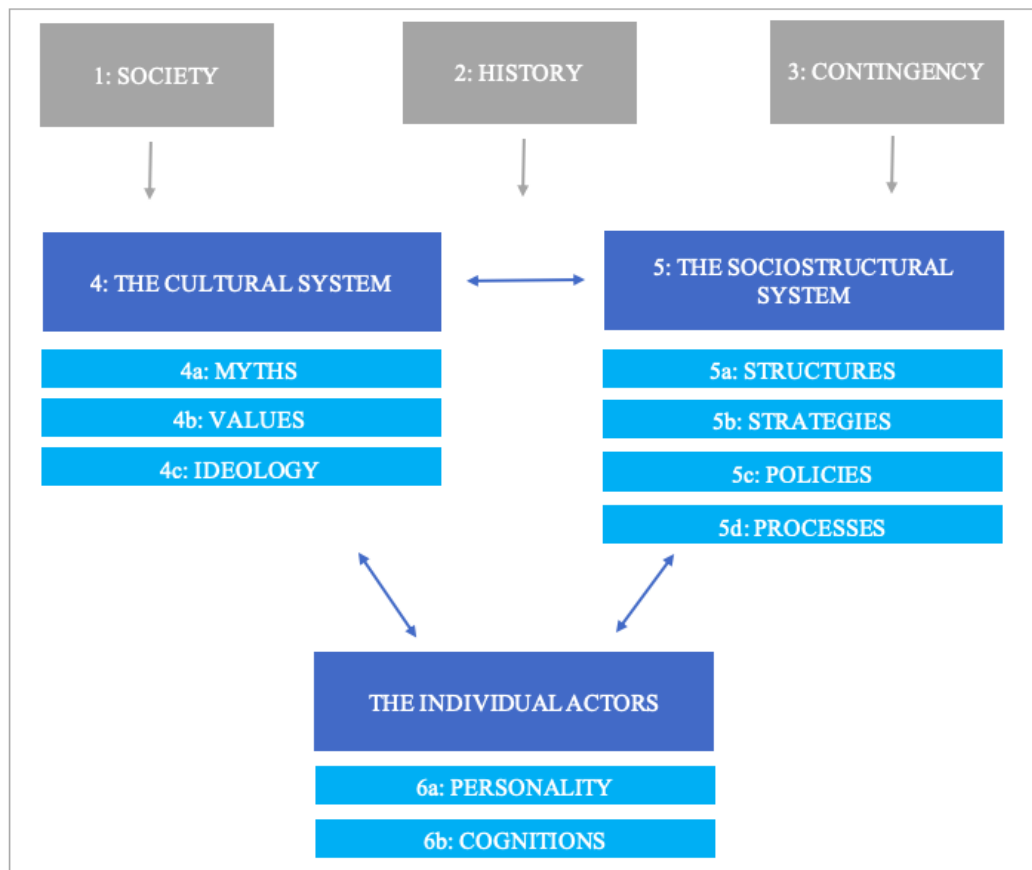

Figure 1: Conceptual Framework for OC
Source: Own visualization according to Allaire and Firsirotu (1984)

"(…) a pattern of shared basic assumptions that the group learned as it solved its problem of external adaption and internal integration that has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems." (Schein, 2004, p. 17).

To clarify this definition, Schein (2004) defines external adaption and internal integration more precisely. External adaption in this context is the strategy or primary task of an organization. Internal

Firsirotu (1984) and published in the paper Theories of Organizational Culture (Figure 1).

This framework was chosen because it contains the determinants of OC, which fit the established research question in this elaboration. It is clear and simple on the one side but includes many important determinants of OC on the other side. Compared to other frameworks, the chosen framework regards two perspectives of organizational culture: from the outside and the inside. In addition to this, the influences of the components among themselves

were considered and increase the understanding of OC. Furthermore, the framework is suitable because it leads the focus on OC instead of considering other concepts in connection to OC. Most of the frameworks for OC in the literature were created in the 1990s. So, the chosen framework is accrued in the time when the subject has been mostly examined. Recent frameworks often investigate the relationship from OC to other topics, which is not appropriate for this elaboration.

