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INTERCONNECTEDNESS IN ENTREPRENEURIAL
ECOSYSTEMS: A SOCIAL CAPITAL PERSPECTIVE

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Thesis for the degree of Doctor of Philosophy

September 2018

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Dedication

I was once told that knowledge should not be an end goal merely because it is unattainable. The aim should rather be the journey of seeking wisdom because in our quest to finding knowledge, we stumble upon many many unexplored roads only to discover how little we know. I dedicate this thesis to those who crave more knowledge, more truth, more light; those who “stay hungry”; those who do not aim to sit still; those who find beauty and give meaning to the smallest of things, in the least expected places.

Above all, I would like to dedicate this work to those who have sacrificed and endured a lot for me to get to where I stand now and become the person I am today;

For my father, my hero, to whom I owe everything I am;

For my mother, my beautiful mother, the light and love of my life;

and for my little brother, the one that keeps me strong and confident.

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University of Southampton

Abstract

Faculty of Social Sciences

Southampton Business School

Doctor of Philosophy

Interconnectedness in Entrepreneurial Ecosystems: A Social Capital Perspective

by Sarah Chahine

This research aims to analyse the characteristics of Entrepreneurial Ecosystems (EEs) and their interconnectedness of entrepreneurs and actors within an EE in a developing country context bound by scarce resources through linking social capital theory to the successful establishment and development of such EEs. The analysed Lebanese EE advances our understanding of the existing EE frameworks through the examination of its available, missing and unexplored elements against the current literature. By embedding the theory of social capital, this research pays close attention to means in which local and international social capital are generated and deployed and examines their significance and weight across the birth and growth stages of EEs.

The EE in Lebanon is explored through 43 semi-structured interviews that are conducted with entrepreneurs and supporting actors; e.g. investors, CEOs of incubators and accelerators, representatives from academic institutions and governmental bodies. The adopted methodological approach is interpretivist that examines the studied context and the link between social capital and EEs.

The findings uncovered that in a country like Lebanon, social capital is one of the most important elements underpinning the genesis as well as the development and saturation of EEs. Social capital widely replaces the missing local support, advocates an internationalized mindset in the entrepreneurial environment and presents social capital as an insurance model for entrepreneurs and supporting actors to gain usually lacking benefits. Findings also reveal that whilst financial support from the government is key to the emergence of EEs, social capital is vital for the growth and sustainment of EE. Moreover, the configuration of the EE is highly dependent on the social attributes as opposed to material and cultural ones considering the limited local resources and infrastructure; hence the significance of social capital. The examination

of the three dimensions of social capital (structural, relational and cognitive) highlight enabling factors like the diaspora, community commitment and disregard of individual reciprocal benefits. Moreover, the analysis of the trajectory of EE highlights that in the absence of formal support systems, an initial formal financial nudge and a heightened flow of formal and informal diaspora-backed international linkages constitute the backbone of a developing resource constrained EE. Accordingly, despite local corruption and nepotism, the system becomes flexible enough to overcome the negative aspects of social capital. Therefore, contrary to existing beliefs in the literature, the difference in the weight of EE elements and the seldom-dysfunctional EE components are not detrimental for the functioning of the EE considering the dense local and international social capital.

The contributions of this study are the following. This research emphasizes a need for re-establishing frameworks of EEs in developing countries that take into consideration their limited resources and strengthen the significance of other elements like local and international social capital. By doing so, this study becomes the first to link social capital theory to the trajectory and success of EEs. Separating the analysis of local and international social capital revealed significant differences between the roles of both capitals highlighting only two unique benefits of local social capital (i.e. emotional and legal support), whilst the rest of the benefits are either exclusive to international social capital or are common to both. Therefore, the significance of international social capital presents a new framework for EE researchers and policymakers in developing countries that inputs the required elements, which strengthens the establishment and deployment of social capital and calls for crafting the needed strategies for establishing and maintaining local and international linkages at an early stage. Additionally, by linking social capital to the trajectory of EEs in developing countries, this study highlights the particular significance of the former in replacing some of the missing elements of EEs in such locations bound by scarce resources.

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Declaration of Authorship

I,

declare that this thesis and the work presented in it are my own and has been generated by me as the result of my own original research.

INTERCONNECTEDNESS IN ENTREPRENEURIAL ECOSYSTEMS: A SOCIAL CAPITAL PERSPECTIVE

I confirm that:

1. This work was done wholly or mainly while in candidature for a research degree at this University;
2. Where any part of this thesis has previously been submitted for a degree or any other qualification at this University or any other institution, this has been clearly stated;
3. Where I have consulted the published work of others, this is always clearly attributed;
4. Where I have quoted from the work of others, the source is always given. With the exception of such quotations, this thesis is entirely my own work;
5. I have acknowledged all main sources of help;
6. Where the thesis is based on work done by myself jointly with others, I have made clear exactly what was done by others and what I have contributed myself;
7. None of this work has been published before submission;

Signed:

Date:

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Acknowledgments

I would like to start by thanking the University of Southampton for granting me the Vice-Chancellors Studentship Award to pursue my PhD at the Southampton Business School. I will always be very grateful for that as I would not have been able to fund my PhD otherwise. I would also like to express my deepest gratitude to my supervisory team starting with Professor Mine-Karatas Ozkan, my primary supervisor. Professor Mine has been there for me through my hardest times, she believed in me when I almost did not. She pulled me up again and got me to where I am now, and for that, she will forever have a very special place in my heart. Thank you for the friendly environment that you surrounded me with, for all the coffees, snacks, advice, future talks and even career discussions. I would also like to thank Dr. Vadim Grinevich for his thorough feedback and great attention to detail. I highly admire the perfectionist in him and aspire to become so one day. He has been offered a great support to me and for that I am very thankful. My sincere gratitude also goes to Professor Julia Bennell, who has tried very hard to present me with different perspectives, ones that I was not able to see. This has helped me in framing my research properly. Besides my current supervisory team, I would like to express my sincere gratitude to my former supervisor Dr. Yuan Huang whom has left the University of Southampton, yet still supports me to this moment. She has generously read and provided me with helpful feedback even when she started her new job elsewhere. I am highly grateful for her and for all my current supervisory team. Without their precious and highly valued support, it would not have been possible for me to conduct this research. Moreover, many thanks to all the reviewers and examiners that have read my thesis, or parts of it, in conferences, doctoral colloquiums and in routine progressive meetings at the University of Southampton specifically Dr Shahnaz Ibrahim and Dr Chidubem Ikeatuegwu. Their comments have helped me a lot in sharpening my research scope, objectives and idea flow.

I would also like to thank my colleagues and friends in Southampton, my home country Lebanon and those who are dispersed around the world whom their support and love have never failed to motivate me. I would like to name four people in specific that have profoundly influenced me throughout this journey. I would like to start by thanking my closest friend, cousin and sister Rakelle Haidar whom her unconditional love, ambitious nature and endless funny stories have guided me through a lot. I would also like to thank my close friends that have truly become my family, my home away from home and my go-to everyday. I would like to start by expressing my sincere gratitude to Hachem Kassem who has proof-read my thesis (as well as my CV and social media posts) over and over again until he memorized my aim statement, research questions and line of argument. I will always use the word “nowadays” to tease you though! My deepest thanks and love go to Wassim Dbouk for his never ending and sometimes head-aching criticism and for his feedback on my thesis. I guess your comments were helpful eventually. I would also like to express my sincere gratitude to my friend Mohamed Abdulla for his 10-hour long Latex session; I really hope he does not hate me after this! I also acknowledge the moral support I received from a lot of my friends and would like to thank each and everyone of them for showing me that friendship does play a great role in fulfilling personal goals.

Finally, my deepest love and gratitude go to my mother and father that have supported me both financially and morally, believed in me and were there for me in the good and the bad times despite the hundreds of miles that come between us. The love of Lamia, my beautiful mother, is in essence, a reason to fulfill all my dreams, wishes and goals. She is all my reasons. She has given meaning to everything. She has been my mother, friend and soulmate who continues to push me to follow my heart wherever it leads me. She has always put me first. The love and respect that I have for this woman is inexplicable. Thank you for being the person you are and for all the support you have showed me. Hasan, my father, the person who changed his whole life for my sake and still puts my happiness and satisfaction above his own, have showed me that there is no love in the world that tops the love of a father to his child. I will carry this love in my heart and soul every day of my life. Thank you for all that you are and thank you for the person you made me become. Last but not least, I would like to thank my young brother, Mohamed whom his unconditional love, purity and innocence will always reflect positivity and motivation on my life. Thank you for the beautiful person you have become and thank you for listening to my endless whining. I love you!

1 | Introduction

1.1 Introduction

There is an increased interest in Entrepreneurial Ecosystems (EEs) in the recent entrepreneurship literature, which highlights the significance of such approach for various practical local, regional and international benefits and sets the scene for further needed theoretical, empirical and other contributions. One way to define EEs is presented by Audretsch and Belitski (2016, 1033) as “a set of interconnected entrepreneurial actors... which... coalesce to connect, mediate and govern the performance within the local entrepreneurial environment”. EEs are rooted in interconnectedness. Although the majority of researchers highlight the crucial aspect of interconnectedness in EEs (Mason and Brown, 2014; Acs et al., 2014; Bosma and Holvoet, 2015; Audretsch and Belitski, 2016), very few studies have empirically contributed to increase our understanding of the topic (e.g. Motoyama and Watkins, 2014). Entrepreneurship is highly dependent on entrepreneurial connections (Aldrich et al., 1987; Aldrich and Mattson, 1987; Johannison, 1998). Accordingly, connections among actors come to the forefront of properly examining both concepts. To this end, taking its foundational value into consideration, social capital theory is being relied upon to fill gaps in entrepreneurship theory (Gedailovic et al., 2013) through the examination of interconnectedness of actors (Kim and Aldrich, 2005). The aim of this study is to examine the characteristics and interconnectedness in an EE in a developing country bound by limited resources through investigating the role of social capital in the establishment and development of similar EEs. Hence, this thesis is the first to link social capital theory and the concept of EEs to examine interconnectedness in a resource-constrained context as compared to the majority of resourceful contexts examined in the existing literature on EEs. The thesis also contributes to the field by investigating the elements of EEs in such contexts along with the significance of social capital across the trajectory of such EEs.

The following sections highlight the scope of the study, the context, research aim and questions, methodological choices, implications, contributions and the structure of the thesis as a

whole.

1.2 Theoretical Background

Regional development is the result of many complex and often interrelated factors. While the unique contextual attributes of a particular geographical region can, at times, lead solely to advantageous outcomes; economic development is more often attained through a number of collaboration strategies and agglomerations akin to EEs. According to the Organisation for Economic Cooperation and Development (OECD), entrepreneurial environments are vital for territorial economics. They describe such environments as a function of three elements (favourable circumstances, appropriate parties and significant resources) which are, in turn, shaped by the culture of entrepreneurship in the territory (OECD, 2010). EEs focus on entrepreneurs as vital actors influencing both the entrepreneurial environment and the economic prosperity of regions. The adaptation of the term “ecosystem”, which is defined as an interconnected network, highlights a focus on interconnectedness (Moore, 1993). Moreover, the use of the term “entrepreneurship” or “entrepreneurial” denotes the concept’s position at the core of these ecosystems (Auerswald, 2015). EEs are hence “biotic communities” where they comprise entrepreneurs as their core component and entrepreneurship as both their inputs and outputs (Acs et al., 2017). They are characterised by a high density of connections among actors and attributes related to their configuration. They are configured differently in different regions as they are highly context-specific and directly attributed to their local social (networks, mentors, etc.), material (infrastructure, universities, etc.) and cultural (supportive culture and histories of entrepreneurship) attributes (Spigel, 2015) focusing on their local dynamics and capabilities with eyes on both the regional and international activities (De Massis et al., 2017). Such ecosystems are characterised by high density of connections among actors and attributes related to their configuration (Brown and Mason, 2017; Bruns et al., 2017; Spigel, 2016). They are employed as strategies in cities, countries or regions to elevate productivity, collaboration, profits, etc. The main argument presented in this research is that the growth of regions is highly dependent on the actors and entities located in them, and that strengthening the connections among these entities would reinforce the development of regions.

EEs are a novel approach in territorial economics. Even though they are shaped towards interconnectedness and entrepreneurship, literature is still short on empirical and theoretical underpinnings to strengthen the concept. The first observed gap relates to contextual settings, where the majority of studies apply to resourceful developed countries with mostly

mature EEs. Whilst acknowledging their added value, findings of these studies cannot be generalizable to EEs in developing countries that are mostly faced by scarce resources; specifically in terms of infrastructure and support. Such EEs, which are referred to as arid EEs by Spigel and Harrioso (2017), lack basic entrepreneurial resources namely venture capitalists, public support for technology scale-ups and seed funding, whilst having strong entrepreneurial and diaspora networks that potentially replace the missing resources (Lingelbach, 2016). In light of the foregoing, this research focuses on an EE in a resource-constrained developing country to present new findings that correspond to such contexts. Focusing on a developing country contributes empirically to the literature by presenting new data that pertain to such aforementioned countries. This also suggests theoretical alterations to existing EE frameworks – that assume the availability of localised resources – to present the key elements and driving forces of EEs that lack local support.

The lack of research of interconnectedness of actors in EEs is highlighted as another gap. Although EEs advocate interconnectedness of elements as well as actors; the current underpinnings of the concept lack systematic examination regarding connections among entrepreneurs and other key actors, their means of generating social capital, its deployment and sustainability. This aspect is often ignored by researchers where several papers on EEs lightly pinpoint the importance of interconnectedness yet call for further research on the matter (Stangler and Bell-Masterson, 2015; Isenberg, 2010; Autio et al., 2014; Auerswald, 2015; Mason and Brown, 2014). The mechanisms of interactions among actors as well as the benefits they are gaining also remain unclear. This study, hence, contributes to the literature by investigating interconnectedness among entrepreneurs and supporting actors in EEs in developing countries offering an in-depth appreciation of their generation, deployment and sustainment through linking the literature on EEs to that of social capital as presented later in this section.

Moreover, considering the novelty of EEs, the literature is still short on a comprehensive understanding of the evolutionary trajectory of ecosystems. Mack and Mayer (2015) have presented a framework explaining four stages of evolution of such ecosystems. Throughout the birth, growth, maturity and/or decline stages, the characteristics of firms, entrepreneurs and support structures are explained and contrasted – based on the elements of EE by Isenberg (2011). The latter framework consists of six elements of EE; permissive culture, supporting policies and leadership, accessible financial support, human capital, markets and a variety of other support from institutions and other parties. Both Mack and Mayer (2015) and Isenberg (2011) fail to describe the connections among entrepreneurs and other actors in the ecosystem even though they are perceived as crucial. On the other hand, Auerswald and Dani (2017) have recently presented another iterative view of the evolution of ecosystems where they argue that the EEs go through short periods of systematic restructuring followed by longer periods

of accumulation and transformation. Both frameworks are examined with regard to EEs in developing countries. Our examination focuses on the role of social capital and the way in which it is generated and deployed in the birth and growth (Mack and Mayer, 2015) and throughout the succession and reorganisation of EE (Auerswald and Dani, 2017) to identify means in which social capital can aid in the growth of the ecosystem. Hence, the overarching aim of this study is to analyse the role of social capital developed by entrepreneurs and supporting institutions taking into account the evolutionary trajectory of ecosystems to emphasize the varying features of the birth and growth phases of EEs in resource-constrained developing countries.

Social capital theory has been associated with studies related to the interconnectedness of actors (Myint et al., 2005; Huber, 2011; 2012; Sajuria et al., 2015; Cooke et al., 2005; Casper and Karamanos, 2003; Hauser et al., 2007; Westlund, 2006; Eisingerich et al., 2010). The theory is being advocated as a foundation in the entrepreneurship literature since its application in the field fills several theoretical needs and gaps in entrepreneurship theory (Gedajlovic et al., 2013) by explaining social interactions in various contexts (Kim and Aldrich., 2005). Social capital theory is, thus, employed to examine the gaps regarding interconnectedness of actors in the EE literature. Social capital is the social networks among individuals, which grant them various benefits (Porter, 2000). Unlike other forms of capital such as economic capital, social capital is not quantifiable but rather more rhetoric (Bourdieu, 1986). It is examined through its three dimensions; structural, relational and cognitive capitals (Nahapiet and Ghoshal, 1998). Structural capital is examined through the configuration of networks and factors influencing it. The measurement of relational capital, encompassing the characteristics of the ties, is attributed to trust, sense of commitment and reciprocity (Constant et al., 1996; Wasko and Faraj, 2005; Nahapiet and Ghoshal, 1998). Cognitive capital, which highlights the shared cognitions and the extent of homogeneity among actors in terms of interpretation and meaning, is measured by expertise, shared language and narratives, homogeneity in knowledge basis and shared norms and values (Nahapiet and Ghoshal, 1998; Wasko and Faraj, 2005; Burt, 1983; Alvarez et al., 2016). The aforementioned variables are further explained in Chapter 3. The chosen context is highlighted next.

1.3 Context: Lebanon

The EE in Lebanon, a country in the Middle East, is chosen as the context of this study. The country is a developing one bound by scarce resources specifically due to the regional political and economic instabilities. The EE, nevertheless, is developing and gaining more popularity

in the country and the region and is attracting more funds, investors and other international supporting actors. Being in its growth stage, the analysis of the Lebanese ecosystem allows an investigation of the link between social capital and the growth an ecosystem, which sets an example for countries in comparable situations and characteristics. As explained earlier, considering the limited number of studies on EEs in resource-constrained developing countries, it is rather demanding that a study in such a context be made.

Lebanon is one interesting case to examine as it is considered one of the world's most entrepreneurial economies (GEM, 2016), in spite of the limited resources in the country. According to the Global Entrepreneurship Monitor (GEM), the rate of business establishment is the sixth highest among more than one hundred participating countries in the global entrepreneurship monitor, including the US and the UK with normal discontinuous rates. This shows that more than half the Lebanese population is either actively starting a business, running a new business or own an established business. Moreover, Lebanon is rated as the fourth country worldwide in terms of early-stage entrepreneurial activity and the first in terms of being efficiency and innovative-driven (*ibid.*). Other interesting findings by the GEM include the following; more than 85% of the working population believe that entrepreneurship is a good career choice, three quarters of the Lebanese early-stage entrepreneurship ventures are creating jobs for others, the workforce is well-educated and well-qualified, availability of loans and different schemes to support entrepreneurial activities, etc. The context is still missing an understanding of interconnectedness, both locally and internationally, and across the birth and growth stages of the lifecycle of EEs.

On the other hand, even though the country is located in an instable region, studies show that entrepreneurs in Lebanon and the region are highly motivated to cultivate change (Chahine and Mowafi, 2015); hence, there is potential that a situation like the current one could boost, rather than hinder, entrepreneurship. Although entrepreneurship seems on the rise in the country,, several hindering factors still exist that flag Lebanon as a country with limited resources. For instance, the political body in the country was paralyzed for more than two years between 2014 and 2016, as the country did not have a president up until the end of 2016. The economy in Lebanon is handicapped particularly after the increased refugee intake where refugees now constitute a quarter the population (UNHCR, 2017). With an area of 10,452 km² and around 6 million residents, the country's originally limited resources are being drained. Broadband connection is slow, entrepreneurial infrastructure (mentorship, serial entrepreneurship, early-stage seed funding) is limited and factors like corruption, sectarianism and nepotism handicap entrepreneurial initiatives. Nevertheless, residents still seek refuge in entrepreneurial activities as means of survival, hence the continuously growing EE. Moreover, being a country with limited resources, the majority of its working-age pop-

ulation has an international orientation (a country with a high proportion of international customers according to the 2016 report by GEM). Therefore, and since diaspora connections are so integral to the development of local businesses (Ho et al., 2015; Stel, 2013; Mack and Mayer, 2015; Tabar, 2010), this indicates a dense international social capital. Accordingly, the Lebanese ecosystem allows for good insights on interconnectedness and social capital.

1.4 Research Aims and Questions

Based on the aforementioned arguments thus far, the aim of this research is to investigate the characteristics and interconnectedness within an EE in a resource-constrained developing country focusing on the roles of social capital in the successful establishment and development of such EEs. The research questions are threefold:

RQ1: To what extent do the key characteristics and elements of EE in developing countries such as Lebanon align or diverge from an ideal understanding of an EE as presented by current literature?

RQ2: What is the role of interconnectedness among actors in building and sustaining an EE? How is social capital generated and deployed in developing such EE?

RQ3: Are there any differences to the way in which social capital is utilised in birth and growth stages of EE?

1.5 Methodological Background

Entrepreneurship is context-specific and the configuration of EEs varies in different contexts based on the available local attributes (Spigel, 2015). Hence, the chosen research methodologies are tailored to correspond to the socially bound ‘reality’ in this study; meaning that (slightly or considerably) different understandings of the same research objectives can be generated in different contexts (Saunders et al., 2012). Specifically, we assume that the elements of EE vary among resourceful developed countries and resource-constrained developing ones. Accordingly, this study assumes an interpretivist research philosophy (Bryman and Bell, 2015; Strauss and Corbin, 1990; Miles and Huberman, 1994), which best suits the understanding of reality in this resource-constrained context and a subjective ontological stance depending on the perceptions of social actors. The epistemological view is interpretivist as the data are mainly based on the views of social actors and the nature of the phenomenon under study requires interpretivist exploration (ibid.). The axiological assumption is value-laden, where

researchers adopting this assumption usually take part in the data-collection process. These assumptions dictate the chosen method for data collection, which is best positioned among the aforementioned research strategy and assumptions.

In order to answer the research questions explained in Chapter 4, this study adopts an interpretive exploratory approach employing qualitative semi-structured interviews. This approach allows for an in-depth understanding of the context. In addition to this depth, diversity of views and experiences have been captured by interviewing two subsets of participants, namely entrepreneurs and supporting actors. A total of 43 semi-structured interviews have been conducted with entrepreneurs and supporting actors such as investors, CEOs of incubators and accelerators, representatives from academic institutions, financial institutions and governmental bodies in the Lebanese EE. Interviews were then transcribed, coded and analysed. The analysis procedure is informed by thematic analysis. The steps used are adopted from Glaser and Strauss, 1967, Strauss and Corbin, 1990 and Miles and Huberman, 1994 who are pioneers in studying interpretive research and grounded theory. Both inductive (employing the findings from interviews to analyse the data) and deductive (making use of current theories as a starting point of analysis) reasoning have been used to obtain the themes. Using the model by Gioia et al. (2012), findings are categorised based on first order concepts, second order themes and the aggregate dimensions where the first category concepts are obtained from interviews, second order themes link between the findings of the study and the literature and aggregate dimensions represent an extension of the second order themes. The latter takes these second order themes one-step further to present general theoretical concepts. This process is integral for both visualizing the data analysis and validating the findings (Pratt, 2008). After that, findings have been interpreted and discussed with reference to the key constructs drawn from social capital theory and EE literature.

1.6 Theoretical and Empirical Contributions of the Study

This thesis makes multiple theoretical and empirical contributions to entrepreneurship and social capital literatures. Firstly, this study associates the novel EE approach to social capital theory linking the emergence, progression and success of the former to the latter. Additionally, the presented findings are the first to classify interconnectedness and social capital based on a lifecycle perspective through a framework highlighting differences in ties, incurred benefits, and important actors across the birth and growth stages and the succession and reorganisation of the studied EE along with the differences in structural, relational and cognitive capitals. Moreover, research on international social capital is scarce. This study

investigates means in which international social capital is generated and deployed in an EE. The focus on international social capital adds to the literature of both social capital and entrepreneurship. The former benefits from differentiating between means in which local and international ties are established, accessed, and maintained as well as the differences in interactions between both types of linkages. Findings related to international social capital also contribute to entrepreneurship literature by emphasizing the former as a key element for establishing, growing and sustaining EEs in similar contexts, which acts as a significant insight for policymakers as shown in the following section.

This study also contributes theoretically by altering few dimensions of existing EE models. The main proposed alterations relate to the significance and weight of elements needed for EEs where they are given equal importance in existing EE models. This study, however, shows that elements like material and cultural attributes of EE (Spigel, 2015), finance, support, human capital and culture (Isenberg, 2011) and actors like entrepreneurial actors and resource providers (Brown and Mason, 2017) are less apparent in the Lebanese EE. Few of these become more prominent during the growth stage of the EE (e.g. entrepreneurial resource providers). By highlighting these differences, it is inferred that local and international social capital largely replace the missing or limited elements. It is also concluded that the configuration of EEs similar to the one studied here, is mostly based on the social attributes and less on the material and cultural ones (Spigel, 2015; Spigel and Harrison, 2017). Additionally, this study adds to the frameworks by Mack and Mayer (2015) and Auerswald and Dani (2017) by emphasizing the variations of social capital across the trajectory of EEs.

1.7 Contributions for Practice and Policy: Entrepreneurs and Supporting Actors

Several practical implications emerge from the study. In identifying which ties are more important at different stages, actors/policy makers can facilitate better networking and tie building through specific events within EEs. Policymakers can make use of such findings to either strengthen both types of social capital (local/international) or dedicate resources to, and focus their support on one of these (e.g. local ties to strengthen the local interactions or international ties to increase the transfer of resources to the country or region). Above all, developing countries are advised to strengthen international networks of ties at an early stage to fill the gaps in infrastructure, governmental support, finance and other forms of limited support. In doing so, they would catalyse the process of accessing the needed elements for

a successful EE. Moreover, diaspora ties are highly appreciated where their financial and practical resource transfer is essential for developing start-ups and the EE as a whole. These, on the other hand, are also encouraged to return back to their country as they have better experience in working internationally; their experience enhances the local capabilities and the EE. In order to elevate the overall performance of the local EE, governments can employ several strategies to target the youth living abroad. Firstly, by initiating programs (like ‘Med Generations’) to target those young entrepreneurs that have been working in international entrepreneurial environments and that would enrich the local entrepreneurial culture upon their return through employing their knowledge and innovative ideas in the country.

Moreover, by uncovering the elements of EEs in developing countries, policy must be altered to fill in the highlighted gaps. For instance, entrepreneurship-friendly (and start-up-friendly) regulatory laws must be introduced, which mind the financial capabilities and the volatile entrepreneurial environment. These laws must include special social security considerations, venture capital laws, private equity laws, along with other laws that would motivate entrepreneurs to incorporate their businesses. Moreover, similar to the excellent initiatives by policymakers to support (without direct interference) the local entrepreneurial environment in Chattanooga (Motoyama et al., 2016), policymakers must strengthen existing supporting actors as well as attract others to join by offering incentives and schemes. These must include venture capitalists and angel investors offering seed funding for start-ups at an early-stage. Existing actors, especially universities and research institutions, must offer updated and state-of-the-art support and research, which correspond to the local entrepreneurial needs. These initiative increase awareness and motivation to take part in the EE as well as limits the traditional mindsets and fear of failure as well as develops the EE as a whole.

1.8 Structure of the Thesis

The chapters proceed as follows. The following two chapters formulate the literature review; the first corresponds to the context of the study and the second to the theory. Chapter 2 comprehends a historic overview of territorial economics theories and studies that eventually led to the establishment of EEs in theory and practice. In Chapter 3, the theory of social capital is properly examined and highlighted as the means for studying the research gaps and questions identified across the chapters of this study. Chapter 4 presents the three research questions of the study and explains the methodological choices employed to answer these questions. After that, chapter 5 presents the findings of the semi-structured interviews with entrepreneurs and supporting actors in the Lebanese EE and links these findings back to the

literature. By the end of this chapter, implications for EE frameworks, social capital theory, policy and practice are emphasized. The final chapter concludes with the main findings, theoretical, methodological and empirical contributions, contributions for practice and policy and the limitations and future research implications.

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2 | Theoretical Development of EEs

2.1 Introduction

This chapter analyses the novel literature on EE and highlights several gaps that arise in the literature creating a need for further research. These are the need for studying EEs in developing countries, interconnectedness among actors in EEs and evolutionary analysis. The purpose of this chapter is threefold; to understand the conceptual underpinnings of EEs, to highlight the gaps in EE literature, and examine the existing knowledge of entrepreneurship and EEs in Lebanon and the region. This chapter continues as follows. The first section commences with several definitions of EEs followed by an examination of the conceptual underpinnings of the concept where several theoretical frameworks are presented and investigated. These frameworks and discussions highlight the gaps in the EE literature, which are then further explored in the following two subsections. They are the interconnectedness and trajectory of EEs. The final section investigates the available literature on entrepreneurship and EEs in Lebanon and the surrounding region, which serves as a starting point for answering the research questions of this study.

2.2 Definitions of EEs

The EE approach is partly related to the regional development literature (Acs et al., 2017) comprising related theories like the Theory of Industrial Districts (Marshall, 1890), the Industrial Location Theory (Weber, 1929) and the Economic Development Theory (Schumpeter, 1934) that are considered as those classical agglomeration theories – part of the territorial economics policies (Boutillier et al., 2016) – which influenced Cluster Theory (Porter, 1990). These theories together have led to the more favourable EE approach in terms of its focus on entrepreneurship and entrepreneurial actors (Mayangsari et al., 2015; Mack and Mayer, 2015). These theories are examined further in Appendix I. The concept of EEs, an

entrepreneurship-focused concept (Acs et al., 2017), is novel and has gained its traction in the entrepreneurship scholarship recently. According to Auerswald (2015), the best way to define the concept is by understanding each term on its own. “Entrepreneurial” from entrepreneurship means the development of innovative combinations drawing on the Schumpeterian notion of entrepreneurship (Schumpeter, 1912).

The concept of EEs has roots not only in previous agglomeration theories, it is directly linked to the theory of entrepreneurship as well as EEs aim to make territories more entrepreneurial. The Schumpeterian school of entrepreneurship is probably one of the oldest related to the concept. Schumpeter (1949) emphasized the role of entrepreneurship and entrepreneurs in creating innovative and sustainable outcomes. He defined entrepreneurship as those activities that are not usually done on a day-to-day basis and that are generally related to leadership initiatives (Schumpeter, 1951). A recent book by Kuratko (2016) on entrepreneurship in theory and practice identifies two schools of thoughts (macro: environmental factors that influence the entrepreneur’s lifestyle, financial factors, and displacement (those factors that make the individual feel displaced or out of place); micro: entrepreneurial traits, venture opportunities and strategic formulation). A theory of the concept has been in creation for the last 40 years, according to the author (ibid). Bull and Willard (1993) gathered many of the definitions and historical arguments to conclude that entrepreneurship takes place if (i) individuals have the motivation related to the task they want to undertake, (ii) the experience or are surrounded by people of expertise, (iii) the expectation of success and (iv) are located in a supportive environment. In other words, it is concluded that entrepreneurship is stemmed from individuals. Kirzner (1997), on the other hand, explained entrepreneurship as a result of change, shocks or unplanned events in the system or market that might seem negative for some, but are viewed as opportunities for entrepreneurs.

Shane and Venkataraman (2000) also built on the classical entrepreneurship approaches and arguments to propose a newer definition. They concluded that entrepreneurship occurs when opportunities rise, and alert entrepreneurs make use of these opportunities. Similar to Bull and Willard (1993) who Focused on the individual’s direct impact on entrepreneurship, Casson (2003) followed the same approach to understanding the entrepreneurs themselves. They argued that entrepreneurs are the ones engaged in decision making; mainly to decide whether a new “combination” is gainful. Audretsch (1995) started his discussion about the importance of entrepreneurs in firm establishment and economic development. His book was the spark for creating new ideas and theories related to the role of entrepreneurs in regions eventually leading to the knowledge spillover theory of entrepreneurship (see, for example, Acs et al., 2013; Hayter, 2013). Audretsch’s research challenged the widely accepted notion by researchers and governments, at the time that only large firms can lead to economic development, ex-

plaining that this is also an outcome of the entrepreneurial activity in the region (Audretsch, 1995). Ghio et al. (2015) studied the knowledge spillover theory of entrepreneurship, which highlights the role of entrepreneurship for knowledge spillover in regions, and explained after a thorough literature based study the following. Entrepreneurship, not only facilitates knowledge spillovers, but also enhances innovative activities and the economic performance of regions.

The second term ‘ecosystem’ was first introduced by Moore (1993). He presented the ecosystem by comparing it to the biological concepts of prey and predators to construct a new view on competition using a 4-stage model of evolution (Moore, 1993). He explained that firms collaborate and/or compete against one another to facilitate higher productivity, customer satisfaction and innovation in such environments. Studying ecosystems from a competition perspective, Moore (1993) concluded that successful businesses must constantly study their competitors to be one-step ahead. Rosted (2012) added to the explanation of ecosystems by arguing that companies in vibrant ecosystems have greater chances of growth and development than in different locations. Another study by Bosma and Holvoet (2015) emphasizing the role of culture in EE described ecosystems as a community of interdependent players. Moreover, Cukier et al. (2015) developed a maturity model for software start-up ecosystems based on a couple existing EE. They defined an ecosystem as a system that is not constant – rather in constant change. An ecosystem is evolutionary where it is continuously being improved and updated according to the new demands and requirements of individuals, society and technology (ibid.). Hence, evolution is one important aspect of ecosystems.

When combining the two terms together, researchers mainly focus on two specific aspects when defining EE; the interdependence of elements and actors and the positive impact these elements jointly have on the performance of the local entrepreneurial environment. For instance, Mason and Brown (2014, 5) defined EE as “a set of interconnected entrepreneurial actors... which formally and informally coalesce to connect, mediate and govern the performance within the local entrepreneurial environment”. Audretsch and Belitski (2016, 1033) recently identified EE as a set of interconnected actors and “system-level institutional, informational and socioeconomic contexts”. According to them, they not only highlight the interactions among actors (and hence the benefits that spill out of them) but also the impacts of the local context on the individual actions of entrepreneurs. Autio and Levie (2015) did not offer a definition of the concept, but argued that EE have impacts on both individual actions of entrepreneurs as well as on venture creation. Acs et al. (2014, 479), however, offered the following definition “...dynamic, institutionally embedded interaction between entrepreneurial attitudes, ability, and aspirations, by individuals, which drives the allocation of resources through the creation and operation of new ventures.” This definition signifies the

importance of institutions and embeddedness of interactions between key actors that have a bearing upon the distribution of resources for new venture creation.

The common characteristics among definitions and views by researchers presented so far are threefold. Firstly, researchers view entrepreneurs at the core of EE and entrepreneurship as the product of it, as well as its input (Acs et al., 2017). Second, building a successful ecosystem is bound by the overall social and cultural contexts of regions (De Massis et al., 2017) denoting that EE are dissimilar in different territories. This highlights that EE are highly localised. In a recent article, Brown and Mason (2017) presented a critical review on the concept proposing that EE are both dynamic and unique in nature due to the presence of various actors and the key roles of cultural and social aspects that shape entrepreneurship respectively. On the other hand, even though entrepreneurship and EE are localised phenomena, they are not bound by a limited territory. A more recent view on EE depicts that such ecosystems are part of greater regional and international activities (Bruns et al., 2017; Stam, 2015; Andersson and Henrekson, 2015). In other words, even though EE are highly localised, they are also rooted in regional and international support structures. The third highlighted characteristic is the interconnectivity of attributes and actors (Isenberg, 2010; Mason and Brown, 2014; Spigel, 2016). To summarize, EE are “biotic communities” (Acs et al., 2017), (i) comprising entrepreneurs at their core with (ii) entrepreneurship treated as both the input and output of these communities. (iii) Ecosystems are configured differently in different locations as they are highly context-specific (iv) focusing on their local dynamics and capabilities with eyes on both the regional and international activities. (v) Finally, EE are characterised by high density of connections among actors and attributes related to their configuration (i.e. social, material and cultural).

Based on our interpretation of EE, we view ecosystems as represented in the following diagram. Figure 2.1 highlights an EE where the entrepreneur is the main focus. The EE boundaries highlight the local and international/diaspora networks of supporting actors and the links they establish with the entrepreneur. Resources flow between such networks and the entrepreneur which establish the key aspect of EEs. Local and international networks represent a variety of supporting actors, for instance, the government and governmental agencies, financial institutions, incubators, accelerators, research institutions, universities, international agencies, etc. These networks exist and can be accessed by the entrepreneur to gain the needed resources. The entrepreneur can establish a long-lasting tie with the needed networks, specifically those that offer (or could offer) recurring benefits. Other connections might be more fragile as the resources gained are transient. The diagram also highlights both inflows and outflows, where the diaspora networks (in blue) represent outflows from the ecosystem that inflow back richer in resources to dissipate in the EE.

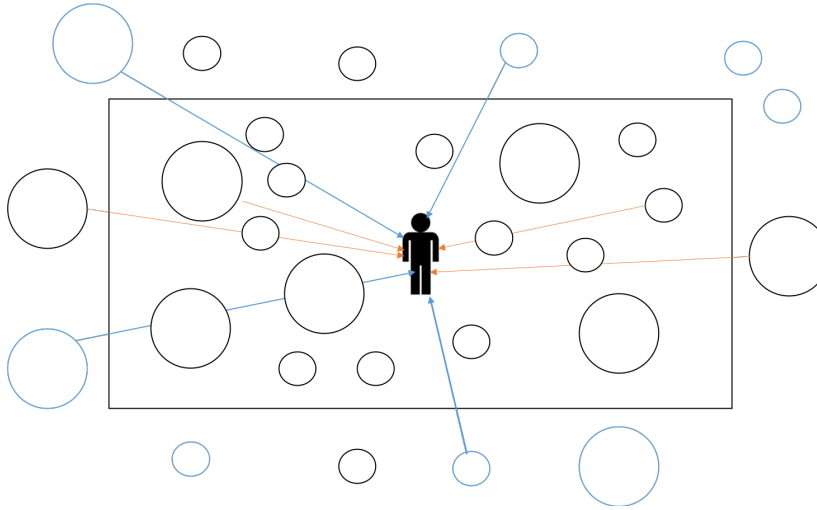


Figure 2.1: A visual representation of our understanding of an EE

Building on our understanding of the theoretical foundations of agglomeration theories, entrepreneurship theory and the concept of EE, the study now moves to examining the conceptual underpinnings of EE in order to establish a thorough understanding of the concept and highlight the recent arguments and research gaps.

2.3 Conceptual underpinnings of EEs

This section identifies a number of important characteristics for a successful EE through an analysis of conceptual frameworks on EE drawing on a number of scholars' work such as Isenberg (2011), Spigel (2015) and Brown and Mason (2017). At the end of the section, networks among entrepreneurs and other actors are reinforced as prerequisites for EEs, which, in turn, require further research. This section serves the purpose of providing further understanding about the conceptual underpinnings of the study along with highlighting the gaps that warrant further research and are therefore addressed in the current research.

Isenberg proposed that every ecosystem is characterized by, sometimes, over hundreds of elements; yet he grouped these into six generic ones (Isenberg, 2011). Isenberg argues that an EE consists of a permissive culture, supporting policies and leadership, accessible financial support, human capital, markets and a variety of other support from institutions and other parties. In total, he describes 50 attributes of the six mentioned elements. For instance, culture comprises both success stories and social norms. The former describes those visible successes in terms of wealth creation and global reputation, whereas the latter refers to the acceptance of risk and failure, innovation, creativity, the social status of an entrepreneur,

wealth creation for the whole society and ambition or, as previously explained, aspiration. Finance, on the other hand, can be obtained through loans, angel investors, friends and family, venture capital funds, etc. The aforementioned elements are presented in figure II.1 in Appendix II.

Isenberg (2011) explains that for an EE to successfully develop, the six elements must be available, accessible and must interact together. Nevertheless, he does not specify means in which they actually interact between one another. Each of the six elements is assumed to have equal importance. In order to have all these elements functioning properly and simultaneously, Isenberg explains the need for proximity, which is crucial for the local creation of resources as well as the attraction of other resources (for instance, financiers, labour, wealth creation, educational institutions, etc). Neglecting one of the six elements could have detrimental impacts on the ecosystem, according the aforementioned researcher. For example, CBVI (2013) argued that if entrepreneurs did not have access to venture capital, they might leave the region in search for others offering higher capital. Based on that, Isenberg stresses the importance of interdependencies among these elements of EEs where building a self-sustaining ecosystem is mainly based on the combination of these elements (Isenberg, 2011). Once these elements are available for entrepreneurs, EEs start developing naturally and hand in hand with the local features of the region (*e.g.* the social, economic, political and geographic conditions of the region/city/country).

One limitation of this model is that it does not offer an in-depth explanation of any of its components. In fact, the descriptiveness of the literature related to EE has been criticised (Autio and Levie, 2015; Stam, 2015). Moreover, the model does not appreciate the trajectory of EE. In other words, it is not clear whether all of the listed components are equally needed throughout all stages of EE's lifecycle (Mack and Mayer, 2015). Another criticism of Isenberg's model is overlooking the key role of incubators. Fernández et al. (2015) tested Isenberg's model of EEs through a mixed-method study focusing on 255 business incubators from all over the world and a specific EE in Spain. They concluded that Isenberg might have placed less importance on business incubators in his model where they considered the latter as a main driver for entrepreneurship. In more recent articles, accelerators are highlighted as important actors in EEs (Mason and Brown, 2017). The key roles of accelerators were first examined by Clarysse et al. (2015) highlighting their effectiveness in offering funds, mentorship, coaching, and eventually moving start-ups from ideation to growth. Therefore, an appreciation of both these actors is required to understand the EE as a whole; which is reflected in this study where both incubators and accelerators are examined (refer to section 4.4).

Another criticism is that even though Isenberg believes that EE are governed by individuals

(most importantly entrepreneurs), he fails to describe the connections among entrepreneurs and other actors in the ecosystem as an important vehicle for success. Similar to Isenberg, the World Economic Forum also listed a number of elements for successful ecosystems of entrepreneurship, which are similar to Isenberg's propositions (Foster et al., 2013). The focus is on (i) resources such as human capital, finance and enabling services, (ii) public institutions, (iii) private organisations and (iv) access to customers and markets. According to Stam (2014) who offered a critique of EE, the two lists of elements demonstrate that EEs are different from the classical territorial economics in terms of the focus on people and their connections. Both Isenberg (2011) and the World Economic Forum (Foster et al., 2013) highlight the roles of entrepreneurs as the main drivers of success and value. However, they describe the significance of having entrepreneurs and other accessible actors without pinpointing the actual facilitator of numerous benefits among these actors; connections and networks (Stangler and Bell-Masterson, 2015; Spigel, 2015; Auerswald, 2015).

On the other hand, unlike Isenberg, Spigel (2015) attributed importance to connections where he explained that EEs involve 10 different cultural, social and material attributes. The unique configuration in each ecosystem shapes the structure of that ecosystem. The cultural attributes are mainly those related to the culture of entrepreneurship in the region (or specific geographical location), and the material attributes are based on the support from universities, governments, support services and open markets. The social attributes, however, encompass those social connections that facilitate resource generation and transfer. Spigel (2015) explains that social networks are highly crucial for EE in terms of helping entrepreneurs gain new ideas, finances, skills, knowledge, opportunities, etc. Nevertheless, the latter researcher assumes that network studies are well documented. However, it is argued that previous studies have looked at networks in contexts different from EE; they have not yet looked at network configurations of actors in EE specifically to understand whether past research on social networks and social capital is reflected in such ecosystems. The aforementioned attributes are presented in Appendix II, figure II.2.

In a different study, Spigel (2016) examined networking among entrepreneurs in Canada to explore resources gained through entrepreneurial social networks (i.e. which directly translates to 'social capital' examined in Chapter 3). The researcher, however, compared and contrasted the networking trends of entrepreneurs categorizing them based on economic and symbolic capitals. Nonetheless, the latter researcher was not clear about the structure of these networks (e.g. density, strength/weakness, types of ties, etc.) and whether their configuration had an impact on these interactions. Spigel's research is one of the few trying to unravel the gap in connections and network configurations in EE (Spigel, 2015; Spigel, 2016; Spigel and Harrison, 2017), yet further research would enable a comprehensive picture of the

tie types and characteristics needed to enhance networking and resource transfer.

Brown and Mason (2017) also contributed to understanding characteristics of EE by highlighting four aspects that configure ecosystems. Entrepreneurial actors include those offering support to three types of entrepreneurs; nascent, novice and serial. The researchers argue that although entrepreneurship is localised, regional factors affect entrepreneurial ventures highlighting a need for recognising both local and non-local interactions that directly support entrepreneurs (*ibid.*). These actors include incubators and accelerators. Entrepreneurial resource providers encompass financial support whether through traditional or unconventional means, as well as linkages to large firms and universities/research institutions (Mason and Brown, 2014). Funds are also linked to the public sector, which is establishing new sources of capital (Grilli and Murtinu, 2014) where public and private sector funds are incorporated under the management of the private sector, whether directly or indirectly. Nevertheless, researchers suggest that indirect support from the public sector is more appreciated (Lerner, 2010). These four aspects are presented in figure II.3 in Appendix II.

Both entrepreneurial actors and entrepreneurial resource providers correspond to the material attributes, as described by Spiegel (2015). Entrepreneurial connectors, on the other hand, are facilitated by high entrepreneurial networks that transfer knowledge and create a local buzz (Brown and Mason, 2017). This links back to the social attribute of networks suggested by Spiegel (2015) where both articles highlighted the importance of these networks for knowledge transfer and depicted “dealmakers” as integral to that process. The final aspect of EE is the entrepreneurial orientation, which relates to the cultural attribute of EE that either facilitates or hinders entrepreneurship (Isenberg, 2010; Spiegel, 2015). Culture enables higher aspirations, support and success. This is an important framework for the current study as it integrates key elements of an EE and acknowledges the interrelationships between them. However, there is still a gap in terms of explicating the nature and types of relationships, resources flow between different EE actors (as a result of these relationships) and how they evolve over time. These are the key areas of focus that are addressed in this research by applying social capital theory as is presented in detail in Chapter 3.

In most discussions, it is apparent that resources and entrepreneurial connections constitute the essence of EEs. Spiegel and Harrison (2017) emphasize this further by distinguishing between four types of EEs based on both these attributes. They argue that the performance of an EE is dependent on the extent of resources available along with networks that lubricates the access to such resources (*ibid.*). Accordingly, they highlight 4 types of EEs based on the network strength and resources. These are strong, arid, irrigated and weak. Strong ecosystems are those that have high resources and strong networks, arid ecosystems are those with strong networks but limited resources, irrigated EEs have available resources yet poor

networks, whereas weak EEs are limited on both attributes.

Entrepreneurial resources can be referred to as the elements needed to establish and develop an ecosystem as explained by the aforementioned frameworks (e.g. Isenberg, 2011; Spigel, 2015; Brown and Mason, 2017). They can comprise financial capital (VCs, governmental investments, incentives, angel investors, loans, early-stage funds, etc.), infrastructure (energy, telecommunications, etc.), legal advisory, skilled labor, specialized expertise, etc. Specifically, Spigel and Harrison (2017) highlight that arid ecosystems, such as the one in Lebanon, lack basic entrepreneurial resources namely public support for high-growth technology scale-ups, venture capitalists and early-stage investments. The latter researchers highlight that diaspora networks can benefit entrepreneurs in filling the aforementioned gaps in resources. Hence, resource-constrained developing countries mainly lack financial capital (specifically in terms of venture capitalists and early stage investments), strong support for technology scale-ups and other governmental and non-governmental support (namely advisory and specialised expertise).

The majority of articles found on EE are descriptive and lack profound explanation of ecosystems. In their book on the geographies of entrepreneurship, Mack and Qian (2016) explored reasons for the discrepancy among entrepreneurial communities. They enforced this argument explaining that more critical examination is required to further understand means in which EE can be applied in cities. Cukier et al. (2015) also highlighted this gap in their work after proposing a maturity model for EEs. They highlighted that although the model serves as a tool for clearly identifying how ecosystems develop and evolve towards a sustainable community, it lacks interconnectivity among its actors calling upon more research to be done on that matter. Isenberg (2011) did highlight that an ecosystem, by definition, is a set of interconnected elements and actors. He did not – however - go in detail about such interconnectivity and whether it varies with the evolution of EEs. Moreover, even though Spigel (2015, 2016) highlighted the importance of social networks and social capital in EE, he did not go in depth to understand the unique configurations of ties and networks among entrepreneurs and whether the previous research on networks and connections is reflected in EEs. Furthermore, these networks generate forms of social capital with certain attributes that facilitate or constrain the development of an EE. These are not captured fully in previous studies putting forward conceptual underpinnings of EE or applying EE lens to empirical domains. Therefore, there is a call for research that takes into consideration the importance of relationships and interactions among key individuals and institutional actors across the trajectory of EE. These two aspects, namely interconnectivity and trajectory of EE are further explained in the following two sections.

2.4 Interconnectedness in EEs

Entrepreneurial ties are well- studied (e.g. Renzulli and Aldrich, 2005; Arregle et al., 2013; Kim and Aldrich, 2005; Aldrich and Zimmer, 1986; Uzzi, 1996; Walker et al., 1997; Birley, 1985; Alder and Kwon, 2002); nevertheless, very limited studies have applied this to the context of EEs. As mentioned earlier, literature is still short on the mechanisms of entrepreneurial relationships among entrepreneurs on the one hand, and entrepreneurs and other agents in EE on the other hand, especially in developing countries. Stangler and Bell-Masterson (2015) suggested four measures to serve as a starting point for interpreting ecosystems (namely density, fluidity, connectivity and diversity) calling upon feedback from experts in the field to add or edit the suggested indicators. One of the most important, yet least developed indicators, as they considered, is connectivity. This is crucial as an EE is not comprised of a list of elements or attributes all on their own, rather the interconnectedness among these foundations is as important as the foundations themselves. Therefore, several methods were suggested to examine connectivity and understand connections between entrepreneurs on one hand and specific programs or resources on the other, connectivity over a specific period, and connections among dealmakers (ibid.). The latter describes those entrepreneurs with high and serviceable social capital. Zoller and Feldman (2012) referred to them as dealmakers. The latter study examined the roles of dealmakers in entrepreneurial communities by analysing 12 US regions, including Silicon Valley and Boston, using a private database, which includes data for more than 4,200 clients in the financial industry. It concluded that dealmakers make a good measure of the effectiveness of entrepreneurial communities in a way that the least successful economies indeed have the least number of dealmakers. These are critical for successful ecosystems as they enable firm establishment, transfer of resources and valuable knowledge. Even though Spigel (2015) highlighted connections as an integral aspect of the social attributes of EE, he did not analyse the network of connections in depth. In a later article by the same researcher, connections made by public and private support organisations were examined in Edinburgh (Spigel, 2016). However, he did not specify the means and nature of interaction among entrepreneurs and these organisations, which implies a need for further research.

Isenberg (2010) explained that interconnectedness among actors of EE is vital and not to be ignored. Nevertheless, he did not examine such interconnectedness. Autio et al. (2014) explained the need for realising entrepreneurs as social entities where they have a need to be connected to other entrepreneurs and actors in communities. They did not - however - provide a measure or specification of these connections. Auerswald (2015) also stressed

on the need for interconnectedness between entrepreneurs and mapping these out to enforce engagement strategies. Mason and Brown (2014) emphasized a need for individuals with high connections facilitating knowledge transfer and eventually leading to the creation of an entrepreneurial society. This is similar to what Zoller and Feldman (2012) referred to as dealmakers. Likewise, Feldman (2001) explained that social capital is one understudied attribute for such successful entrepreneurial cultures. Hechavarria and Ingram (2014) accessed data from the Global Entrepreneurship Monitor (GEM), to examine entrepreneurship in the US between the years 2001 and 2012. They used the data to further investigate the impacts of EEs on the entrepreneurial society. One of their findings highlight that EEs must focus on connecting people to ideas and resources. These efforts are usually made by individual serial entrepreneurs aiming to create linkages enabling knowledge transfer and eventually an entrepreneurial society (referred to as dealmakers by Feldman and Zoller (2012)). Fernandez et al. (2015) examined the roles of universities and the public sector in EEs concluding an interesting implication. They argued that as the value and quality of research and other services provided by the government and universities increase, more interrelations between entrepreneurs and other stakeholders occur. They highlight the importance of such interrelations for higher entrepreneurial activity.

Moreover, Motoyama and Watkins (2014) were, to our knowledge, the first to study interconnectedness among elements of EEs (in the case of St. Louis region) explaining the need for interconnectivity among entrepreneurs themselves and key support organisations. They interviewed a number of start-ups to uncover the flow of their relations. They identified four types of relations, namely among entrepreneurs themselves, among support organisations, between entrepreneurs and support organisations and miscellaneous support connections. However, identifying connections is not the only gap in the literature. The gap can only be filled by further understanding these relationships, how they arise and evolve, and by investigating means in which they are nurtured (Cukier et al., 2015). Furthermore, previous researchers focused on holistic matters like the general structure of EEs and specific regional resources (Spigel, 2015; Isenberg, 2011; Brown and Mason, 2017). This is no longer feasible for EE studies knowing that the focus of such ecosystems is on individual entrepreneurs (Feld, 2012). Therefore, understanding the nature and types of interconnections among these individuals, and the forms of social capital generated through these interconnections is crucial. This study aims to address this gap and add further understanding to whether such connections vary across the trajectory of EE, which is explained next.

2.5 Trajectory of EEs

The aim of this section is to highlight a gap in the evolutionary analysis of EE, and suggest this gap as an area that is addressed in current research. As mentioned above, scholarship on EE does not take into account its trajectory yet. This issue has been highlighted as a gap since cluster theory (see, for example, Feldman, 2001; Motoyama, 2008; Kim, 2015; Elola et al., 2012; Feldman and Francis, 2004; Iammarino and McCan, 2006, Motoyama and Watkins, 2014, Huber; 2011). In a highly critical article by Motoyama (2008), a number of limitations in cluster theory has been highlighted, one of which being lack of understanding of how clusters emerge and evolve. Moreover, researchers tend to focus their attention on greatly developed ecosystems (e.g. Silicon Valley). Nevertheless, Motoyama and Watkins (2014) argued that although this is not wrong from a research point of view, it would be more beneficial to academics as well as policymakers and entrepreneurs to understand how such or other ecosystems develop. This would allow better understanding of how key elements of successful ecosystems evolve.

Connecting the previously explained gap to this one, the roles of entrepreneurs and dealmakers are analysed in conjunction with the trajectory of EE. Feldman et al. (2005) used a case study of Washington D.C.'s entrepreneurial environment to examine its emergence, self-organisation, and maturity. Her research appreciates ecosystems at different stages pointing out that the roles of entrepreneurs and key persons are the most prominent for development supporting the findings by Schumpeter (1939) and her earlier finding in 2001 (Feldman, 2001), where she suggests that such persons along with supportive social capital lead to the establishment of clusters, firms and the entrepreneurial environment. Feldman et al. (2005) explained that even though researchers focus on mature and well-developed entrepreneurial environments, these environments are non-replicable pointing out that several communities like San Antonio, Texas failed in doing so. Nevertheless, her research is specific to one case. Other communities and ecosystems, she argued, might emerge and develop differently.

To our knowledge, only two studies suggested frameworks for examining the evolution of EE (Mack and Mayer, 2015; Auerswald and Dani, 2017). Mack and Mayer (2015) proposed a four-cycle framework for ecosystems; birth, growth, sustainment and decline. They used the six elements of successful EEs as proposed by Isenberg (2011) to discuss their availability and significance at each of the proposed phases. The first stage is characterized by high firm births, low firm deaths, few financial capital and the emergence of support organisations and policies. When an ecosystem is just born, the culture of entrepreneurship is minimal, support from incubators and accelerators is limited and success stories are almost

inexistent. Nascent entrepreneurs notice very few personalities that stand out. Additionally, markets for entrepreneurs are not fully developed yet. Hence, at this stage, the material, social and cultural attributes are limited. Entrepreneurial actors and resource providers exist only in few numbers, whereas entrepreneurial connectors and orientation are only starting to be born. In the growth phase, the number of firms, availability of finance and support increase. Mack and Mayer (2015) highlight that the networks among entrepreneurs become more important (hence, connectivity and social attributes starts to increase). They also argue that at this stage, serial entrepreneurs start to appear, creating more success stories and role model figures for nascent entrepreneurs to value. Dealmakers are thought to be important to this stage (Spigel, 2015). The discussed stages are followed sequentially by an EE as the aforementioned factors are met as described. Entrepreneurial actors and resource providers like incubators and accelerators increase, offering more support, resources and funds to entrepreneurs. The characteristics of the growth stage of EEs are applicable in the Lebanese context, which is according to this classification, in its growth stage.

In the sustainment phase, the firm deaths rate is higher than that of the births, there are also fewer opportunities to grasp by entrepreneurs where barriers for start-ups to enter the EE are now higher (Mack and Mayer, 2015). This stage requires critical attentions from policy makers and serial entrepreneurs where their support is integral to guarantee the sustainment of the EE, otherwise it will start to decline. Serial entrepreneurs must provide nascent ones with success stories for motivation as firm deaths is high. Support from the private sector leans away from EE support. Moreover, financial capital is still available, but is harder to access and acts as one barrier for start-ups to enter. Moreover, networks start decreasing at this stage. Hence, all attributes of the EE are at a critical phase in the lifecycle where they start to decline. It is notable that the researchers highlighted a need for strengthening international and diaspora networks at this stage to help the ecosystem survive (ibid.). Finally, the decline phase occurs if agents fail in prolonging the sustainment phase. Entrepreneurship is then the least looked after option for economic prosperity. Here, the firm birth rate is much lower than the death rate. Support from entrepreneurial actors, resource providers like incubators, accelerators and other private sector institutions is almost lost. Entrepreneurial orientation starts declining, as there is much less success stories and serial entrepreneurs available to encourage nascent ones. Networks of connections within the market and among entrepreneurs decline as well, whilst EE officials try to build connections with international EEs as means of reviving the local EE.

This novel framework is suggested to be used in the evolutionary analysis of EEs to further report the progressive trajectory of ecosystems. However, Mack and Mayer (2015) did not provide a detailed explanation regarding each stage of the lifecycle. Moreover, building on

the previous gap, the researchers did not study the interconnectedness among actors in each of the stages (ibid.). For instance, would connections be more important and beneficial in specific stages and less vital at others? Additionally, there is a need to differentiate between the suggested phases and the actual emergence of ecosystems. Whilst the four phases suggest certain characteristics of ecosystems, they do not provide an explanation about the ‘how’ and ‘why’ of ecosystems. Mason and Brown (2014) asked questions like how do ecosystems come to life and why are they formed? The suggested framework seems to fail at explaining such notions. Further testing is needed to account for these characterizations and characteristics of EEs at each of the four phases. This study adopts this framework to examine the trajectory of EE focusing on the first two stages only as the interest here lies in understanding means in which interconnectedness brings the EE to life and aids in its development.

Auerswald and Dani (2017) proposed another framework to investigate the evolution of adaptive industry clusters emerging within an EE inspired from the adaptive cycle of ecosystems by Bengtsson et al. (2000) and the four indicators of EEs by Stangler and Bell-Masterson (2015). This framework allows further investigation of the interconnectedness among actors and the role of dealmakers in the succession and reorganization of EE. The framework (presented in Appendix II, figure II.4) highlights “short periods of systematic restructuring... (release and reorganization), followed by longer periods of accumulation and transformation of resources... (exploitation and conservation)” (Auerswald and Dani, 2017, 100). The short periods are often referred to as creative destruction (ibid.). Such period is characterised by an external shock or influencer that leads to severe positive changes that establish new opportunities and connections. The longer periods are characterised by a mature, dense and interconnected EE. Nevertheless, external shocks can still occur, hence indicating the start of a new cycle of the ecosystem. Auerswald and Dani (2017) study these four phases based on the density, fluidity, connectivity and diversity indicators of EEs (Stangler and Bell-Materson, 2015). The aforementioned model is also used for discussing the findings of this study.

The three analysed gaps related to this study are as follows. The literature on EEs has limited insights from developing countries bound by scarce resources. Insights related to the mechanisms of entrepreneurial relationships among entrepreneurs on the one hand, and entrepreneurs and other agents in EE on the other hand specifically in developing countries are limited. The lifecycle of EEs is yet to be explored especially in relation to the trajectory of entrepreneurial connections and social capital. Drawing on these three listed gaps, the direction of this study is to analyse connections among entrepreneurs, key actors and institutions embedded in the evolutionary trajectory of ecosystems to emphasize the varying attributes of specific phases of ecosystems in resource-constrained developing countries. The study of interconnectedness among actors through different stages of EEs gives rise to a need

of thoroughly examining the concept of social capital, as these connections generate, deploy and sustain social capital. Prior to discussing that in-depth in the following chapter, the following section focuses on EEs in developing countries in the Middle East in general and Lebanon in specific, which represents the chosen context of the study.

2.6 Entrepreneurship in Lebanon and the Region

According to Jamali and Lanteri (2015), who were probably the first to publish a book on entrepreneurship in the Middle East, entrepreneurial activities in the region were boosted after the Arab Spring in 2010. This is mainly because the latter highlighted several obstacles faced by countries and individuals in the Middle East and North Africa (MENA) region. Entrepreneurs, as discussed earlier, grasp opportunities in such misfortunes. According to the World Economic Forum (2011), MENA is faced by high unemployment rate, one of the highest in the world, where the region has to generate around 75 million job vacancies by the year 2020 to cope with the current high unemployment trends. Jamali and Lanteri (2015) explain that such initiatives, especially when done through the private sector, are key to entrepreneurial activities from young adults (under 25 years of age), which constitute according to the World Bank (2014), more than half of the population in the region.

Some of the challenges for entrepreneurship, which can also be viewed as opportunities at times, include issues like poverty, limited public services, gender discrimination, economic disparities, etc. For instance, Ghandour (2013) highlight that almost 40% of countries lacking oil are poor. Moreover, only 26% of the workforce in MENA are females (ibid.). As much as these issues are hindering, they create higher pools of opportunities for aspiring entrepreneurs (Warren et al., 2001). Sindi (2015) studied the Saudi Arabian entrepreneurial culture and reported with specific factors that need to be dealt with in order to boost EEs. According to her, several obstacles must be overcome to nurture an EE in the Middle East. The first relates to increasing entrepreneurial competencies. She explains that even though there are a number of respected and reputable universities, there are limited courses on entrepreneurship, which offer practical knowledge related to what is actually needed in industries. Several Saudi key players support this argument claiming that they do not have the needed supporting environments for establishing an effective EE. The second challenge is the inadequacy of funds. She explains that start-ups in the region are mostly dependent on their own personal funds since banks prefer investing in less risky enterprises. Thirdly, it is problematic when entrepreneurs are not ready to grasp failure, as she explains that there is a cultural fear of disappointment in the region. This limits the entrepreneurial risk taking initiatives. Another

limiting cultural related aspect is the bureaucratic nature of policy governing and corruption. Only when these obstacles are removed, she explains, a proper EE can be nurtured. Fear of failure has always been one part of the entrepreneurial journey. All the interviewed entrepreneurs acknowledged that and some even discussed their failings. They learnt from their mistakes and stood up again with new, enhanced innovative ideas. Nevertheless, as few characteristics of the EE in KSA are different in Lebanon (e.g. availability of funding) as explained next, these challenges are not fully applicable in Lebanon.

In the case of Lebanon, entrepreneurship is getting more under the spotlight as there has been a number of incidents, which boosted entrepreneurship. A number of supporting organisations are created to maintain a developing ecosystem of entrepreneurship. Lebanon is being referred to as the tech-hub and the start-up hub of MENA (e.g. Butcher, 2016; Baghdadi, 2015; Salhab, 2016). According to GEM (2009), countries of the MENA region seem to have low entrepreneurial activities. However, Lebanon is one of the countries that had comparably better entrepreneurship rates where it is put forward as one of the most powerful entrepreneurial countries among 100 worldwide participating countries (those include the UK and the US) (GEM, 2016). Chahine and Mowafi (2015) argued that entrepreneurship in Lebanon increased directly after the Cedar revolution in 2005. The World Economic Forum (2011), on the other hand, highlighted that entrepreneurship has initially started to increase right after the civil war in the country in 1990, with the highest rates of entrepreneurship recorded during the rise of the social, economic and political revolutions in several countries of the Middle East (e.g. Algeria, Egypt, Syria). These revolutions increased motivations for change among entrepreneurs in Lebanon and the region.

Stel and Naudé (2012) explained that the attention of local and national change organisations has moved from inspiring political change to empowering economic ones. Examples of such institutions include the UK-based Mowgli Foundation, US-based Cisco Entrepreneur Institute, US-Middle East Partnership Initiative (MEPI), Endeavour Lebanon, etc. (Chahine and Mowafi, 2015). A number of these institutions also hold several networking and entrepreneurial events to elevate aspirations, skills and competencies as well as offering a supportive environment to nurture entrepreneurial initiatives in the country. More information related to the current available support and supporting actors in the Lebanese EE is presented in Chapter 5. Additionally, Figure III.1 in Appendix III highlights the key supporting actors in the Lebanese EE as presented by the Central Bank of Lebanon in 2015 (BDL Accelerate, 2015).

Sfeir (2015) listed in their paper – on the need for incubators for nurturing entrepreneurship – a number of famous Lebanese incubators influencing the country’s EE. A business incubator is best defined as a centre for aiding early-stage firms (Hacket and Dilts, 2004). They

offer advice, funds, and other services including access to networks of important actors. For instance, Berytech is the first established technology incubator in the country. It started with one building in the capital Beirut, but now established a handful of those across the country. It was founded in 2001 and quickly became a partner of the Global Social Venture Competition (GSVC). Two other important examples of business incubators are Nabad and AltCity where the former is only focused on promoting social entrepreneurship, whilst the latter has a number of different entrepreneurial focuses (Sfeir, 2015). These attract entrepreneurs aiming to establish start-ups or SMEs. They also offer the needed technological hosting, training, and advising. Entrepreneurs get their own office spaces, technological infrastructure and any needed criteria for their projects at low costs (Berytech, 2016). One of the listed support offered to entrepreneurs by these incubators is networking, in other words, access to important individuals (Sfeir, 2015). Moreover, Beirut Digital District (BDD) was established in 2012 as a plan for empowering the digital industry in the country by offering high-tech services for businesses (BDD, 2017). One year later, a Berytech digital park was established as part of the BDD initiative to support the increasing numbers of SMEs and start-ups. Two new buildings were also added to BDD in 2013 and 2015 which adds to four buildings in total that host entrepreneurial firms in a collaborative working environment in Lebanon.

The ecosystem is also powered by the availability of worldly recognized universities like the American University of Beirut (AUB). The university is known for its high-quality research and programs offering an elite level of education to its students and serves as a facilitator of both local and regional entrepreneurship. For that reason, it hosted the Annual Global Entrepreneurship week in 2010 (Chahine and Mowafi, 2015). Moreover, Berytech (2016) lists St. Joseph University (USJ) as one of its partners that directly promotes the ecosystem. The Lebanese American University (LAU), which is regarded as the second best university in the country following AUB, has recently launched an entrepreneurship initiative aiming to engage students in entrepreneurial activities by elevating their entrepreneurial knowledge, skills and competencies (GEM, 2010). However, universities have only recently joined the entrepreneurship scene. For that, most of the programs/competitions made are still new and require more expertise. It is important to highlight here that the Lebanese learn second and third languages (mainly English and French) when they first enter schools alongside their native language, Arabic. Often, the language of instruction in schools and in the majority of universities in the country is either English or French. Moreover, both these foreign languages are used by the Lebanese in their daily conversations with friends, colleagues and even family. Hence, they are comfortable conversing in English or French almost as much as they are comfortable conversing in Arabic.

The Lebanese rapidly developing EE also offers a number of funding services to entrepreneurs.

Berytech established the Berytech Fund to support projects with high potential benefits and unique ideas (Berytech, 2016). Moreover, several banks offered to fund projects with a certain percentage of profit going to the bank in return. More importantly, the Central Bank of Lebanon (BDL; i.e. Banque Du Liban) issued circular 331 in August 2013 announcing high support for start-ups willing to participate in co-working spaces (BDL Accelerate, 2015) as a plan to elevate the knowledge economy and increase the GDP of the country. The circular put around \$400 million under the authority of Lebanese banks to encourage them to invest in start-ups. It gives banks access to government loans interest-free for 7-year interest-free that, in turn, can be invested in treasury bonds with 7-percent interest (Rimington-Pounder, 2016). By that, BDL has encouraged banks to take part in the EE as well.

Exploring the Lebanese context seems intriguing especially for the fact that although several obstacles that would hinder the progression of ecosystems could be available, the Lebanese EE is proving to be a successful ecosystem of entrepreneurship in the MENA region (Salhab, 2016) as well as worldwide (GEM, 2016). Political corruption and social crises are probably the two recurring themes in the Lebanese context that might hinder some entrepreneurial activities, yet motivate young entrepreneurs to cultivate change. Lebanon has had continuous political crises, for instance, not having a president for more than two years, as the parliament failed to agree on one candidate. During that period, the country was governed by an illegal parliament that had no budget and could not make decisions or changes in most of the social, economic and political dilemmas. Moreover, a recent report shows that one in four persons in Lebanon are now Syrian refugees (UNHCR, 2015). The country also welcomed other refugees from other different countries (e.g. Armenia, Palestine) in earlier struggles. Higher rates of migration are still being recorded (worldometers, 2018) despite the country's limited capabilities.

Moreover, the Lebanese context responds to the arid classification of EEs as represented by Spigel and Harrison (2017), which lacks basic entrepreneurial resources, for instance, early-stage investments, venture capitalists and public support for technology scale-ups. Additionally, the country also has limited public support specifically in terms of public incentives and entrepreneurship-friendly laws and support structures that are described as main elements of EEs (Isenberg, 2011). Such missing attributed categorize Lebanon as a resource-constrained developing country. Interestingly, the EE is in its developing stage based on the framework by Mack and Mayer (2015), which highlights the significance of networks as a crucial attribute for resource acquisition in such contexts (Spigel and Harrison, 2017; Lingelbach, 2016).

Regardless of the aforementioned hindering factors, Lebanon still ranks high in entrepreneurship. The Global entrepreneurship monitor positioned Lebanon as the sixth worldwide in terms of business establishment, fourth in terms of early-stage entrepreneurial activity and

first for being innovation-driven (GEM, 2016). Findings by the GEM (2016) also show that almost half the Lebanese population are either actively starting a business, running a new business or own an established business. Moreover, more than 85% of the workforce in the country believe that entrepreneurship is a good career choice as well as three quarters of the Lebanese early-stage entrepreneurship ventures are creating jobs for others (ibid.). Some of the unique characteristics of Lebanon's working population is their education, connections to regional and global networks as well as their multilingualism. The Lebanese are highly educated and own a high range of skills that make them attractive to businesses (Stel and Naudé, 2012).

Moreover, Lebanon is a country with high diaspora rates where people residing outside the country are much more than those inside of it (Ahmed et al. 2012). Brazil on its own has around 7 million Lebanese (Brazilian Ministry of Foreign Affairs, 2017), whereas the local population in the country is estimated to be around 6 million (worldometers, 2018). The Lebanese diaspora have established communities everywhere they went making sure to keep solidarity and connections to Lebanon (Hourani, 2007). The aforementioned researcher has elaborated about the several connection types that migrants have established with Lebanon; for instance, government bonds, lobbying groups, human rights organisations, funding political candidates or groups, cultural festivals, etc. (see Figure III.2 in Appendix III). Moreover, the diaspora has kept links with entrepreneurs and start-ups on the one hand and several supporting actors in the Lebanese ecosystem to create bridges between the local entrepreneurs and internationally known EEs like Silicon Valley. LebNet, for instance, is an association for Lebanese-American professionals, which established direct links with Lebanon (LebNet, 2017) and connected start-ups to Silicon Valley and San Francisco (Baghdadi, 2016). As for multilingualism, Lebanese people are, generally, fluent in Arabic, English and French. Other schools also teach German and Spanish. Knowing more than two languages make the Lebanese workforce more attractive to international companies and enables smoother interconnectedness with international networks. This could assist in examining international social capital in the country to fill the gaps in the literature, as shown in section 3.3.2.3.

Supporting institutions have started to engage entrepreneurs and students in entrepreneurial activities as well as entrepreneurship courses to increase awareness and motivation to participate in the EE. Lebanon currently has academies that are aware of the need to reduce the gap between academia and entrepreneurship and offer entrepreneurs with the needed technical skills to establish and accelerate start-ups; for instance, SE factory – an initiative offering intensive coding bootcamp (Rowley, 2017). Funding, on the other hand, is a huge part of entrepreneurship ecosystem and is considered as a main driver of the successful ecosystem in Lebanon. The Bank Du Liban (BDL) – Central Bank of Lebanon – issued a circular

(circular 331) to encourage banks to invest in start-ups (BDL Accelerate, 2015). The availability of funds has encouraged more entrepreneurs to take part in the ecosystem increasing participation and the overall numbers of start-ups. A country with these aforementioned characteristics nurtures a developing ecosystem that is interesting to study. Diaspora connections and connections with international networks enable us to embark upon new findings related to international social capital, which is the least explored type of capital in the social capital literature (see section 3.3.2.3) along with examining local social capital in the EE. A country with dense network ties offers rich findings related to means in which these ties are generated and deployed; hence, offers a proper context to explore social capital, which is investigated in the following chapter. Moreover, through social capital, entrepreneurs and supporting actors could face several hindering factors (e.g. corruption, social crises). These issues would only increase the dependency on social capital and interconnectedness among entrepreneurs and other actors in such a region with limited resources and across the birth and growth of start-ups and the ecosystem as a whole; hence, allowing for in-depth interpretations of social capital at the birth and growth stages of an EE.

2.7 Conclusions

In this chapter, the concept of EEs is examined in-depth through an investigation of the theoretical underpinnings and characteristics of EEs, which highlighted several gaps in the literature that are taken into account in this research. Two major gaps include interconnectedness among entrepreneurs and other key actors in an EE along with the evolution of entrepreneurial connections and activities across the trajectory of EE. Studying both of these gaps would enrich our understanding of EEs in developing countries bound by limited resources. The context of this study is highlighted in the final section of this chapter to highlight the available information related to Lebanon in the literature.

3 | Theoretical Development of Social Capital

3.1 Introduction

This chapter presents the social capital theory used to examine the identified gaps in EE scholarship. Social capital is being promoted as a foundational element in entrepreneurship literature (Gedajlovic et al., 2013) where its application to the field fills theoretical needs of entrepreneurship theory by explaining social interactions in various contexts (Kim and Aldrich., 2005). Building on the theories of social capital by its three main theorists (Bourdieu, Coleman and Putnam), we highlight the main arguments, as well as the similarities and differences among their arguments. Based on the gaps discussed in the previous chapter, social capital theory is suggested as means for understanding both the interconnectedness between entrepreneurs and across the trajectory of EE. At the end of this chapter, the attributes employed by both entrepreneurship and social capital literatures are combined and presented together as the conceptual framework and the building block of the current research.

This chapter continues as follows. Firstly, it examines the theoretical foundations of the social capital lens focusing on the works of the three founding theorists; Pierre Bourdieu, James Coleman and Robert Putnam. After highlighting their views, definitions and arguments, a definition is proposed, which takes into consideration the key similarities among the works of the three theorists and categorizes social capital into two elements; relationships and benefits. After that, both of these elements are examined thoroughly. The model by Nahapiet and Ghoshal (1998) that focuses on the structural, relational and cognitive dimensions of social capital is then presented and proposed as the theoretical underpinning of the analysis and discussion of this study. At the end of this chapter, a conceptual framework, which links social capital theory to the previously identified gaps in EE literature, is put forward.

3.2 Theoretical Foundations of Social Capital

Kim and Aldrich (2005) presented an academic article directed towards young researchers aiming to demonstrate the basic discussions and debates in the fields of social capital and entrepreneurship. The authors argued that the concept of social capital entered the entrepreneurial research debates in the 1980s where entrepreneurs realised the importance of networks and networking as one crucial aspect of entrepreneurial success. Both entrepreneurship and social capital research are still evolving, yet both topics have been related for more than two decades. A large body of research demonstrates that entrepreneurial networks and the social capital incurred from such connections assist entrepreneurs in facing challenges and obstacles and gaining valuable knowledge and resources (Aldrich and Zimmer, 1986; Uzzi, 1996; Walker et al., 1997; Birley, 1985; Alder and Kwon, 2002). A number of researchers, on the other hand, (e.g. Brass et al., 1998; Gargiulo and Benassi, 2000; Gould, 1993; Putnam, 2000; Portes, 2014) highlighted the negative influence social capital has on entrepreneurs and entrepreneurial activities. However, the significant relationship between both concepts is rather more apparent. Bian and Ang (1997) studied social networks focusing on two countries (China and Singapore) proving that social capital and networking are highly important for entrepreneurial ventures. Similarly, in their paper on the effect of the internal locus of control on entrepreneurship, Hsiao et al. (2016) explained that with higher connections and social capital, entrepreneurs are more entrepreneurial. Moreover, higher social capital ensures the formation and the sustainment of new ventures (Aldrich et al., 1987; Carsrud and Johnson, 1989; Huggins, 2000). Reflecting on the significant relationship between entrepreneurship and social capital, connections are highly valued by entrepreneurs; however, an appreciation of social capital is required to grasp means in which these connections are established, employed and sustained.

Given this backdrop of social capital being instrumental in the entrepreneurial process and therefore its traction in entrepreneurship research, the attention is now turned to the roots of social capital theory. Social capital theory is mainly derived from the works of three scholars: Bourdieu, Coleman and Putnam. These theories are important to discuss as they serve as the foundation of the concept as well as they lay the theoretical foundations of the social capital lens adopted in the current research.

3.2.1 Pierre Bourdieu: Bourdieuan Approach to Social Capital

The French sociologist Pierre Bourdieu had a number of prominent books and articles, which have been influential in shaping the roots of social capital theory. His understandings drew upon Weber's arguments of the "social" which was defined by the latter researcher as a method of socialization that includes mutual and significant interactions among entities and individuals (Weber, 1968). His works were mostly targeted towards understanding both the social world and social behaviour. He tried to understand why individuals with similar social positions have different performances in the community. He did not focus solely on social capital, his research reflected on a broad range of sociological emphasis, where capital, in his view, consists of economic, cultural, social and symbolic capitals (Bourdieu, 1986). Whilst economic capital is linked to people's wealth and is transformable into money or property (ibid), family members transmit cultural capital, which can be also attained and institutionalized in the form of academic qualifications (Walther, 2014). On the other hand, Bourdieu defined social capital as:

".. the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance and recognition – or in other words, to membership in a group – which provides each of its members with the backing of the collectivity-owned capital, a "credential" which entitles them to credit, in the various senses of the word." (Bourdieu, 1986, 248-249)

Symbolic capital is related to an individual's honour and recognition where the latter three forms of capital can be converted to symbolic capital (Bourdieu, 1972). Bourdieu argued that for both the social and economic matters, relationships are highly important. He explained that in business, as well as when it comes to families and the society as a whole, it is important that individuals have a big chain of connections or "network of alliances" which when in need, is considered more important than economic capital. He gives an example of farmers. Bourdieu insists that if the latter require help, it is more beneficial to use their network of linkages to ask for more men for assistance rather than receiving money. It might be a form of economic capital in disguise, he argued, however, this only enhances relations further. These notions are still highly significant in the current research on environments of entrepreneurship where connections and networks of ties are key for benefit circulation.

According to Bourdieu (1985; 1986), social capital is dependent on two aspects; the size of the connections and the volume of the three different capitals owned by those connections. In other words, according to him, social capital is a function of networks of connections, in a way that the scale of individual social capital increases as the size of networks of connections increase (Bourdieu, 1986). Moreover, the scale of social capital increases as the volume of other

forms of capital (for instance, economic or cultural) owned by their networks of connections increase. Moreover, a person's position in a society is dependent on the latter two aspects. For instance, people can acquire economic capital through social capital by getting inexpensive mortgages. They can also make use of social capital to elevate their cultural capital by interacting with researchers or specialists or by joining political organisations. Eventually, the higher the social capital owned by individuals, the more power, and the better position they have in the society.

After Bourdieu's approach to understanding capital, researchers applied these understandings to entrepreneurship. For instance, Nowicka (2013) studied the forms of capital among migrant Polish entrepreneurs in Germany. Using qualitative interviews, the latter researcher argued that the three forms of capital suggested by Bourdieu (social, economic and cultural) do exist and are all transformable among entrepreneurs where investments transform economic capital into social and cultural and vice versa (social and cultural capital are transformed into economic capital), all leveraging the social positions of entrepreneurs in Germany. Light and Dana (2010) argued that in some instances, social capital can only influence entrepreneurial activities when accompanied with cultural capital. Moreover, social capital could suppress entrepreneurs and other social actors when some groups of people make use of capital to gain power over others. Nonetheless, the latter researchers argued that this only applies to ethno-racial and ethno-religious minority groups. This is a good indication of the limited negative impacts of social capital. Davidson and Benson (2003) proved that social capital is highly important to entrepreneurs whether inside or outside the firm they work in. According to their model, social capital owned by individuals was highly associated with entrepreneurial discovery of opportunities as well as successful exploitation of opportunities, sales and profitability. This is also proved by the works of many other researchers (e.g. Cope et al., 2007; De Carolis and Saporito, 2006; Casson and Giusta, 2007; Anderson and Jack, 2002; Hsiao et al., 2016; Westlund and Bolton, 2003; Fritsch and Storey, 2014; Jaafar et al., 2009; Aldrich and Zimmer, 1986; Johannison, 1988).

Karatas-Ozkan and Chell (2010) analysed the economic, cultural, symbolic and social capitals. They employed these capitals along with other concepts by Bourdieu (e.g. habitus, field) in a multi-level analysis to investigate nascent entrepreneurship and learning. Through two case studies, the latter researchers concluded that nascent entrepreneurs embark on their generated capital and experience to transform (ibid.). Scott (2012) presented a case study on music producers to prove that Bourdieu's views on capital are supportive of entrepreneurs and entrepreneurship. This is because, just like Bourdieu's vision of conversion of capital, entrepreneurs are in constant need of converting the social capital into economic one and so on. In a different paper by Karatas-Ozkan (2011), the tools of Bourdieu have been employed

to measure entrepreneurial learning of nascent entrepreneurs establishing a new venture. The latter researcher concluded that the transformation and use of different forms of capital is key for entrepreneurial learning among the entrepreneurs. Their social capital, specifically, aided in building a number of partnerships in which facilitated the formation of their venture (ibid.). Similarly, De Clercq and Voronov (2009) argued that social capital can facilitate an entrepreneur's entrepreneurial practice and innovation in their research on the role of different forms of capital in legitimizing the entrepreneur's identity, practice and resource acquisition. Bourdieu (1986) viewed that the forms of capital exist mostly with the elite groups of the society who dominated production in a way that, those who are more powerful have the highest social capital. Also, implied from his works was that people nurtured their connections to uphold their social position. Bourdieu's explanations of the concept were mainly focused on individuals and their own abilities in terms of gaining access to networks to make use of the offered products and services they can obtain and elevate their positions in a society. Such arguments categorize Bourdieu's theory as a neo-capital theory, which neglects the society's impact on individual connections (Lin, 2001). Later uses of his theory show that forms of capital, especially social capital, is not used solely by the elite anymore. It is now more frequently employed by individuals inter- and intra-organisations, among entrepreneurs and other actors to gain and circulate benefits. Similarly, EEs are constituted of individuals belonging to different groups and authority levels.

Bourdieu's views on social capital are highly significant in this research. Firstly, social capital is a key element where it is employed to explore the interconnectedness among entrepreneurs and key actors in EEs in a developing country context. Moreover, even though the literature has moved away from discussions related to the elite and powerful individuals in societies, such could still be apparent in a developing country context. Hence, the Bourdieuan approach to social capital in this study entails an analysis of the accessibility of social capital among entrepreneurs and the impacts of class and power on that. Moreover, the Bourdieuan approach is contrasted with that of Coleman and Putnam to identify whether social capital is mostly tied to a communitarian or individualistic perspective.

3.2.2 James Coleman

Coleman added more attributes to social capital. Initially, Coleman's most cited work examines the relationship between social capital and human capital. In that context, he saw social capital as multidimensional with more than one unit of focus, all of which share two functions; social structure and its enabling activities for those inside the structure (Coleman, 1988). At that time, he defined the concept as:

“Social capital is defined by its function. It is not a single entity but a variety of different entities, with two elements in common: they all consist of some aspect of social structures, and they facilitate certain actions of actors – whether persons or corporate actors – within the structure.” (Coleman, 1988; 98).

In this definition, social capital seems to take a sociological and cultural approach where he represents it as being part of social structures where in later discussions he explains that human interactions are a function of rules, norms and obligations. Coleman (1988) did not link social capital to social actors; he argued that social capital is deployed through its functions and activities.

Similar to Bourdieu, Coleman linked both the social and economic aspects of a society arguing that the economic state is bound by the social context. Based on his arguments, Coleman viewed social capital as a function of societal characteristics. In other words, as norms, trust, social networks and social organisation increase, social capital increases (ibid.). He then elaborates that with the presence of social capital, actors would gain benefits and advantages that were not possible otherwise (Coleman, 1994). Shifting his focus and the majority of work thereafter, to the educational concept (more precisely on teenagers in U.S. schools), Coleman refined his theory offering a new definition that includes more added attributes:

“Social capital is the set of resources that inhere in family relations and in community social organisation and that are useful for the cognitive or social development of a child or young person”. (Coleman, 1994; 300).

This shift in attention highlighted two types of relationships only; family and community ties. Baron et al. (2002) explained in their book critique on social capital that this placed Coleman’s theory in a neo-functionalist framework where he measured social capital in terms of its functionality. Nevertheless, his views on societal impacts on social capital did not change where he argued that the resources individuals gain from their relations with family members and the community can be influenced by factors like trust, feelings of obligation, values, cultural differences, degree of closeness in relations, etc. (Coleman, 1994). In other words, the higher the levels of trust, obligation, shared values and closeness, the higher the social capital.

Even though he mentioned the degree of closeness as one of the criteria, it seems from Coleman’s explanation that his concentration was only on those close ties knowing that he overstressed the relations with family members and immediate neighbourhood. By this, he neglected the impact of weak ties that according to Granovetter (1973) had a higher influence on knowledge transfer. The latter researcher had a considerable impact on social capital through his concept of embeddedness and importance of weak ties, explained later in this chapter.

The way Coleman viewed social capital goes hand in hand with what an entrepreneur requires to access needed resources. According to him, social capital facilitates the actions of actors, similar to the way entrepreneurial behaviour is facilitated by higher social capital. Moreover, entrepreneurial social capital is stronger when actors have higher trust in their network of ties, which can eventually impact the society as a whole. Finally, his views on the development of children or young persons can also be applicable to entrepreneurs as the latter employ their family ties, as a start, and other community ties for further developments, in terms of social, economic or other kinds of support. Even though Coleman did not clearly discuss entrepreneurship in his work, Audretsch and Keilbach (2004) argued that Coleman's approach to social capital can be enhanced by a high presence of entrepreneurship. The aforementioned scholars introduced a new form of capital (entrepreneurship capital) linking it to economic capital in societies. They argued that entrepreneurship capital is one important aspect of social capital. Even though several researchers were critical of Coleman's findings, he did have several unique contributions to the field. In contrast to Bourdieu (1985; 1986) that placed social capital in a somewhat elite-group rank, Coleman advanced the theory by emphasising non-elite groups (Baron et al., 2002) which facilitates the study of social capital from an entrepreneurship standpoint. Due to that shift in focus, Putnam (1993) discussed Coleman's social capital theory as a fundamental foundation of social capital.

3.2.3 Robert Putnam

Political scientist Robert Putnam is the one who probably most popularized social capital. Both of his works on Italy and the US served as a point of interest for researchers in the field to either build on his theory or criticise it. His research was bound between the social aspect of the theory and the political one tying social capital to the community rather than the individual. Starting with his work on democracy in Italy, Putnam (1993) studied variations in regional administrations across Italy through the local community variable. In this research, Putnam lightly discussed social capital without offering a clear understanding or a definition of the concept. He argued that civic participation increases the development of organisations, trust and norms (ibid.).

Further research and books related to the American society witnessed a clearer, more in-depth study of social capital. In 1995, his article "Bowling Alone" studied the reasons why Americans are having less engagement with one another focusing on activities like meeting with neighbours, membership to institutions and political participation (he later published a book with the same title that discusses the matter further in the year 2000). He used the bowling activity as a reference since it was considered highly recreational at the time and

requires company. He explained this phenomenon through social capital, where the fall in relations among people has prompted less contact and benefits, which usually gained from these relations. Hence, he was the first to highlight the decline in social capital. He also highlights the negative impacts of television that, in his opinion, is one key reason for that decline. Putnam defines social capital in his book as:

“.. features of social life - networks, norms and trust - that enable participants to act together more effectively to pursue shared objectives.” (Putnam, 1996, 56).

In the above definition, Putnam (1996) focuses on three triads that enable an effective pursuit of social capital; networks, norms and trust. In other works by Putnam (1995; 2000), the researcher highlights civic engagement as another variable that influences social capital; hence, the community perspective to social capital. Carpiano (2005) reviewed the works of Putnam and other researchers highlighting the similarities in the term where it is established that social capital is a concept that encompasses a number of social characteristics mostly associated with connectivity and attachment classifying these as “social cohesion”. The researcher classified social cohesion as processes underlying the levels of interactions among individuals and the benefits inquired from these interactions (ibid.).

In a critical paper on measurements of social capital, Lochner et al. (1999) explained that Putnam’s perception of the theory has made social capital seem like a glue keeping communities together through joint capabilities, norms of exchanging benefits, trust, and social participation to gain shared advantages. His definitions along with his views on social capital provoked a number of criticisms. First, Putnam (1996) believes that social relations are not the objective of social capital; rather social capital is a form in which shared objectives are realised. Moreover, it is not clear from his definitions whether an increase in social capital would prompt higher interactions or merely act as a characteristic of a good society (Baron et al., 2002). Moreover, Portes and Landolt (1996) argued that Putnam did not consider the harmful impacts of social capital. He solely highlighted its necessity for a higher civic engagement. In 1998, Portes stressed on the idea that researchers must study the negative aspects of social capital so that the concept does not turn into a holy grail for communities (Portes, 1998).

Putnam is the researcher mostly tied to the communitarian approach of social capital (Lin, 2001); however, Coleman might have had an impact in initiating this approach through his attention to the community’s social organisation. Unlike the neo-capital approach, Putnam’s views on social capital are largely communitarian where the concept, according to him, is related to societies and groups instead of individuals (ibid.). Moreover, the positive outcomes are supposed to benefit all people equally in spite of the dissimilarities in their actions or standards. This focus on the collectivity stimulated the study by Fine (2001) to be highly

critical of social capital. The latter researcher criticized Putnam's views considering that he neglected important aspects of the theory like the application of power initially explained by Bourdieu (1986). Another study by Campbell et al. (1999) related to social capital in Luton concluded that Putnam's idea of a collective community does not take into account the continuous changes in societies.

Focusing on the similarities in defining social capital by different theorists, it is inferred that social capital prompts or is initiated by interactions among individuals, which either has benefits to the individuals or the community as a whole. Coleman and Putnam highlighted social values (like trust, norms of reciprocity, feelings of obligation), which are also a characteristic of communities with high social capital or lead to higher social capital. Putnam's work was highly embedded in linking social capital and economic welfare, which did not comprise entrepreneurship. Even though Putnam viewed trust and associational membership as highly crucial for social capital, he did not relate these to entrepreneurial debates. The following section highlights the major arguments and definitions of social capital.

3.2.4 Towards a Definition

Briefly, both Bourdieu and Coleman assumed that social capital is directly tied to economic capital where the higher the social capital the higher the economic capital. On the other hand, the works of the three researchers can be contrasted based on class. Bourdieu assumed that the elite own higher volumes of social capital (those with higher power and positions in societies), whereas Coleman and Putnam thought of the concept as more generally available to different individuals regardless of their position. Nevertheless, later research in the field has moved beyond class classifications focusing on the implications of social capital regardless of individual status. Coleman and Putnam agreed that societal characteristics like norms of reciprocity, feelings of obligations and trust among individuals initiate higher social capital. Putnam viewed social capital as a product of the community, equally influencing all individuals. Bourdieu and Coleman argued that it is more of an individual product. The three theorists did not involve entrepreneurship as a main aspect of their research; however, their work did not conflict with it. Few scholars argued that entrepreneurship can go hand in hand with the theories of Bourdieu, Coleman and Putnam (Audretsch and Keilbach, 2004; Swedberg, 2011; Scott, 2012).

Social capital is used in various different fields, where researchers adopt a specific definition by specific theorists or researchers, which best suits their research interests. That said, there is not one universally accepted definition. The concept, as interpreted from the literature, is context-specific and is treated differently by different researchers. After analysing many

definitions, it is inferred that social capital can be viewed from two different perspectives. The first relates to those who view social capital as an individual act where it is a result of individual efforts in building up networks of connections (Bourdieu, 1986; Coleman, 1988; 1990). The other perspective relates to those who view social capital in a more holistic way considering it a community product (Putnam, 1995). The latter depicts social capital as a collective product, which includes connections, norms and institutions that build up a community's social relations (Putnam, 1993). Putnam (1995) explains that regions have major roles in outlining borders in which social capital is best developed knowing that it is a collaborative process that requires time to advance. Social capital, according to Putnam, is a process embedded in organisations and cultures.