The chosen framework from Allaire and Firsirotu (1984) has six components. Three of these components influence the organizational culture from the outside, which is named society, history, and contingency. Society includes the cultural, social, political, and judicial systems. History means, in this case, the transformations of an OC, founders' vision and values of a culture, and contingency implies the industry, technology, competition, and regulations in organizational culture.

The other three components of the framework influence organizational culture from the inside and each other. These are named as the cultural system, the socio-structurally system, and the individual actors.

The cultural system contains myths, ideologies, and values, which affect each other. Because of many definitions in the literature, the authors have determined the following definitions for these. Myths are understood as strong and effective bonds between reality and past, which justify actions in the present. Moreover, the framework uses a definition of myths from Cohen, where myths are defined as a symbolic and holy story (Cohen, 1969). Ideology is, in this case, defined as a convincing system, which suggests corporate action (Allaire & Firsirotu, 1984). Values are defined as interpretations, which confer "(…) meanings for social actions and standards for social behavior" (Allaire & Firsirotu, 1984, p. 213). Values are often the basis of ideologies but can also exist without being in an ideology. Also, other elements like rituals, metaphors, and slogans, sagas, and legends, as well as symbols and logos, were included as sub-items in the cultural system. The society, the history, and the contingency have minted the cultural system in organizational culture, and it modifies and develops by the socio-structural system and the individual actors within

an organization (Allaire & Firsirotu, 1984). The socio-structural system implies the cooperation of formal structures, strategies, policies, and management processes in an organizational culture within formal goals, authority, control mechanisms, and education (Allaire & Firsirotu, 1984).

The last component of the chosen framework is the individual actors. Especially the abilities, expertise, and character of a person are named as an important influence on the organizational culture. Those three components of the framework for organizational culture affect positive on each other but can be dangerous when the OC is changing (Allaire & Firsirotu, 1984).

3 Towards Understanding the Culture in the Context of EE

The theory of OC cannot simply be transferred and used to analyze or explain the culture of EEs. It originates from the social sciences and has been developed to get a better understanding of organizations. The basis for this theory is the organization itself (Schein, 2004). Therefore, it is immanent to understand the differences between organizations and the EE in order to transfer the theory to the research of culture within startup ecosystems.

3.1 Transferability and Differentiation

To discuss these differences, it is important to know how organizations are defined. By looking in the literature, there cannot be found a clear definition of this social phenomenon. Nevertheless, Frese, Graumann, and Theuvsen (2012) are making two fundamental restrictions. First, more than one person and their actions are considered. Second, the people and their actions are connected due to an adjustment on the same purpose; thereby, one person's actions can have an impact on the actions of others within the system.

Especially with the second limitation, legal entities, such as public organizations, associations, or companies, constitute organizations because of the natural pursuit of the same goals by individuals within the entities. The theory of OC refers to any organization that falls under the two limitations and is therefore not a theory that is limited exclusively to legal entities like companies, associations, or

public organizations. Looking at a social ecosystem, such as the EE, the first limitation applies just as much as to organizations. The second limitation cannot be transferred to the EE without restrictions. Single actors in a social ecosystem have not necessarily the same goal, even if the action of one actor has a potential influence on the actions of other actors. However, the second limitation also considers that the persons direct their efforts towards a common goal. All actors within the ecosystem contribute to an overall goal, namely the strengthening of the EE.