Porter (2000) defined social capital by comparing it to economic and human capital. He argued that unlike economic capital that is portrayed by people's economic status and human capital that is related to people's knowledge, social capital is related to the relationships among people. In his paper in 2009, researcher Franz Huber thoroughly studied most of the definitions of social capital found in books and journal articles (Huber, 2009). He concluded that the previous definitions did not distinguish between causes and effects of social capital as well as their focus was solely on its positive outcomes. According to this, he proposed a new definition that has a clear differentiation between what leads to social capital and its consequences; namely, "resources embedded in social networks which can be potentially accessed or are actually used by individuals for actions" (Huber, 2009, 11). In other words, social capital is the answer to the question: "what do I benefit from having a relationship with actor X?" Unlike Coleman (1988) and Putnam (1996) who proposed that trust and norms are key factors in the establishment of social capital, Huber (2009) argued that trust, standards, principles and other similar factors are considered to influence the overall process and should not be part of what defines social capital. Yet, they are important attributes of the concept.

What most definitions have in common is the concentration on two elements; connections among people and benefits, which are eventually derived from these connections regardless of their individual or holistic (community) views. Other factors like norms and social values either are considered as influencers of social capital or are a result of it. On the other hand, numerous researchers use these factors as measures of social capital arguing that they should not be part of what defines it. Based on that, social capital is characterized by social networks among individuals, which grant them various benefits, resources and connections to deploy and navigate through their career or entrepreneurial journey. This conceptualisation of social capital will be elaborated at the end of section 3.3.2.4 after the discussion of the framework of social capital by Nahapiet and Ghoshal (1998). Regardless of the relationship

social values (trust, reciprocity, etc.) have with social capital, they are considered as integral in all its aspects. Nevertheless, as they are now mostly employed as measures of social capital (popularised after the work of Nahapiet and Ghoshal (1998) which is explained later in the chapter), these factors are best depicted as means in which constitute the volume of social capital. In the following section, these two elements (networks and benefits) are further examined starting with the latter.

3.3 Social Capital: Benefits and Network Ties

In this section, we start by highlighting the benefits gained by entrepreneurs through their entrepreneurial networks. These are important to examine here to highlight the need for studying entrepreneurial networks of ties in EEs. After that, we explain about network ties to understand different ways in which entrepreneurs and other actors can be connected together. It is important to distinguish between various networks that yield different outcomes depending on the types of ties. Moreover, considering that research on entrepreneurial networks and their benefits is still limited in EEs (Stangler and Bell-Masterson, 2015), an understanding of these networks and benefits serve as the foundation for a more in-depth research in EEs.

There is adequate proof that entrepreneurship is embedded in connections and relationships among individuals (Jaafar et al., 2009; Aldrich and Zimmer, 1986; Johannison, 1988). Moreover, entrepreneurs are in many cases dependent on social capital. Jaafar et al. (2009) studied the impact of social ties on entrepreneurs in a specific housing project. They collected data quantitatively through questionnaires to conclude that entrepreneurs make good use of their social ties to gain knowledge, resources, as well as meeting new resourceful individuals to expand their network. Moreover, results show that entrepreneurs depend on social capital to start their businesses (ibid.). Similarly, Zimmer (1986) explained the same notion. According to her, entrepreneurs can establish new firms by making use of opportunities and through high motivation. She argues that for entrepreneurs to realise opportunities and grasp them, they need to establish social ties. In other words, grasping opportunities is a function of social capital. Johannison (1998) proved through a series of case studies that entrepreneurs rely on their networks of connections to overcome challenges, gain recognition and social support, create new ventures, etc. He even identified entrepreneurs as “networking men”. Due to the continuous endorsement of the high connections between entrepreneurs and the benefits they gain from their networks of ties, it is important to further examine this relationship. First, entrepreneurial networks are explained after which the importance of these is demonstrated.

After that, the structural, relational and cognitive capitals by Nahapiet and Ghoshal (1998) are explored and added to the conceptual framework of the study, which is presented at the end of the chapter.

3.3.1 Benefits of Social Capital

Entrepreneurial networks are those networks established by entrepreneurs. Social capital is the capital (or benefits) they gain from these networks. Aldrich and Zimmer's (1986) article is an influential one in this area, being cited by more than a couple thousand researchers. They carried out interviews with over 200 individuals from several cities across England. They argued that it is through understanding entrepreneurial networks that one gets to see the reasons some entrepreneurs end up establishing their own businesses and others cannot. One year later, Aldrich published another article on entrepreneurial networks explaining that entrepreneurs have low chances of survival, growth, firm establishment and profit making if they lack wide-ranging networks of connections (Aldrich et al., 1987). Similarly, Johannisson (1998) investigated Swedish, American, Irish, Italian and Norwegian entrepreneurial firms to understand their networks' characteristics. They explained that the needed knowledge and resources to establish and grow businesses are mainly gained through connections in the case of knowledge-based firms. Hence, entrepreneurial networks are vital to entrepreneurial activities and, in turn, EEs.

Prior to that, it is important to highlight that there is a whole body of literature on negative social capital. Recent research has extensively studied several instances where social capital led to unfavourable events. For instance, Levine et al. (2014) underwent a study on the impact of social capital on trade among homogeneous ethnicities. By comparing trade in two different areas (homogeneous and heterogeneous ethnicities), the latter researchers argued that where individuals are highly similar to one another, price bubbles arise. In other words, traders agree to elevate prices more than the actual value of assets. Price bubbles would eventually lead to market failures, disturbing communities as well as nations, according to Levine et al. (2014). Portes (2014), on the other hand, argued that this is not the only instance where social capital might lead to extreme scenarios. He explained that in tight religious groups, co-ethnic bonds, and nations with high ethnic particularism (Weber, 1965), negative social capital could lead to limited circulation of resources and benefits as well as job restrictions and increase in unemployment. Wacquant (1998) also highlighted the negative political implications in inner cities with one ethnicity, in this case African Americans. For instance, higher unemployment, less benefits, etc. Nevertheless, such negative consequences are not the focus of this research for reasons related to the general research questions as

well as the case selection. The research does not focus on social capital in a group with one ethnicity or religion. Moreover, the chosen case study is open to international markets and is highly dependent on international linkages, which eliminates the negative impacts of closed groups' leverage. This, however, does not eliminate the possibility of finding some negative impacts of social capital, which we argue is found almost everywhere.

On the other hand, Casson and Guista (2007) reviewed the literature on entrepreneurship and social capital focusing on network configurations among individuals. They argued that networks impact a number of aspects related to entrepreneurship one of which being access to opportunities. Using network connections as channels of value creation, opportunities spin out from acts of interactions, which are usually acquired from those who do not have the needed capabilities to grasp opportunities themselves. Hence, opportunities spin out from the transfer of information among individuals in social networks (Aldrich et al., 1987). Nicolaou and Birley (2003) realised a connection between opportunities found by entrepreneurs and the flow of information in communities by examining the connections between relational and structural embeddedness in the networks of academics in their paper on the impact of networks on university spinouts. They focused on the spinouts from Imperial College London. Earlier in 1985, Granovetter's theories on weak ties highlighted that network connections are the main facilitators of opportunity recognition. Moreover, Morgan (1995) emphasized the need for working in close proximity in his article on learning regions. He argues those individuals who are closer to one another realise opportunities faster and have higher tacit knowledge transfer. Similarly, Sorenson (2003) had the same findings. Therefore, it is considered that the closer entrepreneurs are, the more resources and tacit knowledge they can exchange. After entrepreneurs realise opportunities, social capital is employed again for accessing knowledge and resources to pursue these opportunities. Nevertheless, international linkages also lead to transfer of benefits as is apparent from the Lebanese case. Findings of this study will further examine this notion in-depth.

Casson and Guista (2007) argued in their paper on the impacts of social networks on entrepreneurship that entrepreneurs make use of their personal and institutional networks to access knowledge, resources and employ different techniques to grasp and implement opportunities. Thus, social Capital aids in the transfer of knowledge and resources among entrepreneurs. The main idea behind network theory, facilitated by works of Barnes (1969), Barabási and Albert (1999) and Mitchelle (1969), is that ties allow individuals to have access to information, knowledge and other types of resources that were not accessible otherwise (see, for instance, Garnsey, 1998; Nahapiet and Ghoshal, 1998; Sorenson, 2003; Brass et al., 2004). Specifically, focusing on owners and managers only, Chell and Baines (2000) emphasized the need for networks of ties for sharing information and facilitating knowledge among

entrepreneurs in their paper on the impacts on networking on entrepreneurship. They collected data both quantitatively and qualitatively to examine networking activities in two English cities. They argued that such networks lead to better understanding entrepreneurial activities and important agents in enabling these activities. Moreover, Sorenson (2003) explains in a paper on interconnectedness and organisational learning that ties directly influence the transfer of tacit knowledge, which is deliberately crucial for entrepreneurial activities and flow of opportunities.

When closely examining articles on tacit knowledge and social capital, it is apparent that these two attributes have an interesting relationship where one always leads to the other. In other words, whereas social capital leads to easier transfer of tacit knowledge (Inkpen and Tsang, 2016), tacit knowledge might also encourage the formation of social capital (Casper and Karamanos, 2003). Casper and Karamanos (2003) researched the linkages established between universities and the industry in Cambridge highlighting that entrepreneurs and workers tend to work closely together when they are unable to codify the means in which they do business. Inkpen and Tsang (2016) argued that networks and social capital serve as direct channels for accessing knowledge and resources.

Social capital also serves in building a trustful and supportive environment for entrepreneurs. Johannison had a number of articles on entrepreneurial networks. In 1990, the researcher argued that entrepreneurial networks turn into a safety zone for entrepreneurs knowing that they have established connections with people in which they have been working with and exchanging some resources for some time (Johannison, 1990). Similar to the arguments of Coleman (1994) and Putnam (1996), Johannison (1990) argued that the more entrepreneurs collaborate or exchange useful resources and information among one another, the higher the feelings of trust and reciprocity; hence, a better supportive environment. In a later article, Johannison et al. (1994) applied graph analysis to extensive survey data from entrepreneurial firms in Sweden. First, they argued that the entrepreneurial network increases entrepreneur's self-confidence. Moreover, they explained that entrepreneurs overcome challenges through the supportive environment surrounding them, which is primarily established due to their networks of ties. The latter researchers explained that such an environment would include different relationship types, weak or strong, professional or informal (ibid.).

Moreover, an entrepreneur's networks of ties support early-stage entrepreneurs. For instance, Stinchcombe and March (1965), when studying the impacts of society and the surrounding environment on enterprises, explained that entrepreneurs that are yet to start their entrepreneurial ventures or activities are more likely to fail if they do not have a well-established network of connections. Johannisson (1998) viewed these ties as means for legitimising early-stage entrepreneurs and pushing them towards success. The researcher conclude the lat-

ter notion in his article on the impacts of knowledge diffusion from individual networks in firms in Sweden (*ibid.*). Moreover, Borch and Arthur (1995) further examined supportive entrepreneurial environments by employing a case study strategy investigating exchange among small firms. They argued that the entrepreneurial network can, in fact, support early-stage entrepreneurs through enforcing their actions, eliminating uncertainty as well as decreasing costs leading to higher venture creation. This is also supported by Westlund and Bolton (2003) who argued that social capital create the needed environment for early-stage start-ups by providing them with effective relations with customers, suppliers, labour, etc. and ongoing learning from these actors.

More recent studies also highlight the interplay amongst supportive entrepreneurial environment and entrepreneurial networks, especially in ecosystems of entrepreneurship. The better the connections among entrepreneurs themselves and with other important actors like the government, entrepreneurs benefit from a supportive environment that facilitates higher entrepreneurial activities. For instance, Motoyama and Watkins (2014) proved that in the case of St. Louis, connections enabled better mediums for entrepreneurship. More recently, Motoyama et al. (2016) showed that in the case of Chattanooga, good connections among the government and entrepreneurs create a trustful and comfortable environment, which enable smoother entrepreneurial activities. Nevertheless, different types of connections may have different impacts on individuals as is explained next.

3.3.2 Network Ties

The second element of social capital examined here is network ties. Howard Aldrich is a known researcher in the field of entrepreneurial networks. He has published a number of articles, which influenced the approach to entrepreneurship, some of which are examined in this section. According to Renzulli and Aldrich (2005), entrepreneurs can have three important relationship types, which are highly beneficial for their entrepreneurial activities and, hence, venture creation. They categorized these ties based on three utilities; advice, resources and emotional support. These are vital for entrepreneurs to empower their position. This categorisation is employed when analysing the benefits gained from social networks.

In a research by Hauser et al. (2007) on the impact of associational activities in the learning region, the researchers argued that social capital is a general concept. Studying it should not use this broad term, rather it should focus on its specific dimensions to offer a higher understanding of its parts, which eventually leads to a clearer picture of the whole concept. For this reason, it is important to understand several dimensions and characterisations of social capital to create a focus for this study. Adopting this notion, the direction of the study

is shaped based on three dimensions of social capital structural, relational and cognitive, which are, in turn, measured by several variables (refer to section 3.3.2.4).

Many scholars proposed differentiating between types of social capital (e.g. Lin, 2008; Burt, 1998; Portes, 1998; Cooke et al., 2005; Myint et al., 2005, Granovetter, 1973; Huber, 2009, *etc.*). For instance, entrepreneurial networks are classified into three types based on utility (advice, resources and emotional support) as suggested by Renzulli and Aldrich (2005). Other differences include social capital at the intra-community level characterised by strong ties referred to as bonds (Lin, 2001). The others encompass those ties that are less strong (more often weak) at the extra-community level referred to as bridges (Granovetter, 1973; Putnam, 2000). International social capital is also explored through examining international ties, which are highlighted as the least explored network type. The main focus, however, is on the three dimensions of social capital as populated by Nahapiet and Ghoshal (1998); structural, relational and cognitive. These dimensions, along with measures adopted to examine them are investigated and added to the conceptual model of this study in section 3.4.

3.3.2.1 Entrepreneurial utility networks

Renzulli and Aldrich (2005) researched entrepreneurial networks employing a quantitative questionnaire surveying new business owners in North Carolina. According to them, three utility ties are important for entrepreneurial activities. The first related to “advice”, or the medium for useful information, which is associated with less uncertainty. Arregle et al. (2013) also studied entrepreneurial networks focusing on family ties in China, Russia, France and the U.S. They explained that the entrepreneurial environment is highly uncertain, continuously putting entrepreneurs in worrying situations. Hence, uncertainty is always a part of an entrepreneur’s daily routine. For this reason, Renzulli and Aldrich (2005) explained that the three types of ties have a positive impact on uncertainty. According to Batjargal et al. (2003), who studied entrepreneurial activities in Russia, advice relationships help entrepreneurs in finding new opportunities and markets and learn about alterations in markets, laws, rules, customer behaviours, etc.

The second type of relationship is associated with access to resources. According to Renzulli and Aldrich (2005), entrepreneurs always have the option to refer to their strong or weak ties depending on the benefits they want to perceive. They argued that, when it comes to resource acquisition, they might tend to contact those closer to them. This is a similar result from the research on family embeddedness by Arregle et al. (2013). Batjargal and Liu (2004) studied the relationship between social capital and venture capital by interviewing academics and practitioners in venture capitals in China. They explained that certain advantages like

access to financial capital, customers, workers, technologies, etc. are associated with this type of relationship.

Entrepreneurs require two types of benefits; tangible and intangible (Granovetter, 1985). While the former refers to those benefits like resources important to their ventures, the latter refers to emotional support. Renzilli and Aldrich (2005) explain that this is important for entrepreneurs to maintain their motivation, focus, and remove obstacles and uncertainties along the way.

3.3.2.2 Bonds and Bridges vs. Weak and Strong Ties

Social capital can also be characterized into bonds and bridges, which can be referred to as strong and weak ties. Putnam (2000) proposed the two classifications aiming to develop a better conceptual framework for social capital. Bonding social capital according to him constitute those close relationships, which are usually built between direct family members and close friends (*ibid.*). These are essential for individuals or entrepreneurs, in this case, as they act as a first step to establishing a larger network of ties. Putnam gives an example of a women's reading club in churches as a form of bonding social capital. The other classification, bridging social capital, refers to the weaker ties formulated among remote friends, workmates and associates. Putnam argued that this type of social capital is more important in getting individuals through, or paving the way for their development. He referred to those as "social oil". An example of bridging social capital is civil rights associations. Putnam (2000) argues that the latter is more important than the former classification of social capital since it generates higher resources and opportunities for individuals. In the point of view of entrepreneurs, this type of social capital is also of higher importance knowing that their primary need as entrepreneurs is finding and grasping opportunities (Casson and Guista, 2007).

Further additions to the framework include the following. Woolcock (2001) added one more classification to this framework in his review paper on social and economic capital; that is linking social capital. According to him, linking social capital exists when members from different social classes, positions, power and status form ties between one another. They argued that these connections are vital for resource acquisition, circulation of new ideas, transfer of information and knowledge, etc. One example of this is ties formulated between a political personality and a regular member of the community. This, although significant for benefit transfer, could lead to negative consequences of social capital (e.g. nepotic treatments). On the other hand, Warren et al. (2001) distinguished between four different classifications within bridging social capital in their paper on social capital in fighting poverty. The latter researchers studied social capital in poor communities. They argued that the first two types

include (i) those ties between poor or isolated communities and (ii) ties between communities with low salaries. These communities are usually less connected and do not make use of social capital. The other two categorisations by Warren et al. (2001) seem more important for this study. These are ties between poor communities and the wealthiest ones on the one hand and among local communities and international ones on the other hand. These tend to have higher impacts on the social and economic conditions in communities as well as on the development of these communities, which allow more entrepreneurial activities. One similarity between poor communities and communities with low resources is that both are not resourceful. In other words, even though the latter researchers refer to “poor communities” in their categorisations, it can be argued that these communities would also refer to those with low resources regardless of their financial or social status.

Several researchers examined bonding and bridging social capital. For instance, Sajuria et al. (2015) studied these two types of social capital in an online network. They referred to bonds as ties among homogeneous groups and bridges as ties among heterogeneous groups. They suggest that firms should not focus solely on bonding social capital as such firms have very similar knowledge and would not benefit from each other. Cooke et al. (2005) also highlighted the differences between these two types of social capital proposing that bridges are more vital for collaborative approaches in industries as according to them, heterogeneity is key. It allows for more information and resource transformation among members of the community. Bridges require more care than bonds and they are weaker and sometimes more fragile. They can come in different forms and capacities; whereas some bridges can carry dense benefits, others are less capable of such. The stronger the bridge, the more benefits incurred by entrepreneurs. Regardless of their capacities, these are more important for entrepreneurs as they are based on heterogeneous relationships.

On the other hand, the categorisation of strong and weak ties is populated by Granovetter (1973; 1983) who is an advocate of weak ties for higher benefit transfer. According to him, whilst weak ties are those relations that do not require constant contact and profound emotional connection, strong ties necessitate the opposite (Granovetter, 1973). After examining ties empirically in Cambridge, Casper and Karamanos (2003) concluded that it is better to have weak ties among all firms in an industry than having few strong ones between important or prominent firms only. Cooke et al. (2005) also concluded that weak ties lead to a more effective flow of knowledge across the whole industry and are thus more essential to be established among the majority, if not all firms in a cluster. According to Granovetter (1983), weak ties have many strengths and advantages for individuals namely; they would result in higher job mobility and employment. He also argued that unlike strong ties, weak ties could act as bridges since they allow individuals to access knowledge beyond their social

circle. This can also be applicable to firms as it is more likely for them to share homogeneous knowledge with their strong ties, yet get better insights, knowledge and resources from the weaker ones, knowing that they are less likely to be part of the same social circle. Accordingly, the knowledge and resources they could potentially transfer among one another tend to be more heterogeneous.

Many studies legitimized the findings by Granovetter (1973). Hauser et al. (2007) realised that weaker ties are more vital since they created higher innovative and patenting activities in several firms across Europe than strong ties. They explained that the closest people to you (strong ties) are likely to know the same people you know; whereas only those that are not very close (weak ties), would help in introducing you to potential linkages. According to this finding, they argue that it is more important for companies to have loose linkages (weak ties) with other firms to trigger knowledge flow. This is in a way similar to the definitions of bridging and bonding social capital. While those closer to you would be the ones with similar knowledge and resources, social ties with cross-cultural firms and individuals are more suitable for valuable and new knowledge transfer. Consequently, whilst it is more logical to have stronger ties with those geographically proximate to you (Huber, 2009); ties are weaker with those located farther. Hence, following the literature about social ties, connections with heterogeneous firms and individuals are more vital for the quality of social capital. Moreover, whilst specific amounts of embeddedness are positive for individuals, actors can develop a state of over-embeddedness, which is not always beneficial. Arregle et al. (2013) argue that this is the case in stronger ties than weaker ones where feelings of obligation to return services and commitment to specific groups of people might have negative consequences on the behaviours of entrepreneurs.

3.3.2.3 International Ties

International ties are probably the least explored type of ties. Keeble et al. (1998) researched collaborations among local and international markets in Cambridge and Oxford. They focused on the positive impacts of international networking among globally oriented firms in terms of sales, collaborations in research and recruitment. Nevertheless, the latter researchers did not actually consider the social capital springing out of these ties. Arenius and Autio (2002) considered that research on the benefits of international ties is inexistent. To address this gap, they collected data empirically from firms in Finland but did not yield enough results to prove that international ties do guarantee benefits for individuals. They explained this inadequacy in findings by the use of old measures like the depth, distance and diversity of international markets. They suggested that other measures could be taken into consideration

in future studies to better understand the benefits of international ties on individuals.

After that, a limited number of studies looked at international ties and social capital in the viewpoint of internationalization of processes and markets. For instance, Staber (2006) studied international social capital from the viewpoint of international cross-cultural management, yet treating social capital as processes and events rather than ties and connections. Mäkelä and Maula (2008) looked at international networks' impact on international venture creation concluding that entrepreneurial teams and international social capital have crucial roles in facilitating international venture creation in Finland. Chou and Chow (2009) researched about social capital in internationalized SMEs explaining that several benefits spinout from social capital in such firms. Nevertheless, researchers only considered the internationalization of business processes and entrance to new foreign markets. They disregarded international relationships that may, in some cases, lead to better resource and knowledge exploitation, which is tackled in this research specifically in Chapter 5.

More related to entrepreneurship, Garnsey and Heffernan (2005) argued that entrepreneurs in Cambridge are more motivated to ensure ties with international firms and entrepreneurs than local ones. This, according to them, is due to the better outcomes and benefits incurred by international ties. They did not, however, look further into such types of ties and their benefits. In a more recent research on high growth firms in peripheral regions, Mason et al. (2015) explained that the majority of high growth firms in Scotland over rely on international firms. They argued that such firms - specifically in peripheral regions - do not depend on local collaborations to grow. This might be an indicator that such firms make use of better social capital from international ties. However, further research is required to identify the means in which local and international entrepreneurs formulate and manage their relationships to access opportunities, resources, knowledge, etc. These gaps are touched upon in the analysis of this study.

Arenius and Autio (2002) studied the international relationships of foreign firms in local markets with other firms from their country of origin through several case studies of new Finnish firms. They considered that they acquire better resources from their country of origin considering the dense networks they established locally. However, in some poor communities or those with scarce resources, it might be that they are forced to quest resources from other wealthier places as these are scarce locally. This is similar to what Warren et al. (2001) explained when studying the network of ties among poor communities. According to them, ties among local communities and international ones have higher impacts on the social and economic conditions in communities as well as on the development of these communities. However, further research is needed to determine whether entrepreneurs in communities with limited resources might have higher tendencies of collaborating with more beneficial actors in

international markets. Studies on social capital in poor or closed communities, however, continuously highlighted the rise of negative social capital due to high levels of corruption. Keyes (2001), for instance, studied a public housing initiative in a closed community in Cleveland. The latter researcher highlighted that corruption along with few strong ties among public authority figures and few actors in the community (referred to as linking social capital by Woolcock (2001)) led to increased nepotism and, eventually, the failing of the initiative. Portes (1998) had similar arguments related to closed communities where he highlighted that they often result in high corruption and nepotism. Hence, with the limited local social capital available to the majority of individuals in such communities, they turn to nurture social capital from other communities and regions. These aspects along with the highlighted gaps of international social capital are analysed in chapter 5. The following section presents the three main dimensions underpinning the overarching theory studied in this research.

3.3.2.4 Structural, Relational and Cognitive Capitals

The term embeddedness (which is closely linked to social capital) proposes that economic actions are part of a social relations systems (Granovetter, 1985). It is the notion that actors in specific communities are embedded in these communities and their actions cannot be considered as independent. Granovetter suggested two types of embeddedness namely relational embeddedness, which refers to the ties among actors that aid in grasping knowledge and structural embeddedness highlighting the value of these ties. Several researchers have criticised Granovetter's research. For instance in his book on economic sociology, Swedberg (2009) argued that Granovetter did not emphasise the important impacts of cultures on network ties and social capital. Tittenbrun (2013) explained that Granovetter's research lacked robust empirical reference where he does not fully differentiate between the economic and social aspects of communities. He concluded that Granovetter's research must either be totally rejected or totally refined.

Nahapiet and Ghoshal's (1998) model is mostly adopted when using the embeddedness of actors to explore social capital. They put forward three dimensions of social capital: structural, relational and cognitive. Studying these three dimensions would help researchers understand the density of social capital. The structural dimension of social capital examines the types of ties among workers and the ways in which the network is configured; the relational dimension encompasses the characteristics of the relationships; whilst the cognitive dimension incorporates the shared cognitions among actors that eventually lead to higher transfer of benefits. A number of elements are proposed by several researchers to test these dimensions, these are presented next. The elements chosen to examine the dimensions of social capital in

this study are presented in Chapter 4 (refer to section 4.4.3.1).

Researchers investigating structural embeddedness can map out the configuration of ties through, for instance, Coleman's (1990) closure view or Burt's (1992) structural holes view. The former hails a dense network of connections where all or majority of actors know one another. Coleman considered that such networks facilitate trust and collaboration. These are networks of strong ties. Whereas, Burt's view on structural holes is the opposite. He explains that firms should be embedded in thinly associated networks to gain access to resources and other benefits. Nahapiet and Ghoshal (1998) suggest that structural capital is examined through network ties, network configuration and appropriable organisation. They argue that different types of ties, network density, connectivity, hierarchy, and different social contexts influence structural capital. Kim and Aldrich (2005), in their paper on social capital and entrepreneurship, argued that dense networks are less beneficial to entrepreneurs than those with structural holes considering that the former fail to provide novel benefits. Such benefits are mostly gained from other actors and entrepreneurs in diverse networks. Rost (2011) explained that members of dense networks gain more advantages when aiming to link structural holes. The holes in the network can be filled through a number of ways, creating weak ties that are considered more beneficial (e.g. Granovetter, 1983; Hauser et al., 2007; Levin and Cross, 2004).

Gulati (1998) suggested that relational embeddedness refers to the cohesion among actors in networks, which leads to higher information sharing. Relational capital is assessed by trust (Nahapiet and Ghoshal, 1998), sense of commitment (Constant et al., 1996) and the norms of reciprocity (Wasko and Faraj, 2005). Nahapiet and Ghoshal (1998) identified trust as an integral characteristic for increasing cooperation and exchange. They argued that trust secures cooperation and cooperation creates trust (*ibid.*). Moreover, Putnam (1995) argues that trust leads to an expectation of reciprocity. Wasko and Faraj (2005) used the norm of reciprocity as a determinant for measuring the strength/weakness of relational capital. This is because when individuals are engaged in a relationship where mutual benefits are expected from both parties, these individuals are more motivated to exchange knowledge when needed (Kramer and Goldman, 1995); thus, they have higher trust in one another. On the other hand, individuals feeling committed to their network of ties have a higher sense of obligation to take part in knowledge exchange (Coleman, 1990; Nahapiet and Ghoshal, 1998). Accordingly, measuring the feelings of commitment is crucial for determining the circulation of benefits. Goddard (2003) used both norms and trust as methods of measurement concluding that students achieve better results in schools with higher norms and trust.

Cognitive capital, on the other hand, is assessed by the individuals' expertise in the domain (Constant et al., 1996), shared language and narratives (Nahapiet and Ghoshal, 1998),

shared values and norms (Alvarez and Romani, 2017) and homogeneity in knowledge (Tsai and Ghoshal, 1998). According to Kim (2015) who studied social capital in a biotechnological cluster in San Diego, actors with higher expertise have higher chances of transferring knowledge that is more valuable. Conversely, those with less experience would have less valuable knowledge to share. Furthermore, Nahapiet and Ghoshal (1998) suggested shared narratives as one indicator of cognitive capital. The latter researchers explained that shared narratives refer to those stories, myths and metaphors that can break the barrier between different contexts allowing for better visionary and literal interpretations (*ibid.*). They allow for higher transfer of benefits among actors. Furthermore, even though a number of researchers argued for the importance of heterogeneity in knowledge between actors for higher quality in knowledge exchange (Cooke et al., 2005; Staber, 2006; Giuliani, 2011), this does not eliminate the fact that there is a need for actors to have homogeneous basic knowledge to guarantee a minimum level of understanding (Tsai and Ghoshal, 1998). Hence, another requirement for measuring the cognitive capital is by understanding the level of homogeneity in the knowledge of actors. Alvarez et al. (2016), on the other hand, studied family social capital arguing that parental norms and values also contribute to more benefit transfer among individuals in the family as shared views of what is acceptable and desirable facilitates higher cooperation and interaction. Cohen and Prusak (2001) explain that shared values enable more cooperation and knowledge sharing as values bring individuals and networks together. This study adds this measure to assess cognitive capital outside the family boundaries to test whether sharing such characteristics enable a higher transfer of benefits.

Relating these elements to EE development, the three dimensions of social capital are used to understand the components and the evolutionary nature of EE. The elements employed to examine social capital are further assessed in the Methodology chapter, which highlights the analytical framework of the study (section 4.4.3.1). The conceptual framework, however, which brings together the literature on EEs and social capital, is explained next.

3.4 Conceptual Framework

Drawing on the debates on EEs and social capital which have been examined in the previous and current chapters, social capital is presented in this section as the conceptual framework of this study for better understanding interconnectedness among actors in EEs as well as its evolution. The majority of research on social capital is either on a single-case institution or firm (for example Jasimuddin, 2007; Wei et al., 2011; Azudin et al., 2009), or across organisations (for example Hackney et al., 2005; Breschi and Lissoni, 2001; Asheim and Coenen, 2005;

Dahl and Pedersen, 2004). Research on EEs, on the other hand, did not entirely adopt the social capital perspective yet. Even though the concept is sometimes criticized, social capital has proven to be an effective approach in analysing networks of ties and benefits gained on individual, firm or industry levels (Myint et al., 2005; Huber, 2011; 2012; Sajuria et al., 2015; Cooke et al., 2005; Casper and Karamanos, 2003; Hauser et al., 2007; Westlund, 2006; Eisingerich et al., 2010). Additionally, being a novel approach, research on EEs is still mostly descriptive and lacks specific case studies with empirical findings. Applying the concept of social capital to that context would not only fill some gaps in the EE literature but also it will add to our understanding of the configuration and interconnectedness and evolution of EEs.

Several researchers highlighted the need for studying procedural, analytical and connection differences throughout the evolution of EEs (Motoyama and Watkins, 2014; Mack and Mayer, 2015). The work of Mack and Mayer (2015) is to our knowledge the first providing a four-stage lifecycle of EEs suggesting that different characteristics appear in each stage. The four stages (birth, growth, sustainment and decline) are presented with a number of characteristics based on the elements of EEs by Isenberg (2011); they did not, however, investigate the interconnectedness of entrepreneurs corresponding to each stage. Another limitation of the framework is that it fails to explain the emergence of EEs. Even though the first stage signifies the birth of ecosystems, Mack and Mayer (2015) do not offer further explanations related to the causes of the birth. Reflecting on the need for further research related to the interconnectedness among actors in EEs (Stangler and Bell-Masterson, 2015; Spigel, 2015; Auerswald, 2015; Mason and Brown, 2014; Hechavarria and Ingram, 2014; Fernandez et al., 2015; Motoyama and Watkins, 2014; Cukier et al., 2015), we suggest a social capital approach to examine ties among entrepreneurs and other vital actors further. This would enable us to understand how entrepreneurs are connected, the types of relationships among them, means in which entrepreneurs make use of these relationships for knowledge and resource transfer, and the extent in which of these relationships impact entrepreneurial activities in EEs.

Putting the aforementioned concepts together, this study combines the theory of social capital and the concept of EEs. The conceptual framework establishes a link among interconnectedness and social capital on one hand and the successful evolution of EEs. Social capital is examined through its three dimensions, structural, relational and cognitive capitals.

3.5 Conclusions

In this chapter, social capital is linked to the literature on EEs and proposed as a theoretical underpinning of this study. Through the structural, relational and cognitive capitals (Nahapiet and Ghoshal, 1998), interconnectedness among actors is examined and differentiated in the emergence and development of EEs. The theory is explained to highlight the past and present trends, gaps and prevailing arguments. After that, both elements of social capital theory (connections and benefits) are analysed to highlight the significance of connections and different types of network ties available for entrepreneurs. As researchers put it, entrepreneurship is embedded in connections among individuals (Kim and Aldrich, 2005). For this reason, studying the connections and the benefits that spinout from them is vital for fostering entrepreneurial networks and ecosystems of entrepreneurship. For that, an in-depth explanation of network ties is presented to understand different types of networks, relationships and capitals related to social capital. The last section combined the aforementioned theory and the concept of EE in a conceptual model that is also linked, in the following chapter, to the research questions of this study.

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4 | Methodology

4.1 Introduction

Within social research, it is crucial to adopt robust research methodologies. There is not a consensus on what makes a suitable approach to dealing with social research; the chosen strategies must be fitting to the purpose of the study and the object being researched (Bryman and Bell, 2015). Specifically, the main question is whether particular methodologies are more appropriate for handling the investigation of social capital in EEs. Denscombe (2007) argues that methodological approaches must be sensible and clear. Considering the complexities of social capital research, appropriate techniques must be adopted so that such complexity can be explored and meaningful results obtained.

Several research approaches could be adopted to tackle the research questions of this study, for instance classic positivist approach, ethnography and case study. However, the aforementioned approaches were not adopted in this study for several reasons. Positivism entails the disconnection between reality and context (Klein and Myers, 1999). In other words, the context does not influence the reality and that the latter can be repeated in different contexts. Nevertheless, EE research is dissimilar in different contexts, thus an adoption of a positivist approach is not possible. Ethnography emphasizes the study of entire cultures or specific ones that could be related to a specific business for example (Hammersley, 2007). A case study approach is a research strategy used when the focus of analysis is on a specific case or cases (namely persons, projects, events, systems etc.) where these would be the “subject of the inquiry” providing an analytical frame for the study (Thomas, 2011). Both ethnography and case study approaches were disregarded for similar reasons. Firstly, ethnography requires the researcher to adopt a "live and work" strategy that allows for a deep observation of actors and the observed culture. This necessitates full access to the observed work unit for a specific period of time (Hammersley, 2007). Since the approach in this study focuses on a number of start-ups and supporting actors, this was not feasible to accomplish with the limited time frame of the study. This would have been also challenging with a less extensive

observation agenda. On the other hand, this study focuses on a specific case (the Lebanese EE). In addition to the criticism of single case-studies, a deeper study of Lebanese ecosystem would have also proven to be challenging due to time constraints. A case study approach could be adopted in the future where there are less time limits and where multiple cases are available. Due to the aforementioned reasons along with the philosophical assumptions of the research explained in this chapter, this study adopts an interpretivist approach.

In this chapter, the research questions are presented based on the gaps identified and outlined in the previous two chapters. The research questions of the study are presented first. The philosophy underpinning this research along with the ontological, epistemological and axiological stances are explored in depth in order to choose the proper strategy and methods that align with these assumptions. The chosen data collection technique is put forward after that followed by the sampling and data analysis techniques employed. The rigorousness of the research is ensured by discussing proper quality criteria adopted in this research towards the end of this chapter. Few ethical considerations are highlighted in the conclusions.

4.2 Research Questions

The suggested research questions are interrelated. The first question is context-based highlighting the characteristics and key elements of EEs in a developing country. Considering that the majority of studies related to EEs focus on ecosystems in strong, developed countries and regions, it is crucial to examine EEs in other parts of the world to understand whether similar elements underpin their formation and trajectory. Moreover, investigating elements of EEs in the suggested context highlights the weight of elements of EEs in such parts of the world. Answering this also sets the scene for the contextual underpinnings of this study. Accordingly, the first research question is the following:

RQ1: To what extent do the key characteristics and elements of EE in developing countries such as Lebanon align or diverge from an ideal understanding of an EE as presented by current literature?

The second question approaches the interconnectedness among entrepreneurs in EEs through the theory of social capital. An ecosystem is a community of interdependent players (Mason and Brown, 2014; Acs et al., 2014; Bosma and Holvoet, 2015; Audretsch and Belitski, 2016) and entrepreneurship is a field highly dependent on entrepreneurial connections (Aldrich et al., 1987; Aldrich and Mattson, 1987; Johannison, 1998). Hence, we argue that the best manner to add depth to the understanding of EEs is by examining the one important thing in common between EEs and entrepreneurship; connections among actors. Social capital the-

ory is being viewed as a foundation in entrepreneurship literature where its application fills theoretical gaps in entrepreneurship theory (Gedailovic et al., 2013) by examining interconnectedness and entrepreneurial connections (Kim and Aldrich, 2005). Researchers like Spigel (2015), Acs et al., (2014), Mason and Brown (2014), Isenberg (2011), etc. highlighted the need for studying connections among entrepreneurs considering that it is a main driver and developer of EEs. Moreover, as explained earlier, the majority of researchers examine developed, resourceful regions. Findings from such regions cannot be applicable to less-developed and less-resourceful regions. We assume that there is not a reality applicable to all EEs in different parts of the world. From that sense, it is only logical to examine social attributes (Spigel, 2015) of EEs in different contexts. In this study, we argue that further research is required, which uncovers deeper understanding of these connections, their types, means of which they are established and sustained. Through applying a social capital perspective, these connections are examined through the structural, relational and cognitive dimensions of social capital (Nahapiet and Ghoshal, 1998). Specific components of the latter dimensions are discussed in section 4.4.3.1. Based on that, the second research question is:

RQ2: What is the role of interconnectedness among actors in building and sustaining an EE? How is social capital generated and deployed in developing such EE?

After establishing a deep understanding of the context of the study and means in which social capital is generated and deployed, the final research question investigates differences in social capital across the birth and growth stages of an EE in the context of Lebanon. Here, the lifecycle perspective by Mack and Mayer (2015) is employed along with the view of the succession and reorganisation of EEs by Auerswald and Dani (2017). The need for appreciating that social capital is diverse across dissimilar stages has been highlighted since industry clusters (Feldman, 2001; Motoyama, 2008). Mack and Mayer (2015) explained four stages of EEs, which also requires further research to understand the differences, similarities and characteristics of each stage specifically in regards to social capital, which is one missing element in their study. The same applies to the study by Auerswald and Dani (2017). Moreover, the presented frameworks fail at answering means that allow EEs to come to life. Hence, the third research question examines the impact of social capital on the birth and growth stages of EEs.

RQ3: Are there any differences to the way in which social capital is utilised in birth and growth stages of EE?

To properly account to the aforementioned research questions, research philosophy, ontology, epistemology along with the strategy and methods are examined in the following section.

4.3 Research Philosophy, Ontology and Epistemology

Research philosophy forms the building blocks of research methodology. Aligned with the research problem at hand, it is crucial to understand the adopted philosophy of research, which encompasses the assumptions and views of the researcher underpinning the research aim and objectives (Saunders et al., 2009). These assumptions then dictate the ontological and epistemological approaches, finally leading to the appropriate choice of research design, strategies and data collection and analysis techniques. These are all interrelated processes; and a robust research methodology and rigorous approach to its application are fundamentally important in any social science research.

The two main research philosophies can be categorized based on their approach to the nature of reality; how to get it and how to relate to it. Positivists believe that reality is external to the researcher and is not bound to context, in which similar patterns repeat themselves in different contexts and domains (Klein and Myers, 1999). Interpretivist researchers, on the other hand, believe the opposite. Interpretive researchers assume that different realities could be present and account for the same notion in different contexts. In other words, reality is socially bound; meaning that it is different in different contexts (Saunders et al., 2012). Hence, reality is not objective. The configuration of EEs depends on the connections among its attributes (Spigel, 2015). In other words, EEs have different configurations in different regions. Perceptions of actors who form an EE also vary and their experiences and realities are multiple and situated in their context. The culture of entrepreneurship, as well as other determinants, vary from one country to another. Hence, it is highly unlikely to find several ecosystems of entrepreneurship functioning in similar manners and capacities. Moreover, the culture of entrepreneurship also determines the social attributes of ecosystems. Consequently, interconnectedness between entrepreneurs themselves, on the one hand, and among entrepreneurs and other actors in an ecosystem is determined by context. Consequently, and from a philosophical point of view, reality in this case is relative; subjective; multiple and context-based. That said, research on EEs, its attributes and other functions cannot be unified or viewed in a positivistic manner. Hence, the research philosophy underpinning this study is interpretivist.

Ontology is a branch of philosophy concerned with the nature of social entities (Bryman and Bell, 2015). The latter researchers explain that if social entities are not associated with social actors, the ontological consideration of the research is objective. On the other hand, if social actors influence social entities, the ontology is considered subjective. Howell (2013) associates the understanding of objectivism and subjectivism to beliefs explaining that objective reality

exists in cases where beliefs do not influence the truth, whilst subjective reality is bound to different beliefs. Interpretive research, as presented earlier, disregard the singularity of reality; assuming a subjective ontological approach to research (Bryman and Bell, 2015). Reality here is dependent on beliefs, experiences and views of actors situated in certain contexts. Since EEs are different in dissimilar contexts, and since the realities in this study depend on the beliefs and views of social actors, the adopted ontological underpinning of this study is subjective.

Epistemology is related to means in which the researcher accesses knowledge (Becker, 1996). Knowledge can be understood either through facts, numbers or through opinions and narratives (Saunders et al., 2009). If the researcher's assumptions are objective, it is more likely that knowledge is linked to facts that are not influenced by opinions and beliefs. On the other hand, subjective researchers access data by understanding the different views of social actors, and it is these views that shape reality. Hence, epistemological considerations are also directly influenced by the original philosophical assumptions underpinning the study. Since it is assumed that EEs are configured differently in different geographical locations; "patterns" are not simply repeated. Moreover, to understand the configuration of EEs, researchers must examine the social, cultural and material attributes of ecosystems from the multiple perspectives of key actors constituting the EE. Considering that these attributes are highly dependent on the context and the culture of the ecosystem, researchers must undergo in-depth talks or observations with actors to comprehend these attributes. In this study, the focus is primarily on the social attributes; degree of connectedness and nature of social capital in the development of the EE. According to Spigel (2015), social attributes are explored through examining means in which actors advance their networks and practices within the studied context to fully comprehend the structure of the EE. Furthermore, considering that interpretive researchers insist that patterns of reality are consistently changing (Klein and Myers, 1999) and that these patterns are bound to social reality (Bryman and Bell, 2015), it is crucial that the researcher assesses and fully understands the context and social constructs associated with that context. Consequently, the adopted epistemology takes into account the interpretivist nature of the phenomenon under study along with the context and social constructs through in-depth talks with multiple social actors. This epistemological underpinning entails that data should be constructed by drawing on multiple views, experiences and narratives of the participants in order to fully capture the relational and contextual dynamics of the social phenomenon, which is the gradual development of an EE and the role of social capital in this study.

Axiology denotes the science of values (Bahm, 1993). Unlike positivists, interpretive researchers take part in the data collection process (Bryman and Bell, 2015). This ensures an

efficient orchestration of properly collecting the views and perceptions of participants, by, for instance, asking probing questions when needed to extract further information regarding specific matters. Interpretivists taking part in the data collection adopt a value-laden axiological stance to research (Saunders et al., 2012). This means that the researcher's worldview, choice of theory and literature is highly relevant to the conduct of the study. This kind of research becomes co-construction of subjective reality through a rigorous questioning and elucidation of critical aspects surrounding the research questions.

4.4 Research Strategy and Methods

These philosophical assumptions lend themselves to particular research strategies and methods. Interpretive research is more subjective (ontology) and relational (epistemology). Subjective researchers tend to go in-depth regarding the views of actors to fully grasp the culture, context and attributes influencing their behaviours or any other factors being examined (epistemology/methodology interface). Axiologically, interpretivist researchers adopt a value-laden stance where they take part in the data collection process. Drawing on these philosophical assumptions, this study adopts a qualitative approach to research design and strategy. In order to best analyse the context-specific research questions, the contextual dynamics and multiple views of several actors forming the EE in Lebanon are assessed through semi-structured interviews.

4.4.1 Semi-Structured Interviews

Three main types of interviews emerge from research methodology books and journal articles; structured, semi-structured and unstructured interviews. Structured interviews adhere to the interview protocol in which the role of the interviewer is minimized as the interview questions follow a specific pre-assigned sequence of questions, thus reducing probing questions to a minimum (Myers, 2013). Conversely, unstructured interviews denote the opposite where they do not abide by an interview protocol. The role of the interviewer is more significant here as the majority of the questions asked are open-ended and probing ones (ibid). Semi-structured interviews, however, go hand in hand with the interpretivist philosophy underpinning this research, as this philosophy lends itself to exploratory research. Multiple experiences and views can be captured through qualitative interviews; and semi-structured interviews allow for utilising the theoretical frameworks chosen as well as for the data to emerge from the study (Myers, 2013). Interactions among actors and lived experiences of key actors in an EE

can be examined effectively via qualitative interviews; particularly semi-structured ones.

Interviews are focused on meanings attached to experiences, views and perceptions. To understand these meanings, the researcher needs to take part in the data collection process, rather than being independent of it (Saunders et al., 2012). The focus is on how people perceive things like the impact of their position in the network of ties on the benefit transfer process and the way in which their position implicates the configuration of the whole network. Hence, to create value, the researcher must orchestrate the data collection process to grasp as much insight as possible. Qualitative research aims to have more in-depth conversations to capture more meaning. In their book on qualitative research, Taylor et al. (2015) argued that interviews are employed to understand means in which people act, think, and give meaning to things. Only when understanding these, the research builds a holistic understanding of the setting or group. In this study, the focus is on the actions and things that are taking place in practice. The focus is not on the participant's opinion on a specific matter, rather the ways they make use of their relationships and the characteristics related to these relationships. These are gained through face-to-face interviews with the participants. In another book on qualitative research, Patton (2014) argued that qualitative research explores instances whilst always considering the context. The latter refers to the situations or events surrounding individuals. Semi-structured interviews aid in assessing the context along with significant situations and events influencing entrepreneurs and other actors as they encourage probing questions as new lines of questioning might arise during the interview (Myers, 2013). Yet, they are still consistent as they adhere to a general interview protocol. Hence, such probing questions allow for greater depth in analysing the surrounding environment specific to each of the participants.