Nevertheless, there are differences between the typical application of OC and the ecosystem. The typical view focuses on the culture of a single organization (such as a company), while a view of EE considers a whole ecosystem and all its actors (e.g., startups, investors, politics, accelerators, incubators, etc.). Thus, the question arises, which

difference that is reflected, for example, in the variety of professional orientations of the actors. Therefore, startup ecosystems have a greater diversity of knowledge and experiences of their actors. Furthermore, in EEs, the individual goals of the actors are in the foreground, whereas in the typical view, the overall goal of an organization is central. Finally, the difference in complexity is also reflected in the fact that EEs are not possible without certain basic prerequisites, for example, a highly established knowledge base, which is not the case for organizations (Mason & Brown, 2014).

Another main difference is the high dynamic nature that EEs have compared to typical organizations. This is because startup ecosystems are much more dependent on internal factors, and changes in factors within a system lead to higher agility. An inflow and outflow of actors are more frequent and spontaneous. This is even more pronounced in the
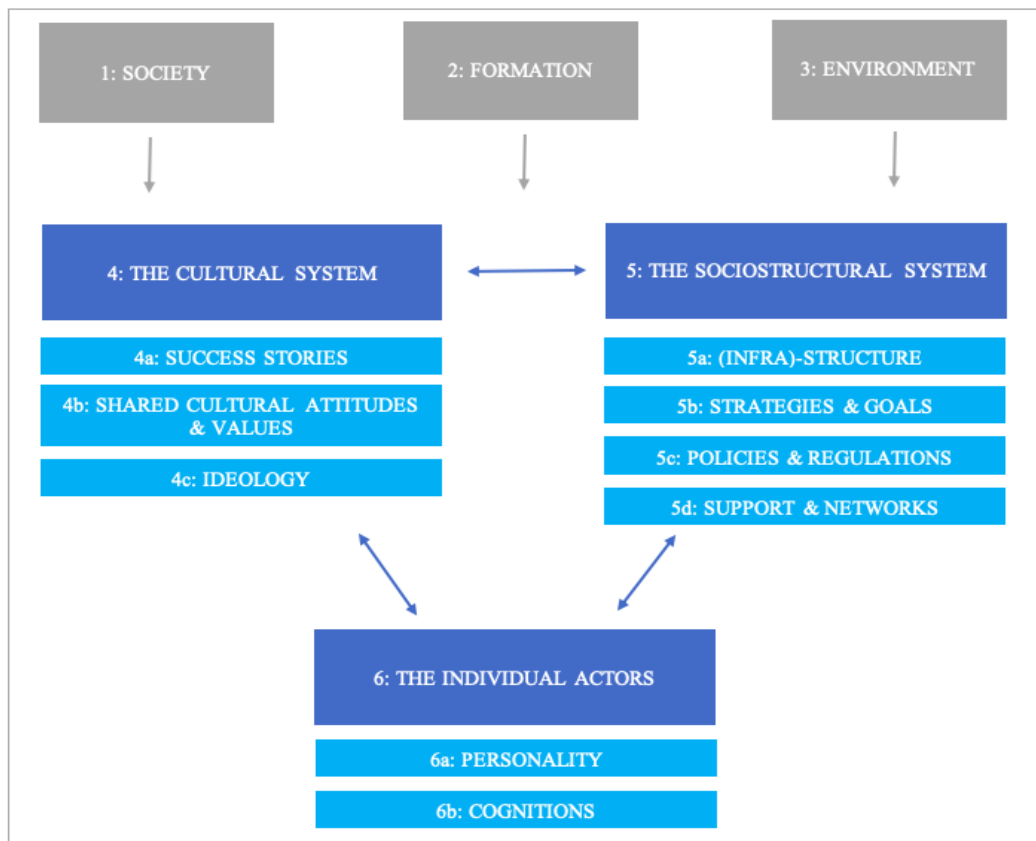

Figure 2: Conceptual Framework for Culture within EE
Source: Own visualization

aspects differ between these two approaches. One main difference is the total number of actors within the system. This is significantly higher in the EE and (in connection with the structure of the system) more complex than the typical approach of OC. Thus, it can be said that there is a dimensional

case of very promising ecosystems because their potential attracts new actors such as entrepreneurs, investors, employees, etc. (Mason & Brown, 2014). These aspects create greater dynamics and make an interesting difference.

In summary, the main differences between EEs and the typical view of organizations are the dimensional extent and the dynamic nature. The single actors in the EE have their own organizational cultures. Finally, an addition of these cultures, like single puzzle pieces, results in an overall culture of the entire ecosystem.

3.2 Framework for Culture in EE

To answer the question of how the theory of OC can be transferred to the EE, a second framework is developed analog to the one from Allaire and Firsirotu (1984). The overall structure is still the same, yet some subcategories need to change to fit better to the characteristics of the EE. Through these adjustments, the differences between organizations and the EE are taken into account. The framework should primarily do justice to the dimensional difference. The size, complexity, and dynamics of the ecosystem will be considered in the individual areas of the framework. In total, there are four main segments (Figure 2).

The first segment includes the grey factors on the top. They are external factors which influence the culture in the EE. This includes the *society, formation* and *environment* of an EE within a region.

The orientation of *society*, which shapes the EE, influences its culture from the outside. For example, an open and tolerant society has a positive influence on dynamic changes and agile developments. Founders are accepted, produced, and supported in their projects. Each individual must have the opportunity to realize itself and still receive moral support from the collective society (Suresh & Ramraj, 2012).

Another important factor is the *formation* of an EE. Each ecosystem appeared under unique settings and conditions (Mason & Brown, 2014). The history of EE includes significant events and successful founders who seem to have a lasting influence on the culture in the ecosystem (Spigel, 2017).

An EE usually extends over one region. Thus, there can be several EEs within a country, which differ in the configuration. The *environment* of the EE is characterized by great diversity. For example, the ecosystems in Calgary and Waterloo (Canada)

consist of different factors. Various actors, market conditions, and focused industries, as well as technologies in the region, influence the culture of the EE (Spigel, 2017).

On the left hand is the cultural system, which shapes the ecosystem through *success stories* and *shared cultural attitudes as well as values*. Experiences of successful and failed founders are shared in the ecosystem. This, together with the underlying attitude, values, and beliefs, ensures that failure is tolerated (Jovanovic & Petkovic, 2018). The segment is rounded off by the underlying *ideology*.

The socio-structural system takes part on the right side of the framework. It gives a formal *(infra)-structure, strategies, goals, policies, and regulations* as well as *support and networks* to the EE. Analog to the *structure* of the OC, the culture of the EE takes the power distance in the account. For example, a society with a lower power distance will be aligned more entrepreneurially (Jovanovic & Petkovic, 2018). In Calgary, for example, the individuals of the ecosystem strive for their own success and aim to establish a profitable business model. In addition to the desire for profit, they feel close and emotional connection to their businesses (Spigel, 2017). Nevertheless, for a successful and growing ecosystem, there should also be overarching *goals* that can be found in the ideology and values as part of the cultural system. *Policies* within an EE are also part of the culture. This can be concerning, for example, tax benefits, investments of public funds, or reductions in bureaucratic regulation as well as business accelerators and incubators (Mason & Brown, 2014). The most important processes within an EE are the business development of the individual actors as well as peer *support and networking*. Part of the culture in the ecosystem is to network with each other and to grow faster together. A positive example of this entrepreneurial culture is the ecosystem in Waterloo (Spigel, 2017).

The last segment presents the *individual actors* of the EE, which influence the ecosystem through individual *personalities* and *cognitions*. Individuals shape it through their personal experiences and knowledge (Spigel, 2017).
This framework is the basis for creating research propositions. The research propositions give a detailed look at the last three segments mentioned

before and explain which determinants build and affect the culture in the EE. Also, the dynamics in the EE, and the significance of culture in the ecosystem will be emphasized.