In this study, the interviews have been used to understand the participant's networks of ties and the benefits they gain as well as the emerging characteristics of the ecosystem. The participants are categorized in two groups, entrepreneurs and actors supporting them. Interviews targeted novice, nascent and serial entrepreneurs, drawing on the typology by Ucbasaran et al. (2001) typology that categorized entrepreneurs in the latter three categories, whilst supporting actors include financial institutions (banks, investors, etc.), incubators, accelerators, governmental institutions/figures, research institutions and other institutions that support entrepreneurs in any means. A full list of the participants is presented in Table 4.1. Two sets of interview questions are tailored for these two groups (see Appendix IV). Interviews with entrepreneurs include three sections of focus. The first is divided among the three dimensions of social capital as explained by Nahapiet and Ghoshal (1998); structural, relational and cognitive. The three dimensions are used as composite indicators to measure social capital (Andriani, 2013) and adopted by a number of researchers (refer to section 3.4.4). The first

section also includes questions that widen the understanding of the benefits and limitations of working within an EE. The second section distinguishes between social capital in the birth and the growth stages of the ecosystem, whereas the final section discusses international social capital and contrasts it to local social capital. As for the questions for other supporting actors, they include similar themes as the ones discussed earlier, but are more focused on the roles played by such actors in supporting entrepreneurs as well as creating and strengthening social capital.

Forty-three interviews were conducted in total; twenty-seven of the interviewees were entrepreneurs (either founders or co-founders of current or previous start-ups that got incorporated), whereas the remaining sixteen were actors that supported entrepreneurs in numerous ways. Most of the supporting actors are entrepreneurs themselves that had their start-ups or firms prior to engaging in the EE. The interviews mostly took place in the participant's workplaces. The duration of the interviews varied enormously depending on the participants where some were more willing to share about their experiences than others. Interviews lasted between 30 to 120 minutes were longer ones included more probing questions that allowed the identification of important entrepreneurship-related notions, hence gaining important insights and comprehensive knowledge of the ecosystem. Participants were asked to explain what they thought social capital is where only few defined it in a meaningful way. After that, a full definition of the concept was given to make sure that the participants could properly comprehend the questions asked in the course of the interview.

Participant ID	Business Type	Industry	Position	Duration of Interview (minutes)
1	Start Up	High-Tech	Co-Founder	97
2	Start Up	Food	Co-Founder	32
3	Start Up	Academia	Founder	24
4	Start Up	Fashion	Founder	41
5	Investing	Finance	Investment Officer	30
6	Start Up	E-Business	Founder	38
7	Start Up	Marketing	Founder	76
8	Start Up	Medicine	Co-Founder	89
9	Start Up	Automobile	Founder	60
10	Start-up	Gaming	Founder	35
11	Investing	Finance	Investment Banker	30
12	Acceleration	N/A	CEO	21

Participant ID	Business Type	Industry	Position	Duration of Interview (minutes)
13	Incubation	N/A	Business Support and Monitoring and Evaluation Officer	52
14	Acceleration	N/A	Site Manager	49
15	Incubation	N/A	Site Manager	33
16	Consulting	N/A	Coach/Investor/ CEO	25
17	SME	Fin-Tech	CTO	47
18	Start-up	Gaming	Founder	23
19	Acceleration	N/A	CEO	33
20	R&D	Academia	Founder	36
21	SME	Photography	Founder	115
22	SME	Finance	CEO	30
23	Start-up	Computer Engineering	Founder	36
24	SME	Consulting	CEO	67
25	Start-up	Social Media	Founder 43	
26	Governmental	Technology	Former Minister	21
27	Start-up	Media	Founder	49
28	Start-up	Computer Engineering	Founder	45
29	Start-up	Academia	Lecturer/CoFounder	60
30	Start-up	Architecture	Founder	65
31	Start-up	Online Solutions	Founder	49
32	Start-up	Computer Engineering	Founder	45
33	Start-up	Automobile	Founder	25
34	Start-up	Furniture	Founder	38
35	Investing	Finance	Chairman	84
36	Consulting	Social Entrepreneurship	Founder	31
37	Acceleration	R&D	R&D Officer	28
38	Acceleration	R&D	R&D Officer	30
39	Start-up	Computer Vision	Founder	51

Participant ID	Business Type	Industry	Position	Duration of Interview (minutes)
40	Consulting	Media/Events	Founder	28
41	SME	Consulting/Media	Media Representative	31
42	Acceleration	Finance	Co-Founder and CFO	30
43	SME	Media	Co-Founder	39

Table 4.1: List of Participants

Being multilingual, the interviewees were asked whether they prefer conducting the interviews in Arabic or English prior to the start of the interviews so that they feel comfortable to express themselves properly. All participants spoke good English, but did use Arabic words and phrases from time to time. Few were more comfortable to conduct the whole interview in Arabic. Those were translated and transcribed verbatim during the coding process. Conducting interviews in a foreign language can be challenging, in theory, as it adds more stress on participants to express themselves properly. Nevertheless, English and French are studied equally alongside Arabic (the native language) in Lebanon all through school. Universities rarely use Arabic as their language of instruction. Thus, conducting interviews in English did not pose a challenge to the participants of the study whom chose to answer the interview questions in English.

4.4.2 Sampling

The researcher was in contact with a manager of one of the main incubators in Lebanon, whom was very helpful in reaching out to a number of start-ups, which were the first point of contact for data collection. Hence, in collaboration with the managerial team of the aforementioned incubator, all the entrepreneurs in that incubator were first contacted via email and then informed about the research in events and face-to-face meetings. After the first round of interviews, other start-ups in the EE, which were part of other incubator/accelerator programs were also contacted via email either after accessing their email addresses online, via the incubator/accelerator websites or through direct referrals from the interviewed entrepreneurs. There are a bit over 100 firms and start-ups in the Lebanese EE. The objective was to engage as many participants as possible from each of the firms and start-ups in the ecosystem until data saturation is achieved. The population consists of all the entrepreneurs in the Lebanese ecosystem regardless of whether they have their own firms, start-ups, are managing the entire ecosystem or are collaborating with the EE. The sample would then consist of those who show

interest in participating in the interviews. Initially, the pilot interviews were conducted with the sample that replied first via email. Prior to the start of the interviews, all participants were given both information sheets and consent forms that provide the needed information about the research as well as assure the interviewees about the confidentiality and anonymity of the study. After the first stage of interviews, more entrepreneurs were contacted either through emails or face-to-face upon meeting them directly in incubators/accelerators. These workplaces are mostly open-spaced allowing for easy discussions with the entrepreneurs. Another part of the interviewees were sampled based on snowball sampling, a non-probability sampling technique. This technique allowed faster access to interviewees that are known to be interested in such interviews. In their book on research methods, Bryman and Bell (2015) argued that snowball sampling is when the researcher starts collecting data from a small sample of people and then use these individuals to get introduced to others who are willing to participate in the study. This technique would then allow for higher participation rates by asking the respondents to invite their colleagues/friends to take part. The direct advantage of this technique is the easy and fast access to participants. Moreover, this makes it easier to reach elite groups or people that are harder to communicate with without referrals. Using this technique, a former minister was interviewed that has had a direct hand in growing the ecosystem in Lebanon by creating funds, attracting international development agencies and enhancing the technical infrastructure.

The notion of “how many interviews are enough?” has been a recurring theme in the research on qualitative interviews. Spradley (1979) argued in his book on the ethnographic interview that for interviews requiring more than or around one hour, 25 to 30 of those are required. McCracken (1988), who had more business-oriented research interests, argued that eight interviews are sufficient for business related studies. On the other hand, a number of researchers argue that it is not appropriate to specify certain numbers of interviews and generalise them to all studies. For instance, Glaser and Strauss (1967) explained in their book on grounded theory that researchers must continue interviewing participants until a level of saturation is reached. Nevertheless, their research did not clarify the meaning of the term saturation. Saunders et al. (2012), however, explained that saturation occurs when the researcher or investigator is not gaining any new information when conducting more interviews. Additionally, in a more recent article by Saunders and Townsend (2016), the researchers interpreted 798 qualitative journal articles to identify that the median of interview participants is 32.5, where the general norm varies between 15 and 60 participants within organization and workplace studies. In this study, data collection stopped at the 43rd interview as no new information was gained and data saturation is achieved (Saunders et al., 2012). Moreover, the number of participants is higher than the median of 32.5 participants as explained by

Saunders and Townsend (2016), yet lies in the range of 15-60 participants as is reflected in organization and workplace qualitative studies by the latter researchers.

The population of the third research question is different than those for the first two. The third research question seeks information related to different stages of the EE lifecycle; hence, the participants must have higher tenure and should have been working in the ecosystem throughout the different investigated stages. The interviews employed here are longer as they inquire about more notions. As for the first two research questions, tenure is not as important. Participants may or may not be working in the ecosystem across different stages of its lifecycle. It is much easier to initiate contact with the participants of this sample than the former one considering that the population of these is larger. The next section discusses means in which data is analysed during and after the data collection process.

4.4.3 Data Analysis

The interviews are analysed through an iterative thematic analysis following Gioia et al. (2012) methodology. The process made use of themes, categories and units of data that were further analysed for developing relationships, patterns and deepening the understanding of the research questions (Saunders et al., 2012). Moving from the recordings, the interviews were directly coded separately to include all what participants said in the interviews. These documents were then read carefully several times to identify important themes. Strauss and Corbin (1998) argued in their book on qualitative research that categories can be either developed from the literature (prior to the data collection), or after finding recurring themes during the data analysis, or by employing specific terms used by the interviewees in a recurring manner. All of the three methods are adopted. After that, units of data are added to the categories, which are then used to spot relationships or patterns. In this stage, new categories are also added (e.g. dividing one category in two: categorizing ties based on location or incurred benefits). Then, the analysis is made based on the general and specific themes found in the computer-based software NVIVO, which facilitates the data analysis process by creating codes and linking quotes to them for easier interpretation and data retrieval.. Prior to further explanation of the analysis of the data and the quality criteria of this analysis, the following subsection highlights the key components employed to measure social capital in the Lebanese EE.

4.4.3.1 Components of Social Capital as the analytical framework of the study

This section highlights the structural, relational and cognitive dimensions of social capital proposed by Nahapiet and Ghoshal (1998) as key elements of analysis of this study. These

dimensions have specifically assisted in answering the second and third research questions understudy. Structural capital highlights the means in which networks are configured among social actors (Nahapiet and Ghoshal, 1998). For example, members of dense networks can gain more advantages than people connected to other networks (Rost, 2011), or those linked to diverse networks can also gain numerous benefits (Kim and Aldrich, 2005). The majority of researchers emphasized the importance of weak links as compared to less beneficial strong ones (Granovetter, 1983; Hauser et al., 2007; Levin and Cross, 2004). To provide a clear picture of the means in which the networks are structured, structural capital is assessed by understanding the configuration of entrepreneurial networks of ties and the factors influencing or hindering them (Nahapiet and Ghoshal, 1998).

Relational capital is assessed by trust (Nahapiet and Ghoshal, 1998), sense of commitment (Constant et al., 1996) and the norm of reciprocity (Wasko and Faraj, 2005). Nahapiet and Ghoshal (1998) identified trust as an integral characteristic for increasing cooperation and exchange. They argued that trust secures cooperation, which in turn increases trust (*ibid.*). Moreover, Putnam (1995) argues that trust leads to an expectation of reciprocity. Wasko and Faraj (2005) used the norm of reciprocity as a determinant for measuring the strength/weakness of relational capital. This is because when individuals are engaged in a relationship where mutual benefits are expected from both parties, these individuals are more motivated to exchange knowledge when needed (Kramer and Goldman, 1995); hence, they have higher trust in one another. On the other hand, individuals feeling committed to their network of ties have a higher sense of obligation to take part in knowledge exchange (Coleman, 1990; Nahapiet and Ghoshal, 1998). Hence, measuring the feelings of commitment is crucial for determining the circulation of benefits. Moreover, norms have a direct effect on the process of knowledge transfer (*ibid.*).

Cognitive capital, on the other hand, is assessed by the individuals' expertise in the domain (Constant et al., 1996), shared language and narratives (Nahapiet and Ghoshal, 1998), homogeneity in knowledge (Tsai and Ghoshal, 1998) and shared values and norms. Kim (2015) argued that actors with higher expertise have higher chances of transferring more valuable knowledge. Conversely, those with less experience would have less valuable knowledge to share. Furthermore, Nahapiet and Ghoshal (1998) suggested that shared language and shared narratives are two significant measures of cognitive capital. The latter researchers explained that actors with shared language are supposed to have higher abilities to transfer benefits than those who do not. Shared narratives refer to those stories, myths and metaphors that can break the barrier between different contexts allowing for better visionary and literal interpretations. Moreover, even though a number of researchers argued for the importance of heterogeneity in knowledge between actors for higher quality in knowledge exchange (Cooke

et al., 2005; Staber, 2006; Giuliani, 2011), this does not eliminate the fact that actors with homogeneous basic knowledge guarantee a minimum level of understanding (Tsai and Ghoshal, 1998). Hence, another requirement for measuring the cognitive capital is by understanding the level of homogeneity in the actors' knowledge. Alvarez et al. (2016), on the other hand, studied family social capital arguing that parental norms and values also contribute to more benefit transfer among individuals in the family as shared views of what is acceptable and desirable facilitates higher cooperation and interaction. Cohen and Prusak (2001) explain that shared values enable higher cooperation and knowledge sharing as these bring individuals and networks together. This study adds this measure to assess cognitive capital outside the family boundaries to test whether sharing such characteristics enable higher transfer of benefits.

4.4.3.2 Data Analysis Process

The process used for data analysis included iterative steps that are explained in this section. The steps used are adopted from the literature of interpretivist grounded theory (Glaser and Strauss, 1967; Strauss and Corbin, 1990; Miles and Huberman, 1994) and operationalised by using Gioia's methodology (Gioia, 2004; Gioia et al., 2012). The following illustration represents the relevant methods employed. Data analysis is made in the beginning phases of data collection as preliminary analysis to make sure the interview questions can capture the needed data. After making few changes to get better outcomes from the participants (e.g. simplifying questions by dividing them in two; adding more details to make things clearer), data analysis is undergone again during and after the data collection. The described steps were iterative as the analysis went back and forth to ensure all codes, categories and patterns are properly identified and interpreted.

Firstly, both inductive and deductive reasoning were used to code the data to highlight both codes arising from the literature (Ezzy, 2013) and others from the collected data (Thomas, 2006). Codes are categorised into three different types; open, axial and selective codes (Strauss and Corbin, 1990). The first order codes (open codes) denote the general codes that are later turned into categories. For instance, social capital, lifecycle of the ecosystem, etc. These codes are mainly identified from the literature. Second order codes (axial codes) include more structured data that are put together by linking different categories (Bryman and Bell, 2015). These include international social capital, structural capital, social capital at the birth stage, social capital at the growth stage, etc. The final set of codes (selective coding) include the core categories that constitute the "storyline" of the interviews (Strauss and Corbin, 1990). Selective codes comprise Lebanese diaspora, brain drain, shared norms

and values, trust, etc. Gioia's Methodology differs in the characterization of codes as is shown in figure 4.1 and explained next.

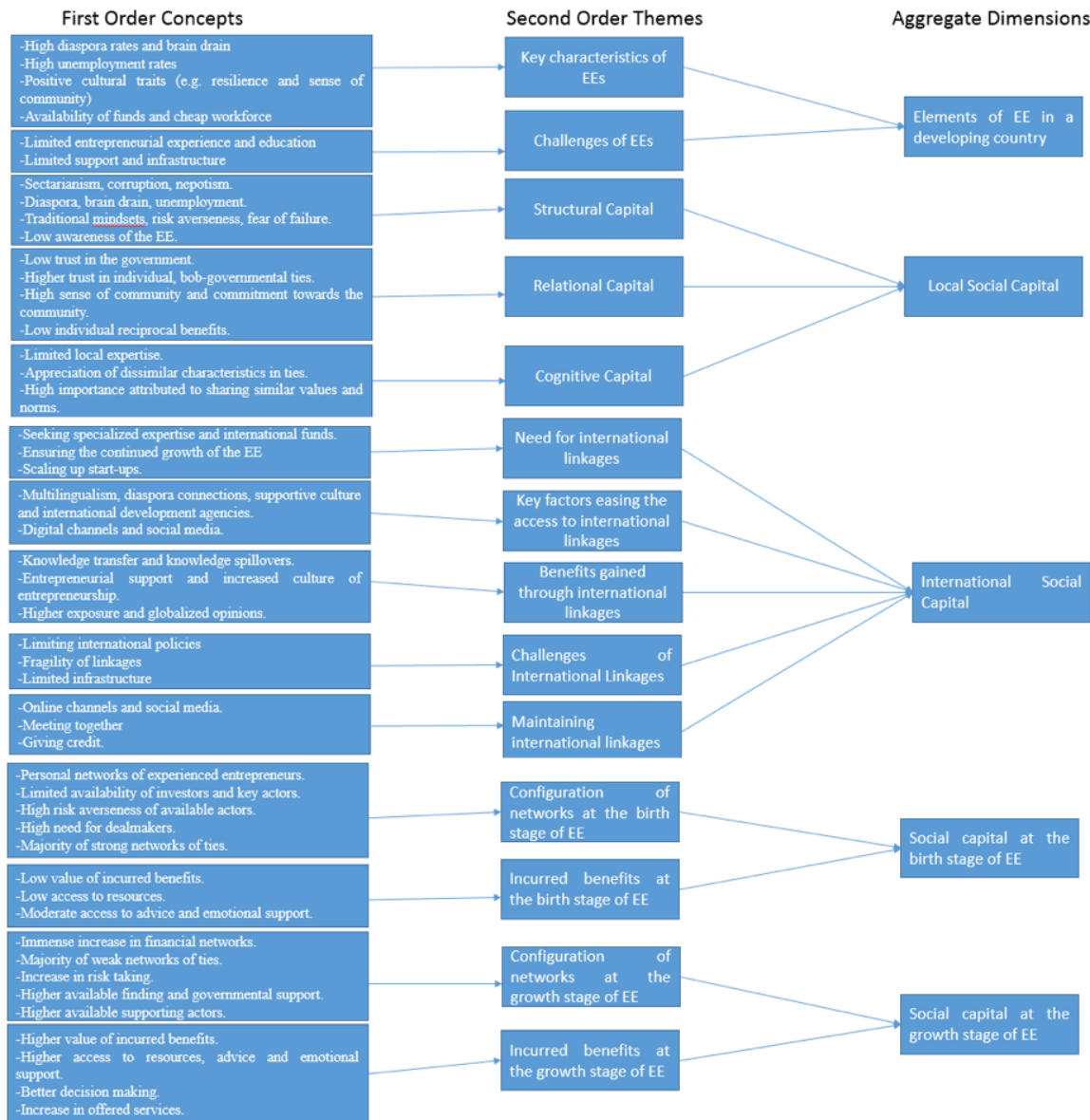


Figure 4.1: Data Structure as adapted from Gioia (2004)

The first-order concepts put forward in figure 4.1 are mainly retrieved from the findings. For instance, “limiting international policies”, “increase in risk taking”, “sectarianism, corruption, nepotism”. During the interview process, tens of first order concepts arise from the interviews denoting primary categories of findings. These are filtered and summarized in the first order concepts. Second order themes present a link between the findings of the study and the literature where the underpinning tactic is whether the themes relate to available concepts, which best illustrate the analysed concepts (Gioia, 2004). These include themes like “key characteristics of EEs in a developing country” and “need for international linkages”. After that, “second order” aggregate dimensions represent an extension of the previous second order themes, which take the latter one-step further to present general theoretical concepts

(Gioia et al., 2012). Accordingly, 5 aggregate dimensions represent the findings of this study; elements of EE in a developing country, local social capital, international social capital, social capital at the birth stage of EE and social capital at the growth stage of EE. This process is crucial for visualizing the data analysis and its progression from raw data to themes and aggregate theoretical concepts (ibid.) which increases the validity of the analysis (Pratt, 2008). More quality criteria measures are explored in the following subsection.

After that, we went through all the interviews to link relevant interview data to related codes. NVivo 11 is used in this step to create codes and link quotes to them for easier interpretation and data retrieval. This eases the process of highlighting more themes and patterns as they arise (Saunders et al., 2012). Clustering is then used to organise participants into two different categories (Miles and Huberman, 1994), which are entrepreneurs and supporting actors. Supporting actors are also further categorized into different clusters based on their roles. For instance, incubation, financial institutions, public organisations, etc. Similarly, entrepreneurs are differentiated based on their tenure; nascent, novice and serial.

At this stage, it is easier to explore relationships (Strauss and Corbin, 1990; Bryman and Bell, 2015), contrast data and make comparisons between them (Miles and Huberman, 1994). After highlighting the similarities and differences between the codes and themes, further partitioning of codes is necessary to denote those variables that do not relate fully to the initially identified codes/themes (ibid.). These steps were repeated as the data was collected until data saturation was recognized. Then, the data is linked to theory to come up with a more holistic view of the findings.

4.4.3.3 Quality Criteria

Interpretivist qualitative research has different criteria that are used to ascertain the trustworthiness of the research. The works of Guba and Lincoln (1985; 1986; 1989) seem to be highly influential in this area (Schwandt, 2007). In 1986, the researchers offered three judging criteria for success that are credibility, transferability and confirmability and dependability (Guba and Lincoln, 1986). The first criterion can be ensured in several ways. Firstly, they highlight the need for representativeness. Considering that interpretivism assumes multiple realities, it is hence a must to test their findings among different groups (Krefting, 1991). In this study, two general groups were first indicated (entrepreneurs and supporting actors). After that, these were further categorised into more detailed categories. Entrepreneurs were divided into three groups; nascent, novice and serial, whereas supporting actors were put in five different categories. Lincoln and Guba (1986) also explain the importance of peer examination from colleagues that have experience in qualitative research to ensure rigorous

findings. Such conversations highlight negative cases and lead to deeper reflexive analysis (ibid.). In this study, conversations with experienced researchers and research supervisors supported the latter criterion. Miles and Huberman (1984) suggest that credibility can be enhanced by having experienced researchers with good investigative skills. They explained that the researcher must have interviewing skills prior to the data collection process. This can be achieved through mock or pilot interviews, for instance, or other trainings. Here, we made a number of mock interviews with entrepreneurs to examine the extent of the participant's understanding of the questions and raised notions. Moreover, pilot interviews were made in the beginning of the study that led to enhancing/changing some questions for faster/easier understanding from the participant's side. Other techniques used for ensuring the credibility of interpretations include making contrasts and comparisons, analysing opposing explanations and weighing the evidence (Lincoln and Guba, 1986; Miles and Huberman, 1984; Krefting, 1991).

Transferability is ensured by presenting high descriptions of the studied context (specifically in section 5.2) allowing readers to assess the extent in which the represented results can be applied to other contexts (Schwandt, 2007). Moreover, as explained earlier, the chosen participants are categorized in two groups: entrepreneurs and supporting actors. The participants were chosen in a way that would guarantee the highest representation of the population specifically that the interviewed entrepreneurs had different backgrounds and levels of experiences. They were divided in three groups; nascent, novice and serial. Moreover, the interviewed supporting actors represented the majority of support structures and organizations available in the country, namely incubation, financial institutions, public organisations, etc. Additionally, the chosen interviewees represented both genders, age groups and various lengths of entrepreneurial experiences. Thus, the chosen sample is considered to be representative of the population as a whole.

For dependability and confirmability, researchers must ensure rigorous audits of the data, which means that the same findings emerge from the results whenever investigated (Lincoln and Guba, 2007). This has been ensured by recording all the interviews, transcribing them, keeping several copies of the transcriptions, and saving the files to NVivo for easier access and analysis of the data and future checks. Moreover, discussions and checks from the supervisory team confirmed the findings, thus ensuring the rigorousness of the data. Lincoln and Guba (1986) present a list of categories of records that could aid in enhancing the dependability and confirmability of the interpretation. These include, "raw data" in the form of field notes and audio recordings, "data reduction and analysis products", for instance, summaries of findings, condensed notes, "data reconstruction" as means of highlighting codes and themes from the findings (Krefting, 1991). Additionally, after transcribing and compiling the findings,

a report presenting the key findings in an accessible language was sent to the participants, which ensured the confirmability of the findings.

4.5 Ethical Considerations

All of the researcher's choices regarding means in which the research is conducted reflect his/her own values (Saunders et al., 2013). Heron (1996) suggests that it is essential to provide participants with a written letter stating the researcher's values, the use of the research, and other ethical considerations including privacy. This helps participants in identifying the researcher's needs, which increases information sharing from the participant's side. Hence, the participants are presented with such a document prior to the interviews. This assures that we (the supervisory team and the researcher) are the only ones with access to the information provided during the interviews. The document stresses that (i) the collected data is for the sole use of this research and (ii) the anonymity and confidentiality of the participants and interviews. As suggested by Heron (1996), the document also includes the purpose of the interview.

This research is made for the University of Southampton. Accordingly, we must submit an application committing to the rules of ethics based on the University's ethical codes. Before the start of the interviews, the participants are presented with a consent form stating all their rights as well as my ethical obligations during and after the research is conducted. If the participants are still willing to take part in the interviews, they must sign the consent form prior to the start. Otherwise, we would not have been able to undertake any further action.

4.6 Conclusions

In order to answer the three research questions presented in section 4.2, this study adopts an interpretive research philosophy with subjective ontological stance depending on the views and perceptions of social actors, which mainly include entrepreneurs and supporting actors in the Lebanese EE. To grasp their views and experiences, a qualitative exploratory study is carried out. Where we took part in the data collection process through a value-laden axiological assumption. These assumptions underpinning the qualitative research design dictate the chosen methods for data collection. Semi-structured interviews with forty-three entrepreneurs and supporting actors are adopted. Drawing on the applied theoretical framework, the components of structural, relational and cognitive capitals are explored in the

Lebanese EE context and analysed through an iterative thematic analysis procedure during and after data collection. Credibility, transferability and confirmability and dependability have been addressed as quality criteria in this study for elevating its trustworthiness (Guba and Lincoln, 1986).

5 | Findings and Discussions

5.1 Introduction

This study focuses on the dynamics of social capital in building, developing and sustaining EEs, specifically in developing countries with limited resources. Such contexts, which are referred to as arid ecosystems by Spigel and Harrison (2017) lack basic entrepreneurial resources like venture capitalists, seed funding, and public support for technology scale-ups. Such findings are supported in the Lebanese case as shown in this chapter. Prior to examining the role of social capital along with its enabling and constraining elements, an appreciation of the key characteristics of the studied context along with the available support and supporting actors is presented in section 5.2 highlighting the high appreciation of social capital in the ecosystem. This leads to the discussion of key elements of social capital in an ecosystem bound by limited resources, yet high in social capital as opposed to the existing EE frameworks that focus on high-functioning and highly developed EEs in developed countries (e.g. Isenberg (2011) and Spigel (2015)) in section 5.3. Findings here indicate a high appreciation of international social capital when facing local challenges. The case of Lebanon enabled us to grasp a wide understanding of social capital due to the density of the latter where it acts as a key driver of the ecosystem replacing many of its limited local resources namely governmental support, infrastructure and various resources. Social capital can also be seen as an insurance model at times where individuals can access several benefits through their established networks of ties when in need for advice or support. However, due to the local socio-political challenges like corruption, sectarianism, etc., entrepreneurs choose a shortcut with less challenges and more valuable benefits; they make use of their personal and formal international linkages. The density of international social capital primarily portrayed through the vast diaspora networks necessitates the presentation of the local and international social capital separately. Treating international social capital as an independent entity is one of the contributions of this study, which presents an understanding of means in which international social capital is generated, deployed and maintained that is generalizable to similar contexts

in developing regions bound by limited resources. Policy-makers in such contexts could then nurture international social capital leading to the emergence, development and sustainment of a strong EE. Moreover, both local and international social capitals are differentiated across the trajectory of the EE in section 5.4 highlighting the key elements that are present and/or missing during both stages and projecting the needed elements for sustaining the growth of similar EEs bound by scarce resources.

This chapter presents the findings drawn from 43 interviews conducted with entrepreneurs and supporting actors of the ecosystem such as investors, venture capitalists, government figures, incubators, accelerators, etc. A number of concepts were investigated as they emerged from the findings (refer to figure 4.1). These were categorized into different themes (e.g. key characteristics of EEs in a developing country, need for international linkages, and challenges of international linkages) and four broad dimensions. These dimensions are the following; elements of an EE in a developing country, local social capital, international social capital, social capital at the birth stage of EE and social capital at the growth stage of EE. These themes are analysed throughout the chapter that is structured according to the three following research questions:

RQ1: To what extent do the key characteristics and elements of EE in developing countries such as Lebanon align or diverge from an ideal understanding of an EE as presented by current literature?

RQ2: What is the role of interconnectedness among actors in building and sustaining an EE? How is social capital generated and deployed in developing such EE?

RQ3: Are there any differences to the way in which social capital is utilised in birth and growth stages of EE?

This chapter continues as follows. Section 5.2 answers the first research question, section 5.3 answers the second research question and section 5.4 answers the third and final research question. The final section concludes with the major findings of the study.

5.2 Characteristics of the Lebanese EE and the EE Conceptualisation

Prior to understanding the role of social capital in building interconnectedness as a catalyst for an EE as put forward in the research questions, it is important to understand the context of the study. This section answers the first research question ‘To what extent do the key characteristics and elements of EE in developing countries such as Lebanon align or diverge

from an ideal understanding of an EE as presented by current literature? 'by explaining the key characteristics and elements of the Lebanese ecosystem, important roles played by supporting actors, opportunities and benefits of working from within the ecosystem and the limitations and possible enhancements that would allow for better and faster growth.

The analysis related to the first research question highlights the high significance of local and international social capital on the one hand and the inequality among elements of EEs in the current existing literature. Findings of this study show that elements and attributes of EEs as suggested by researchers like Isenberg (2011), Spigel (2015) and Brown and Mason (2017) do not account for EEs in developing countries bound by limited resources. For that, the analysis puts forward elements like policy and markets as key for the emergence and development of such EEs, whilst other elements are less significant, yet support the growth of the ecosystem. Moreover, it is inferred that due to the high concentration on local and international social capital, the EE is socially configured, where less attention is given to the cultural and material attributes. Even though the financial aspect is key, its influence is crucial for the emergence of the EE, entrepreneurial networks and social capital are more significant for the development of the EE, as shown in the analysis of the findings along this chapter. The interpretation here looks at the elements of policy and markets as seeds and other elements like financial capital, support, human capital and culture as fertilizers of the EE, where entrepreneurship springs out of the combination of these elements organically. However, it is important to distinguish among the weights of these elements; although the fertilizers play a role in the EE, the seeds are a prerequisite. This interpretation highlights the significant use of the "eco" component in "ecosystems" as the few planted seeds lead to an organic development of the EE making it a self-governing, self-organising and self-sustaining ecosystem exactly as is initially inferred from its name.

This part of the chapter continues as follows. After presenting the findings related to the characteristics and the offered support and supporting actors in Lebanon in section 5.2.1, section 5.2.2 links these findings back to the literature and highlights the main elements of EEs in developing countries focusing on two key EE frameworks by Isenberg (2011) and Spigel (2015) to answer the first research question.

5.2.1 Characteristics and Offered Support in the Lebanese EE

Participants have highlighted a number of characteristics that gave rise to an ecosystem of entrepreneurship in Lebanon. These include the large Lebanese diaspora around the world, high brain drain and unemployment. Moreover, one interesting dimension about Lebanon is that although it is limited in resources specifically in terms of entrepreneurial experience and

education along with the limited governmental support and infrastructure that is repeatedly mentioned by participants, the ecosystem is still growing. These limited resources are highlighted in this section and linked back to the need for and high density of international social capital in the Lebanese ecosystem. Finally, other factors like relatively cheap workforce and availability of talents and funds are also presented as key characteristics of Lebanon.

The diaspora plays an important role in bridging the gap between Lebanon and the world in terms of resources and expertise. Connections with Lebanese living abroad introduces entrepreneurs to knowledge and resources not accessible in the country. This is linked to an important finding that emanated from this study, which is international social capital. Moreover, due to the increase in brain drain, the government and other institutions have created initiatives to (i) bring back talent and (ii) establish a proper ecosystem as an attempt to increase employment and build a knowledge economy. The following subsections describe these characteristics that nurture entrepreneurship in the country.

5.2.1.1 Lebanese Diaspora and Brain Drain

Lebanon's population is almost six million (worldometers, 2018) with 1 in 4 being a refugee (UNHCR, 2015). However, more than twofold of the local Lebanese population reside outside the country creating a large diaspora worldwide. Part of the reasons why the ecosystem in Lebanon is initiated is to bring back the Lebanese diaspora to the country and limit the brain drain (A1.1). This strategy acts as an attempt to strengthen return migration to the country. The government had an important role to play in attempting to bring back those intellectual Lebanese that left the country for job opportunities elsewhere or that were originally born and raised outside Lebanon. The Chamber of Commerce started a project called Med Generation (short for Mediterranean), which mobilises the diaspora for the development of the Mediterranean (Med Generation, 2017). This project is also run by other countries like Jordan and Palestine and was adopted by the Lebanese government to limit the brain drain and strengthen the economy. One of the interviewed entrepreneurs came back to the country through this program (A1.2).

Almost half of the interviewed entrepreneurs were either residing outside Lebanon before starting their start-up, or between Lebanon and another country. The fact that many of the start-ups are created by Lebanese who lived part or most of their lives outside Lebanon adds to the uniqueness of the ecosystem, as these entrepreneurs have a lot more experience and rich backgrounds than others who did not travel (Rose, 1969). These entrepreneurs adopt foreign ideas and apply them in the country with a twist that fits with the Lebanese culture and needs. For example, one of the interviewees started his start-up only after traveling and

being introduced to carpooling (A1.3). Another entrepreneur commented on such business models that are ‘Arabized’ highlighting that the success of these is needed for enhancing the ecosystem, attracting more people and investors and gaining more support (A1.4). The latter interviewee explained his theory by referring to a recent success story of a start-up that was incorporated and acquired by Amazon. Table 5.1 shows the participant’s quotes highlighting the pros and cons of the Lebanese diaspora and brain drain.

Characteristic	Quotes
Lebanese Diaspora and Brain Drain	A1.1 <i>“In Lebanon, we have around 20,000 graduates each year and only 3,500 available jobs. It makes sense why everyone is leaving the country. This is why Bank Du Liban (BDL) has released the circular 331, which places 500 million dollars in the hands of all investors and financial institutions to invest in start-ups.”</i> (Int. 1, Novice Entrepreneur, High-Tech)
	A1.2 <i>“I actually came back to Lebanon from a government initiative aimed at the Lebanese diaspora in Europe. It was about 2 years ago and through the chamber of commerce. They were reaching out to Lebanese entrepreneurs working in Europe aiming to bridge ties between them and Lebanese entrepreneurs in Beirut. I left Berlin to visit Beirut, met a few start-ups. This is how I discovered the ecosystem and decided to stay here.”</i> (Int. 6, Serial Entrepreneur, e-commerce)
	A1.3 <i>“I have visited every country I could have imagined and it was all with ease by metro, train, economy flights, etc. Then I have travelled across Europe through carpooling. When I came back to Lebanon it was very basic so I wanted to do something about it.”</i> (Int. 9, Novice Entrepreneur, Automobile)
	A1.4 <i>“Souq.com existed recently and was bought by Amazon. This is an example of how something this big would contribute to the ecosystem as a whole. It would definitely attract more investors, top VCs in the world, it might also contribute in reshaping the legal framework. The government might also audit more, increase the internet connection, etc.”</i> (Int. 7, Serial Entrepreneur, Marketing)
	A1.5 <i>“We work closely with LebNet and Silicon Valley, and this is how we get our start-ups to Silicon Valley.”</i> (Int. 12, Accelerator)
	A1.6 <i>“We got connected to LebNet, which in turn helped us participate with Black Box that gets start-ups from around the world to take part in an accelerator in Silicon Valley to give them the Silicon Valley experience.”</i> (Int. 32, Serial Entrepreneur, Computer Engineering)
	A1.7 <i>“We have an association started in California connecting the Lebanese abroad for development. These people still kept connections with their previous universities in Lebanon. We also have all those successful businessmen having Lebanese origins and still for some reason remember their country and come back to it or support it one way or another. The diaspora supports the ecosystem extensively especially from those communities in Australia, Canada, the US. It is in our multiplicity in culture that this ecosystem is unique.”</i> (Int. 35, Financial Institution)

Table 5.1: Lebanese Diaspora and Brain Drain

Return migration is one concept that is lightly highlighted by the findings of this study. It

is understood by few entrepreneurs that they came back to the country to resettle after having lived for a few years outside. Another entrepreneur has explained that he "remigrated" outside the country, highlighting another concept of remigration which directly translates to individuals that decide to migrate a second time after moving back to their homelands for a specific time period (Gmelch, 1980). The latter entrepreneur explained that the country is suffocating, and thus incapable of offering the needed support (A5.5). Circular migration, which refers to the frequent movement between two or more countries (ibid.), was also highlighted by one of the interviewees as he constantly travels between Beirut and Dubai for operating his start-up. Even though return migration can lead to negative influences on the society at times (Tuccio and Wahba, 2018), the impacts of both return and circular migration, as understood by the findings of this study, have been a positive one on the Lebanese EE. Entrepreneurs have employed the knowledge and expertise they gained in different countries in the Lebanese EE. They have also helped other entrepreneurs in the ecosystem by transmitting their knowledge and resources when possible.

on the other hand, migration and diaspora has proved to offer long lasting benefits to local entrepreneurs and the EE through the establishment of Lebanese associations like LebNet in the U.S (A1.5, A1.7), which connects entrepreneurs to American companies and Silicon Valley. Other benefits could also relate to the increase in remittances as explained in section 5.3.1.1, where such an increase from immigrants foster entrepreneurship (Tabar, 2010). Further strategies should be put in place by the government in order to foster return migration or increased support specifically in the form of remittances and philanthropic projects by the diaspora (Battistella, 2018).

The Lebanese diaspora is helping in several ways. Lebanese associations are now established abroad in, for instance, the United States, which is encouraging entrepreneurs residing in Lebanon to (i) build connections with them and (ii) get support where applicable. For instance, LebNet is an association for technology-oriented Lebanese professionals living in the US (LebNet, 2017). They have offices in Silicon Valley and have connections with Lebanese entrepreneurs in Lebanon. Accelerators are partnering with LebNet to connect entrepreneurs to Silicon Valley (A1.5). One entrepreneur explained how his start-up went to Silicon Valley because of the connection they had with LebNet (A1.6). One investment banker, on the other hand, assures the quality of benefits gained from such associations to develop the ecosystem as a whole (A1.7). This demonstrates the importance of the utility of international connections and multiple ties that are embedded in Lebanese society and culture. Moreover, and based on the discussions by the interviewees, the benefits of 'important' international and diaspora networks are not transient, rather long-lasting. Nevertheless, transient benefits could always be a byproduct of international networks, especially if these networks were fragile,

established only for one purpose and then severed when they have delivered what is needed, as explained further in section 5.3.2.5.

The Lebanese diaspora and brain drain are a direct facilitator of international social capital as is shown here and are further explained in section 5.3.2. The following section describes the indirect positive influence of unemployment in relations to the Lebanese EE.

5.2.1.2 Unemployment

Unemployment is seen as a facilitator of the Lebanese EE. As shown earlier (A1.1), jobs are not widely available, which limits the graduates, in many cases, to two options only; either leaving the country or as in the case of the interviewed entrepreneurs, finding an alternative innovative endeavour backed by the ecosystem. Table 5.2 highlights the direct and indirect impacts of unemployment on entrepreneurs and the Lebanese EE.

High unemployment pushed the citizens of Lebanon to be more innovative as shown by one entrepreneur (A2.1). Nevertheless, few participants showed lack of knowledge to what entrepreneurship really means. They expressed their motivation to solving societal problems and filling needs. This creates a culture of entrepreneurship, probably without entrepreneurs knowing that it is classified as so (A2.2). In other words, they could be either indirectly contributing to the culture of entrepreneurship or negatively influencing it through their lack of knowledge. Either cases show the increased participation in the EE due to the limited available jobs in the country. On the other hand, this also indicates that the nature of entrepreneurial activity is problem-driven rather than opportunity-induced. This is an important characteristic of the Lebanese ecosystem and similar EEs in developing countries. On the other hand, supporting actors in the ecosystem implement many projects and provide funds for start-ups merely to decrease the problem of unemployment. These organisations are aware of the high unemployment rates in the country and for that, they measure the effectiveness of projects or start-ups and SMEs in terms of the number of jobs that will be created like one fund manager explained (A2.3). Another investment banker explained that a good number of investors look at the employment prospect when studying the possibility of funding entrepreneurs (A2.4). This notion is also highlighted in section 5.2.1.6 when explaining about the support offered by supporting organisations and in section 5.3.1.1 as one socio-economic factor influencing the configuration of structural capital.

5.2.1.3 Lack of Entrepreneurial Experience, Education Base and Expertise

Findings show that the lack of entrepreneurial experience, education base and expertise also contribute to the lack of resources in the country. Table 5.3 highlights these and elaborates

Characteristic	Quotes
Unemployments	A2.1 <i>“Having very limited jobs in Lebanon pushed people to making their own businesses and start-ups because they have a lot of energy and ideas that can be put in practice and actually have an influence in the market and other people’s lives.”</i> (Int. 8, Nascent Entrepreneur, Medicine)
	A2.2 <i>“I still do not understand until now what an entrepreneur or entrepreneurship is. For me, I believe I saw a problem that I could solve, I did not just talk about it, I worked hard to fix it. This is probably what the mindset of an entrepreneur should be.”</i> (Int. 9, Novice Entrepreneur, Automobile)
	A2.3 <i>“We care a lot about job creation and women empowerment. We encourage women entrepreneurs and we want job creation. Whenever a start-up comes and applies for funds, we first ask them about the number of jobs they are creating over the coming 18 months. This is very important because in the end, this fund that we have is to boost the Lebanese economy in every possible way.”</i> (Int. 5, Investment Officer)
	A2.4 <i>Some investors focus on two main criteria to invest; the impact of the project and the employment prospect.”</i> (Int. 11, Investment Banker)

Table 5.2: Unemployment

on a couple limiting factors adding to the lack of a strong education base; specifically limited funding and traditional mindsets in the education sector. The first quote explains that the majority of university students do not acquire the needed entrepreneurial knowledge prior to entering the market (A3.1). This is closely related to the limited education base in universities, which is in turn associated with the limited funding they receive to enhance their offerings (A3.4). Another reason is the traditional academic mindset that mostly advocates scientific breakthroughs and neglects their student’s needs (A3.5).

Findings	Quotes
Lack of Entrepreneurial Experience	A3.1 <i>“Probably over 80-90% of university students go through universities never having any entrepreneurial experience. So, even though there are some things that are starting, there is a huge room for improvement.”</i> (Int. 19, Local Accelerator)
Lack of Education Base	A3.2 <i>“You would be surprised when we go to job fairs at universities trying to attract students join us, they say that they do not have the money to do so. They are not familiar with how start-ups work.”</i> (Int. 14, International Accelerator)
	A3.3 <i>“What worries me is the education. It is so evident that we should have coding classes in schools and universities and this needs laws. In a country where everything is complicated, will ministers put such laws in place? We need the will of at least the PM to do that.”</i> (Int. 26, Former Minister)

Findings	Quotes
Limited Funding	A3.4 <i>“Their main challenge is funding as they receive very limited funding and they are unable to develop these projects. Sometimes, some of them are limited on facilities; they do not have well-established labs.”</i> (Int. 38, International Accelerator)
Traditional Mind-set	A3.5 <i>The most important part for them is the science breakthroughs. They do not look at the commercial potential. They do not understand the ecosystem and they do not know how to do business. They have always been researchers in the labs. You have to show them the potential and explain how you will offer support and that you will be alongside them.”</i> (Int. 38, International Accelerator) A3.6 <i>“Their mentality must be tweaked into a more commercial one.”</i> (Int. 37, International Accelerator)
Lack of Expertise	A3.7 <i>“It is only a very small group of people in the country that have experience, interest and availability to be high quality mentors to start-ups. It is very challenging, There are very few people in the country who have experience building high-growth enterprises and many of those people who have that experience are very busy and so it is not easy for them to provide that kind of mentorship and support.”</i> (Int. 19, Local Accelerator)
Ongoing Enhancements	A3.8 <i>“I think there are now more institutions here solving this problem by guiding entrepreneurs/IT personnel and offering them courses especially in coding. I believe that in the coming year, we will start witnessing a good increase in knowledge and expertise in the market.”</i> (Int. 34, Novice Entrepreneur, Furniture) A3.9 <i>“We were invited to a meeting with the PM two weeks ago to discuss things that need to be put to enhance the ecosystem. This shows how the government is now more interested in investing in this ecosystem and this is a very positive thing to us. This top down approach always helps for higher validation and support. People on top can do things much faster. We could always do okay without the government, but with the government’s help we can do much better.”</i> (Int. 32, Serial Entrepreneur, Computer Engineering)

Table 5.3: Lack of Entrepreneurial Experience, Education and Expertise; Representative Quotes

The lack of expertise has also been found as a reason for the poor entrepreneurial base in the country, where those who have the experience are mostly inaccessible (A3.7). For that, international linkages replace local ones for entrepreneurs seeking expertise.

Chahine and Mowafi (2015) explained that entrepreneurship in Lebanon has been on the rise ever since the Cedar revolution in 2005. The World Economic Forum (2011), on the other hand, indicated that higher rates of entrepreneurship were witnessed in 2011 after the start of revolutions in the Middle East. This is because entrepreneurs and regular young individuals were highly motivated to cultivate change. However, such entrepreneurial endeavours were lacking the needed entrepreneurial support, which led many of such ventures to fail or relocate outside the country. The interviewed former minister explained the need for an interference from the prime minister to assist in solving the aforementioned drawbacks (A3.3).

Fortunately, during the time of the interviews, the prime minister asked for a meeting with few prominent entrepreneurs from the Lebanese entrepreneurial scene along with supporting actors like investors to discuss their needs and the trajectory of the ecosystem. Nevertheless, results from this meeting are still not clear. However, entrepreneurs are hopeful that with the awareness of their needs from the prime minister, they expect to have better environment for entrepreneurship in the country (A3.9). Consequently, even though the government's influence is still not fully positive as is shown throughout this chapter, attempts to enhance the entrepreneurial scene are taking place. In a country with limited resources and high unemployment and brain drain, officials seek growth through entrepreneurship. Nevertheless, this is not possible had it not been to international connections providing support that is lacking in Lebanon starting with the factors mentioned in this section (entrepreneurial experience, education and specialised expertise). Having most of the population residing outside the country has helped the local ecosystem enormously by bringing in international funds, specialised expertise, knowledge, mentorship, international projects, etc. as is explained further in section 5.3.2. Lebanon's case proves that international social capital is required for establishing and growing EEs in regions with limited resources. Consequently, in such regions, entrepreneurial networks are characterised by high dependency on international networks. Implications of this are discussed in the ensuing sections of the chapter.

5.2.1.4 Positive Cultural Characteristics

Participants have highlighted a number of characteristics the Lebanese people have that are positively associated with their entrepreneurial journeys. For them, these characteristics aid in overcoming or finding a way around challenges in the country like sectarianism, corruption and other obstacles.