4 Research Propositions

Similar to myths, legends, and stories that are passed on in OC, stories of successful founders shape the culture of the EE. The individuals of the ecosystem can thus get inspiration and be encouraged from experiences and positive examples to follow a similar way (Spigel, 2017). The *success stories* also increase the readiness of entrepreneurs as well as further actors of the EE to risk-taking (Aoyama, 2009). Also, the experiences of failed founders are recycled and shared. This ensures that failure is tolerated and not penalized (Spigel & Harrison, 2018). In addition to the tolerance of risk, and the acceptance of failure, the culture of the EE is characterized by further *attitudes and values*. These include, for example, the willingness to cope with new tasks, which reflects the optimism and enthusiasm of the actors in the EE. Moreover, the fulfillment of desires for happiness and the enjoyment of life is in the foreground. The actors have a positive attitude and take control of their lives and emotions. A long-term orientation, which considers changes, adaptation, and pragmatic problem solving, also shapes the founding culture (Jovanovic & Petkovic, 2018). An underlying ideology shapes a further part of the culture of the EE. It can be understood as similar purposes and goals among the actors of the EE. This provides, for example, cohesion but also shows diversity (Roundy, Brockman, & Bradshaw, 2017).

RP-1: The cultural system and its aspects are highly relevant determinants within the culture of an entrepreneurial ecosystem. More success stories shared cultural attitudes, and ideologies influence the culture of the ecosystem positively.

The socio-structural system as an influence on OC is transferable to the culture of an EE. The *(infra)-structure* in the EE includes not only the individual founders but also organizations and institutions that are indispensable for the development of the ecosystem. On the one hand, they provide knowledge and skilled people, which has a supportive effect on the ecosystem (Suresh &

Ramraj, 2012). In addition to that, they provide financial support so that the infrastructure of the ecosystem ensures that the EE grows. The *strategies and goals* mean in the EE the primary pursuit for own goals, strive for autonomy, and development of a successful business model. However, also overarching goals, that be based on the ideology and values of the EE are a supportive determinant to make the ecosystem helpful and successful. *Policies and regulations* can also be found within the culture of EE. Factors like government and market support, which include opportunities in markets, reports from governments and trade associations and suppliers, support the culture in EE (Suresh & Ramraj, 2012). For example, new and young entrepreneurs, as well as companies, can create a dynamic economy. This can be bolstered up through education regulations, through which the growth of the ecosystem can be supported and directed (Suresh & Ramraj, 2012). In the EE, essential processes can be found in the business development of the individual actors as well as peer *support and networking*. The network of the individuals in the EE supports and helps to grow faster (Stam & Spigel, 2016).

RP-2: The socio-structural system and components are also highly relevant determinants within the culture of an entrepreneurial ecosystem. More structure, clear strategies, goals, policies, and regulations, as well as constructive support and diverse networks, influence the culture of the ecosystem positively.

The contributions of individual actors of an EE are particularly essential for the development of culture in the EE. For example, "entrepreneurs are key actors in an ecosystem, with the ability to identify challenges and help create structures to overcome common problems. Other actors, such as existing firms, who can draw on ecosystem resources to catalyze new growth, startup workers, mentors, advisors, and dealmakers are also crucial constituencies" (Spigel & Harrison, 2018, p. 157).

RP-3: The individual actors and their aspects are highly relevant determinants within the culture of EE. More personality and cognitions influence the culture of the ecosystem positively.

Allaire and Firsirotu (1984) explain in the conceptual framework for OC that the components are interrelated. This relationship provides support for the OC. However, it should be noted that rapid or undiscovered changes can destroy these supporting bonds. Spigel (2017) mentions that the attributes of an EE are connected and therefore produce entrepreneurial culture within the support. The attributes are correlated and rebuild others. For example, networking and sharing success stories motivate actors of the EE and increase financial as well as supportive resources within an ecosystem. According to this, it can be assumed that the elements of the four segments in the framework of culture in the EE influence or support others. In this case, the elements of the cultural system influence the socio-structural system as the individual actors of the ecosystem. Equally elements of the socio-structural system are related to other elements of the culture in the EE. Finally, the individual actors shape other elements of the culture in the EE through their individual characteristics.

RP-4a: Success stories shape the personality of the individual actors in the ecosystem. In addition, the exchange of experiences influences the cognitions of these individuals positively.

RP-4b: Shared cultural attitudes and values are the basis for mutual support and necessary for networking. It is important not to change these fundaments rapidly, because it could disrupt the basic components of culture in the EE.

RP-4c: The ideology influences and shapes the strategies and goals of the culture in the ecosystem.

RP-4d: Individual actors form the structure of the entrepreneurial ecosystem. In addition, the external factor of the environment with the focused industry, technology, and competition has an impact on the structure of the culture in EEs.

RP-4e: Personalities and cognitions of individual actors influence the extent of support as well as the nature of networks within an EE.

The framework enables us to analyze the determinants of which the culture within EEs is built. To further understand the structure, a dynamic view is mandatory, as the culture is not only shaped by the presented determinants, but also by a high level of dynamism within the ecosystems. The rapid inflow and outflow of actors and the high degree of individuality of every single actor make up a large part of the culture of an ecosystem (Mason & Brown, 2014). It also influences and constantly redefines the norms and underlying beliefs. Due to the rapid changes and high interdependencies, there is no possibility to build up routines within the ecosystem. The elements are in constant reformation and, thus, the whole ecosystem and culture within it.

RP-5: Every determinant of culture in EE is shaped by the high dynamics within the ecosystem. Therefore, the dynamics can be seen as a significant influencing factor, constantly changing the culture of the ecosystem.

5 Discussion and Conclusion

This paper is seen as an initiation for research on the importance of culture within EE. The research work will serve as a milestone for the subject field and can be adopted as an academic basis and has brought to light the use of culture within EE by depicting the determinants and its significance to the players involved.

The paper depicts that the theory of OC can be transferred to EE in order to illuminate the determinants of the culture in the ecosystem. Therefore, the determinants of the culture in the EE are based on the theory of OC. They are likewise part of the four main segments: external factors, the cultural system, the socio-structural system, and the individual actors. Nevertheless, differences have been taken into account through greater dynamism and complexity in the EE. In addition, it can be assumed that determinants influence and support each other. Through these linkages, the positive effects of the EE can be increased.

The analysis of the paper also depicts how the dimensions of the OC framework are transferable in the context of EE regarding culture as a change agent. It is significant to reiterate that the research propositions have been formulated to emphasize the determinants and their effects on the culture within the EE. Nevertheless, it is essential to note that research gaps about the culture within the EE

still exist because this paper only introduces first considerations and initiates the topic to allow interest in the subject field by other scholars. Further research is needed on the subject area for comprehension and apprehension.

5.1 Suggestions for Future Research

This study offers a roadmap for future studies on EE, considering the proposition of the research studies and the framework constructed.

Further research about differences and similarities of OC and EE should be done by future studies to allow detailed insight and discernment to the subject matter. The scope of the research about culture in the EE can be expanded to enable more meaningful outcomes to be obtained with more variables, which could bring more clarification to the subject field. Future studies can also consider investigating the stakeholders and the institutions involved in the EE to enable further detailed requisite knowledge of the phenomenon.

5.2 Practical Implications

This elaboration increases the understanding and awareness for transmission of the theory of organizational culture on the EE for academia, intuitions, and stakeholders. Furthermore, it provides a deeper understanding of the culture within the EE and the general comprehension of the conceptual framework function and the significant contributions to the EE.

Specifically, it is very relevant to emphasize that the research work seeks to enhance and reinforce the culture component within the EE. The findings in the elaboration can be valuable for institutional and corporate knowledge acquisition. Finally, the paper can serve as a test case for actors of an EE to try the conceptual framework of the study to see how effective and efficient it functions.

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