Characteristics	Quotes
Resilience	A4.1 <i>"The Lebanese have a powerful characteristic that is adaptability. They can work under stress and under war. We have a strong culture here that allows us to stay strong regardless the challenges. They are persistent and resilient."</i> (Int. 34, Novice Entrepreneur, Furniture)
	A4.2 <i>"They are resilient. They can continue even if so many things are coming their way. They get up and continue. "</i> (Int. 37, International Accelerator)
	A4.3 <i>"There are many nice things happening in the ecosystem now but it is not easy. However, we are used to it. Nothing comes easy for us Lebanese, and for that we always know how to work through it and actually stay."</i> (Int. 32, Serial Entrepreneur, Computer Engineering)
Sense of Community	A4.4 <i>"We do not get anything in return. Our return is when we hear more success stories. "</i> (Int. 40, Serial Entrepreneur, Media)

Characteristics	Quotes
Strong Social Capital	A4.5 <i>“I am doing what I am doing because I am passionate and I have a mission to benefit my community”</i> (Int. 40, Serial Entrepreneur, Media)
	A4.6 <i>“You see people very eager to help without expecting anything in return. The atmosphere in the ecosystem is very positive.”</i> (Int. 31, Serial Entrepreneur, Online Solutions)
	A4.7 <i>“Social capital is something in which we Lebanese are rich in, maybe one of the richest component we have in the EE is the international expert community tied to the ecosystem. This network is priceless and we are tapping on it as much as we can.”</i> (Int. 26, Former Minister)
	A4.8 <i>“The diaspora is an added value. We are a small country and we like to connect. We are historically entrepreneurs. We have been living on a sustainability mode for the last 2000 years. All empires passed from here. We always found alternatives to sustain ourselves. Fortunately, our diaspora is always in contact with the country. They have the nostalgia that pushes them to support Lebanon. This is what differentiates our diaspora.”</i> (Int. 38, International Accelerator)

Table 5.4: Positive Cultural Characteristics; Representative Quotes

Participants identified resilience, sense of community and strong social capital as the main positive traits the people of Lebanon have. They agreed that these develop due to the lack of trust in the government (also investigated in section 5.3.1.2), scarce resources and the high diaspora. The Lebanese learn to find creative solutions to problems considering that they have been facing many of them. This problem-solving mindset also forms the basis of their approach to entrepreneurship, as discussed previously. They are resilient because they learned how to overcome tough political instabilities, wars and security breaches (A4.1). They know how to apply such resilience in their daily lives (A4.2; A4.3). Moreover, they depend on the diaspora and social capital to strengthen their positions. On the other hand, when asked about reciprocity and commitment, the majority of the participants explained that reciprocity in benefits is not always expected as people want to give to benefit the community. Moreover, they are committed to benefiting the community. These are explained in more detail in section 5.3.1.2. For example, one of the interviewees established an agency that offers a networking platform for entrepreneurs and connects them to experts in several domains both in Lebanon and outside of it. When asked about what he gets in return, the participant explained that the services he offers are free of charge and does not expect anything in return (A4.4; A4.5). This might be due to the high need for improving the country, as one of the entrepreneurs explained. People are motivated to be the change that the country needs considering that the government has failed in that:

A4.9 *“There is a real need for innovation because there are a lot of things that are not functioning right and a lot of people are trying to fix them through technology while overseas*

there are not these problems. ”(Int. 33, Novice Entrepreneur, Automobile)

Furthermore, the people in Lebanon proved to have strong social capital both locally and internationally. Considering the limited resources they get from the government, the Lebanese are used to gaining these resources from the people they know, which implies importance of social capital. For that, they work on building a strong network of ties and they make use of the diaspora connections they have abroad (A4.8). The aforementioned cultural characteristics also highlight the importance of international social capital in Lebanon. The Lebanese are used to finding creative solutions to the obstacles they face in which they cannot depend on the government to solve. They end up making use of their social capital both inside, and outside the country and at many times through their diaspora links. The need for international social capital is further explained in section 5.3.2.2.

5.2.1.5 Availability of Funds and Cheap Workforce

The final two key characteristics of the Lebanese EE discussed here are the availability of funds through the circular 331, which encourages banks and investors to invest in such start-ups where 70% of the risks are shared with the Central Bank. Additionally, the relatively cheaper workforce in comparison to the regional and international tech hubs is also discussed (e.g. Dubai and Western EEs).

Availability of Funds and Cheap Workforce	Quotes
Availability of Funds and Cheap Workforce	A5.1 “ <i>I took six or seven start-ups that were graduating from an accelerator called Seegnce at the time, took them to the governor of the central bank and I told him that these are the future of Lebanon. We discussed how this sector needed a lot of money and that a lot of it might be lost, however, the small part that would be invested in the right place would make up for the losses and actually turn out to be very profitable. He was convinced immediately and decided to introduce the circular 331. At the time, we were talking about \$400 million; today we are close to \$600 million. That was a corner stone for the ecosystem to have the minimal necessities to survive.</i> ” (Int. 26, Former Minister)
	A5.2 “ <i>However, that was not enough, so we created an accelerator with the Central Bank, boot camp, start-up mega funds, the Tech Hub with the British Embassy to help the ecosystem grow faster, learn the basics of what it should know and we started tackling as much as we could the places that were still limited. We are now introducing a network of angel investors and I am very optimistic about where things are going.</i> ”(Int. 26, Former Minister)
	A5.3 “ <i>There are more money than there are start-ups and ideas.</i> ”(Int. 34, Novice Entrepreneur, Furniture)

Availability of Funds and Cheap Workforce	Quotes
	A5.4 <i>“I think Lebanon is a country with good talents and anyone who would like to enter the MENA region could go through Lebanon. For example, you can have a front office in Dubai and a back office in Lebanon, like many do mainly because of its relatively cheaper workforce and their expertise.”</i> (Int. 34, Novice Entrepreneur, Furniture)
	A5.5 <i>“We are capable people, the ecosystem encompasses a very good human element. The problem is this human element is being worked within a context that is suffocating.”</i> (Int. 39, Serial Entrepreneur, Computer Vision)

Table 5.5: Availability of Funds and Cheap Workforce; Representative Quotes

Starting with the circular, the interview with the former minister clarifies means that paved the way for the release of the circular. The minister explains the important role he played along with that of the governor of the Central Bank in the first quote in table 5.5 (A5.1). The minister then discussed other means of supporting the EE highlighting the initiative with the British Ambassador in the country that led to the establishment of a British-Lebanese accelerator (A5.2). They also started introducing boot camps, mega funds, and are in the process of creating a network of angel investors. However, it is important to highlight that this financial support is the only material support offered to entrepreneurs from a governmental entity. Other forms of support and infrastructure are either generated through non-governmental supporting agencies or accessed internationally.

The interviewed entrepreneurs agree that the money is available for them. Supporting actors approve this by discussing the high availability of money in the banks. One entrepreneur even explains that the availability of money is higher than that of ideas. This is because, for a country as small as Lebanon, the invested money is considered to be massive (A5.3). However, money is not always easily accessible. Moreover, this did not decrease the problem of risk averseness of investors, at first, which is discussed in section 5.3.1.1. As for the cheaper workforce, one of the entrepreneurs explained how several start-ups and businesses establish back offices in Lebanon due to its relatively cheaper workforce (A5.4). The workforce is available and talented; however, it is the limiting work conditions that sometimes lead workers to suffer (A5.5).

Although the context is limiting, the entrepreneurs look at the positive side of things; they have funds available and a relatively cheap workforce. They make use of their positive characteristics like resilience and sense of community (also examined in section 5.3.1.2) as well as international social capital to overcome obstacles along the way. Supporting actors also offer

a number of advantages that further motivate these entrepreneurs, all of which are explained next.

5.2.1.6 Supporting Actors and Offered Support

This section presents the main supporting actors in the Lebanese EE and the support they offer to entrepreneurs. The interviewed actors include investors, representatives from financial institutions, universities, research centres, incubators, accelerators, international development agencies, and CEOs of accelerators, mentors, coaches, consultants and a former minister. Table 5.6 highlights current supporting actors through their quotes. The roles of other actors like the previous minister, experts and research institutions are previously mentioned in section 5.2.1.3.

Supporting actors in the ecosystem highlighted the essential role played by the government in facilitating the growth of the ecosystem through the creation of the circular 331 by the Central Bank of Lebanon, as introduced in the preceding section as the only material support offered from a governmental entity. They, as well as entrepreneurs in later sections, stressed that the circular has prompted the establishment of several local funds and attracted international ones to the country. This has had a direct impact on the growth of the ecosystem in Lebanon through attracting start-ups to join and decreasing the traditional mindset of investors and entrepreneurs. It has also created a safe haven for entrepreneurs to come forward with their innovative ideas. With growth comes awareness. Actors explain that they have recognised more of the entrepreneurial needs in terms of funding, knowledge and resources. They have also called for further governmental participation. The Central Bank influenced other private banks to take part as well. It, however, has more work to do in terms of attracting more ministries to join (B1.8). Few participants believe that the circular is the main event that started the whole ecosystem in Lebanon (B1.9). We argue that it enhanced its visibility, as the EE was present prior to the circular.

As found in the literature in section 2.6, supporting actors like incubators, accelerators, funders and universities are available in the Lebanese EE, yet their support is not as expected. For instance, the majority of universities are still working on support programs to help their students get engaged in the start-up scene. Others are still trying to engage in the EE, which highlights their lack of experience and needed support (A3.2, A3.3). Other than the universities mentioned by the founder of one accelerator (B1.3), USJ actually initiated the first incubator in the country. However, its role in supporting the incubator in terms of research is inexistent. Hence, although it is thought to be as a main facilitator of the EE (as shown in section 2.6), it does not provide the needed research and educational support (B1.3).

One entrepreneur is trying to engage university students in the ecosystem by offering talks and workshops on the subject. As he explained, he is focusing on middle class universities that usually have less funding to create competitions or programs for entrepreneurship (B1.4). On the other hand, even though the banks and VCs are supported from the Central Bank to fund start-ups, they are still not providing the needed financial support specifically in the initial stages of start-ups. One entrepreneur distinguishes between the available funds in the ecosystem and explains that the majority of the ones available now were initiated after the circular 331 was out. In other words, the circular by BDL triggered more investors to join the ecosystem (B1.5). However, the CEO of one accelerator, on the other hand, explains that there are some missing funding stages that should be added to further support entrepreneurs (B1.6). The support offered in the EE is further explained and categorized in different categories in the following subsection as suggested by the interviewed supporting actors.

Supporting Actors	Quotes
Accelerators	B1.1 <i>“The UK Lebanon Tech Hub started by an initiative by the British Embassy and the Central Bank of Lebanon. Our chairperson is the former minister Nicolas Sehnaoui. Together, they decided to kick-start this new program. This program was supposed to end in March 2016. However, we continued because we got more funding from BDL and other companies.”</i> (Int. 14, International Accelerator)
Incubators	B1.2 <i>“Berytech has four pillars. First, we have the business support that contains competitions, incubation and everything relating to entrepreneurs. We have the funding pillar with two entities IM Capital that is funded from US Aid and Berytech Fund 2 from BDL to invest in start-ups and it is part of the circular. We also have the hosting part to rent offices for entrepreneurs and other companies. Finally, the community part includes all the public events we do for the people not only entrepreneurs, public trainings, networking, etc.”</i> (Int. 13, Local Incubator)
Universities	<p>B1.3 <i>“The universities are stepping into this game and are trying to do many things, yet we still expect them to do more. Some of them are already showing some good signs of potential success. Others are still far away from getting there. I would see AUB, for instance, playing a major role because they have five different centres for entrepreneurship. USEK did an entrepreneurship day and is now establishing a centre for entrepreneurship. LAU did a program with us called ACE, achieving creative entrepreneurs. USJ started Berytech, but it does not support the incubator in terms of research, for instance. The others are jumping on board but not all of them are fully there.”</i> (Int. 12, Local Accelerator)</p> <p>B1.4 <i>“I give several talks in Lebanon through the “Shift” universities to engage students in the entrepreneurial scenes. Our focus is on universities that are middle-class, as all the high-class universities already have their own entrepreneurial initiatives.”</i> (Int. 7, Serial Entrepreneur, Marketing)</p>

Supporting Actors	Quotes
Financers	<p>B1.5 “<i>Phoenician funds mainly invests in FinTech everything related to finance. If I have an app that splits the bill for me, this is a category that fits inside these funds. Leap ventures like AI start-ups. IM Capital does not do investments alone, it ensures and match, you get a lead investor who puts in the start-up 400K. IM Capital would then matches 50% of that 400K to get a total of 600K. B& Y are X entrepreneurs they already did an exit and they are very new here. Kafalat gives loans to start-ups, good loans. They make sure to give 90% of your ask with long grace periods. Note that before the circular, there were only two or three funds available, now we have a lot more that I lost count.</i>” (Int. 1, Novice Entrepreneur, High-Tech)</p> <p>B1.6 “<i>There are enough funds that are providing series A and series B funding, but there are much less that are providing seed funding, which is when they need to give 100-500K. There are a couple who are trying to do it, but the issue is that because they are VCs and they are institutional and they have banks behind them, their requirements to give an investment are a bit higher than they should be. They won’t invest in a start-up unless they are certain requirements met that potentially are more for series A requirement than for a seed funding. There is also a missing link at the pre-acceleration stage, meaning bridging the gap between those who have ideas and then coming to Speed. In that sense, there is only one player doing that today.</i>” (Int. 12, Local Accelerator)</p> <p>B1.7 “<i>Entrepreneurs think that they are always right. Go to England and try to get a project financed. I have spent some time in the Cambridge science park and found that to get money you have to argue and fight for it. It is a very competitive business. We gave 100 grants and because these were well-studied, 28 of them got subsequent risk financing. I find this a reasonable rate. We had also refused 86 application for grants. When you have resources you have to allocate them to what you think is the best and most creative. Our VC funds are not the most savvy in the world, you need experience and knowledge.</i>” (Int. 35, Investor)</p>
Government and Central Bank	<p>B1.8 “<i>BDL is more of a regulator, whereas the government secures the environment. Ministries like ministry of finance, telecom must be part of this ecosystem to ensure a better environment for entrepreneurs. They have to push for it to create more funds and other types of support, for example competitions among entrepreneurs to boost entrepreneurship even more. Then, ministries can choose the winning start-ups offering a win-win situation for both parties.</i>” (Int. 11, Investment Banker)</p> <p>B1.9 “<i>The ecosystem was built through the circular 331.</i>” (Int. 11, Investment Banker)</p>

Table 5.6: Supporting Actors; Representative Quotes

Support Offered

Table 5.7 categorizes the support offered by supporting organisations in five different categories; connecting with the diaspora, creating jobs, highlighting success stories, partnering with international networks, local developments and connecting with universities. Providing the needed day-to-day and long term counselling for start-ups is the product of all of the latter and is offered by the needed parties. Table 5.7 presents quotes from participants that

support the chosen categories of support by supporting actors.

Support Offered	Quotes
Connecting with the Diaspora	<p>B2.1 “We met with different experts in the Lebanese diaspora around the world (US, UK, Paris) to understand where we are strong at and what the areas/sectors are that we can strive in. We realised that FinTech, health sector and retail visualization are things we need to focus on in Lebanon. After that, we started funding and managing applied research projects that are part of the three sectors.”(Int. 37, International Accelerator)</p> <p>B2.2 “We went to London, Paris, Dubai and the US, we paid money to go to them we did not wait for them to come to us. We reached out to them and we paid them money for every time they contributed their time. We highly benefited from their knowledge and networks. The big issue among most is that they do not believe there is something serious happening in Lebanon because of miscommunication. The Lebanon they know is purely for meeting family members, they do not see it as a Tech hub for start-ups. When we started talking to them, they started changing their perception.” (Int. 38, International Accelerator)</p>
Creating Jobs	<p>B2.3 “We have created 500 direct and indirect jobs in two years over the different support programs that we offer.” (Int. 37, International Accelerator)</p> <p>B2.4 “We now have a project called Agrytech. It is funded by the Netherlands to invest in the agriculture sector in order to boost the industry in Lebanon, attract youth to work in this sector and decrease unemployment. We aim to create more jobs in every project we do and in investing in start-ups.” (Int. 13, Local Incubator)</p>
Highlighting Success Stories	<p>B2.5 “We get successful people to pitch about their success stories. We have around 90 speakers from different industries and 1,000 attendees.” (Int. 40, Serial Entrepreneur, Media)</p> <p>B2.6 “The fourth program we offered was a marketing and communications one for highlighting the success stories of Lebanon and put Lebanon on the Tech map. We wanted to change people’s perspective about Lebanon.” (Int. 37, International Accelerator)</p>
Partnering with International Networks	<p>B2.7 “We took some projects from the World Bank like the SE factory. We help them in generating reports by sending them the needed data. We also work with the EU on projects like WeHubs, a social network for women entrepreneurs.” (Int. 13, Local Incubator)</p> <p>B2.8 “In 2005, we started a program that would give loans for entrepreneurs with innovative ideas. The entrepreneurs must then give back the money in 7 years with 1 year grace period. The problem with that was when entrepreneurs did not have enough income to pay back the loan in the second year. For that, we created another program called Kafalat supported by the EU offering 3 years grace period for entrepreneurs.” (Int. 35, Investor)</p>
Local Development	<p>B2.9 “We have an outreach program to reach out to school students, university students, parents, etc. first for them to learn about us and second, to change their mentality. We did a number of competitions in collaboration with international companies. We had 42 public and private schools joining for all parts of Lebanon.” (Int. 37, International Accelerator)</p>

Support Offered	Quotes
	<p>B2.10 <i>“Our director was going to universities trying to talk to presidents to explain how much our accelerator is improving and the benefits it is offering for entrepreneurs and the ecosystem. The director thought that we really need universities to explain and teach entrepreneurship to students as it is very important for them to know that entrepreneurship exists before thinking about entrepreneurial ventures. The director was trying to convince universities to have such lectures for students. We are trying to fix this as much of possible. We are not waiting for people to knock on our door, we are doing the extra mile. We are the ones knocking on doors asking people to participate in helping and growing the ecosystem.”</i> (Int. 14, International Accelerator)</p>

Table 5.7: Support offered by supporting actors in the EE; Representative Quotes

All of the above-mentioned support eventually lead to a higher development of social capital. All of the interviewed supporting actors are aware of the importance of social capital in the entrepreneurial journey. For that, they manage to arrange a number of social capital development activities whether in their own institutions or through their connections. One recurring idea was the high importance of social capital, as one of the participants puts it:

B2.11 *” Social capital is the most important part of my work.”* (Int. 12, Local Accelerator)

To increase social capital, accelerators and incubators make sure to make as many events for entrepreneurs to widen their network of ties. One participant explained this further:

B2.12 *“We do a lot of events in which people network, meet each other, and conduct partnerships. For example, a few months ago, I was in contact with a company working on a project to connect entrepreneurs from different countries in one stage. I tried to gather our entrepreneurs and they got there’s and we decided that they could come here and work together. We gathered those entrepreneurs to discuss their business together. They were able to learn new things. Moreover, several of them even built partnerships. Another example is the events made by BDD that connects entrepreneurs together.”* (Int. 14, International Accelerator)

As for funding parties, they make sure to connect entrepreneurs to persons with the needed experience whenever they need it. Moreover, they also connect them to other investors to get more money. One interviewee supported this:

B2.13 *“Yes, when we want to give investments, we need to find a matching partner to co-fund the start-up. First, if we have someone in our network, whether it is a VC or an*

angel investor that is interested in these types of products and wants to invest, we definitely put the entrepreneur in touch with them to convince them like they convinced us. Second, we have strong connections with USAID, as we are a USAID program. The program has grants, technical assistance, etc. They could help in providing workshops, certifications, etc. We put the start-up in touch with USAID when needed. Moreover, if some of our start-ups are looking for advice, assistance in anything, if we can provide it internally, we do and if we can link them to other people than can help them we also do that.”(Int. 5, Investment Officer)

All the interviewed actors show high awareness of the need for social capital to establish, scale-up and incorporate start-ups. They highlight a number of tools they employ to increase the social capital of entrepreneurs, for instance, events, mentorship, workshops, Skype sessions with international talents, etc. This, along with testimonials from entrepreneurs in the following sections, prove the density of entrepreneurial networks in the Lebanese ecosystem. Actors argued that leveraging social capital is part of their daily routine. One of the crucial activities led by supporting organisations is their continuous attempts to connect with the diaspora and establish international partnerships, which increases the density of both international linkages and international social capital. The latter is continuously referred to by both entrepreneurs and supporting actors as an element at the backbone of their entrepreneurial journeys. International social capital is explored independently in section 5.3.2, yet it constantly underpin discussions in this chapter. In the next section, the elements of an EE in a limited resources developing country are examined through linking the aforementioned findings with the literature on EE frameworks focusing on those by Isenberg (2011), Spiegel (2015) and Brown and Mason (2017).

5.2.2 EE Conceptualisation: Elements of an EE in a Developing Country

This section takes the collected data a step further by generalizing the findings to theorize the elements of an EE in a developing country. The objectives of this section are threefold; (i) to explain the characteristics of the Lebanese EE in line with the elements of EEs in the literature, (ii) to investigate the characteristics emerging from the findings that are not part of the existing frameworks and (iii) to examine the extent in which these characteristics comply or diverge from the literature. Accordingly, the examination of the Lebanese context advances our understanding of the literature. The frameworks underpinning the analysis of this section are explained in section 2.3.2.

The analysis of the findings in this section places the *policy* element (specifically in terms of *financial support* from the government) as key for the emergence of EE and *markets* (specifi-

cally in terms of its *networks* attribute) as highly significant for the growth and sustainment of EE based on the framework by Isenberg (2011). The link among these elements and the trajectory of EE is further unpacked in section 5.4. Other elements were less significant, yet mostly replaced by local and international social capital (explained more in-depth in section 5.3). In other words, thinking about EEs as a fertile soil where entrepreneurship springs out of it, we can look at the elements of policy and markets as its seeds and other elements like financial capital, support, human capital and culture as fertilizers. Even though the fertilizers are crucial, the seeds are a prerequisite. A combination of these elements produce higher start-up participation and facilitate the trajectory of EE. Moreover, this section also highlights that the configuration of the EE in Lebanon is highly dependent on the social attributes rather than the material and cultural ones based on the distinction of EE attributes by Spigel (2015). However, even though the relative importance of elements and attributes in the Lebanese EE is not equal, this is not entirely detrimental for the functioning of the EE. These findings are further elaborated here.

The EE of Lebanon encompassed elements like policy, human capital, finance, culture, support and markets as described by Isenberg (2011). Nevertheless, these elements varied in their strength. For instance, each of the presented elements has a number of functions that did not necessarily appear as important or available. On the other hand, few elements are more significant at specific stages along the trajectory of EE. Starting with the elements of EEs by Isenberg (2011), **policy** is *equivocal*, unlike what the framework suggests. Moreover, attributes like *entrepreneurship strategy, urgency, crisis and challenge, regulatory framework incentives* are inexistent. Entrepreneurs continuously highlighted the limited and *unclear support* provided by the government. Conversely, clearer support is established through the circular 331, which is directly tailored towards entrepreneurship. This support, however, did not provide financial (or other) incentives related to *tax benefits, R&D, bankruptcy and labour* as Isenberg (2011) presented. Moreover, the circular is the only material support offered from a governmental entity to the ecosystem. Hence, policy is one of the elements of the EE, but with several missing factors. The circular proved highly significant in the establishment of the EE, which attracted start-ups and supporting organizations to the ecosystem. Thus, although many attributes of successful policy implementation were missing, the financial support provided through the government is highly significant for the birth stage of the EE, as explained in-depth in section 5.4.2.

Financial capital is limited specifically in terms of angel investments, loans, zero-stage venture capital, etc. Participants explained that the accessed funds were those provided through the governmental financial program or through personal funds. One factor that is negatively associated with financial capital is the traditional mindsets of investors (explained in-depth

in section 5.3.1.1), which is limiting the investments. This factor might only be present in developing countries as it is not apparent in Isenberg's elements of EEs nor in case studies of successful EEs in developed regions (e.g. Chattanooga (Motoyama et al., 2016); Phoenix, Arizona (Mack and Mayer, 2015); Waterloo, Ontario, and Calgary, Alberta (Spigel, 2015)). This, however, can be seen in similar developing countries (e.g. Saudi Arabia (Sindi, 2015); Egypt (Abdou and El Ebrashi, 2015; Chahine and Mowafi, 2015); and Morocco (Rossi and Kjeldsen, 2015)). Investors in Lebanon feared investing in start-ups at the initial stages of their lifecycle considering that start-ups do not have a robust plan for success. This increased the risk of failure. This mentality is altered as the EE grows with the higher participation rates and increased entrepreneurial experience. Few participants, on the other hand, highlighted that they depend on personal funds from their own savings or their families' to start their entrepreneurial journeys. The main reason for the latter is the often-bureaucratic nature of the financing process. Moreover, the economy in Lebanon and other developing countries with similar characteristics is almost never stable. Political, economic and social crises could take place anytime, which could explain the ways investors function. However, the somewhat high participation of entrepreneurs in the Lebanese EE shows that the latter party has indeed adapted to the mindsets of investors on one hand, and this mindset is positively changing with time.

More than that, considering that such ecosystems are still new to Lebanon and the region, the **culture** of entrepreneurship is yet to become stronger. *Success stories* are on the rise, *tolerance of risks and failure* is low, *international recognition* is still ongoing as well as *creativity* and the *social status of the entrepreneur*. Considering that developing countries tend to follow the footsteps of developed ones, many of the entrepreneurs try to Arabize famous mobile applications, websites or business models in order to make them appeal to local citizens. Regardless of whether these attempts are needed or not, creativity is often being hindered in the process. Few participants highlighted few challenges they faced from their family members and friends in terms of support, while the majority explained the easy process. Nevertheless, with higher awareness of the ecosystem and participation from entrepreneurs as the EE moves to its growth stage, society is now more open to tolerating risks, yet more acceptance is required to boost the culture of entrepreneurship.

Support in Lebanon is missing a few aspects. Entrepreneurs described a number of missing services like *accounting, legal and technical advisory*. Being limited on money, especially in their initial stages, start-ups may at many times face difficulties in hiring such private services. In terms of *infrastructure*, basic resources like those related to *energy and internet* were scarce. Electricity is not available all day to the public. Electricity cuts are so high daily that businesses and households are obliged to have their own electric generators, which are not

always affordable. Internet connections are slow, thus hampering and delaying interactions with international linkages. Nevertheless, positive cultural traits like high resilience, partly because the Lebanese people are used to obstacles along the way, and dense social capital, entrepreneurs showed that such factors only make them work harder to overcome them. Interviewees had the willingness to increase working hours to reach their goals.

Markets and Human Capital, as per Isenberg's (2011) classification, both have the human factor as their basis and are connected in few aspects. The latter encompassed the *Labour* factor, which lacked specialization in knowledge and skills. However, *serial entrepreneurship* is available in the country. Hence, entrepreneurs in Lebanon have the needed experience to transfer for nascent ones. On the other hand, *educational institutions* are reported to be developing their programs and participation in the EE to deliver the needed skills and knowledge to their students. Their role, however, requires more tailoring to fit the needs of the ecosystem. The connection between markets and human capital is apparent specifically when *entrepreneurial networks, diaspora networks, and multinational corporations* fill the gap in technical and specialised advisory. Networks play a crucial aspect in the trajectory of EE. After the government put the needed amount of money in the EE, these networks continue the process of developing the ecosystem, hence acting as the second crucial step after the government's financial support. Their significant roles are further explained in section 5.3. Participants access these networks to gain benefits that they often lack from supporting actors and the government. In other words, social capital often replaces the limited support, human capital and policy.

Accordingly, social capital is one missing element in Isenberg's framework of essential elements of EEs. This study argues that both local and international social capital are crucial for filling the gaps of the limited and/or missing elements of EEs in developing countries bound by scarce resources. Social capital, as is shown in the following sections as well as the findings, is an integral element in the development of the Lebanese ecosystem. Both local and international social capital are needed in both of the investigated stages of the ecosystem (refer to section 5.4), yet the growth of the ecosystem requires much higher international social capital. Entrepreneurial networks proved to be crucial for entrepreneurial knowledge, skills, specialised expertise, moving start-ups to global markets, etc. International social capital is one main component of successful EEs in developing countries.

On the other hand, limiting the elements of an EE to three main attributes as suggested by Spigel (2015), the material attributes (which are also linked to entrepreneurial actors and resource providers by Brown and Mason (2017)), are available in the EE in Lebanon but not as expected. Since the context is a developing country with scarce resources (as explained in section 5.2.1), the government does not have similar capabilities for support as in devel-

oped countries or developing ones with stronger economies and infrastructure. For instance, the circular 331 is the only material form of support offered from a governmental entity to the local EE. Located in the Middle East, Lebanon is bound by local and regional political instabilities that widely influence the local market, economy and infrastructure. **Material attributes** are hence limited to what the government can offer within its restricted budget. These circumstances have shaped the configuration of the EE in Lebanon to become highly dependent on the **social attributes** related to entrepreneurial connectors (Brown and Mason, 2017). In other words, social capital often replaces the benefits gained through the entrepreneurial actors (e.g. incubators, accelerators) and resource providers (e.g. financial providers, angel networks, R&D centres) (refer to section 2.3.2). Furthermore, considering the novelty of the ecosystem, **cultural attributes** are still on the rise meaning that culture is still not entirely supportive, as explained earlier. Thus, in Lebanon, the ecosystem is configured in a way that is highly dependent on its social attributes and less on material and cultural ones. More than that, the social attributes are mostly international or linked to the diaspora.

It is also evident that EEs in similar regions in the Middle East face similar challenges (Sindi, 2015; Abdou and El Ebrashi, 2015; Chahine and Mowafi, 2015; Rossi and Kjeldsen, 2015) yet are developing. In Lebanon, the attributes of financial support and networks related to the elements of policy and markets respectively downplay other elements of the ecosystem. Moreover, the social attributes of the EE are more significant than the cultural and material ones (Spigel, 2015). These findings highlight that the focus of both frameworks is on localisation and on the assumption that all resources are available locally. Nevertheless, the internationalisation strategies in Lebanon and similar countries change the weights attributed to the elements of EEs.

On the other hand, even though the elements of Isenberg (2011) differ in their weight and significance and are seldom dysfunctional (e.g. tax benefits, public capital markets, venture-friendly legislation), this is not detrimental for the functioning of the EE considering the dense local and international social capital. Hence, the takeaway message related to the Lebanese EE and other ecosystems in regions with similar characteristics specifically those with limited top-down support structures, is mainly the high significance of local, diaspora and international networks of connections. Particularly, developing countries must aim to strengthen such networks of ties at an early stage to fill the gaps in infrastructure, governmental support, finance and other forms of limited support. In doing so, they would fasten the processing of accessing the needed elements for a successful EE.

5.3 The Role of Local and International Social Capital in EE

The previous discussion highlights that the configuration of the EE in Lebanon is highly dependent on its social attributes and much less on material and cultural ones, hence pinpointing the significance and high reliance on social capital as compared to other material and cultural support systems. Moreover, considering the (i) limiting local factors and the (ii) limited availability of the needed elements of EEs (based on the analysis of existing EE frameworks in section 5.2.2), the entrepreneurs and supporting actors in the Lebanese EE view social capital as an insurance model. Just as individuals access their insurance benefits whenever things go wrong, individuals in the Lebanese ecosystem access both their local and international social capital to gain benefits they can hardly gain otherwise (e.g. from the government). Individuals pull together both their local and international linkages by formulating different networks of ties, which they can go back to when in need for advice, resources or other means of support. These formal and informal networks whether naturally created, through supporting agencies or through personal connections become a backbone in their entrepreneurial endeavours. Findings highlight that local and international social capital differ in terms of creation, purpose, benefit transfer and value, which necessitates presenting them as two independent entities. The two following subsections pinpoint such differences and conclude with elements constraining and enabling both capitals in the studied context, whilst highlighting unique themes emerging from the findings that contribute to the originality of this study. Section 5.3.2 examines means in which international social capital is generated, deployed and maintained in aims of highlighting the importance of nurturing such capital in EEs in similar contexts. This section corresponds to the second research question ‘What is the role of interconnectedness among actors in building and sustaining an EE? How is social capital generated and deployed in developing such EE?’

Social capital, as explained in Chapter 3, is characterized by social networks among individuals, which grant them various benefits, resources and connections to deploy and navigate through their career or entrepreneurial journey. Huber (2009) highlighted that several factors that were once considered part of social capital’s definition by theorists like Coleman and Putnam, are in fact, what strengthen it. He defined social capital as the “resources embedded in social networks” used by individuals (*ibid.*). For instance, trust, reciprocity and obligations lead to higher social capital, yet they are not constituents of it, unlike what previous research depicted. Putnam et al. (1993), on the other hand, defined social capital as “features of social organisation, such as trust, norms, and networks that can improve the efficiency of society by facilitating coordinated actions”. This definition has influenced researchers after-

wards and contributed to the fuzziness of the concept of social capital. Iyer et al. (2005) then defined the concept as the “institutions, relationships, attitudes and values governing interactions amongst people”. Similar definitions emerged by a number of researchers (e.g. Cooke et al., 2005; Staber, 2007). Other researchers linked social capital to specific factors. For instance, Woolcock (2001) linked the concept to norms and networks, Schneider et al. (2000) emphasized trust and civic engagement and Maskell (2000) defined social capital as shared values among people.

These definitions diverge from the practical use of social capital in the Lebanese context where participants listed such factors as integral to strengthening their social capital but made clear distinctions among the two (social capital and these factors), similar to Huber’s (2009) argument. For instance, the following quote supports this argument:

C.1 *“Social capital is only considered a capital that you can capitalize on when people agree on the same norms. They have to be trusted social entities. Values and norms establish trust, which then increases your social capital.”*(Int. 39, Serial Entrepreneur, Computer Vision)

Out of the studied factors, participants mostly agree that trust, expertise, commitment, reciprocity, shared values and diaspora lead to higher social capital. The latter factor seems to be specific to the Lebanese context as the majority of the Lebanese people reside outside the country. Although disadvantageous at times, this has proved to be a direct facilitator of the Lebanese ecosystem and the individual and community social capital. One interesting finding is related to the role of community commitment and the disregarding of individual reciprocity on enabling local social capital as shown in section 5.3.1.2. These factors are explained in depth in the following sections.

Social capital is also seen as both an individual and a community product in the work of theorists. Putnam, for instance, constantly linked social capital to the community’s civic engagement viewing it as directly connected to the community (Putnam, 1996). Coleman (1988; 1990; 1994) and Bourdieu (1963; 1972; 1985; 1986) on the other hand viewed social capital as an individual phenomenon as their focus was mostly on the individual social relations. The Lebanese entrepreneurs viewed social capital as both an individual and a community product where levels of the community social capital is altered across the birth and growth stages of the EE. Hence, they distinguished between their own individual social capital and that of the community. The following quote highlights the ecosystem’s cumulative social capital:

C.2 *“I think the ecosystem needs social capital at the birth stage in order for it to reach the growth stage. You will not be able to reach that stage without social capital.”*(Int. 3, Novice Entrepreneur, Academia)

Nevertheless, they highlighted that both are affected by the same factors mentioned earlier. Trust, for instance, has a direct positive relationship with social capital. As it increases, social capital is increased and vice versa (Huber, 2009; Schneider et al., 2000). Participants also highlighted trust as a factor affecting the community as a whole (Putnam, 1993), where entrepreneurs having low trust towards the government and/or public organisations lead to lower local social capital. This is supported by the findings as several of the chosen quotes highlight that participants lack trust towards their government. For instance:

C.3 *“We discovered that the government likes the lack of accountability. They prefer you not knowing who is involved in what in case something happened.”*(Int. 33, Novice Entrepreneur, Automobile)

The same is applicable to other factors. For instance, limited expertise in the country forces people to develop international ties and limits their local social capital. After generally touching upon the factors strengthening and constraining social capital, the individualistic and communitarian views of social capital and the significance of social capital for the trajectory of EE, we take these discussions more in-depth to discuss the local social capital in the Lebanese EE in the following subsection.

5.3.1 The Role of Local Social Capital in EE

Locally, structural capital is hindered by several factors like corruption, nepotism, sectarianism, etc., yet participants have demonstrated a number of ways to go around them. Trust, commitment and reciprocity are discussed and related to relational capital as means of understanding the characteristics of the relationships. Cognitive capital is then assessed to understand the qualities that participants look for in their networks of ties. The expertise, language, narratives, knowledge basis, norms and values are investigated. Not all participants viewed these attributes as important locally as the ecosystem is still growing. For that, international linkages seemed more essential and valuable. The analysis here highlights few significant aspects of local social capital like community commitment, disregard of individual reciprocal benefits and the mostly non-material benefits accessed through local social capital. On the other hand, the constraining factors discussed like nepotism, corruption, lack of

specialized expertise, etc. necessitates international linkages to replace the missing local elements. The discussion continues following the three dimensions of social capital (structural, relational and cognitive) and concludes with the general conceptualization of the local social capital in section 5.3.1.4.

5.3.1.1 Structural Capital

Structural capital is concerned with network ties among entrepreneurs themselves as well as with other actors in the ecosystem. Nahapiet and Ghoshal (1998) identified structural capital as the configuration of ties among actors arguing that it is in the configuration of these ties that benefits prevail. Away from the discussions related to the optimal positioning of ties in networks (Burt, 1992; Coleman, 1990), it is mostly agreed that weaker ties embedded in diverse networks lead to higher benefit circulation (Granovetter, 1983; Hauser et al., 2007; Levin and Cross, 2004). Since structural capital is concerned with the configuration of ties, it should investigate factors that hinder or facilitate social capital. This section identifies these and links them back to the literature. Further details regarding the types of ties available are presented in section 5.4.2. This is because different ties are present across the birth and growth of the EE, and an appreciation of these two stages allows for better investigation of available ties. The participants show that they try their best to gain benefits from their network of ties working hard to overcome challenges that might hinder social capital. These challenges can be related to themselves, their ties or factors external to both parties. Findings show that the Lebanese mentality is a hustling one, as perceived by several of the participants. They mostly agree that the Lebanese may lack some skills but are talented when it comes to dealing with people.

Factors	Quotes
Limited Public Awareness	<p>C1.1 <i>“The offers in the ecosystem are focused on one city, Beirut. They are only promoting the circular in the capital claiming it is for everyone, however, people in the South and North have not really heard about it. It does not offer equal opportunities for everyone in the country.”</i> (Int. 7, Serial Entrepreneur, Marketing)</p> <p>C1.2 <i>“Awareness hinders social capital. Social capital increases with higher awareness. We take funds from BDL, we need to show the Central Bank that we were able to get entrepreneurs and invest in them. Otherwise, the funding would stop. Social capital gave us more exposure and for that, we were able to get another round of funding from BDL.”</i> (Int. 14, International Accelerator)</p> <p>C1.3 <i>“You would be surprised when we go to job fairs at universities trying to attract students to join us to find out that they are not familiar with how start-ups work. We are hoping that universities would help in solving this problem.”</i> (Int. 14, International Accelerator)</p>

Factors	Quotes
Sectarianism	<p>C1.4 <i>“Sectarianism is a problem that is found everywhere in the country that could potentially hinder social capital and the entrepreneurial community.”</i> (Int. 33, Novice Entrepreneur, Automobile)</p> <p>C1.5 <i>“People are categorised based on their religion and political views. If you have different views, you might not be able to access specific networks. Unfortunately, this has also reached the ecosystem. If one VC has invested in you, another VC will not consider investing due to internal politics and corruption.”</i> (Int. 40, serial entrepreneur, Media)</p>
Corruption	<p>C1.6 <i>“Due to sectarianism and corruption, we had to stop working.”</i> (Int. 33, Novice Entrepreneur, Automobile)</p> <p>C1.7 <i>“We have high corruption. For example, in one of the companies that I coach in, the CEO was trying to get a visa to come to Lebanon aiming to install a big project in the country. I get a call from someone saying that I need to pay 25,000 dollars to get the person in the country. They did that after realizing how rich that person is. After I rejected, they asked for 50,000 dollars. Since we refused to pay, the process took six months so far and nothing is moving forward. That multi-millionaire then lost his motivation and decided to invest his money elsewhere. These are sorts of things that would make it very difficult for entrepreneurs.”</i> (Int. 16, Coach)</p>
Nepotism	<p>C1.8 <i>“There is a lot of nepotism here, depending on your political and religious views. You would have better chances meeting someone having the same religion or political views as you do.”</i> (Int. 18, Serial Entrepreneur, Gaming)</p> <p>C1.9 <i>“There might be room for nepotism especially that it is how this country functions but let us face it, even if an entrepreneur makes use of that, it does not mean that they would succeed. If they are not good enough, even if they get \$1 million in investments they would lose the money, it would backfire on the management team and it would go terrible.”</i> (Int. 1, Novice Entrepreneur, High-Tech)</p>
Traditional Mind-sets	<p>C1.10 <i>“We receive many people that do not want to discuss their ideas in public, thinking that someone might steal them. They still did not know how to switch from the traditional to the entrepreneurial mindset and this is very difficult. They usually face this problem in the beginning only, however at later stages, they are obliged to be more open as they need to have market researches with future clients, talk to investors, etc.”</i> (Int. 13, Local Incubator)</p>
Risk Averseness	<p>C1.11 <i>“BDL is our investing backbone and it is risk averse. This means that for us to actually make it through the upcoming ten years with whatever money that has been pumped into the system, we need more full proof investors versus those with old mindsets. If all investors are like the ones we have approached that are holding onto the money, all entrepreneurs will become demotivated.”</i> (Int. 2, Nascent Entrepreneur, Food)</p> <p>C1.12 <i>“Investors still lack some education as they are still a bit risk averse when it comes to funding. They look at risks more than potential. There is a big return especially from the capital growth side. There are many amazing ideas that are not being funded because of this mindset from the investors’ side. You find that people who have the money are either too greedy or too risk averse.”</i> (Int. 11, Investment Banker)</p>

Factors	Quotes
Fear of Failure	C1.13 <i>“There are some cultural factors that heavily add barriers to innovation and entrepreneurship. For example, fear of failure. Socially, when you want to do something ambitious and it does not work, people look down on you rather than being impressed that you are doing something amazing. Legally, the problems related to closing a company or bankruptcy are massively stronger here than in other strong economies. Culturally, parents often push their children to work for a big company or to have a job as a doctor, lawyer, engineer, but if their children are doing something they do not understand then parents are often very critical and not supportive.”</i> (Int. 19, Local Accelerator, CEO)
	C1.14 <i>“We live in an overprotective environment. Few were the people who believed in what we were doing.”</i> (Int. 34, Novice Entrepreneur, Furniture)
	C1.15 <i>“We do not have a law, imagine! There are a lot of tech start-ups in Lebanon that do not have an electronic law ... In Lebanon, you do not have social security for everyone. If you work in a company, you are entitled for social security. Start-ups however are limited on capital and resources, yet talents require social security. We cannot afford that. It is at a very high rate that would cripple a start-up. The electronic law or E-law should be there to help us, at least at the early stages to move forward. This is why a lot of companies in Lebanon have a few number of employees and then they just concentrate on marketing which drains the resources out of where it should be in an entrepreneurial tech start-up scene.”</i> (Int. 9, Novice Entrepreneur, Automobile)

Table 5.8: Hindering factors of Structural Capital; Representative Quotes

Nevertheless, factors like **limited public awareness** of the ecosystem, **sectarianism**, **corruption**, **nepotism**, the **traditional mindset**, **risk averseness** and **fear of failure** of both investors and entrepreneurs, etc. still deteriorate the benefits incurred (see figure 13). Nevertheless, they also explained a number of solutions to these issues. In other words, even though social capital can be hindered by a number of factors, entrepreneurs learn to overcome them. Table 5.8 provides quotes from participants that support the aforementioned arguments.

Table 5.9 presents the main factors hindering the configuration of social capital in the Lebanese EE. Quotes related to the socio-economic factors are presented in section 5.2.1 and shown as enabling factors in most times. For example, the diaspora and brain drain allow for stronger international social capital and better specialized benefits (as explained in section 5.3.2). Moreover, high unemployment has pushed people to taking part in the ecosystem; hence altering the configuration of social capital. These factors are taken a step further by categorizing them into socio-political, socio-economic, cultural and managerial, as shown in table 5.9 and explained in this section. The factors hindering and enabling the local structural capital and those contributing to strengthening (directly or indirectly) the international social capital (e.g. brain drain) are highlighted here. The analysis of struc-

tural capital depicts the challenges and factors limiting local social capital, which pushes entrepreneurs to make use of socio-economic factors, along with their formal and personal international connections as a shortcut to accessing specialised benefits and overcoming local disadvantages.

Factors	Socio-political	Socio-economic	Cultural	Managerial
	Sectarianism	Diaspora	Traditional Mindsets	Low awareness
	Corruption	Brain drain	Risk Averseness	
	Nepotism	Unemployment	Fear of Failure	

Table 5.9: Categorization of factors hindering structural capital

Socio-political Factors

Although recent work on social capital has moved away from discussions related to the influence of power and high positions mostly depicted by Bourdieu (1972), these aspects were highlighted at times as influencers of the concept (Lin, 1982). Findings showed that corruption and nepotism act as both an influencer of social capital and as a negative consequence of it as is summarized in the following quote:

C1.16 *“You have to remove the negative social capital, which is built on nepotism and focus on the positive social capital that looks at the worth and value of the person. The moment we stop promoting people through nepotism and help them out because they are good, this is when you start seeing positive things happening.”* (Int. 32, Serial Entrepreneur, Computer Engineering)

This is also well documented in the literature on negative social capital (Fukuyama, 2002; Portes, 1998; Warren et al., 2001; McGreevy, 1996; Zhou, 1992). Nepotism is mostly highlighted in poor or closed communities. Keyes (2001), for instance, examined social capital in a poor community in Cleveland studying the relationship they have with public authorities. The latter researcher highlights that strong ties with these public authorities mainly with small groups in the community eventually lead to corruption and nepotism as public figures would then only benefit those they are strongly linked to (ibid.). Woolcock (2001) referred to such benefits as linking social capital. In his presented case about public housing, Keyes (2001) showed how Cleveland’s initiative for public housing has failed due to such connections

along with lack of trust in the government. Portes (1998) also highlighted such end results for closed, poor and corrupt communities. As is shown, entrepreneurs with connections to high authority figures or people with high status or power in the community benefit from having higher social capital and easier access to resources from their elite network of ties (Bourdieu, 1972). Nevertheless, such linking social capital acts as a negative consequence to other entrepreneurs that end up having less access to needed resources.

Although individual social capital is at many times irrelevant to the individual's social status or that of their connections, it is apparent that this negative aspect of linking social capital seldom exists in the Lebanese context. This is explained by the country's corrupt public authority figures in specific and public organisations in general. Stel (2013) explained the configuration of the Lebanese economy and private sector as liberal and not directly influenced by the government. Nevertheless, the researcher described it as oligopolistic (controlled by few business owners) on the one hand and controlled by political leaders through corrupt cases (*ibid.*). Leenders (2012) highlighted high levels of political corruption among highly ranked politicians, ministers, directors-general and senior-officials in Lebanon. He defined corruption as the abuse of public office by such public figures where nepotism is always a manifestation of such dreadful acts. A number of interviewees explained how political corruption hindered their work and in one case, stopped it completely (C1.6). Results of this can be extreme as it can be highly demotivating to entrepreneurs who might consider dissolving the start-up and/or leaving the country, as was the case with one of the entrepreneurs that has now moved to Europe and started his start-up there. On the other hand, and in most cases, corruption pushed entrepreneurs to think realistically about establishing connections locally. Many of the entrepreneurs laughed when asked whether they have ties to public institutions, as this is only possible among the elites. They, nonetheless, turn to forming connections with other similar beneficial parties either from the existing supporting organisations in the ecosystem or other international supporting actors. This is supported by Warren et al. (2001) who argued that people from corrupt communities or those with limited resources tend to seek ties with others outside their communities. The researchers explained that such connections allow for higher entrepreneurial activities (*ibid.*). Other researchers like Cooke et al. (2005) and Sajuria et al. (2015) argued that entrepreneurs must seek heterogeneous connections as this is vital for successful enterprises. We refer to such connections as bridges (Putnam, 2000; Casson and Guista, 2007; Woolcock, 2001). When entrepreneurs establish bridging social capital (in this case connections with actors residing outside their country), they would access heterogeneous resources, information and knowledge and would come up with creative ideas that benefit their local communities (Putnam, 2000). Hence, the explained socio-political factors can hinder or enable entrepreneurial activities by pushing

them to engage with international linkages and, in turn, strengthening international social capital.

Socio-economic Factors

One of the unique characteristics of Lebanon is its high diaspora rates where the majority of the Lebanese people reside outside the country's borders. 7 million Lebanese (and Lebanese descendants) live in Brazil (Brazilian Ministry of Foreign Affairs, 2017), which is almost double the population of Lebanon. Statistics show that 46% of the Lebanese households has at least one family member that has immigrated outside the country (Tabar, 2010). Immigrants, hence, contribute to the Lebanese GDP by around 25% (ibid.). Stel (2013) explained that the Lebanese diaspora is a main attribute for calling Lebanon an entrepreneurial country.

The key feature of the Lebanese immigrants is that the majority are highly educated and have created a mark wherever they reside (Ahmed et al., 2012). The latter researchers explained that many Lebanese have left the country due to the limiting economic, political and social situations, whereas the rest have decided to travel to join the highly developed economies of the Americas, Europe and Africa (ibid.). For that, the percentage of brain drain is also increasing. A Lebanese minister explained that emigration and birth rates are equal in Lebanon, meaning that the country is losing its youth, intellectual and hardworking workforce (AUB Outlook, 2013). The Lebanese Chamber of Commerce has realised this and started a program called Med Generation to attract back Lebanese intellectuals (MED Generation, 2017). One of the interviewed entrepreneurs came back to the country through that program and has now established his start-up in the EE.

Nevertheless, similar to the previously explained socio-political factors, the Lebanese diaspora and brain drain has been beneficial to the Lebanese local entrepreneurs primarily for establishing international connections and accessing crucial benefits that are lacking locally. Moreover, considering that immigrants are well educated, as mentioned earlier, local entrepreneurs benefit from their knowledge and experience. Tabar (2010) explains the large returns in terms of remittances from the Lebanese diaspora, which is continuously increasing on a yearly basis. In Lebanon, these remittances (defined by the UN as "financial resource flows arising from the cross-border movement of nationals of a country" (Kapur, 2004)), are the first source of external funding in the country, which contributes to better means of living for locals in terms of welfare, education, etc. (Chami et al., 2005). The immigrants are also contributing to philanthropic and other projects in their local towns and communities (Tabar, 2010). Interviews with supporting actors highlighted that many of the donations are made from rich Lebanese entrepreneurs residing outside Lebanon (A1.7). Furthermore, participants used their immediate kinships, connection with friends, colleagues or others they know who study/work outside Lebanon to access resources and/or needed knowledge and informa-

tion. Additionally, supporting actors often connected Lebanese entrepreneurs to successful Lebanese networks outside the country. For instance, incubators and accelerators established linkages with Lebanese networks in the US and UK (e.g. LebNet in San Francisco and the UK Lebanon Tech Hub in London). These associations put local Lebanese entrepreneurs in contact with networks essential to their work, most remarkably are those networks from the Silicon Valley. The entrepreneurs also have the chance to visit Silicon Valley themselves for direct participation in events and competitions. Interviewed entrepreneurs mostly described such connections as the backbone of their start-ups and the needed push to start their business or grow it further.

Amin (2007) explained that diaspora connections are at times integral for the survival of local communities. In the case of Lebanon, and considering that remittances of immigrants constitute almost 25% of the GDP, these connections are vital for the country. The interesting aspect of diaspora connections is that unlike other business connections, the end goal for those is on the giving end of the spectrum, they do not always expect a profit, as Falzon (2004) explained. Such networks of connections usually have a higher sense of community and tend to help one another to contribute to their community (*ibid.*). Ho et al. (2015) discussed two broad diaspora strategies explaining that the first aims to decrease or eliminate poverty in their homelands and the second contributes to the knowledge economy through their knowledge and expertise. In Lebanon, both strategies are employed. The first is apparent considering the high contribution of the diaspora to the local GDP. On the other hand, Lebanese immigrants are highly contributing to the knowledge economy by supporting local start-ups through funds, knowledge and resource transfer. Nevertheless, the local government does not craft enough strategies to ease these connections or to attract more of such. For instance, countries like Pakistan and India offer quasi-citizenship schemes for those descendants that do not have the passport of the country they left offering them special rights and recognition (*ibid.*). Other countries offer preferential-visas to such people to encourage them to visit (Collyer, 2014). On the other hand, findings have shown that unemployment has aided in increasing entrepreneurship (A2.1). Unemployment rate was fixed at 6.2% between the year 2009 and 2014, but started to rise in 2015 and 2016 to reach 6.8% (Trading Economics, 2017). This could be directly related to the sudden increase in population starting 2011 as shown in figure 5.1. Considering the start of the Syrian civil war in 2011 (Syria borders Lebanon to the west), hundreds of thousands of Syrian refugees entered the country starting that year eventually leading to a 1.42 million increase in the total population.

This has also led to a higher unemployment rate among the Lebanese where the limited jobs offered in the market are now shared with refugees. A report by The World Bank



Figure 5.1: Lebanese Population (Trading Economics, 2017)

showed that unemployment among the youth equalled 34% highlighting that Lebanon needs to create 23,000 jobs every year to lower the youth unemployment rate (The World Bank, 2013). Another report shows that around 35,000 graduates graduate each year to find only 5,000 jobs available in the market (Kadi, 2017). For that, many fresh graduates decide to leave the country, but with the new available EE, more of those are encouraged to think outside the box and come up with a new, innovative idea for a start-up. This is supported by Plehn-Dujowich (2012) and Musa and Semasinghe (2013) who explained that unemployment can actually spur entrepreneurship and growth. The three explained socio-economic factors shape structural capital in terms of (i) higher international concentration and lead to an (ii) increase in entrepreneurship rates elevate the attractiveness of entrepreneurship among the youth, which, in turn, (iii) facilitate the establishment and increase the density of local and international entrepreneurial networks.

Cultural Factors

Entrepreneurs unanimously complained about traditional mindsets among several supporting actors (e.g. investors, VCs) and among entrepreneurs themselves at times. Sindi (2015) argued that one problem facing EEs in the Middle East generally (KSA in specific) is the traditional mindset of actors. Participants agree that Lebanon is facing such a problem as well. Several entrepreneurs explained the risk averseness of investors claiming that they do not invest properly even though they have the needed financial resources (A5.3; C1.11). Sindi (2015) argues that risk averseness of investors is partly due to the low-impact ideas offered by entrepreneurs, where the former do not see enough creativity nor impact to invest. Several entrepreneurs also highlighted that a number of start-ups or start-up ideas are copying other models that do not serve a purpose in the Lebanese context. Hence, one investor argued that parties having the money should hold on to it for those ideas that influence the community whether financially, socially or culturally, etc. (B1.7).

On the other hand, entrepreneurs supported their notion about the risk averseness of investors in Lebanon by highlighting the very limited seed funding available in the country (B1.6). They

explained that investors do not appreciate taking risks, especially that risks are much higher in the beginning stage of a start-up. Seed funding is usually provided in the initial stages of a start-up, where start-ups are more prone to failure. Investors, however, prefer investing when start-ups are more solid and less risky, as entrepreneurs claimed. Despite the initial attempts by investors and VCs to provide seed funding, such attempts are still very limited. Considering that entrepreneurs might have to find money on their own at this stage, their motivation to engage in the EE can be dampened. This is similar to other ecosystems in the Middle East like, for instance, Egypt (Abdou and El Ebrashi, 2015; Chahine and Mowafi, 2015), Saudi Arabia (Sindi, 2015) and Morocco (Rossi and Kjeldsen, 2015). On a positive note, the problem is becoming less horrific as the ecosystem develops specifically after the circular 331 was introduced as is shown in the following quote:

C1.17 *“In the beginning, banks did not have the proper knowledge that would push them to invest in start-ups. They were more risk averse. Now, they understand the benefits more and are more willing to invest than before. I think the experience of the people who are managing the funds now also helped in changing their mentality.”* (Int. 11, Investment Banker)

Another factor influencing the risk averseness of both investors and entrepreneurs themselves is the fear of failure. This is similar to what Sindi (2015) explained about the entrepreneurial culture in the Middle East region, where investors and entrepreneurs have a hereditary trait of cultural fear preventing them at times in engaging or going forward with what they aspire. Some of the participants linked their fears to the risky political systems and legal infrastructures governing the ecosystem, where the general environment of intimidation affects the motivation of entrepreneurs in the Middle East (Namaki, 2007). Consequences of failure in the society are highly viewed as intimidating. Other than the shame they carry, the legal system is a burden where the failed parties are subject to case actions if they are not able to pay their dues (Sindi, 2015). On the other hand, considering the remarkable increase in entrepreneurial start-ups, regulatory laws must be added to foster not hinder their progress. Other than the high legal action against those who might fail, entrepreneurs are faced with other legal challenges like the need to register their start-ups (like any other business corporation) in several governmental departments like NSSF, VAT, labour regulations, etc. (The World Bank, 2018). They also need to have a certain amount of money in their accounts before doing so. Moreover, another entrepreneur mentioned the high amounts of money they need to pay for social security for every employee they have, which is challenging considering that start-ups are limited on money (C1.15). Hence, they end up hiring less employees to save costs, which eventually slows their pace of work. Such regulations could be altered to

mind the volatility and financial conditions of start-ups. Perhaps then, both entrepreneurs and investors are more encouraged to take risks and accept failures.

Further analysis on the matter revealed that such challenges started decreasing in the growth stage of the ecosystem (refer to section 5.4.2.2). Moreover, the embeddedness of the Lebanese EE in international support structures has also attracted international entrepreneurial mind-sets to the country, which also aided in facilitating a richer, risk-taking entrepreneurial culture. Such a culture is also more apparent during the growth stage of the EE. Hence, international linkages have also played a key role in decreasing local cultural challenges.

Managerial Factors

Several participants highlighted lack of public awareness of the entrepreneurial initiatives in the ecosystem as a factor hindering their social capital. If more people know about the ecosystem, more support can be accessed. The following quote suggests a few strategies to increase awareness:

C1.18 *“We should work more on the ecosystem through new marketing strategies. They should work with new companies, embassies, universities and even schools. Students at small ages must be aware that there is an ecosystem for entrepreneurs in Lebanon. After that, we should preach it to universities so that students know that they are not alone.”* (Int.

15, Local Incubator)

Considering that EEs are still newly employed initiatives in Lebanon and the region, limited amounts of people are familiar with them. Hmayed et al. (2015) highlighted this as a problem explaining that it limits the development of enterprises in the country. Other ecosystems in the region, like in Morocco, are also described to have low visibility (Fasiki, 2015); hence, limiting participation. Motoyama et al. (2016) described a detailed case study of the EE in the city of Chattanooga in Tennessee U.S. Among other important factors described thoroughly to get the ecosystem to maturity, the latter researchers highlighted the important role played by the mayor of the city in terms of establishing the ecosystem, attracting the right partners (universities and supporting firms from the public sector) and creating awareness and engaging people with events, gatherings and start-ups. The mayor sponsored the events made by EE officials, and attended them himself as a way of encouraging people to learn about what is actually taking place and eventually get them to participate. This led entrepreneurship and entrepreneurial events to become part of the culture in Chattanooga (ibid.).

Fasiki (2015), on the other hand, described several attempts to increase awareness of the entrepreneurial environment and the available support for entrepreneurs in Morocco that are applicable in the Lebanese EE and other similar EEs. The first step was targeting universities through entrepreneurial campaigns presenting successful stories of entrepreneurs aiming to (i)

encourage the youth, (ii) inform them about entrepreneurship and (iii) inspire them to create their own success stories. The second step was a national outreach campaign graduates and young adults across 15 regions in the country with similar goals as the previous campaign. They did a number of tours that complemented each other where they highlighted several problems and encouraged participants to come up with solutions to solve them. The latter campaign was also directed towards important stakeholders where they organized gatherings for representatives from universities, civil society, media, banks, international organizations, foundations and international specialists. By those initiatives, Moroccans were more aware of the problems facing their societies and were given a new tool to fix them that is entrepreneurship.

The aforementioned strategies can also be applied in different contexts, as they are not related to specific cultures. Although incubators and accelerators organize regular events, these are mostly targeting the same entrepreneurs working in their shared spaces. Moreover, public and governmental officials do not engage in organizing or pushing people to attend entrepreneurial events in Lebanon. There are only very few exceptions to that like the yearly Banque Du Liban Accelerate Conference (frequently referred to as BDL Accelerate), which attracts few thousands of people in what the Lebanese refer to as a networking event. The conference is sponsored by the governor of the Central Bank (BDL Accelerate, 2015). People attend the conference in aims of being introduced to important people in their domains, as described by the participants. Apart from that, the EE officials did not establish nationwide campaigns to let people know about the ecosystem. One of the participants described how the ecosystem is mainly known among residents of Beirut. People from other districts never hear about the EE unless they move to the capital. Hence, more efforts need to be put to construct a nationwide strategy that would spread the word and attract more youth, fresh graduates, young adults, and critical stakeholders to participate in the EE. By applying similar strategies and avoiding the aforementioned challenges discussed throughout this section, the configuration of the entrepreneur's social capital becomes denser. Moreover, the lack of local awareness that leads to less participation of supporting actors also lead entrepreneurs to seek support internationally. Hence, this acts as another factor that leads to a higher appreciation of international linkages. On the other hand, such awareness of the ecosystem increase as the EE moves to its growth stage as shown in section 5.4.2.2.

The four factors affecting structural capital (socio-political, socio-economic, cultural and managerial) directly influence the attributes of trust, commitment and reciprocity, which shape the local relational capital discussed next.

5.3.1.2 Relational Capital

Findings related to relational capital are in part relevant to Putnam's theory of social capital (Putnam, 1993; 1995; 2000). Other findings went hand in hand with more recent literature streams. The Lebanese entrepreneurs and supporting actors show a different perspective to relational capital, which is that of the collectivity rather than individual social capital. In terms of trust, they look for trustworthy social actors, yet they lack trust in the government and public bodies. This is due to the limiting socio-political factors previously explained. Commitment is more important than reciprocity in benefits; however, both factors are community-oriented. In other words, participants explain that as long as their direct or indirect ties are committed to benefiting the community they belong to, the former are satisfied with the relationship and tighten the connection. This shows that the majority of the entrepreneurs and supporting actors in the Lebanese EE measure their relational capital with respect to the greater good of the community rather than their direct individual benefit. This is shown in detail in this section where the three dimensions of relational capital namely trust, sense of commitment and the norm of reciprocity are explored in the Lebanese context. Table 5.10 presents the key quotes used to explain the findings related to relational social capital.

Trust

Start-ups in Lebanon are embedded in networks of ties. Social capital, especially when sharing interpersonal trust, increases benefits circulated among entrepreneurs. Putnam (1997) constantly highlights the importance of trust in the society arguing that it eases social life; Higher trust among actors increases social capital (Huber, 2009; Schneider et al., 2000). The Lebanese entrepreneurs reflect this notion in their arguments (C2.1) as shown in table 5.10. Trust should also be reciprocal. Not only should entrepreneurs trust their network of ties, people should also view them as trustworthy. This would result in acquiring more benefits as another entrepreneur explains (C2.2).

Attributes	Quotes
Trust	<p>C2.1 <i>"You need to trust the people you are working with and trust that they are giving you their best. We need this support to grow. I will always need to learn from someone. I can read online and search, but it is always another thing when someone is sharing their expertise with me."</i> (Int. 4, Novice Entrepreneur, Fashion)</p> <p>C2.2 <i>"My network first started within a close circle and slowly expanded into a bigger one through these few close ties. I realised that people tend to help me primarily because they look at me as someone they trust and that was the main asset that led me to acquire the benefits I was looking for."</i> (Int. 3, Novice Entrepreneur, Academia)</p>

C2.3 *“Business in Lebanon mainly functions through nepotism. You build ties with people, but in the back of their minds, they always know someone they trust who can refer them to people in an executive position. Whenever you want to take things from these people, you take the basics. Trust is not also that high. You see you cannot trust a lot of people in the business world. You always have to take precautions, know what to say and to whom to talk. You have to manipulate the strategies to reach something specific.”* (Int. 15, Local Incubator)

C2.4 *“If universities did not teach entrepreneurship chances are students might not even hear about the ecosystem. This is why Lebanon is not moving forward like the rest of the countries because other countries know the importance of research and have up-to-date curriculum. The director was trying to convince universities to have such lectures for students. We are trying to fix this as much of possible. We are not waiting for people to knock on our door; we are doing the extra mile. We are the ones knocking on doors asking people to participate in helping and growing the ecosystem.”* (Int. 14, International Accelerator)

Sense of Commitment

C2.5 *“I think people are committed in Lebanon. A lot of the commitment is related to the fact financial resources are being allocated. After the circular, we got a number of development agencies that decided the SME sector is of focus. I think there is a commitment by virtue of this circular and having development agencies as well as having competent people in Lebanon with high skills.”* (Int. 16, Coach)

C2.6 *“We have a corrupt government that does not work toward supplying the basic rights to its people, how would you expect it to provide to the ecosystem? Knowing that, you cannot establish commitment to any of its institutions.”* (Int. 31, Serial Entrepreneur, Online Solutions)

C2.7 *“They are definitely more committed than large companies that do not need clients like our size, small. It is an equal force relationship because we are all small firms. When you are a small company and you go to see a bank, for example, they do not care about you and it is the same if you go see other suppliers. Like if you are doing a hundred trips a month with a delivery company, it is not very significant for them. However, smaller start-ups appreciate you more and take more care of you.”* (Int. 6, Serial Entrepreneur, E-commerce)

C2.8 *“There is commitment at least among 20% of them. They are invested in your success and failure. The entrepreneurial journey is like living your life at the edge of a cliff, these 20% are the one that gives you lemons. There are many people that would be invested in your success, but it is very hard to connect with people that are also invested in your failure.”* (Int. 7, Serial Entrepreneur, Marketing)

C2.9 *“We, as entrepreneurs, do not need emotional support when we fail. We need trained people that know how to tell us to our face that we failed when we do, and give us the tools to stand up to our feet again.”* (Int. 7, Serial Entrepreneur, Marketing)

Norm of Reciprocity

New Views on Reciprocity

C2.10 *“I view us as contributing to the next generation of entrepreneurs and the next version of the ecosystem. If we all are contributing to get a better ecosystem, we will all get the benefit of the ecosystem and not individuals. Only then will the ecosystem be better for me and for everyone. This is what I am waiting for in return to my benefits.”* (Int. 7, Serial Entrepreneur, Marketing)

	<p>C2.11 <i>“My mentor believes in the chain of love and passed that to me. For example, if I am mentoring you today, you need to find someone whom you can mentor because you are learning a lot and you have to share this curve of learning to keep the knowledge and the chain going to reach as many people as you can.”</i> (Int. 4, Novice Entrepreneur, Fashion)</p> <p>C2.12 <i>“Reciprocity does not work like this in the start-up ecosystem. In real life, you are expected to give and take but not here. You take whatever help you need, the only expectation is that you will help another start-up because eventually you have to give back to the community you belong to. This is why we participate in mentoring other start-ups.”</i> (Int. 18, Serial Entrepreneur, Gaming)</p>
Forms of Reciprocity	<p>C2.13 <i>“We give them credit. When we go on interviews, we tell everyone that we are part of an incubation program and that they gave us mentorship and other services, etc. We advertise them. Moreover, when the incubator is doing a media coverage, for example, they invite us to tell them about our story. This is all done informally. No one tells us or them to do what we do. I guess we all have this idea of growing the community, so we work towards that goal wholeheartedly.”</i> (Int. 1, Novice Entrepreneur, High-Tech)</p>

Table 5.10: Relational Capital; Representative Quotes

However, factors like nepotism, sectarianism and corruption can obstruct trust among entrepreneurs and other actors leading to less circulation of benefits. Keyes (2001) studied a closed community in Cleveland concluding that higher levels of governmental corruption increases nepotism in the community. Similarly, the corrupt government in Lebanon has, in one way or another, led to an increase in nepotistic treatments. This was shown in one interview with a manager at an incubator. She explains the challenges faced by the incubator to obtain certain benefits or services to offer to entrepreneurs. She argues that nepotism decreases benefits and shapes the ties they have and strategies they use to attain what they need (C2.3).

As inferred by the participants, corruption in the country limits the trust people have (i) between one another in general and (ii) with the government and public bodies. This lack of trust influences the national social capital in the country in ways that make them less dependent on the local government while relying more on local and international personal and professional connections. Moreover, corruption in public institutions is also limiting personal social capital. Socio-political factors, which are explained in the previous section, highlighted a few cases of severe corruption that led one start-up to close down (C1.6). Education is another factor leading to lower trust in the government. One participant highlights a disappointing fact; the Lebanese entrepreneurs, at times, go the extra mile by doing what the governments and/or local authorities in other countries do (e.g. the case of Chattanooga by Motoyama et al., 2016). They liaise and push institutions to participate in the ecosystem.

The same participant shows that the lack of trust in government and public bodies have pushed actors to act on their own (C2.4).

Findings have shown that entrepreneurs view trust as integral for viable and effective network of ties. Even though trust is high on a personal and professional level, trust towards the government is low. This affects the overall atmosphere in the ecosystem resulting in lower benefits and longer processes to attain the needed resources or support. For that reason, entrepreneurs and other actors in the ecosystem (like incubators and accelerators) tend to acquire what they need through other means (e.g. international connections), as is explained in section 5.3.2.

According to Putnam (1993), civic communities are those who appreciate unity, participation in societal duties (e.g. voting, taking parts in societies and clubs), and trustworthiness. Uncivic communities, on the other hand, are those that undervalue the law and expect politicians to handle public affairs for them. In his book *Bowling Alone*, Putnam highlights his notion of generational replacement, which depicts that generations born after 1945 are not carrying societal responsibilities of their past generations (those born between 1910 and 1940) (Putnam, 2000). He attributes that to the shocking events of the Vietnam War, Watergate and the abusive use of TV, whilst the generation before that witnessed events like WWII and the Great Depression that created feelings of belongingness and commitment to their country. Mclean (2002) explain that such events impact the zeitgeist of generations. In other words, big events taking place in one's country dictate people's beliefs, norms and actions. On a similar note, Maraffi et al. (2008) argue that patriotism impact social capital in a way that those with high support to their country have higher trust towards citizens, whilst unpatriotic people have lower levels of trust. In Lebanon, a number of events have led to a recent change in the zeitgeist of the community. The Lebanese people lack trust in their government due to its inability to handle the recurring corrupt and discriminating political body. It does not provide the basic rights of its residents (e.g. health care, security, safety). Additionally, the Lebanese people, especially the youth, are turning into beacons of change due to several events that took place recently. For instance, an increase in social and anti-establishment movements calling for policies and political bodies that are representative of the whole community and fighting for their rights. Moreover, the inability of the government to stop terrorist threats and, sometime, attacks leading to a number of casualties in 2015 and 2016. Other characteristics of Lebanon has also heightened these movements like the increase in education, travel, intellectual figures, regional anti-establishment movements etc. Hence, entrepreneurship is now viewed by the youth as their patriotic responsibility towards their country in the absence of a trustworthy political system. Accordingly, lack of trust in the government has led to higher commitment as well as trust in the entrepreneurial networks

both inside and outside the country and has triggered a motive for establishing the greater good for the community through social networks, disregarding individual reciprocal benefits, as is shown next.

Sense of Commitment

Findings related to commitment and reciprocity levels diverge from the literature. Table 5.11 illustrates insights from the literature as opposed to the findings of this study. Although commitment and reciprocity are important, the participants' perspective these two dimensions as community-oriented. When discussing relational capital, participants focused on the benefits to the community of entrepreneurs and entrepreneurship. A number of entrepreneurs are passionate about giving and committing to their network of ties and, in turn, their community. This is further explained in the following two quotes:

C2.14 *"They are committed because they are interested in taking part of the ecosystem."*

(Int. 13, Local Incubator)

C2.15 *"We are committed because it is our job, our mandate. Our ties are very committed in action, and if they are not committed, they are involved. In reality, if any of them wanted just to cut all ties, they can do that without actually losing much in terms of tangibles. They would lose in terms of the intangibles as in the benefits of being in a community working alongside peers who are doing the same thing."* (Int. 10, Novice Entrepreneur, Gaming)

Dimensions	Insights from Literature	Findings from this study
Sense of Commitment	Commitment signifies a responsibility to participate in future action (Coleman, 1990) and is expected to increase benefit circulation.	Individuals feel less committed on an individual level but more on the community level in a way that individuals engage in future action when their participation benefits the community.
Norm of Reciprocity	Norm of reciprocity is integral for increased circulation of benefits (Putnam, 1995).	Individuals in entrepreneurial settings are invested in producing a ripple effect that leads to higher benefits for the community.

Table 5.11: Commitment and Reciprocity: insights from the literature as opposed to findings from this study

The former entrepreneur shows that people are now more interested in being part of the community. Wellman and Haase (2001) highlighted the term community commitment arguing that individuals with high commitment and feeling of belongingness toward their communities, make more effective utilisation of their social capital. Conversely, lack of commitment means less participation in the community, which results in fewer benefits. With the majority of participants highlighting the importance of the community perspective for giving, findings of this study agree with the aforementioned finding that community commitment increases social capital. In Lebanon, commitment is enhanced by the release of the circular 331 by the central bank, as one well-known coach as well as a serial entrepreneur explained (C2.5).

Participants explaining about high commitment mainly focused on the commitment towards the community or individuals in the ecosystem; not even once did they mention commitment towards the government. When asked about that, one entrepreneur shows a negative attitude arguing that he could not establish commitment to the government, as it does not provide their basic rights as Lebanese citizens or as entrepreneurs in the ecosystem (C2.6). On the other hand, one entrepreneur also explains that the entrepreneurial environment increases the feeling of commitment as big companies are less interested and committed to start-ups. They do not look at their potential of growing. Other start-ups, however, better understand and support one another (C2.7).

However, another entrepreneur raised one challenge of commitment to start-ups. He explained that it is easy to have people commit to the success of a start-up, but the challenge is to find those ready to commit to its failure (C2.8). Several of the participants raised the issue of failure as inevitable in the start-up world arguing that entrepreneurs only learn from failing. They do things many times until they work, but they require support to do so (C2.9). It becomes an issue when entrepreneurs are only encouraged to win big and constantly afraid of losing. The world of entrepreneurship is risky in its roots, for that, the mindset of the actors in the community must be tailored to accept those risks. Several strategies to do so are presented in section 5.3.1.1 when explaining cultural factors hindering structural capital. Instead of leaving entrepreneurs when they fail, they should help them stand up again.

The measure of commitment has highlighted the following important findings. In the absence of governmental support, the Lebanese entrepreneurs have high commitment towards the community in contrast to very low and at times inexistent commitment towards the government. With high commitment to the community, entrepreneurs as well as supporting actors engage in higher benefit circulation (Coleman, 1990; Nahapiet and Ghoshal, 1998). The lack of commitment towards the government has an indirect impact on community commitment, where the latter increases as the former decrease. This shows that in developing countries, communities develop higher cohesion when authorities fail to deliver their civic duties. More-

over, specific events like previous wars, security threats and recent anti-establishment movements dictate people's beliefs, norms and actions by increasing their community commitment (McLean, 2002). Social capital is, in turn, positively associated with the latter where as community commitment increases, social capital becomes denser (Wellman and Haase, 2001). Nevertheless, commitment is still faced by few obstacles specifically related to the type of relationship between entrepreneurs and supporting actors. If supporting actors are only committed to start-ups when they are profiting, commitment is compromised. This, however, is tied to cultural and economic attributes of the society that indirectly impact relational capital.

Norm of Reciprocity

Entrepreneurs tend to dig deep into their social relations as a substitute of the lacking governmental and public support in the country. For that, entrepreneurs have dense social networks that they highly nurture and view as integral to their start-ups and businesses. Participants have mostly agreed that even though the norm of reciprocity is important in relationships, it is not highly present in EEs (C2.12). Entrepreneurs mostly describe the ecosystem with enthusiasm showing that when they or other actors do "good", they do it wholeheartedly for the sake of growing the ecosystem and benefiting Lebanon (C2.10). This would eventually bring higher returns to the person giving it as well as the whole ecosystem. This, according to one entrepreneur, is called "the chain of love" (C2.11). An important argument that is built from the interviews is that, even though reciprocal relations are apparent in the business world, this is not the case in the Lebanese EE. This finding, however, requires further research to be generalized to other similar regions. Moreover, even though reciprocity is documented as integral for social capital (Putnam, 1995), findings from this study contradict the widely accepted view of reciprocity in social ties, yet goes hand in hand with other findings related to online communities where reciprocity is not expected (Wasko and Faraj, 2005). Yamagishi et al. (1999) define generalized reciprocity as "the expectation of favourable treatment from others not as direct but as indirect reciprocation for the favours they give." In other words, people belonging to a specific group expect benefits from all its members, disregarding whether these members have already transferred benefits to them in the past. Applying this concept to communities, generalized reciprocity is existent in the Lebanese EE where entrepreneurs give benefits to one another without any expectation of direct benefits from the same actors. Yet, they aim to create a "chain of love", as referred to by one of the participants (C2.11). The chain of love here denotes a sequence of benefit circulation from one party to another in entrepreneurial communities where individual reciprocal benefits are not essential rather holistic beneficial ripple effects are necessary.

This is also related to the high community commitment due to the recurring shocking events

in Lebanon (Putnam, 2000), where a high sense of belongingness leads to individuals disregarding their direct benefits and aiming to achieve the greater good of the society through nurturing a knowledgeable community of entrepreneurs and fostering entrepreneurship. On the other hand, entrepreneurs make sure to give credits to supporting actors as is explained in the final quote in table 5.10 (C2.13). Commitment and reciprocal transfer of benefits are directly connected to the community. Participants showed their support to the community by having it in mind when committing or giving to the people in their networks. Trust is integral among non-governmental ties and networks, where trust towards the government is inexistent. Moreover, the latter factor led to high embeddedness in the local community. Hence, relational capital is generally community-oriented in the Lebanese EE.

5.3.1.3 Cognitive Capital

Cognitive capital investigates shared characteristics among actors, which build the foundation of connections. It is highlighted in the literature that social ties are embedded in the shared cognitions among individuals that allow easier communication (Nahapiet and Ghoshal, 1998; Constant et al., 1996; Wasko and Faraj, 2005).

Cognitive Capital	Quotes
Expertise	<p>C3.1 <i>"It is important because whenever someone has experience they will ease things. When you have more experience, you know how to deal with everything better. Others benefit from this experience to build their knowledge and access resources."</i>(Int. 4, Novice Entrepreneur, Fashion)</p> <p>C3.2 <i>"Expertise does not play any factor. You might be doing the same thing for 10 years and then call yourself an expert about it, but you are not really an expert in the field. On the other hand, you might be doing something different every year for 10 years and there is something that you are expert about. This is where you could get quality over quantity."</i>(Int. 9, Novice Entrepreneur, Automobile)</p> <p>C3.3 <i>"Expertise is not really important at times because you meet people that are very bright and driven to do something. I met an 18 year old mathematician that influenced me."</i>(Int. 31, Serial Entrepreneur, Online Solutions)</p> <p>C3.4 <i>"We lack expertise and specialisation in the ecosystem. Many people do many things maybe because there is not enough opportunities so people are not obliged to be specialised. There are not many technical people and that is a problem. For that I do not see expertise as always necessary in our ecosystem in specific. It is in general terms, but the ecosystem is lacking expertise to start with."</i>(Int. 7, Serial Entrepreneur, Marketing)</p>

	C3.5 <i>“We have a lot of mentors and coaches that throw speeches about entrepreneurship without actually having experience in building a start-up. They did not get their hands dirty. They might be very experienced in specific fields but as long as they did not have their own entrepreneurial experience, they cannot really help.”</i> (Int. 23, Novice Entrepreneur, Computer Engineering)
Shared Language	C3.6 <i>“All the qualified start-ups that I have met who want to be introduced to foreign entities have always very good English and French. Language has never been a barrier for me either.”</i> (Int. 5, Investment Officer) C3.7 <i>“I would see it from a different angle as different language can help a lot. Knowing different languages would help as the people would have different backgrounds and experiences, hence more knowledge exchange.”</i> (Int. 11, Investment Banker)
Shared Narratives	C3.8 <i>“There are some technical words we share. I need to connect with someone who knows these terms so that we can stay on the same page.”</i> (Int. 14, International Accelerator) C3.9 <i>“I do not see that necessary as you can still benefit from people from different domains with different narratives.”</i> (Int. 13, Local Incubator)
Homogeneity in Knowledge Basis	
Attributing importance to homogeneous knowledge	C3.10 <i>“It is necessary to have the same basic values or concepts. I cannot team up with someone believing in the waterfall methodology, he/she needs to believe in the lean methodology.”</i> (Int. 7, Serial Entrepreneur, Marketing)
Attributing importance to heterogeneous knowledge	C3.11 <i>“You do not need similar knowledge basis to share knowledge. People from other domains know a lot of things that I do not. You can always take more information from people working from domains different than yours.”</i> (Int. 13, Local Incubator) C3.12 <i>“No, because strategies apply everywhere. You just need to have the logic and find people who have the logic so we can implement those strategies in what we are doing.”</i> (Int. 4, Novice Entrepreneur, Fashion)
Shared Norms and Values	
Importance of shared norms and values	C3.13 <i>“This is very important. For me, I hire and create relationships based on values. This is because if your business is not aligned with your values, you hit a wall. For that, similar values and norms are one of the main things I look for in people.”</i> (Int. 40, Serial Entrepreneur, Media) C3.14 <i>“This is a priority for me.”</i> (Int. 31, Serial Entrepreneur, Online Solutions) C3.15 <i>“When two people talk, there should be common ethical and social norms. This is how people interact. Problems occur when people tend to play around these norms. Volatility happens when two people do not establish trust between one another, they do not agree on the same norms. Social capital is only considered a capital that you can capitalize on when people agree on the same norms. They have to be trusted social entities. Values and norms establish trust.”</i> (Int. 39, Serial Entrepreneur, Computer Vision)

Table 5.12: Cognitive Capital; Representative Quotes

However, findings suggest that dissimilar characteristics allow for higher transfer of benefits at times, similar to findings from Cooke et al. (2005), Staber (2006) and Giuliani (2011).

Furthermore, findings show that the most important attribute is the shared norms and values, whilst others are less important locally specifically because of the novelty of the ecosystem. Hence, specialised expertise is scarce. However, those seeking international connections look for higher cognitive capital to compensate for the local gaps in knowledge, which is discussed in section 5.3.2. Nonetheless, the higher the shared characteristics and cognitions (i.e. expertise, shared norms and values, etc.), the higher the trust in the social actors. Moreover, individuals having high relational capital but no mutual understanding fail to benefit from one another. This section investigates four characteristics that influence social ties; expertise, shared language and narratives, homogeneity in knowledge basis and shared values and norms. Table 5.12 presents the quotes used in analysing the latter four attributes of cognitive capital.

Expertise

Findings show that the expertise is generally viewed as an important characteristic for building ties and exchanging benefits; the higher the expertise of a connection, the better the gained benefits (C3.1). On the other hand, few entrepreneurs are not very keen on having high expertise as key characteristic among all their network of ties, specifically local ones. One of them explains that out of his experience, people might call themselves experts in a certain field after working in it for many years, but they would not really be, whereas others might only be working in the field for a little time and be more experts than the former (C3.2). Constant et al. (1996), on the other hand, highlighted the need for high expertise for actors seeking high social capital. Similarly, Kim (2015) explained that actors with limited experience have less valuable knowledge to share. Although participants acknowledge the importance of expertise in several instances, limited expertise in the country pushes them to employ those elsewhere and look for other alternatives locally. For instance, one participant explains that young talents influence him (C3.3). Young talents are highly welcome in the ecosystem and are one of the main attributes that increase creativity and creative outcomes. The most recurring and needed solution for this, as well as several problems explained in this chapter (e.g. lack of awareness, traditional mindsets, etc.) is proper university education. Aaltonen (2016) describes the role of universities in building and maintaining young talents. On the other hand, universities as well as schools must update the offered classes and materials that would answer to the need of the market and the EE. Universities play a direct role in shaping the direction of ecosystems of entrepreneurship (World Economic Forum, 2014). Other studies focus on the support offered rather than needed actors. For instance, Boutillier et al. (2016) highlight the need for research, education, training, etc. regardless of the actors offering it. Other researchers undervalue the roles of universities (Ebdrup, 2012; Åsterbro and Bazzazian, 2011; Mason and Brown, 2014). Åsterbro and Bazzazian (2011) measured

the impact of universities in developing countries arguing that with limited spin-offs their influence is low. Nevertheless, it could be that the examined universities are also, like the Lebanese case, not tailored to the needs of the market; hence, students and researchers do not possess the needed skills to deliver proper market solutions. Regardless of the discussion related to the importance of universities in EEs, education and training are required to tailor entrepreneurial skills to what suits the market needs. This can be highlighted as a need that must be filled irrespective of the party offering it. This would alter the level of expertise in the country.

On the other hand, due to the novelty of the EE and low local specialized expertise, entrepreneurs and supporting actors refer to international linkages for advice, accessing resources and other forms of support (C3.4). Additionally, entrepreneurial expertise is also lacking where entrepreneurs could have several available mentors/coaches who lack practical entrepreneurial experience (C3.5). Hence, even though expertise is limited locally, it is high internationally, thus acting as another reason for higher embeddedness in international networks.

Shared Language and Narratives

Nahapiet and Ghoshal (1998) explained the need for sharing the same language and codes for higher and more valuable social capital. Lebanon's multilinguistic asset aid in overcoming language obstacles with local and international connections. Although the majority of players in Lebanon speak Arabic or have Arabic speaking employees, the fact that the Lebanese learn two foreign languages at a young age make them well-equipped to answer and communicate properly with people in English and French. Focusing on local social capital, this measure is not crucial, as Arabic is the only official language in the country (C3.6). Hence, participants did not highlight any problems in communicating with local ties (C3.7). Being multilinguistic, in fact, strengthens their international social capital. On the other hand, they attributed higher importance to sharing the same narratives as at times, this could act as a barrier (C3.8). Nevertheless, the latter researchers highlighted the attribute of sharing the same narratives as a prerequisite for transferring knowledge (ibid.). Findings suggest that although this is accounted as a characteristic that adds to the strength of the relationship, it is not a major one (C3.9). Similar to homogeneity of knowledge (Giuliani, 2011), having dissimilar narratives increases the margin for transferring benefits. Nevertheless, entrepreneurs working from within the same ecosystem can be sharing similar narratives only by attending the same events, conferences and meetings (Bolino et al., 2002) or by cooperating. Participants who insured that the ecosystem is small enough for everyone to know one another, especially through attending the same networking events and conferences, have frequently described this as the norm. Hence, they are bound to know the same stories, myths and metaphors

(Nahapiet and Ghoshal, 1998). Hence, findings show that shared language is much less significant than sharing the same narratives; nevertheless, both measures have low importance when it comes to transferring benefits, similar to the attribute explained next.

Homogeneity in Knowledge Basis

In terms of sharing similar knowledge, participant's views varied with the majority highlighting other measures as more central for higher social capital. Table 5.12 highlights the two groups of participants; those attributing importance to homogeneous knowledge (C3.10) and other attributing importance to heterogeneous knowledge (C3.11). Nevertheless, the latter group constituted the majority. To bridge the gap between both groups, one participant clarified that homogeneity in knowledge is important when looking for technical or specialized consultants, whereas heterogeneity in knowledge becomes more important for business level alliances/connections:

C3.16 *“On a business level, I search for people with more connections regardless of the knowledge they have. On the other hand, I do require people at times that know what I know to ask for their advice; especially when I am seeking for technical advice.”* (Int. 3, Novice Entrepreneur, Academia)

However, the majority of the participants regarded homogeneity in knowledge basis as a weak component of knowledge sharing. This is similar to findings from Cooke et al. (2005); Staber (2006) and Giuliani (2011). The latter researchers argued that with higher heterogeneity in knowledge, more benefits are transferred among parties. Nevertheless, this component act as a prerequisite for exchanging technical and/or tacit knowledge. This is similar to the findings from Tsai and Ghsohal (1998).

Shared Norms and Values

Findings show that shared norms and values is the most valued component of cognitive capital. Participants highlighted that they both hire and make connections based on the norms and values of people (C3.13), as shown in table 5.12. The final quote in the table (C3.15) is by an entrepreneur who has strong views regarding the importance of values and norms when building connections as well as for establishing a start-up, as he decided to start over in a different country when he did not find the values he values among actors in Lebanon. The same quote establishes a connection between values, norms and trust. When connections are founded on the basis of similar norms and values, trust can thus be created. Hence, sharing similar norms and values is a prerequisite to building trust. This causality is another reason why participants perceived this measure as a crucial one; it acts as a foundation for trust; which again shows the interrelatedness among cognitive and relational capitals. In this in-

stance, a higher cognitive capital increase relational capital.

Norms shape the overall perceptions of people. As Adler and Kwon (2002) explain, entrepreneurship can be viewed as egoistic in one instance and legitimate in another. These general norms dictate the holistic views of individuals towards specific matters. Similarly, Putnam (1993) describe norms of reciprocity as a cumulative trait individuals learn from their community. In other words, a community widely known for the norm of reciprocity means that its individuals are used to asking for favours or benefits in return to theirs either immediately or at later times. On a different note, Portes (1998) categorises norms of reciprocity as those based on trust or are consequences of it. In the case of Lebanon, a community that seeks the greater good in return to individual favours, entrepreneurs do not necessarily look for direct benefits from each other. Hence, these general norms are hereditary. Similarly, specific work ethics and values are transmissible in the ecosystem. Entrepreneurs influence each other as well as be inspired by coaches, mentors and other supporting actors.

Other norms and values are internalized either at a young age or through later experiences obliging people to act in certain ways. Hence, Portes (1998) argues that social capital is either embedded in the generalised norms of a community or is transferred through social exchange. Both Portes (1998) and Putnam (1993) consider that social capital is captured through common norms. Hence, findings of this study relate back to the views of social capital mostly investigated by these two theorists. This can also be explained by the high sense of community. Putnam (1993) argues that shared experiences could increase social capital due to the feelings of solidarity and strong commitment to one's community. Unlike other hindering factors that push entrepreneurs and supporting actors towards seeking support internationally, both attributes (community commitment and sharing similar norms and values) facilitate the density of local social capital.

5.3.1.4 Summary of Findings and Analysis of Local Social Capital

Through the analysis of the three dimensions of social capital (structural, relational and cognitive), this study highlights means in which social capital is deployed locally focusing on its enabling and limiting factors, which pinpoint the role of social capital in the journey towards the sustainment of EEs in similar contexts. Prior to that, it is important to highlight that one contribution to social capital literature relates to the interconnectedness among the structural, relational and cognitive dimensions of social capital in the local contexts of EEs in developing countries bound by limited resources. It is inferred that, community commitment – an attribute of relational capital – influences values and norms – attribute of cognitive capital. Moreover, trust – an attribute of relational capital – increases by the increase in

norms and values – attribute of cognitive capital. Whilst attributes of both relational and cognitive capital are interrelated, structural capital is altered with the variation of these two dimensions. Conjointly, several factors hindering or facilitating the configuration of structural capital influence the variation in both relational and cognitive capitals.

Moreover, the elements of the three dimensions of social capital highlight enabling factors like the diaspora, trust (non-governmental), high sense of community portrayed through community commitment, disregard of individual reciprocal benefits, expertise and shared norms and values. The diaspora facilitates international linkages leading to higher international partnerships and social capital, which is further analysed in section 5.3.2. Community commitment is the result of the lack of trust towards the local government primarily due to its corrupt, sectarian nature and nepotistic treatments. When entrepreneurs are aware of the government's incapability of offering the needed support to the EE, they turn into community-oriented agents where they disregard reciprocal benefits and show higher commitment towards benefiting their community, which in turn leads to higher trust. For that, they generate a sequence of benefit circulation from one party to another. Accordingly, one contribution of this study is highlighting that in similar developing countries, communities develop higher cohesion and community commitment when authorities fail to deliver their civic duties. Another contribution is that the benefits of local social capital are non-material in a general sense. In other words, whilst entrepreneurs and supporting actors still gain benefits through their local ties, these benefits are restricted to the availability of resources and expertise. Since these two are limited attributes locally, the material benefits become limited to the initial funding provided for start-ups and then convert to the non-material moral support, advice, and competitions, etc. Material benefits, on the other hand, which relate to the traditional resources required by entrepreneurs to excel and accelerate their entrepreneurial journey are mostly internationally based and accessed.

On the other hand, local social capital is constrained by socio-political, cultural and managerial factors referred to in table 5.9. Additionally, the lack of trust towards the government, limited expertise and tenure also limit the access to local social capital. It is important to note that sharing the same language and narratives along with the homogeneity in knowledge basis were the least influencing attributes of cognitive capital, and hence did not affect the general density of the cumulative local social capital. Hence, whilst social capital is considered as insurance to entrepreneurs, only part of its benefits are found locally. The remaining benefits, namely resources, specialized expertise, entrepreneurial experience, etc. are accessed through international linkages. By that, entrepreneurs skip the local challenges like corruption, nepotism, sectarianism, etc. and gain more specialized benefits. Without corrupt, sectarian and nepotistic treatments, international benefits are gained faster and these

advantages are pumped back into the local ecosystem adding more transferable knowledge to the local community. The following section analyses the role of international social capital in-depth and further highlights its benefits to the local community, their need to such capital, means of accessing such capital and strategies for maintaining it.

5.3.2 The Role of International Social Capital in EE

As introduced earlier in the chapter, international social capital is dense in the Lebanese EE mainly due to the limited benefits incurred locally, the presence of restrictive socio-political factors (e.g. corruption, sectarianism) as well as other factors like low trust in the government and high diaspora. The density of this capital necessitates its presentation as an independent entity to allow for an in-depth analysis that could potentially lead to an understanding of means in which international social capital is generated, deployed and maintained that is generalizable to similar contexts. Policy-makers in such contexts could then nurture international social capital leading to the emergence, development and sustainment of a strong EE. This section corresponds to the second research question and highlights that social capital is the strongest when accessed internationally. This section starts by briefly distinguishing between the international structural, relational and cognitive capitals and then moves to the more important aspects of international social capital that we aim to explore as these are often neglected. The remaining sub-sections offer an in-depth analysis of the need for international social capital, the ease or difficulty faced by entrepreneurs when accessing international networks, incurred benefits as well as means in which international connections are maintained. The challenges of international ties are also explained. This study has highlighted the significance of international social capital in the studied context and it proposes that by understanding mechanisms related to international social capital, policy-makers and practitioners become equipped with the needed knowledge and tools to nurture, maintain and strengthen international social capital and guarantee faster growth rates of EEs.

5.3.2.1 Structural, Relational and Cognitive dimensions of International Social Capital

The configuration of international linkages is unique where it is mostly embedded in diaspora networks. These act as the main hub for accessing international social capital where entrepreneurs and supporting actors depend on such capital for international funds, resources, mentorship, specialized expertise, accelerating start-ups internationally, connecting entrepreneurs to international associations, conferences, ecosystems, etc. and participating in

events worldwide. The findings of this study highlight international social capital as one key driving force of EEs in similar developing countries that leads to the transfer of benefits into such ecosystems. Accessing international linkages can be challenging due to reasons like time difference, slow internet connections, etc. nevertheless, and as highlighted in section 5.3.2.3, factors like supportive culture, digital channels and social media and diaspora connections make access to international linkages easier than it seems. However, few entrepreneurs explained that some of these connections are more fragile than local ones (D4.8), making them, sometimes, ties that are valid for a one-time benefit transfer. There is a high need for such connections (refer to section 5.3.2.2) and they offer higher benefits (refer to section 5.3.2.4), nonetheless making them highly available in the Lebanese EE.

Relational capital is different among local and international connections. Trust is described as important for both strong and weak ties as they do not disclose information about their work to connections unless mutual trust exists. Few participants explained that they had higher trust in international linkages (D1.10) as they are much more experienced. Moreover, such linkages are more trustworthy considering the emergence of negative social capital in poor communities mainly due to factors like corruption, nepotism (Portes, 1998; Keyes, 2001) and sectarianism in the Lebanese context (Stel, 2013). Hence, international social capital is one solution to avoid the negative implications of local social capital. However, whilst the trust factor is as important locally and internationally, proximity impacts views on commitment and reciprocity. As international connections are fragile (D4.8), commitment and feelings of obligation towards them are limited, specifically when considering challenges like the time difference, distance barrier and limiting international policies. This would limit feelings of over-embeddedness (Arregle et al., 2013), if existent. Hence, commitment is higher in short proximity. Feelings of reciprocity are also impacted by distance, mainly because connections with actors overseas are more formal; hence, reciprocal benefits are expected and are essential for social capital creation (Putnam, 1995).

Cognitive capital is more important here as actors aiming to build bridging connections search for people with higher expertise and tenure internationally to fill the local gap, where the available pool of expertise is limited. Expertise is crucial when seeking assistance internationally. On the other hand, Lebanon's multilinguistic asset (refer to section 5.3.2.3) does not impose problems related to communicating with international ties. Moreover, participants did not flag any problems related to narratives when communicating with international linkages. Hence, similar to the analysis of sharing the same language and narratives locally, this attribute does facilitate communication among local and international connections, yet other attributes (e.g. sharing similar values and norms) are more significant, according to the participants. Additionally, the discussion related to homogeneity of knowledge basis also

intersects with that of local social capital (refer to section 5.3.1.3). Finally, and similar to the former stage, sharing the same norms and values is also emphasized as crucial for establishing connections in the growth stage of the EE. As has been clear throughout the thesis thus far, there is a high need for international social capital. Reasons for this are explained next.

5.3.2.2 Need for international social capital

Factors	Quotes
Specialized Exper- tise	D1.1 <i>“The gaming industry is not really mature in Lebanon. For us to be able to keep growing and provide larger programs, we have to rely on mentors outside Lebanon.”</i> (Int. 10, Novice Entrepreneur, Gaming)
	D1.2 <i>“Once we started, we needed to build our own drones. There are no machines in the country that helped us to do that. For that, we needed to get all the parts from outside the country and then build it here. It was very challenging and the design was a failure because we did not have the knowledge nor the resources inside the country.”</i> (Int. 1, Novice Entrepreneur, High-Tech)
	D1.3 <i>“I am someone who had to go abroad to sharpen my UX knowledge. Had I had it here, I would not have done that for example.”</i> (Int. 2, Nascent Entrepreneur, Food)
Growing the Ecosystem	D1.4 <i>“We could all benefit from more advanced markets like Europe and North America.”</i> (Int. 30, Novice Entrepreneur, Architecture)
	D1.5 <i>“The ecosystem gets higher exposure. International firms give credibility to the ecosystem. For example, bringing Steve Bozniak to the BDL accelerate conference was very important. Each time we do such international events, the ecosystem would grow more and more.”</i> (Int. 43, Nascent Entrepreneur, Media)
Accessing Interna- tional Funds	D1.6 <i>“Most of the funds are international. Banque De Liban is of course helping in this but accelerators get most of their funds internationally. Moreover, we do not find all the help and support we need locally. For that, we depend on international ties to move forward.”</i> (Int. 27, Serial Entrepreneur, Media)
	D1.7 <i>“IM Capital is a USAID Fund. The US Agency for International Development has an initiative in the Middle East. They invested 15 million dollars in our fund.”</i> (Int. 5, Investment Officer)
Scaling up start- ups	D1.8 <i>“For most start-ups, Lebanon is a good testing ground. Once they want to grow, they need international ties. In our case, and since we cannot really test our product in the country due to lack of infrastructure, we mostly benefited from out international ties for that.”</i> (Int. 29, Serial Entrepreneur, Academia)
	D1.9 <i>“We are working in a global industry. No one’s market is Lebanon. When someone launches a start-up, they do not have only Lebanon in mind as their market. They test, validate, get feedback in Lebanon but everyone’s market is either the Gulf, Mena region or the world. For that, everyone needs global connections. For that, the ecosystem will only grow better and faster with global ties.”</i> (Int. 10, Novice Entrepreneur, Gaming)

Table 5.13: Need for International Social Capital; Representative Quotes

Lebanon is a country with limited resources – in terms of specialised skills, research, infrastructure and developed technological resources. For that reason, Lebanese entrepreneurs are highly reliant on social capital accessed through international linkages. Entrepreneurs from different industries and fields explain how they did not find the needed skills, research, knowledge and expertise in Lebanon. All the inferred factors leading to the high need for international social capital are presented in table 5.13 and are supported with relevant quotes. Entrepreneurs explain that international social capital fills the gap of the limited specialized expertise in the country (D1.1, D1.2, D1.3). International connections are more experienced and knowledgeable at many times and provide them with the needed resources that are missing in Lebanon. Such connections provide better advice, global insights and global visibility. They also aid in growing the ecosystem as a whole where the success of the start-ups is positively associated with the development of the EE (D1.4). More than that, start-ups accessing international markets and succeeding there attract firms in such markets to Lebanon, which in turn is beneficial to all start-ups in the ecosystem (D1.5).

International connections also provide international funds (D1.6, D1.7), which are more flexible than those offered locally (e.g. rules for acquiring the funds are considered less strict, especially in terms of nationalities of partners and the location in which the start-up operates). Finally, several of the participants highlight that Lebanon is seen as their starting point or ‘testing ground’ (D1.8). However, all entrepreneurs aim big. When they need to scale up their business, they make use of their international connections for that (D1.9). One last theme related to trust is highlighted. Few entrepreneurs explain that they have higher trust in international linkages mainly due to their experience and expertise:

D1.10 *“I have higher trust in international SC as they have more experience. What was happening in Silicon Valley 50 years ago is only happening now in Lebanon.”* (Int. 3, Novice Entrepreneur, Academia)

The high dependence on international linkages in Lebanon is not surprising. Few researchers like Arenius and Autio (2001) and Warren et al. (2001) explain such phenomenon in poor communities and those with limited resources. Arenius and Autio (2001) argued that such communities need assistance from those wealthier ones to fill the gaps they have. Warren et al. (2001) explain that such ties are essential for the social and economic prosperity of poorer communities. Moreover, a further need for such ties is highlighted considering the emergence of negative social capital in poor communities mainly due to factors like corruption, nepotism (Portes, 1998; Keyes, 2001) and sectarianism in the Lebanese context (Stel, 2013) (refer to section 5.3.1.1). Hence, international social capital is one solution to avoid the negative implications of local social capital.

5.3.2.3 Accessing International Networks

When comparing access to local and international networks, participants have somewhat similar views. The majority describe access to international networks as an easy process. Table 5.14 demonstrates the ease of accessing such networks along with the factors that aid in that, which include multilingualism, diaspora connections, international projects, international development agencies, digital channels and social media and supportive culture. Many of the interviewees had the opportunity of travelling and meeting important people abroad that have influenced their work one way or another. Accelerators in the country also make sure that hard working start-ups get this chance, as is shown in table 5.14. One entrepreneur describes the ease of accessing international networks highlighting the importance of traveling for that (D2.1). Another entrepreneur explains that people in the business world are the same all over the world. For that reason, it might not even be important that people have the ability to connect to each other as much as it is crucial to have the business mindset (D2.2). Moreover, on describing the ease of access to international networks, another participant highlights his way of thinking related to creating global connections. He explains that by being connected to a couple ecosystems, you would have the ability to reach any connections you require (D2.3).

The quotes presented in this section have shown that the majority of participants find it easy to access international networks. This is mainly due to the support offered by local accelerators, incubators and other supporting actors along with the dense diaspora links. International social capital is mostly bridging social capital as its links are extra-community (Lin, 2001), heterogeneous (Cooke et al., 2005) and social actors involved have different values and morals as they do not belong to the same social contexts (Wellman et al., 2001). Several of the participants describe these social actors as friendlier than local ones, while few others think the opposite. Regardless of that, when connecting local and international actors, it is implicitly agreed that both actors follow the general norms and rules of business, as entrepreneurs explain; hence positively impacting cognitive capital (when sharing similar values and norms as explained in section 5.3.1.3).

Moreover, international social capital has similar attributes as electronic networks of practice (Powell et al., 1996; Constant et al., 1996). These are defined as groups of geographically dispersed networks of ties sharing benefits among each other without necessarily having to meet (Wasko and Faraj, 2005). This is relevant since participants also highlight such ties in which they build through email introductions, or through LinkedIn and other online platforms without having face-to-face meetings. Additionally, the latter researchers explain that such ties are usually formed through third party associations or through exchanging knowl-

edge in conferences or events (ibid.). All of the participants identify these two as the main means in which they get in contact with international ties. One incubator even have linkages with the EU and the World Bank in Lebanon. Entrepreneurs benefit from working within these impactful projects in the country with the chance of exiting abroad, if successful. The British Embassy in Lebanon and BDL also established an accelerator as an initiative to accelerate Lebanese start-ups in aims of offering them international support and eventually fly those with successful products and services to their offices in London. They frequently bring experts from the UK to provide trainings and workshops to entrepreneurs. Another program they offer is the National Resource Centre (NRC), which connects international businesses to the Lebanese workforce.

Accessing International Linkages

Ease of Accessing International Linkages	D2.1 <i>“They are very easy to access. People make a big deal out of them. We have been to Facebook, MIT, those are the technological engines of the world. Just saying hi is more than enough. I overhear that you have to have a meeting scheduled while in fact just bumping into someone over there is enough to exchange speech and could give you some expertise.”</i> (Int. 9, Novice Entrepreneur, Automobile)
	D2.2 <i>“The business mindset is the same everywhere. People want to make money and they want to provide a service that is reliable and easily accessed. If you go to Tanzania or Algeria, people think the same.”</i> (Int. 17, Serial Entrepreneur, Fin-Tech)
	D2.3 <i>“You can reach anyone in the world by maximum 6 connections. I think being connected to 2 or 3 different ecosystems, you are connected to the whole world.”</i> (Int. 34, Novice Entrepreneur, Furniture)

Factors influencing the ease of access to international linkages

Multilingualism	D2.4 <i>“Honestly all the qualified start-ups that I have met who want to be introduced to foreign entities have always very good English and French. Language has never been a barrier for me either.”</i> (Int. 5, Investment Officer)
	D2.5 <i>“I speak 3 languages and I was able to communicate with internationals using the three languages I know. Programs in the Silicon Valley were in English. We meet with start-ups from Turkey, India, Canada, etc. We also got French mentors in France when we went to a competition there.”</i> (Int. 1, Novice Entrepreneur, High-Tech)
Diaspora Connections	D2.6 <i>“We try to rely on Lebanese expats working abroad because there is more willingness to help and we feel like the people receiving mentorship are a bit more comfortable just because of this affinity that you have.”</i> (Int. 10, Novice Entrepreneur, Gaming)
International Projects	D2.7 <i>“We work closely with Leb Net and Silicon Valley, and this is how we get our start-ups to Silicon Valley. We get at least 2 start-ups every cycle to go for a program there for two weeks. They meet with experts to widen their network and get other benefits. We did the same this week, we got a delegation from Sweden coming here and they met with the start-ups and it was also very beneficial. We try to leverage all the connections in so many ways.”</i> (Int. 12, Local Accelerator)

Factors influencing the ease of access to international linkages

	D2.8 <i>“We have many projects with UNDP, EU, World Bank. We built the ecosystem with the projects that we took. We work with the EU on projects like WeHubs, a social network for women entrepreneurs. We now also have a project called Agrytech. It is funded by Netherlands to invest in the agriculture sector in order to boost the industry in Lebanon, attract youth to work in this sector and decrease unemployment. This is a two-year project. We are now diversifying more as this project is bringing together technology and agriculture. We are in search for entrepreneurs with innovative ideas that would solve problems related to the agricultural sector.”</i> (Int. 13, Local Incubator)
	D2.9 <i>“The partnerships we did with the English and French are very important because Lebanon is still a regional player in a tough region. The fact that we can look at the English speaking market and try to compete with the big guys is a big plus. We also need a launching pad from London or from Paris. We need to benefit from these European hubs.”</i> (Int. 26, Former Minister)
International Development Agencies	D2.10 <i>“The NRC is a very new program. In general, it is when international companies contact us to ask us for outsourcing talented people. We interview the local talents and connect them with these companies. We advertise for this program abroad. We aim to target Lebanese international companies working abroad to recruit Lebanese.”</i> (Int. 14, International Accelerator)
	D2.11 <i>“We do depend on our international ties because our aim is to grow these start-ups internationally. We want them to be internationally known in order for us to mark Lebanon on the world map of entrepreneurship. Phase 1 is a three months intensive work in Lebanon. At the end of this stage, they have their final pitch in front of juries. The shortlisted entrepreneurs then move to our offices in London for stage 2. However, other start-ups moved to Dubai because their products were Arabic.”</i> (Int. 14, International Accelerator)
	D2.12 <i>“Because we are part of an international accelerator program, international ties are much easier to access and maintain. Working for within the hub helped us create a lot of international connections. They were the ones who sent us to the UK. It was a huge step in our journey.”</i> (Int. 18, Serial Entrepreneur, Gaming)
Digital Channels and Social Media	D2.13 <i>“There are a lot of platforms these days where you could actually seek some professional work like UpWork. For example, we work with a designer based in India through that platform. These kinds of platforms change the way start-ups and even big companies work.”</i> (Int. 6, Serial Entrepreneur, E-Commerce)
Supportive Culture	D2.14 <i>“I think the Lebanese have an instinct so for them they could give for anybody and I think this is one of our greatest strengths as well as the ability to adapt and integrate with different cultures. For Lebanese, it is part of our DNA. So I think we have an advantage. It is very easy for us to establish these linkages.”</i> (Int. 16, Coach)

Table 5.14: Factors Facilitating the Access to International Social Capital; Representative Quotes

As explained in Table 5.14, several factors lubricate access to international social capital. Nevertheless, such factors cannot be sorted in a hierarchy as different entrepreneurs and supporting actors might employ different strategies to connect with international linkages.

Nevertheless, diaspora connections do play a key role in this spectrum as the entire ecosystem is dependent on such a factor for resource acquisition along with other benefits. The Lebanese diaspora networks available worldwide (e.g. LebNet) connect local Lebanese entrepreneurs with Silicon Valley and prominent figures related to their designated fields. These networks are employed informally through friends and family members to bridge ties. Hence, international social capital is categorised as part of bridging social capital and electronic networks of practice and is directly facilitated by diaspora networks. Fitjar and Huber (2015) conclude that innovative ventures have denser international networks than non-innovative ones. They further classify such networks as based on personal linkages, yet not neglecting that formal international ties do influence innovation but, not as widely. In the context of Lebanon, personal linkages are mainly those diaspora links. Hence, findings from this study prove that diaspora connections are tied to innovation where the denser the former, the higher the creative thinking and inspiration of entrepreneurs (D3.4). Additionally, such networks act as a shortcut with no limiting socio-political factors like the local corruption and sectarianism, which makes them more appealing to entrepreneurs. Strategies explained in this section are generalizable to other contexts aiming to access international linkages.

5.3.2.4 Incurred Benefits

Participants are asked to list the incurred benefits of their ties both locally and internationally. Although both networks offered similar types of benefits (information, knowledge, resources), they also differed in other instances. Firstly, it is worth highlighting that a good number of the interviewees highlighted that the benefits incurred internationally were more valuable than those locally gained. Moreover, whilst local ties served better for attaining emotional support and PR (referrals and introductions), international connections were more important for inspiration (creative thinking) and an increased culture of entrepreneurship. Table 5.15 identifies six main benefits of international linkages; they are knowledge transfer, entrepreneurial support, exposure, globalised opinion, knowledge spillovers and better local culture of entrepreneurship.

International social capital is also required for increasing inspiration, innovation, specialized knowledge, strategy, market and product know-how. After analysing the roles of both local and international social capital, figure highlights these roles along with the overlapping roles between the two entities. This supports the idea suggested by the entrepreneurs that international social capital is more valuable as the two independent roles of local social capital are emotional and legal support, the latter being very limited at the time of the interviews. To start with, many of the participants highlight the limited success stories in Lebanon,

hence seeking to feel inspired by international entrepreneurs. Local entrepreneurs get several chances to travel to international conferences and events through incubator/accelerator partnerships, competitions and diaspora links (D2.7, D2.8, D2.9). They describe high levels of interactions with international actors during such events, in which creates direct and indirect impacts on strategy and even product know-how. One entrepreneur describes how one quick conversation with a serial entrepreneur in Silicon Valley saved them 8 months of wasted technical work in Lebanon and introduced a new easier technique for delivering their product (D3.2). This is similar to the finding by Fitjar and Huber (2015) whom concluded that global buzz with strangers they meet in international events is directly and positively tied to process innovation. In the case of Lebanon, such global buzz is further related to other forms of innovation where entrepreneurs highlight that conversing with strangers internationally affect the way they view entrepreneurship and means in which they could scale up their business (D3.4); i.e. business strategy. Hence, a further impact of global buzz is on strategy. Unlike Fitjar and Huber (2015), findings from this study also suggest that product innovation is altered through temporary clusters.

The differences in findings would relate to the differences between developed and developing countries where the former offer better resources and infrastructure to entrepreneurs. Another conflicting finding is that of Fitjar et al. (2016) whom argued that medium proximity networks allow the highest innovation outcomes in Norway. In Lebanon, participants did not mention such networks focusing mainly on those international ones and few prominent local networks. This can also relate to the developing status of Lebanon and the surrounding countries where more specialised knowledge and expertise are better accessed internationally.

Internationally Incurred Benefits		Quotes
Knowledge Transfer		D3.1 <i>“The connections from different places in the world will also contribute to your knowledge, showing you new opportunities, the dynamics of different markets. I have friends all over the world and they helped by connecting me to their contacts. I had Skype meetings every month with top entrepreneurs in the world because of these international connections.”</i> (Int. 7, Serial Entrepreneur, Marketing)
		D3.2 <i>“One of the best advice that I got was from the Google technical team and this have saved seven, eight months from only half an hour of a meeting with them. It was flawless and for us this was a huge jump for what we might face later on when we scale up and it shaped the whole core of what the technology is.”</i> (Int. 9, Novice Entrepreneur, Automobile).

Internationally Incurred Benefits	Quotes
Entrepreneurial Support and creative thinking	D3.3 <i>“They are very important for my entrepreneurial journey, business skills, creative thinking, inspiration, advice, mentorship from people who already made it in more advanced markets. The advice and resources I take from these people are definitely better than those I receive locally as they exist in a mature ecosystem and the kind of things they face are different and more mature.”</i> (Int. 24, Serial Entrepreneur, Consulting)
	D3.4 <i>“We discovered more about entrepreneurship and how to scale up the business. They also inspire us to become more creative.”</i> (Int. 34, Novice Entrepreneur, Furniture)
Exposure	D3.5 <i>“I believe international ties are more important than the local ones because they give you exposure to the outside world.”</i> (Int. 27, Serial Entrepreneur, Media)
	D3.6 <i>“It is not only related to connections, it is also related to events and exposure.”</i> (Int. 4, Novice Entrepreneur, Fashion)
Globalised Opinions	D3.7 <i>“International firms provides us with globalised opinions. Moreover, it is important to have people who exited internationally and understand how things work outside. They teach us how to launch our company from within Lebanon and how it should look like internationally.”</i> (Int. 27, Serial Entrepreneur, Media)
Knowledge Spillovers	D3.8 <i>You cannot know what is going to happen, just be there and be awake, because it could just be someone crossing the street or just someone you converse with over a cup of coffee next to the printer.”</i> (Int. 9, Novice Entrepreneur, Automobile)
Better Culture of Entrepreneurship	D3.9 <i>“We do not have the culture of start-ups in Lebanon. Everyone thinks that working in a start-up is very similar to working in a normal 9-5 job. For that, we need to get international firms to the country that would bring this culture of working in start-ups and teach us how to help the community grow and implement the culture and mindset of ecosystems in the country.”</i> (Int. 1, Novice Entrepreneur, High-Tech)

Table 5.15: Internationally incurred benefits; Representative Quotes

Furthermore, similar to Bathelt et al. (2004), higher international linkages lead to more valuable knowledge spillovers (D3.8) and local buzz. Entrepreneurs describe the EE as a friendly environment where almost everyone knows or is in contact with most actors and entrepreneurs. They help one another and are open to sharing knowledge and resources. This means that when entrepreneurs receive valuable benefits from international linkages, they will also circulate these benefits to other local entrepreneurs in Lebanon. Consequently, individual international social capital results in a cumulative development of local entrepreneurial ventures. With such massive benefits to start-ups and the ecosystem as a whole, maintenance strategies, explained next, become crucial.

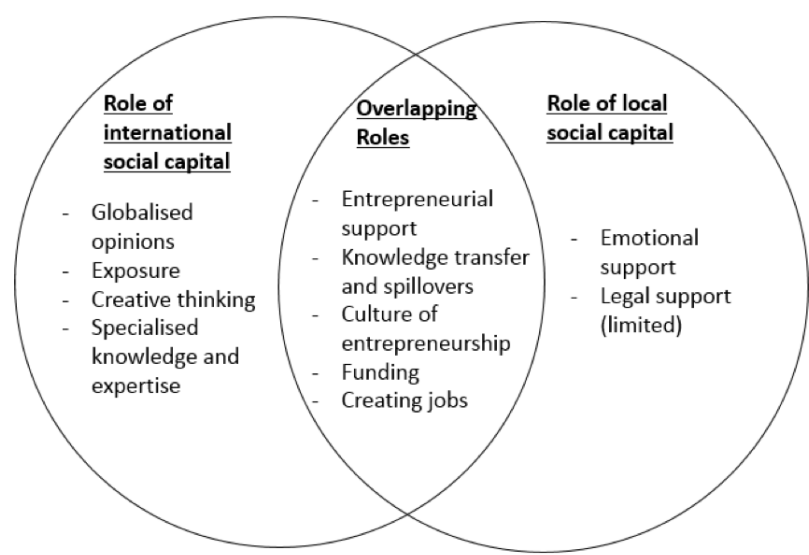


Figure 5.2: The Distinct and Overlapping Roles of Local and International Social Capital

5.3.2.5 Maintaining International Ties

Strategies for Maintaining International Ties	Quotes
Online Channels and Social Media	D4.1 <i>“I maintain both types of ties in the same way; by emails, gifts, greeting cards, phone calls, etc. Sometime I pay commissions if they helped a lot. Connection are connections, whether they are local or international.”</i> (Int. 22, Novice Entrepreneur, Finance)
	D4.2 <i>“We are in the area of social media and digital channels. Nothing is impossible as long as you know how to use them. I maintain such ties on social media. There is someone that I met three years ago at Arab Net, and we kept in touch on Instagram, for example.”</i> (Int. 4, Novice Entrepreneur, Fashion)
	D4.3 <i>“Slack is a mobile and desktop application for chatting. We can integrate skype inside of it and other tools to communicate easier and faster. This is very beneficial especially when talking to people overseas. It is used for business purposes and even online courses for example. You get to meet people with the same mentality as yours.”</i> (Int. 8, Nascent Entrepreneur, Medicine)
Meeting Together	D4.4 <i>“Speak about them in good and catch up with them every now and then. When you visit their country, go visit them.”</i> (Int. 9, Novice Entrepreneur, Automobile)
Giving Credit	D4.5 <i>“We send gifts sometimes, grab a drink, keep them updated about what we are doing, thank them and give them credit. Moreover, if someone helps us, we always include him in every slide we present to thank them and tell them that they deserve this exposure.”</i> (Int. 17, Serial Entrepreneur, Fin-Tech)

Table 5.16: Strategies for maintaining international ties

Although it is apparent that maintaining international linkages is harder than local ones, entrepreneurs still take the extra mile to gain benefits out of them. Throughout the interviews, participants list several means to maintaining the ties they establish. Most of these are similar to the ones they use to sustain local ones; nevertheless, local ties are probably easier to keep considering there are no geographical barriers. Other highlighted challenges included distance and communication barriers (D4.6), restricting international policies (D4.7) and fragile linkages (D4.8). Nevertheless, as one entrepreneur puts it, these ties are not supposed to last forever; when the intended benefit is attained, the connection can be severed in some cases (D4.9). This, while applicable to individual entrepreneurs in some instances, is not applicable on organisation-level. Supporting actors tend to establish strong ties and partnerships with international support structures, whether through diaspora connections or through other means like embassies, international organisations (The World Bank, USAID), etc. Strategies for maintaining international connections are highlighted in table 5.16; these include the use of online channels and social media, planning visits and giving credit to international ties when needed. Online channels and social media are the tools mostly used by participants to maintain international linkages. According to them, LinkedIn and Slack are the most effective online mediums to meet and sustain such ties. All of the strategies explained in table 5.17 reflect the entrepreneur's maintenance strategies as supporting actors maintain their international connections mostly through contracts considering these connections are formal.

Challenges for Maintaining International Ties	Quotes
Distance Barrier	D4.6 “ <i>There is the distance barrier and the time difference so you cannot get them 24/7. It is different from knocking on the door of your advisor. It is very different because all of our meetings are through skype. I cannot invite them for a drink or dinner. It is very tough to keep these connections.</i> ” (Int. 1, Novice Entrepreneur, High-Tech)
International Policies	D4.7 “ <i>There is distance and a lot of policies against us. We cannot even get a laptop with us on the plane to England or the US. They have other similar policies against the Mena region and policies that are killing interconnectivity among such connections. However, we can still reach them easily through social media or Skype.</i> ” (Int. 9, Novice Entrepreneur, Automobile)
Fragile Linkages	D4.8 “ <i>These relationships are weak and fragile but more important.</i> ” (Int. 1, Novice Entrepreneur, High-Tech) D4.9 “ <i>They were crucial. It was not a tie or a connection that was meant to be made forever. It is just the information exchanged is something that is always going to be a brick stone in our growth journey.</i> ” (Int. 4, Novice Entrepreneur, Fashion)

Challenges for Maintaining International Ties	Quotes
	D4.10 “ <i>“They are strong but fragile because they are cross-borders. They are easier to break but there is also so many of them out there, so you are no longer limited to local or regional suppliers or anyone from anywhere. It is possible to rebuild new ones.”</i> (Int. 6, Novice Entrepreneur, E-commerce)

Table 5.17: Challenges for maintaining international ties

With more geographical boundaries and restricting international policies come higher communication challenges. New rules are being added that prevent Lebanese entrepreneurs from getting the best out of the people they know (see table 5.17). Moreover, few participants explain that international ties are mostly fragile. Challenges like the distance barrier, international policies and the fragility of links can shorten the lifespan of international linkages. Entrepreneurs explaining the strengths of international ties emphasise that even though such linkages are “fragile” and “weak”, they are integral for their start-ups as well as entrepreneurial journeys. A founder of one start-up points out that unlike local ties, international ones are not supposed to stay forever. These might not even be considered as ties that can be maintained, but ones that give valuable information that would shape their growth (D4.9). Another entrepreneur expands on the weakness of international ties but highlights that they can be easily replaced (D4.10).

The majority of professional international linkages are weak. The literature on social capital advocates the generation of such weak links for higher benefit transfer (e.g. Granoveter, 1973; Casper and Karamanos, 2003; Cooke et al., 2005; Hauser et al., 2007; Huber, 2009). Nevertheless, establishing weak ties over distance require a different approach for analysis. Few entrepreneurs highlight that ties to international actors might be temporary where the latter is severed after the benefits are transferred. Whilst this is not the case in all instances, international social capital is harder to maintain than local social capital, as the former requires more effort. One aspect to sustain linkages and that stems from the literature is reputation (Donath, 1999; Jones et al., 1997). Wasko and Faraj (2005) explain that reputation maintains knowledge sharing in electronic networks of practice where it encourages and adds incentives for others to participate in the network. Similar to electronic networks of practice, international linkages are sustained generally with no face-to-face contact and sometimes over distance. Reputation can be built through the quality of work delivered as one of the participants explained (D4.11). When doing so, international linkages are motivated to participate more, as is supported by the following quote:

D4.11 *“I guess it is the quality of the work that we deliver that builds our reputation and keeps our partners and connections satisfied and well-connected.”* (Int. 13, Local Incubator)

Moreover, maintaining high levels of relational capital, which mainly reflects high trust, commitment and reciprocal norms, sustains connections (Nahapiet and Ghoshal, 1998; Portes, 1998; Adler and Kwon, 2002). Since the community perspective is mostly not the main concern of those international actors that are not part of the diaspora, commitment and reciprocity are of more importance for sustaining the ties. Contrary to that, diaspora connections show higher commitment to the community that goes hand in hand with the analysis presented in section 5.3.1.2. Trust, similar to local social capital, is crucial for that matter, as shown in the quote below:

D4.12 *“I try to build trust among us and this triggers more collaboration”* (Int. 3, Novice Entrepreneur, Academia)

Moreover, with higher expertise and through sharing similar work norms and values, along with speaking the same language guarantees a high cognitive capital that potentially ensures an increase in the density of international social capital.

After analysing the interviews with entrepreneurs and other supporting actors, it is inferred that international social capital is highly valued in Lebanon – sometimes even more than local social capital. This is mainly due to the lack of specialised expertise, trust in public institutions, globalised opinions, and other resources. Other than the high need for international networks, the Lebanese have a supporting culture that nurtures such relations specifically because of the high diaspora connections. For instance, the large Lebanese diaspora around the world, multilingualism among people, as well as the establishment of international projects in Lebanon supported by the EU, UK, The World Bank, USAID and other individual countries like the Netherlands. Digital channels are mostly employed as tools to establish and maintain international connections. Participants continuously referred to LinkedIn and Slack for such purposes. Conversely, with borders come challenges. Interviewees explained some of the obstacles they face when dealing with individuals residing outside Lebanon. For instance, communications challenges, restricting international policies and fragility of ties. Nevertheless, these did not seem to hinder the motivation of establishing international linkages as participants highlighted several means in which facilitate their international ties. Moreover, such ties transfer valuable knowledge and resources in a corrupt-free, sectarian-free, non-nepotic manner, which make them highly attractive for entrepreneurs residing in environments that are high in limiting socio-political factors.

5.3.2.6 Summary of Findings and Analysis of International Social Capital

International social capital plays a key driving force in the examined EE and acts as an insurance for entrepreneurs to refer to when in need. Unlike the local social capital, international social capital is more specialised, experienced and trustworthy. It is neither corrupt, sectarian nor does it favour nepotic treatments. International social capital is more important in terms of bringing the value and resources, whilst local social capital plays an enabling role where it is more about bonding, creating a sense of community and bridging gaps between the local and international capital. Hence, local social capital is a non-material element, whereas international social capital is more material offering more ‘traditional’ and ‘functional’ resources needed by the entrepreneurs. Accordingly, we can refer to international social capital as the driving force that orchestrates the transfer of key benefits and traditional elements of an EE into the local Lebanese ecosystem.

Hence, from the analysis of both types of capital we infer that entrepreneurs are directly exposed to local and international social capital. They need to bear in mind that whilst the former strengthens the sense of community and bonding among actors, it might expose entrepreneurs to corruption, sectarianism and nepotic treatments. Accordingly, entrepreneurs can take the shortcut by reverting to international social capital in order to avoid the restraining aspects of the local social capital and gain more traditional and functional resources needed for their entrepreneurial journeys.

5.4 The Trajectory of the EE

This section answers the third research question “Are there any differences to the way in which social capital is utilised in birth and growth stages of EEs?”. Social capital is differentiated across both stages based on Mack and Mayer (2015) lifecycle framework of EEs in aims of adding the concept of social capital to the examination of the characteristics of both stages. The discussed stages are sequential, where they commence when specific factors are met, as described in section 2.5. Another recent addition to the literature is the suggested lifecycle by Auerswald and Dani (2017) adapted from Bengtsson et al. (2000) view of the succession and reorganization of ecosystems. Both frameworks are discussed here. Additionally, this section presents views on how the ecosystem came to life focusing on the roles of serial entrepreneurs and dealmakers (Feldman and Zoller, 2012).

Connecting the four actors suggested by Brown and Mason (2017) to the trajectory of EEs, we inferred that key individuals attract actors, resource providers and connectors. The pres-

ence of these actors lead to the emergence of the EE. This stage is characterised by low social capital. After that, when the ecosystem is established, more of these actors are attracted to establish more incubators, accelerators, venture capitals, R&D centres, etc. With the increase of these actors, people would have higher acceptance toward entrepreneurship and the culture surrounding it; meaning, they tolerate failure, embrace innovation, search for role models, and entrepreneurship education (Brown and Mason, 2017). The existence of such culture along with the increase in the numbers of needed actors, resource providers and connectors, the ecosystem moves toward the growth stage, which is now characterised with higher and more valuable social capital. These findings are discussed in depth and linked to participants' quotes as well as the literature in the following sections. The investigation of the role of social capital in the birth and growth stages highlighted three key attributes that prompt the birth and growth of EEs; they are dealmakers, governmental support specifically in terms of funding and entrepreneurial networks. This is presented in-depth next through an appreciation of the framework by Auerswald and Dani (2017).

5.4.1 Succession and Reorganisation of the EE

The EE, according to the aforementioned model, is iterating between short periods of systematic restructuring and long periods of accumulation and transformation of resources (refer to section 2.3.4). The short periods are subject to external shocks or influencers that lead to changes and new opportunities. In Lebanon, the external influencer is the circular 331 introduced by the Central Bank, which has pumped more than 600 million dollars in total in the local ecosystem to support start-up formation as supported by the following quote.

E1.1 *“The government pushed for the circular 331 at the beginning that helped the whole ecosystem. Several accelerators made use of the circular and it helped them in getting more start-ups on board. Before that circular we only had around 3 active investors.”* (Int. 8, Nascent Entrepreneur, Medicine)

One important part of the story of the circular is that it is initially prompted by two dealmakers, the governor of the Central Bank of Lebanon and a previous minister invested in establishing a strong ecosystem in the country. The following quote from the former minister tells the story of how the circular was formed:

E1.2 *“I had a belief at the time that entrepreneurship is a golden opportunity for the country to find a sustainable model of growth, so I took six or seven entrepreneurs to the governor of*

the central bank and I told him that these are the future of Lebanon. We discussed how entrepreneurs and start-ups needed a lot of money and that a lot of it might be lost, however, the small part that would be invested in the right place would make up for the losses and actually turn out to be very profitable. He got convinced immediately and pushed to introduce the circular 331.” (Int. 26, Former Minister)

The circular is the only form of material support provided by a governmental entity. It led to a great increase in start-ups, availability of funding and the number of investors, VCs and other funding schemes. It attracted more supporting actors and led to a positive change in the mentality of participants making it more entrepreneurial and less risk averse, as shown in the quote below:

E1.3 *“With the support of the circular and the government, the participating banks and investors are increasing and changing their views about start-ups. In the birth stage, banks were more risk averse. Now, they understand the benefits and are more willing to invest.”*
(Int. 11, Investment Banker)

During this period, interconnectedness increased due to the boost in the numbers of entrepreneurs and investors as well as the heightened willingness to participate in the EE. People started establishing networks of connections to ease their entry to the ecosystem and establishment of their firms/start-ups. Another influencer is the establishment of institutions and informal entrepreneurial networks by dealmakers, which prompted (i) awareness and (ii) initial participation in the EE by supporting organizations and entrepreneurs:

E1.4 *“In the birth stage, there were a few serial entrepreneurs managing the ecosystem. They knew what they were doing because they had the vision. They established a small circle of connections, mostly local to build the first few supporting organisations.”* (Int. 4, Novice Entrepreneur, Fashion)

Nevertheless, social capital reaches much higher levels during the longer periods of accumulation and transformation where the ecosystem becomes more interconnected:

E1.5 *“Social capital must be stronger and have a bigger weight of people in the growth stage.”* (Int. 7, Serial Entrepreneur, Marketing)

After the circular was established, entrepreneurs described a higher availability of networks they could access, which were more valuable, offering specialized services and expertise.

Participants also highlighted the availability of extra-community connections enabling the transfer of global opinions from mature ecosystems around the world as well as increasing motivation of local talents as the chances for international exposure increased (C10).

E1.6 *“In the growth stage, the ecosystem grew in numbers, money and somewhat in maturity, which in turn created awareness about the ecosystem that attracted more people.”*
(Int. 32, Serial Entrepreneur, Computer Engineering)

Considering their iterative nature, the framework by Auerswald and Dani (2017) predicts that future shocks can occur again leading to the start of a new cycle. One public and political figure listed few of these which would occur in the near future; for instance, the introduction of new networks of angel investors and the availability of new extremely fast (fibre optic) internet connection in the ecosystem (another governmental initiative) facilitating better connection with international networks of ties. Such incidents are expected to heighten people’s motivation to participate in the EE – whether entrepreneurs or supporting actors. The below quote reflects this further:

E1.7 *“For the infrastructure, we are going in a very good path as major development are being put in place. Fibre optics will be out. We will have specific places in Lebanon (especially those incubators in the EE) that will have fibre optic connections.”* (Int. 26,
Former Minister)

Three distinctive factors emerge from the above analysis; governmental support in terms of funding, dealmakers and entrepreneurial networks. The first two factors are crucial to prompt the initial short period of systematic restructuring to give rise to the EE. The third factor, however, is the consequence of the former two, which (i) lubricates the transition to the long period of accumulation and transformation and (ii) is a prerequisite for its sustainment; hence, leading to higher interconnectedness and social capital. Unless major economic or security threats occur, further support from the government and dealmakers is expected to initiate a new cycle of succession and reorganization of the EE. Accordingly, whilst dealmakers and funding from the government are crucial for systematic restructuring, social capital spins out of that period leading to a long and dense accumulation and transformation of resources. These factors are further examined from a birth and growth perspective of EE in the following two subsections.

5.4.2 Birth and Growth of the EE

Mack and Mayer (2015) described characteristics like policy, availability of funds, human capital, markets, etc. with limited concentration on networks and social capital across the phases of the lifecycle. The researchers, nevertheless, highlighted the importance of diaspora and multinational networks in the saturation stage of ecosystems arguing that such act as assets to strengthening the maturity of EEs and preventing its decline (ibid.). Moreover, they explain that entrepreneurial networks become part of the culture in the growth phase. To identify at which stage the Lebanese ecosystem is, the measures used by Mack and Mayer (2015) were adopted, which classified the Lebanese EE to be at its growth stage. This is because, as proposed by the latter two researchers, the Lebanese EE is characterised by growing rates of firm births, policy is beginning to be tailored towards entrepreneurship, funds are easier to access, etc. Adding to the findings by Mack and Mayer (2015), table 5.18 distinguishes between social capital at birth and growth and further categorizes it into networks of ties and incurred benefits.

The following sections distinguish between social capital at the birth and growth stages and then identifies the different means of support offered at both these phases. Table 5.18 is further elaborated in the upcoming sections.

	Birth	Growth
Network of Ties	Personal networks of experienced entrepreneurs. Very few investors. Actors are more risk averse.	Immense increase in financial networks. Actors are more risk takers.
Incurred benefits	Limited support from government (infrastructure). Advice and emotional support are the two main benefits incurred.	Fast decision making. Advice is more valuable at this stage, with higher access to resources. Emotional support is also present here.
Social Capital	Social capital is lower at this stage with higher presence of strong ties. Connections are easier to build.	Social capital is higher with a majority of weaker but more valuable ties. Connections are harder to build.

Birth	Growth
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Table 5.18: Social Capital at the birth and growth of the ecosystem

5.4.2.1 Social Capital at the Birth Stage

Participants explain that social capital is available at both stages yet in different capacities. Generally, entrepreneurs identified social capital to be very easy to build in the birth stage as actors are limited and easily available to help. Nevertheless, the value of the support provided is less compared to the growth stage mainly due to (i) the limited pool of supporters and the (ii) the majority of local intra-community ties. More valuable local and international actors join the ecosystem in its growth stage, as is shown in the next section. Table 5.19 highlights the main understandings about the birth stage from participants. The analysis here also highlighted the significance of dealmakers, funding from the government and the need for further governmental support.

It is important to note that different types of ties exist at both of the studied stages (e.g. weak and strong, bonds and bridges, intra-community and extra-community, etc.); nevertheless, few of those has higher existence in each stage. For instance, the birth stage has higher reliance on intra-community ties as the first serial entrepreneurs made use of their personal bonding social capital to establish the first few supporting organizations in the EE. Stronger networks of ties, often referred to as bonds (Lin, 2001), are made in close proximity (ibid.). Weaker ties, bridges, are established regardless the location of actors (Warren et al., 2001). Considering that most of the used networks were strong at this stage, these actors found it easier to build social capital as the access to networks is tranquil (E2.11). Moreover, nascent entrepreneurs who joined the ecosystem at this stage also describe having easy access to networks. They explain that only few supporting actors existed at this stage, and connecting with them is easy. As the ecosystem started to grow, more actors, resource providers and connectors (Mason and Brown, 2014) were attracted to it.

Birth stage of the ecosystem	Quotes
Importance of Dealmakers	E2.1 <i>“In the birth stage, experienced entrepreneurs came together to initiate the ecosystem. These people knew what they were doing because they had the vision. They needed more funding than anything else and partnerships to grow the ecosystem.”</i> (Int. 4, Novice Entrepreneur, Fashion)

Birth stage of the ecosystem	Quotes
Importance of Governmental Funding	E2.2 <i>"I think when it comes to the birth stage, it took one person to get the stone rolling."</i> (Int. 9, Novice Entrepreneur, Automobile)
	E2.3 <i>"I think the circular was the birth of the Lebanese ecosystem."</i> (Int. 10, Novice Entrepreneur, Gaming)
	E2.4 <i>"They created the circular 331 in the birth stage. Before that, we only had around three active investors. For that, some investors are important to be present at the birth stage, but then more of them should join in the growth stage."</i> (Int. 27, Serial Entrepreneur, Media)
	E2.5 <i>"It is important to have two or three investors to have a sense that things will go well in the ecosystem."</i> (Int. 24, Serial Entrepreneur, Consulting)
Need for Governmental Support	E2.6 <i>"The government is important at the birth stage. When you are creating something new, it is very difficult to launch it on your own on a business level or an ecosystem level. When you are two people instead of one it is less difficult. It is also harder for a country that lacks a culture of entrepreneurship to start up something with no governmental support. I really believe, at least in Lebanon, the government must be present and helpful."</i> (Int. 1, Novice Entrepreneur, High-Tech)
Social Capital	E2.7 <i>"In the birth, it is easier to make relationships, as everyone is here to meet new people and connect with others. It is an easy sell. However, the value of these connections is different, as the more valuable actors usually join the ecosystem as it is growing. You find less experienced people in the birth stage."</i> (Int. 29, Serial Entrepreneur, Academia)
	E2.8 <i>"Social capital is lower at the birth stage."</i> (Int. 1, Novice Entrepreneur, High-Tech)
	E2.9 <i>"In the birth, it was too limited. Few people know few things. They did not have enough media coverage and did not do a lot of events."</i> (Int. 34, Novice Entrepreneur, Furniture)
	E2.10 <i>"In the birth, it was a small number of people. It was a closed group. It was interesting but not very fruitful because when you talk to the same people all the time, you do not get new ideas."</i> (Int. 31, Serial Entrepreneur, Online Solutions)
	E2.11 <i>"In the birth, social capital existed with small groups of people and few individuals."</i> (Int. 32, Serial Entrepreneur, Computer Engineering)
	E2.12 <i>"In the birth, people can easily access social capital, as the ecosystem is small. However, it is less efficient."</i> (Int. 33, Novice Entrepreneur, Automobile)

Table 5.19: Birth stage of the ecosystem

Hence, the configuration of social capital (structural capital) is mainly focused on the local connections with limited international support from organisations like the UN and USAID. Ties are stronger allowing for an easy access for entrepreneurs to gain more benefits and build more connections. Relational capital is characterised by high trust, commitment and willing-

ness to reciprocate benefits as the feeling of obligation is higher among strong ties (Arregle et al., 2013). Even though the latter researchers highlight a negative case of over-embeddedness where actors feel obliged to give something back to their networks (ibid.), participants in this study did not highlight this as a problem. The majority explain their positive views of embeddedness in their communities as means of giving back to those who support them. Moreover, some actors show willingness to give without any expectation of gaining benefits back on the personal level, but hoping that these benefited parties would eventually give back to the community whether in the form of creating their own success story or actual tangible benefits to other nascent entrepreneurs (refer to section 5.3.1.2). This gives rise to a theme of civic engagement and community cooperation similar to that highlighted by Putnam (2000). Putnam’s work categorised social capital as being dependent on the community, not the individual where factors like cooperation and engagement in the community result in higher gained benefits (Alvarez et al., 2017). Thus, social capital in essence is viewed as a public good in the Lebanese community (Putnam, 2000) not only in the birth, but in the growth of the EE as well. Relational capital is viewed as limited specifically in terms of the limited availability of specialization in expertise in the birth stage considering that the majority of the players are local and do not have enough resources to offer nascent entrepreneurs. However, shared values and norms are viewed as important in all stages as most participants argue that this is the focal point of their relationships.

Nevertheless, the value of incurred benefits is less at this stage as compared to the growth stage (E2.10) bearing in mind the limited availability of actors, specialised expertise, funds and risk averseness of investors. Hence, participants highlight access to resources as low, whilst advice and emotional support as higher based on Renzuli and Aldrich’s (2005) classification of incurred benefits. Quotes explaining the incurred benefits at the birth stage are presented in table 5.20.

Quotes

Support required in the birth and growth stages of the EE	<p>E3.1 <i>“Support is required at all stages. Each stage has its own challenges and you will need to tackle them. Someone used to tell me these six months are hard. So, I would wait for these six months to finish, and then realise that the next six months are hard as well, sometimes harder. This is because you are in another stage, with new challenges and it is a continuous loop.”</i> (Int. 4, Novice Entrepreneur, Fashion)</p> <p>E3.2 <i>“We need advice at both stages. We need access to resources at the growth stage because at the beginning, you always have to do everything by yourself and then once you validate it, this is when you access resources. Emotional support is needed all the time.”</i> (Int. 28, Novice Entrepreneur, Computer Engineering)</p>
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Quotes

E3.3 *“Advice and emotional support is necessary at every stage. Access to resources is more necessary in the growth stage just because you have to give the teams that you are recruiting a promise of somewhere to go after.”* (Int. 29, Serial Entrepreneur, Academia)

E3.4 *“I think advice is important in the birth and access to resources is important in the growth. Emotional support is important at both.”* (Int. 4, Novice Entrepreneur, Fashion)

E3.5 *“I think advice is minor in the birth stage, but massive in the growth stage. When it comes to growth, we started growing like two days ago. I do not know what is coming soon. I heard a lot about what happened to people and a lot of people broke down in the growth stage because their technology could not scale, their team could not take the effort, etc. Knowing that will give you a head up, but you never know what comes up.”* (Int. 34, Novice Entrepreneur, Furniture)

E3.6 *“In the growth stage, mentorship and advisory are key because it is booming and everyone wants to be an entrepreneur.”* (Int. 4, Novice Entrepreneur, Fashion)

Table 5.20: Support required in the birth and growth stages of the EE

Moreover, (i) being more reliant on close ties and (ii) the first few to join the entrepreneurial environment, entrepreneurs can grasp more opportunities at this stage. Morgan (1995) and Sorenson (2003) explained that actors with close proximity exchange higher information about available opportunities in the market. While available opportunities highlighted by actors from different markets/regions might lead to success, opportunities available in the local market have higher benefits to the local community. For that, a number of participants highlighted the importance of understanding the local market, its needs and requirements prior to the establishment of start-ups. This is also viewed from a civic engagement perspective where a higher understanding of the local needs result in better local economic development. On the other hand, this stage witnessed higher risk averseness from investors considering their limited experience in funding start-ups and accepting risks. Nevertheless, with more experience in the market, investors develop higher tolerance to risk as is apparent in the growth stage of the EE and discussed in the next section.

It is important to note that the Central Bank is considered as one of the key actors at this stage providing a safe environment for entrepreneurs (Casson and Giusta, 2007), which is also crucial for eliminating the traditional mindset of entrepreneurs making them more tolerant to taking risks and embracing opportunities. The impact of international social capital is still low at this stage as the international partnerships are boosted as the ecosystem starts to grow, as shown in the following section. This eventually leads to the entrepreneurial orientation (i.e. higher culture of entrepreneurship), which, in turn, prompts the growth stage of the ecosystem. Dealmakers are also viewed as important. These actors (i) prompted the birth

of the EE and (ii) facilitated the performance within the local entrepreneurial environment eventually stimulating a wide entrepreneurial orientation (i.e. culture of entrepreneurship), which, in turn, prompts the growth stage of the ecosystem, discussed next.

5.4.2.2 Social Capital at the Growth Stage

The characteristics altering social capital – as mentioned by the participants – include higher availability of supporting actors and structures (both local and international), more funds, higher need for policies, more success stories, better and faster decision-making, higher support from universities, incubators and accelerators and more appreciation of weaker links. Moreover, the mentality of both the investing bodies and entrepreneurs changes to the better by the former becoming less risk averse and the latter more willing to participate in the entrepreneurial scene. These newly added support structures elevate social capital for entrepreneurs, yet making it harder for them to be seen, as more start-ups are engaging. Thus, with more people available in an ecosystem (more start-ups and supporting actors), it becomes harder to meet and know everyone. Nevertheless, considering the higher availability of resources and parties, ties are more valuable as shown in the quote below:

E4.1 *“It is harder to make connections in the growth stage but they are more valuable to the entrepreneur.”* (Int. 7, Serial Entrepreneur, Marketing)

The real question, however, is related to whether social capital is that important for growing an ecosystem? Most entrepreneurs as well as supporting actors build their argument based on the fact that social capital is the most crucial aspect for growing both the ecosystem in general and start-ups in specific. The below quote supports this notion:

E4.2 *“I think you need social capital at the birth stage in order for you to reach the growth stage. You will not be able to reach that stage without social capital. You need your connections and to put all your efforts. At the growth stage, the network would start to grow. And as this happens, the ecosystem would grow more and more.”* (Int. 3, Novice Entrepreneur, Academia)

Table 5.21 highlights the characteristics and needs of participants in the growth stage of the EE and supports those with appropriate quotes by the participants. Unlike the birth stage where participants referred to the central Bank as the key facilitator of the ecosystem, the analysis here highlights international social capital as a key driver facilitating the growth of the ecosystem. The growth stage witnesses a higher reliance on extra-community ties, where the supporting actors started building international networks aiming to access resources and

bringing further support to the country, whilst working simultaneously on accessing local networks of connections. The growth of the ecosystem gives it good publicity that attracts important local, regional and international players like universities, research centres, incubators, VCs, angel investors, etc. The actors also affiliate with international organisations to bring international projects to the country (E4.12); for instance, SE Factory (intensive coding boot camp) with the World Bank, We Hubs (social network for women entrepreneurs) with the EU, women empowerment training with the UNDP, etc. (B2.7).

With higher affiliations with international networks, this stage of the EE depends more on extra-community connections that are more bridges than bonds (Lin, 2001). Bridging social capital denotes weak ties that are constantly referred to as more important for information sharing, accessing opportunities and resources among other benefits (Granoveter, 1973; Casper and Karamanos, 2003; Cooke et al., 2005; Hauser et al., 2007; Huber, 2009). In the case of Lebanon, these ties are important to access specialized expertise and other resources that are lacking in the country. Moreover, with more support from universities as well as the availability of more acceleration programs targeted at university students and fresh graduates, the growth stage witnesses an increase in applications from the youth. With access to boot camps, networking events, skype conferences with international experts, advice from mentors, coaches and university professors, etc., the youth are more motivated to join and succeed (E4.9, E4.11). Additionally, as one participant explains, when nascent entrepreneurs see other start-ups succeeding, they only grow fonder of what they do aiming to build their own success story (E4.6).

Growth Stage of the EE	Quotes
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Higher Funding	E4.3 <i>"The ecosystem is improving. There is more funding available from different parties. They have more money to invest and even better advice to offer."</i> (Int. 31, Serial Entrepreneur, Online Solutions)
Need for Governmental Support	E4.4 <i>"You have to back up the growth stage with policies because it might fall if you do not have a solid background or infrastructure underneath it. A lot of policies are still missing, if not in this country, in the region as well. For this ecosystem to grow, they need to get a lot of policies around the technical revolution. Without the infrastructure and the policies, it will just cripple in the end."</i> (Int. 9, Novice Entrepreneur, Automobile) E4.5 <i>"Some of the drawbacks are the Lebanese law, we do not have a venture capital law nor a private equity law. The problem is from the country not the ecosystem. Last year they have presented a PEVC law but it is still pending. The legal infrastructure is the problem."</i> (Int. 5, Investment Officer)
Higher Success Stories	E4.6 <i>"What happened recently with Souk.com was amazing because if one could make then everyone of us could make it."</i> (Int. 9, Novice Entrepreneur, Automobile)

Growth Stage of the EE	Quotes
	E4.7 <i>“The fourth program we offer highlights the success stories of Lebanon and puts the country on the Tech map. We wanted to change people’s perspective about Lebanon.”</i> (Int. 37, International Accelerator)
	E4.8 <i>“We get successful people to pitch about their success stories. We have around 90 speakers from different industries and 1,000 attendees.”</i> (Int. 40, Serial Entrepreneur, Media)
Higher Engagement from Universities	E4.9 <i>“We could see it in the universities, every university right now has a program for entrepreneurship, events for that, networking among their students. This is the rise.”</i> (Int. 9, Novice Entrepreneur, Automobile)
	E4.10 <i>“LAU has recently started an entrepreneurship program with one accelerator. Together they are helping students launch their company as soon as they graduate from the university. Anyone can have access to it not only LAU students.”</i> (Int. 12, Local Accelerator, CEO)
Increase in Offered Services	E4.11 <i>“In the birth stage, we were only accelerators. We provided entrepreneurs with free co-working space and we had limited funding from BDL. Recently, we established new research services, resource centre and launched a new accelerator program. Our services changed. We now host many new events. Many TV channels came here and interviewed us. As we grew more, we started attracting more entrepreneurs and innovative ideas.”</i> (Int. 14, International Accelerator)
	E4.12 <i>“We did not have the co-working space in the beginning, we did not do as many events, and we only had one site. We did not have projects at the beginning with international organisations. We built those partnerships through the years as well as initiating more funds.”</i> (Int. 13, Local Incubator)
Shift in the Mentality: Actors becoming more entrepreneurial	E4.13 <i>“The mentality of banks is changing they were very conservative. With the support of the circular and the government, the banks are changing their views about start-ups. There is a lot of risk; however, there is a lot of return if this company succeeded. In the birth stage, banks did not have the proper knowledge that would push them to invest in start-ups. They were more risk averse. Now, they understand the benefits more and are more willing to invest than before. I think the experience of the people who are managing the funds now also helped in changing their mentality.”</i> (Int. 11, Investment Banker)
	E4.14 <i>“The most prominent difference between what happened at the birth and growth stages is that when people wanted to engage in the entrepreneurial world in the birth, they viewed it as a risky move. Now and because everything is available in the market, entrepreneurs have more guts to go into the market knowing that they have the support they need from BDL and other funding companies. People used to believe that funding companies are stealing their shares, now they are more literate about it. That is why you see more people are getting into this as what they need is now more available and accessible in the market.”</i> (Int. 15, Local Incubator)
Other Advantages	E4.15 <i>“Decision-making is much faster here.”</i> (Int. 7, Serial Entrepreneur, Marketing)
Social Capital at the Growth Stage	E4.16 <i>“Social capital must be stronger and have a bigger weight of people in the growth stage. They say that the ecosystem will filter itself in a way that the people who were part of the ecosystem in the birth stage but are not good enough will leave before reaching the growth stage.”</i> (Int. 7, Serial Entrepreneur, Marketing)

Growth Stage of the EE Quotes

E4.17	<i>“In the growth stage, you would require more connections. The problem here is that the country is small and it is harder to bring in more people and change their culture. For example, if someone likes basketball and you need to create a team, you can find 4 people and create it, but it is very difficult to convince the 5th person to join and like the team. The same applies to the ecosystem. To convince the people to build a community, the first two people are easy but getting more is hard. When it comes to social capital, we need to use a lot of our connections at the growth stage only to get a few new people to join in.”</i> (Int. 1, Novice Entrepreneur, High-Tech)
E4.18	<i>“I think towards growth, you understand the value of a few weak links versus huge social capital.”</i> (Int. 18, Serial Entrepreneur, Fin-Tech)

Table 5.21: Growth stage of the EE

Mack and Mayer (2015) also highlight success stories as integral for this stage of the EE as young entrepreneurs view these successful people as their role models aiming to succeed as they did. This, according to Isenberg (2011), enhances the entrepreneurial culture by making entrepreneurs and the society more entrepreneurial and investors less risk averse. Nevertheless, even though more success stories are available at this stage, participants explain that they are more inspired from their international connections. This, they argue, is due to the saturation of international EEs and the fact that they have much developed resources available for them leading to a good number of start-ups succeeding. Moreover, participants explain that they can learn something from conversing with their international connections whether face-to-face (D3.8) or through Skype as they are knowledgeable and have more creative ways of dealing with obstacles. Hence, interviewees highlight that these ties increase their creative thinking, culture of entrepreneurship in Lebanon and give them access to globalised opinions from serial entrepreneurs who worked in highly developed and saturated ecosystems. Mack and Mayer (2015), however, only highlight international ties at the saturation and decline stages as a solution for the deterioration of the EE, nevertheless, these ties are of great importance at the growth stage in Lebanon to fill the gaps in the limited local resources. Warren et al. (2001) argued that such ties lead to an increase in economic development and entrepreneurial activities in developing countries.

On the other hand, participants evaluating the incurred benefits as categorised by Renzuli and Aldrich (2005) (refer to table 5.20) explain that they have higher access to resources and advice at this stage as they are more experienced. Emotional support, they explain, is available at both stages. The benefits are more valuable at this stage as the ecosystem moves toward a more specialised EE attracting those supporting actors with the needed experience and knowledge both locally and internationally.

Hence, the structural capital of entrepreneurs is different at this stage as it is more dispersed regionally and internationally. It is also more dense and diverse locally as more supporting actors join the ecosystem. Moreover, ties are more bridging than bonding at this stage as both entrepreneurs and supporting actors move away from their personal networks to more specialised ones in different locations. Relational capital decrease as participants explain that weaker ties are more fragile, especially international ones. Consequently, commitment and feelings of obligation decrease. This limits feelings of over-embeddedness (Arregle et al., 2013), if existent. Nevertheless, they describe trust as important for both strong and weak ties as they do not disclose information about their work to connections unless mutual trust exists. Cognitive capital is more important here as actors aiming to build bridging connections search for people with higher expertise than in the birth stage of the EE where the available pool of expertise is limited. Participants highlight the importance of having shared values and norms in all stages of the EE. Civic engagement is also apparent at this stage as it is noticed that a number of supporting actors organise events, conferences and connect entrepreneurs to experienced people without expecting anything in return other than to benefit the community as a whole.

On the other hand, negative social capital starts to rise in the growth stage of the EE where few entrepreneurs argue that although uncommon, there exists a situation of abuse of power and corruption locally. Woolcock (2001) define linking social capital as ties among people from different social classes, positions, status and power. Participants explain that this is where problems occur considering that people abuse the ties they have with powerful connections to get what they need regardless if they deserve it or not. Moreover, religious and political segregation and sectarianism is still present in a developing country like Lebanon where people can access more resources if they belong to a specific religion or political party similar to those in power. As explained in the analysis of the second research questions (refer to section 5.3), due to the increase in negative (linking) social capital locally, entrepreneurs thus choose the shortcut of connecting to international linkages to skip the local socio-political factors hindering their social capital.

5.4.3 Summary of Findings and Analysis of the Trajectory of the EE

Through the analysis of the trajectory of EEs based on the view of the succession and reorganisation of EE and the birth and growth view, we infer a number of key themes, actors, and generalizable implications to the trajectory of EEs in similar contexts bound by scarce resources.

The distinction between social capital at the short and long periods of succession and reor-

ganisation along with the birth and growth stages highlights three key factors; dealmakers, governmental funding and entrepreneurial networks. Whilst the government hopes to provide support to the EE through ministries, infrastructure, etc., the potential of social capital was identified but was not enabled and put in practice. It was only limited to the funding by the Central Bank, which seems to have made the difference. This leads to the argument that in limited resources countries, EEs require an initial diffusion of money through the support of few dealmakers, after which international social capital plays a key role in accelerating the ecosystem (the support of start-ups can be taken forward by international actors). Hence, in the absence of formal support systems, internationally well-connected entrepreneurs and supporting actors (mainly through diaspora networks) bring value and make the difference. Accordingly, an initial formal financial nudge and a heightened flow of formal and informal diaspora-backed international linkages constitute the backbone of a developing resource constrained EE.

As shown in the analysis of the second research question (refer to section 5.3.2), higher dependence on international social capital reduces chances of corruption considering the absence of the government in providing funding or other resources at later stages of the start-up life-cycle. Hence, despite the local corruption and nepotism, the system becomes flexible enough to overcome the negative aspects of social capital. The international actors are important to keep nurturing the Lebanese EE, they can keep faith in it in terms of the flow of funds, expertise and networks.

5.5 Conclusions

This chapter has presented the findings of the interviews undertaken with entrepreneurs and supporting actors of the Lebanese EE and linked these back to the literature. The results highlighted the key characteristics of Lebanon to identify a frame to which these findings are generalizable. Lebanon is classified as a developing ecosystem in a developing country bound by limited resources (e.g. specialised expertise, technological infrastructure, etc.). Social capital, thus, replaces these missing resources both through local and international linkages. Accordingly, when studying the elements of an EE in such a developing country, a number of elements like policy, support, entrepreneurial actors, etc. are of less significance compared to social capital. Further investigation of the dimensions of social capital highlight several local limiting factors categorized into socio-political, socio-economic, cultural and managerial; all of which indirectly act as motivators of change. These along with the community-oriented

relational capital as well as the highly significant norms and values (attribute of cognitive capital) characterise the local social capital in the Lebanese EE. These findings correspond to the challenging local environment, as explained earlier. To avoid such local challenges, international linkages become more prominent.

In view of the importance of international social capital in the studied context, it is important to differentiate between the mechanisms of it and that of the local social capital. Considering the wide availability of diaspora networks scattered around the world among other reasons, the majority of the participants described the ease of access to international networks. Moreover, a number of the participants either had dual nationalities, have studied, worked or lived overseas for a period of time. Hence, the access to such networks is not difficult. However, few participants view such connections to be fragile describing them as a onetime benefit only. Nevertheless, more reciprocated networks are created especially when the connections are stronger denoting a more professional relationship that might lead to a collaboration or partnership. Similarly, personal and diaspora networks are stronger than other types of international connections characterised by higher commitment and reciprocity.

Social capital is also inferred to be a crucial element of the birth and growth stages of the EE in the studied context of Lebanon. Serial entrepreneurs made use of their strong ties to investors, public and other prominent figures in the country to establish the first incubator. They then worked on widening their networks in aims of attracting further support and key actors. Their attempts eventually led to the increased awareness of the availability of resources that could support entrepreneurs and innovative ideas, which, in turn, led to the establishment of accelerators, VCs, support centres, etc. Moreover, social capital is more important in the growth stage especially the international one considering that more resources are needed in the second stage as more entrepreneurs participate in the ecosystem. Hence, diaspora networks along with personal and professional international networks are more prominent in the growth stage of the EE. Such networks appear to be crucial for developing the ecosystem eventually leading it to sustainability as well as developing start-ups in attempts of incorporating them and widening their audience to reach international markets.

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6 | Conclusions

6.1 Key Findings

This thesis have dealt with a substantive gap in the literature by highlighting social capital as a keystone in the emergence and development of the EE in Lebanon, which presents a developing country with limited resources (e.g. infrastructure, governmental support, expertise). Two literature review chapters are presented in this study; the former focused on the theoretical development of EEs as found in the literature and then moves to discussing about entrepreneurship and EEs in Lebanon and the region. Interconnectedness and evolutionary analysis are highlighted as two gaps in EE research requiring further investigation. Other related theories of territorial economics (Boutillier et al., 2016), e.g. the Theory of Industrial Districts (Marshall, 1890), the Industrial Location Theory (Weber, 1929), the Economic Development Theory (Schumpeter, 1934) and the Theory of Industry Clusters by Porter (1990) are presented in Appendix I. These theories, as shown in the first appendix, underpin the foundations of EE studies. The third chapter investigates the theory of social capital and its applicability in entrepreneurial studies. We argue that social capital is a fundamental aspect for both entrepreneurship studies in theory and entrepreneurial endeavours in practice (Gedailovic et al., 2013). Both chapters also highlight the inadequacy of findings in EE studies specifically because they do not correspond to developing countries; hence, highlighting a need of examining an EE in a developing country context. Accordingly, the research questions of the study are threefold:

RQ1: To what extent do the key characteristics and elements of EE in developing countries such as Lebanon align or diverge from an ideal understanding of an EE as presented by current literature?

RQ2: What is the role of interconnectedness among actors in building and sustaining an EE? How is social capital generated and deployed in developing such EE?

RQ3: Are there any differences to the way in which social capital is utilised in birth and growth stages of EE?

43 semi-structured interviews are made with entrepreneurs and supporting actors in the Lebanese EE in aims of answering the research questions. The findings uncovered the key characteristics, elements and means in which these are configured leading to a different structure of an EE in a developing country with limited resources and faced with several challenges. It is inferred that in a country like Lebanon, social capital is one of the most important elements underpinning the genesis as well as the development and saturation of EEs. More than that, individuals depend on international social capital as much as or even higher, at times, than the local one. This is due to the limited specialised expertise, high-tech products and knowledge, and other scarce resources. Furthermore, due to the local corruption and nepotism surrounding social capital, entrepreneurs seek and, at times, prefer accessing international networks to escape such hindering factors.

Findings related to the first research question uncovered characteristics and elements from the EE literature that do or do not apply in the studied context. Starting with the model by Isenberg (2011), most of the described elements are apparent, yet limited. For instance, elements like support and human capital are often unattainable considering the limited support stemming from the government along with the scarce specialized expertise. Accordingly, material attributes (Spigel, 2015) including policies and infrastructure, are tied to the capabilities of the government, which are in turn restricted and at large inadequate. This has led the EE to become vastly configured based on its social attributes. Thus, social capital broadly replaces the benefits gained through the entrepreneurial actors (e.g. incubators, accelerators) and resource providers (e.g. financial providers, angel networks, R&D centres) (Brown and Mason, 2017). Findings highlighted the policy element (specifically governmental financial support) as key for the emergence of EE and markets (specifically networks) as highly significant for the growth and sustainment of EE (Isenberg, 2011). The weight of the elements of EE in Lebanon has led to the conceptualization that EEs in such contexts with scarce resources correspond to a fertile soil with entrepreneurship springing out of it. The elements of policy and markets act as seeds to the soil and the remaining elements namely financial capital, culture, support and human capital act as fertilizers. Whilst fertilizers are important, the seeds are a prerequisite for entrepreneurship; and the combination of both seeds and fertilizers cultivate the trajectory of EE. This interpretation shows that the “eco” component in “ecosystem” is justified as EEs are more organic than other approaches to agglomeration. In other words, once few seeds are planted (e.g. policy and markets), the EE works “organically” through the organic building of linkages, which then grow the ecosystem. Thus, the “eco” component has a very significant connotation, where it shows that the EE has to be self-governing, self-sustaining and self-organising. Accordingly, our findings support that the ecosystem construct is right to use.

The findings of this study also show that whilst existing EE frameworks assume equal availability of elements and a local agglomeration of resources, EEs in limited resources countries seek internationalization and dense international linkages, which shuffles the distribution of elements leading to a somewhat hierarchical organisation and distinction of elements accessed locally and internationally. It is important to highlight here that the inequality among elements of the EE in Lebanon was not detrimental for its functioning considering the dense local and international social capital.

The second research question of the study is concerned with the role of social capital in building and sustaining an EE, and means in which it is generated and deployed. After highlighting the vitality of social capital as a key element in resource-constrained EEs in developing countries, the three dimensions of social capital (structural, relational and cognitive) are analysed to answer this research question. Several socio-political, socio-economic, cultural and managerial factors hinder structural capital, yet indirectly motivate entrepreneurs to make a difference. The local sectarianism, corruption and nepotism (socio-political) push entrepreneurs towards establishing international linkages, which are also strengthened by the huge diaspora and brain drain (socio-economic). Other factors that hinder local social capital include the traditional mindsets of investors and entrepreneurs at times, risk averseness, fear of failure (cultural) as well as the low awareness of the availability of the EE (managerial). The aforementioned limit the generation and deployment of local social capital specifically that related to governmental actors and experienced mentors, yet bridges the establishment of international connections, which substitute the local inadequacies. Although they are less resourceful, local connections are characterised by high trust (not true in relation to governmental ties) and community commitment. Findings of this study highlight that relational capital is high in a developing, limited resources country since community commitment widely replaces the disadvantageous governmental position. Hence, entrepreneurs aim to focus less on individual gains and reciprocal benefits and more on the overall benefit to the local community. They tend to produce a ripple effect of benefits that powers the community as a whole. This shows that, unlike other contexts where individual reciprocity is high, this is not true in the studied context as limiting socio-political, socio-economic, cultural and managerial factors dictate the formation and deployment of social capital. Moreover, community commitment and benefits replaces individual benefits in such entrepreneurial contexts in developing countries, hence leading to individuals disregarding their personal benefits and aiming to empower the whole community. Cognitive capital, on the other hand, highlighted the need for dissimilar characteristics like knowledge basis, language and narratives, whilst reinforced the need for shared values, norms and high expertise. This goes hand in hand with the notion that dissimilar characteristics allow higher benefit transfer (Cooke et al.,

2005; Staber, 2006; Giuliani, 2011) yet prioritizes other characteristics as fundamental for tie building. However, due to limited local expertise, the latter is more important when accessing international networks. Both relational and cognitive capitals are interrelated where the higher the characteristics of cognitive capital and the shared cognitions (i.e. high expertise, shared norms and values, etc.), the higher the trust in the social actors. Moreover, individuals having high relational capital but no mutual understanding fail to benefit from one another. Putnam (1993) explains that shared cognitions and experiences increase social capital and lead to feelings of solidarity and strong commitment to one's community. Moreover, structural capital is altered with the variation of these both these capitals as they can influence the density and proximity of ties. Conjointly, the opposite is true where several factors hindering or facilitating the configuration of structural capital influence the variation in both relational and cognitive capitals. For instance, higher international linkages indicates higher expertise and reciprocal benefits.

In terms of benefits, this study highlights that due to the limited expertise, infrastructure and governmental support, the benefits of local social capital are non-material in a general sense. On the other hand, material benefits attributing for the traditional resources needed for entrepreneurial endeavours are mostly internationally based and accessed. By that, entrepreneurs skip corrupt, sectarian and nepotic treatments, and gain benefits that are pumped back into the local ecosystem. Hence, international social capital plays a key driving force and an insurance model for entrepreneurs that orchestrates the transferral of key benefits and traditional elements of an EE into the local ecosystem. It brings value and resources to the ecosystem, whilst local social capital increases bonding between actors, their sense of community and bridges the gaps between local and international capital.

The third research question investigates the role of social capital in the trajectory of EE through the view of succession and reorganization of EE as put forward by Auerswald and Dani (2017) and the birth and growth of EE as suggested by Mack and Mayer (2015) in a developing country context. Application of social capital theory in this empirical context demonstrates that structural, relational and cognitive capital vary in the emergence and growth of EE. In the birth stage, structural capital is configured by strong local connections, where social capital is mainly present in small groups of serial entrepreneurs. Although accessing such networks is easy, two factors hinder the process; limited awareness and risk averseness. Both of these, however, decreased significantly during the growth of the EE with higher investors' experience, education and participation from entrepreneurs and supporting actors. With these two factors becoming less apparent in the growth, along with few success stories, the entrepreneurial culture becomes widespread enabling higher participation rates. Connections in the growth stage are more dispersed internationally and are denser and more

diverse. One negative aspect hindering structural capital at this stage is negative social capital resulting from misuse of linking social capital and the local corruption and nepotistic treatments. Even though access to social capital is easier in the beginning, the value of the incurred benefits is higher at the growth due to the availability of experienced connectors, resource providers and actors. One key aspect of relational capital in both stages is the high embeddedness of entrepreneurs in their communities. Entrepreneurs aim at many instances to give one another with no regards to any reciprocal direct personal benefits in return; instead, they keep an eye on benefiting the whole community. This has led to the view that social capital is a public good similar to the arguments by Putnam (2000). In the growth stage, however, reciprocity is higher in the more formal international networks; whereas commitment is low as such connections are more fragile. Trust is high among participants but low towards the government due to its obvious corrupt nature. Cognitive capital, on the other hand, is higher when the ecosystem is growing as experience is more available and tenure is higher. Sharing the same values and norms is marked as the key component of this dimension of social capital at both stages.

Three key factors have been highlighted through the analysis of the trajectory of EEs; dealmakers, governmental funding and entrepreneurial networks. In resource-constrained developing countries, EEs require an initial nudge from the government in the form of money diffusion through the support of few dealmakers, after which entrepreneurial networks take the support of start-ups forward. In other words, in the absence of solid local support systems, internationally well-connected entrepreneurs and supporting actors (mainly through diaspora networks) offer the needed support. Accordingly, an initial formal financial nudge and a heightened flow of diaspora-backed international linkages comprise the backbone of an EE in a developing country bound by scarce resources. The findings explained in the section make numerous theoretical implications and contributions, which are explained in the following section.

6.2 Theoretical Implications and Contributions

The focus of this study is on the significance of interconnectedness among entrepreneurs and supporting actors in EEs operating in developing countries. Through the theory of social capital, local and international networks of linkages are closely analysed to understand means in which they are generated and deployed as well as examine their significance and weight across the birth and growth stages of EEs. The study also investigated the ecosystem in Lebanon, which represents a resource-constrained developing country in aims of examining

its key elements that led to its establishment and accelerate its trajectory. Findings led to several implications and contributions, which are discussed in this section. Implications are discussed on three levels; EE frameworks, social capital theory and EE in developing countries. Theoretical, methodological and empirical contributions are presented.

6.2.1 Implications for EE Frameworks

It is safe to say that all of the analysed models and frameworks in this study vary in their applicability in the Lebanese EE context mainly due to the limited resources and the several local hindering factors (e.g. corruption, nepotism). Brown and Mason (2017) presented four key actors, which govern the inter-relationship within EEs (entrepreneurial actors, resource providers, connectors and orientation). These actors include the entrepreneurs themselves along with the supporting actors available. Nevertheless, although all of the actors are available, they vary in their magnitude. For instance, support is very low in the birth stage of the EE. The main actors available at this stage are those serial entrepreneurs (part of the entrepreneurial actors). For that, it is not possible to attribute the presence of serial entrepreneurs to the whole entrepreneurial actors category. Few financial providers are present as well, yet this does not include other entrepreneurial resource providers like peer-to-peer lending, stock market access and linkages to R&D centres, as suggested by Brown and Mason (2017) (refer to figure II.3).

Findings also place few limitations on the model by Isenberg (2011) as it assumes equal importance of elements and availability of resources. The model listed a number of elements (e.g. policy, human capital, finance, culture), which constitute an EE. After studying the applicability of this model in the resource-constrained Lebanese EE, we put forward one major limitation. The findings show that these elements do exist, yet they vary in their weight and ease of applicability. In other words, few of the elements are harder to establish or are less significant than others are. For instance, due to the limiting socio-political factors that hinder social capital (section 5.3.1.1), the government is incapable of offering all the needed support. However, the policy and markets elements have proven to be the two most significant ones in the model specifically due to the financial support from the government and the networks attributes of policy and markets respectively. The element of finance exists; however, fear of failure and risk averseness hinders access to funds. Similarly, the culture of entrepreneurship is apparent where factors like international recognition and success stories strengthen it. However, several missing elements are examined in such a resource-constrained developing country, which brings international social capital to the forefront of discussions related to EEs in such contexts. International networks (including diaspora connections) fill

local gaps. As mentioned in section 5.2.2, the missing elements can be embedded in such networks, for instance, finance, technical consultancy, support, etc. Hence, the elements of EEs are not equally present; rather the ecosystem required an initial formal financial support from the government after which further support is accessed through networks and social capital.

The model by Spigel (2015) (refer to figure II.2) is the most appreciative of social networks as it views such networks as an integral element with as much significance as the cultural and material attributes of an EE. Nevertheless, similar to the previous interpretation, Spigel's model presented a hierarchy-like view to his suggested attributes that configure an EE (cultural, material and social) where it can be argued that the current model might have attributed a higher importance to the material attributes by placing it at the top of the pyramid, followed by the social and cultural attributes (*ibid.*). In the context of this study, social networks (part of the social attributes) posit higher significance in a way that the configuration of the EE is highly dependent on the social attributes. This accounts for the lack or scarcity of other elements like supporting policies and infrastructure (material attributes). This is because the material attributes are limited to the governmental restricted budget and capabilities. Hence, the configuration of EEs in such limited resources countries is dissimilar to developed ones. The categorization of EEs by Spigel and Harrison (2017) attributed greater importance to social networks in ecosystems such as the one in Lebanon. This classification calls for an alteration of the pyramid of attributes configuring EEs by Spigel (2015) in a way that fits the available support structures in dissimilar region.

Both models by Mack and Mayer (2015) and Auserwald and Dani (2017) present views on the trajectory of EEs. Yet, both of these models do not encompass the role of social capital. This study strengthens the impact of the latter, both locally and internationally, in the emergence and development of the EE. In the studied context, social capital led to the formation of the first few supporting organisations, which prompted the birth of the EE. Additionally, local and international social capital replaced the lacking support structures and policy endorsements on the government's side along with the limited local entrepreneurial experience. For that, international social capital is highly significant for the growth stage. This study provides evidence that international social capital is one of the crucial elements for the growth of EE in such a limited-resources developing country. In this case, and unlike what Mack and Mayer (2015) suggested that international linkages are only essential in mature EEs to prevent their decline, EEs in developing countries require strong diaspora and international connections to emerge, grow and become sustained. For that, the framework is altered to highlight this finding. Similar to the aforementioned discussion of the weight of elements and actors suggested by Isenberg (2011), Spigel (2015) and Brown and Mason (2017), those dis-

cussed by Mack and Mayer (2015) are also dissimilar in the context of this study. The latter researchers examined the lifecycle of EEs focusing on Isenberg's (2011) elements of EEs. As explained earlier, these do not represent the same EE picture in a developing country. Focusing on social capital, this study adds to the body of literature by distinguishing between the configuration and impact of social capital across the trajectory of EE. The somewhat limited local support structures serve as a direct influencer of the type of ties available in the growth stage, which are mostly extra-community, mainly international linkages to fill the gaps in the offered support. The findings highlight the role of specific actors and factors, which facilitate social capital and in turn, initiate and develop the ecosystem. For instance, dealmakers and governmental support are considered crucial for the emergence of the EE, whilst international linkages come to the forefront during the growth of the EE. Hence, this study adds the element of social capital to the list of elements examined by Mack and Mayer (2015) throughout the birth and growth stages of EE. Similarly, the use of the model put forward by Auserwald and Dani (2017) strengthened the need for social capital across the succession and reorganisation of EEs where it is inferred that social capital spins out of the shorter succession period to become more prominent and denser in the longer reorganisation period.

The ecosystems approach has been criticized for its self-sustaining ability, where it is not clear whether this approach can actually be sustained on its own. Findings of this study provide evidence that ecosystems are indeed self-governed and self-sustained specifically in resource-constrained developing countries. This research highlights that EEs in such contexts require an initial financial nudge, after which organic international social capital on its own accelerates the ecosystem. Such social capital facilitates the organic evolution of EEs providing the required material and non-material support for entrepreneurs and supporting actors. Further implications to social capital theory are examined next.

6.2.2 Implications for Social Capital Theory

Through the use of social capital theory, this study adds to the literature on structural, relational and cognitive capitals by distinguishing their measures across different stages of an EE in a resource-constrained developing country as well as locally and internationally. Based on our understanding of the literature, applications of social capital theory has been mostly linear, focusing on the theory in a specific period. This research, however, employs the theory of social capital in an evolutionary perspective through analysing it across the evolutionary trajectory of EE. This analysis emphasizes the significance of particular social capital attributes discussed next. Moreover, findings related to international social capital

filled a gap in the understanding of mechanisms and implication of such capital in similar contexts. It is seen as a driving force in EEs in resource-constrained developing countries, where it brings value and material resources that are lacking in such EEs. International social capital is enabled by many facilitating factors making it act as insurance for entrepreneurs and supporting actors for replacing the local limitations.

Our analysis shows an interesting interconnectedness among attributes of structural, relational and cognitive capitals. For instance, community commitment facilitates values and norms, and trust is positively connected to norms and values. Hence, this shows an interrelationship between relational and cognitive capitals. Furthermore, structural capital varies with the changes in the two former capitals, whilst the variation of structural capital also influence relational and cognitive capitals. For instance, when structural capital is dispersed internationally due to local hindering factors and high diaspora, local commitment becomes community-oriented, and expertise is accessed internationally. Local sectarianism, corruption and lack of resources shapes the configuration of local and international social capital. Due to several impeding factors (most importantly socio-political factors), trust towards government is almost inexistent. Nevertheless, entrepreneurs and supporting actors in the EE become highly embedded in their community, which increases community-commitment and the local disregard for immediate individual benefits. Individuals, however, aim to benefit the community as a whole in an attempt to replace the missing governmental support. Reciprocity is more important when it comes to international linkages. These findings highlight that in resource-constrained developing countries, entrepreneurs and supporting actors develop higher cohesion and community commitment especially when governments fail to deliver their civic duties. Expertise and sharing similar values and norms are two attributes of cognitive capital that are most appreciated by entrepreneurs and supporting actors. Expertise, however, is mostly accessed internationally. Hence, six key attributes lead to higher social capital; these are diaspora, trust, community commitment, international reciprocity, expertise and shared values and norms.

Therefore, the configuration of structural capital varies locally and internationally and across the emergence and development of the EE where strong, intra-community ties constitute the majority of networks in the birth, while the growth shifts the available networks to a majority of weak extra-community ties. This is because more international linkages become available at the growth stages; local ones, on the other hand, are more prominent in the initial stage of the EE. Relational capital is more community-oriented locally, whilst more formal types of connections exist internationally, where trust is higher, reciprocity is required and commitment is high as long as the connection is leading to reciprocal benefits. Relational capital is higher for international connections as specialized expertise is mostly internationally ac-

cessed.

Another implication of this study is related to the types of benefits, where findings show that the benefits of local social capital are mostly non-material, whereas those of international social capital represent the material traditional resources needed by entrepreneurs throughout their entrepreneurial endeavours. Therefore, local benefits are restricted to the availability of local expertise and resources, and are mainly focused on emotional and legal support. Other benefits like funding and entrepreneurial support spinout from both local and international social capital. Since the benefits accessed internationally are higher and more material and essential to entrepreneurs, local challenges like corruption and nepotic treatments are hence skipped and entrepreneurs ensure a constant transfer of benefits to the local EE. International benefits are gained faster, which create a pool of local transferable knowledge available to entrepreneurs and supporting actors. Hence, international social capital is viewed as the driving force that orchestrates the transfer of key benefits and traditional elements of an EE into the ecosystem.

Research on international social capital is limited where up to our knowledge no study examined the mechanisms of such capital, specifically not in a developing country context facing limited local resources. Highlighting a need for determining whether entrepreneurs in such communities have higher tendencies of collaborating with more beneficial actors in international markets, this study shows that international social capital is a prominent theme in the findings and a key driving force for such EEs. International social capital is needed for five main reasons namely gaining specialized expertise, growing the ecosystem, attaining international funds, scaling up start-ups and accessing resources that are scarce locally. Moreover, this study pinpoints factors, which lubricate the access to international networks. These are multilingualism, diaspora connections, international projects, international development agencies, digital channels, social media, and a local culture that is supportive of building international linkages. These factors smooth the mechanisms of interactions among such linkages. While different entrepreneurs and supporting actors employ such factors differently, diaspora connections are viewed as the key factor which lubricates access to international networks as the ecosystem as a whole is dependent on such networks for resource acquisition along with other integral benefits. International linkages contribute to higher knowledge and benefit transfer, entrepreneurial support, exposure, globalised opinions and knowledge spillovers. These also aid in further developing the local entrepreneurial culture, which (i) develops the EE as a whole, (ii) removes local cultural barriers like traditional mindsets, fear of failure and risk averseness and (iii) increases awareness and motivation to participate in the EE eventually leading to higher entrepreneurial rates in the country.

Accordingly, as highlighted earlier, international social capital is a key driving force in EEs

in similar resource-constrained contexts. It acts as an insurance for entrepreneurs to refer to when in need. International social capital offers a shortcut to entrepreneurs and supporting actors in which local hindering factors can be skipped. International social capital is essential for bringing value and material resources to the EE, whilst local social capital has an enabling role in terms of bonding, creating a sense of community and bridging gaps between the local and international capital.

6.3 Implications for Policy and Practice in EEs in Developing Countries

Whilst EEs in developed countries strengthen overall economies, developing countries could employ EEs as a tool to stabilize theirs. This is highly applicable in generally, politically and economically, unstable regions like the Middle East. The Lebanese case shows similar indications considering the availability of limiting socio-political and socio-economic factors like corruption, sectarianism, risk averseness and traditional mindsets. These factors combined with poor entrepreneurial and social infrastructure convert the use of EEs to problem-driven rather than opportunity-induced; which alters the implications to EEs in such resource-constrained developing countries as compared to developed ones.

The first implication to EEs in developing countries is the modification of the widely spread EE models to suit their resources and challenges. Second, the main implication of this study, as has been explained throughout most of the previous section, is the vitality of international linkages. The configuration of EE in Lebanon is more dependent on its social attributes than its material and cultural ones (Spigel, 2015) (refer to section 5.2.2), and similar configuration is expected in similar EEs (Spigel and Harrison, 2017). Hence, social capital is one vital factor needed in the emergence and along the trajectory of EEs, which broadly replaces benefits gained from entrepreneurial actors (e.g. incubators, accelerators) and resource providers (e.g. funding parties). Moreover, to overcome and/or go around the local limitations (e.g. socio-political and socio-economic challenges, refer to section 5.3.1.1), international social capital becomes more prominent. When employed properly, the latter grows the EE by overcoming the local challenges through assistance from international expertise and resources. Moreover, employing international social capital at an early stage might decrease the negative impacts of local social capital specifically those related to nepotism (Keyes, 2001) and linking social capital (Woolcock, 2001).

Hence, by applying the findings of this study in similar EEs in developing countries, poli-

cymakers and supporting actors appreciate the role of international social capital as a main component of EEs in such regions. By strengthening international linkages and initiating and maintaining diaspora networks, entrepreneurial actors, connectors and resource providers overcome several local challenges as well as fasten and maintain the growth of the EE. One scheme that was lightly mentioned in the previous chapter by one participant in the study could also be one direction employed to implement such strategies. The Lebanese government made use of a scheme to bring back Lebanese youth living abroad and encourage them to start their own start-ups. This scheme is powered by the Lebanese Chamber of Commerce and has helped one entrepreneur out of the 26 interviewed to move back to Lebanon. Such schemes can be powerful tools to (i) bring back talents that have had rich experience abroad, innovative ideas and international connections to (ii) empower the growth of the overall EE. Bringing people back who have lived in different countries around the world adds multiplicity in culture, which makes the EE unique and differentiated. Moreover, connecting to diaspora associations abroad aid in achieving such results. Thus, due to the high significance of diaspora and international networks, developing countries must aim to strengthen such networks at an early stage to fill the gaps in infrastructure, governmental support, finance and other forms of limited support. In doing so, they would fasten the processing of accessing the needed elements for a successful EE. Moreover, other developing countries like Pakistan and India employ quasi-citizenship schemes for descendants that do not have the passport of their country, which makes them entitled to special rights (Ho et al., 2015). Preferential visas are also another strategy to encourage descendants to visit (Collyer, 2014). Such initiatives motivate the diaspora to establish and maintain linkages with their communities. Hence, such strategies guarantee continuity and increase the support gained from diaspora networks. Moreover, they could attract the youth to relocate to their home countries. However, similar initiatives are not offered in Lebanon. Hence, with not a lot of motivation from the Lebanese government to immigrants, the latter might lose motivation to keep linkages with their communities. Thus, the Lebanese government should focus on designing such strategies to guarantee continuity and increase in support from diaspora networks.

Further implications to policy and practice are related to strategies that could potentially decrease hindering factors like fear of failure and risk averseness. Firstly, investors must be educated about the important role played by start-ups in creating economic value and social impact (Chahine and Mowafi, 2015). By that, risk averseness decreases eventually allowing the community to access more funds and other benefits. Moreover, both investors and entrepreneurs must be taught to accept risk and failure. This is stimulated with the growth of the EE and with greater success stories. Hence, as the EE grows, entrepreneurs and investors are expected to become less risk averse and more accepting of failure. This, nevertheless, is

also dependent on the cultural norms surrounding the ecosystem.

6.4 Limitations and Future Research Agenda

This study has presented an in-depth investigation of EEs and social capital in the Lebanese EE, which is generalizable to other similar contexts. Nevertheless, few limitations of this study highlight a need for further research that can add to the fields of entrepreneurship and social capital. To start with, this study is made in one specific period of time. Further insights can be generated by a longitudinal study that investigates evolution of the ecosystem over a certain period of time. Such longitudinal analysis would highlight a better comparison between different attributes of EEs specifically material, cultural and social. It could also examine the implications of such attributes on ecosystems and their evolutionary trajectory. Moreover, the conversion between different types of capitals could be also observed.

This research has focused on the Lebanese contexts in specific. Future research could also explore the topic comparatively in similar resource-constrained developing countries in order to deepen our understanding further of EEs in such contexts. It could also map out a framework corresponding to the attributes and characteristics shared by EEs in such contexts. Additionally, further investigations in such resource-constrained areas would formulate a better picture of the lifecycle of EEs in developing countries.

More specifically, this study has focused on the birth and growth stages of the Lebanese EE to highlight means in which bring similar EEs to life as well as lead to their development. Further research can be put in place to examine the significance of local and international social capital in the saturation and decline stages. This would present a complete picture of both concepts and highlight whether social capital play a significant role in these two stages and maybe prevent EEs that are in saturation from declining.

Additionally, further research can distinguish between novice, nascent and serial entrepreneurs by examining the variations of use and applicability of social capital based on their experiences. This can also be applicable to supporting actors in the EE as the role and weight of social capital can differ among different players. Furthermore, future research can also interview more supporting actors that were missing from this study; for instance, entrepreneurship and innovation centres, the Central Bank, etc. On the other hand, this study focuses primarily on the social attributes of EEs as the findings suggest their significance in the studied context. Further research can examine material and cultural attributes (along with other elements) along the trajectory of EEs. Moreover, Appendix I lightly touches upon the history of agglomeration theories (e.g. industrial districts and clusters) and attempts to link these to

the current EE approach. Further research can touch on this matter further by investigating the similarities and/or differences among these strategies and examining how they led to the formulation of the EE approach.

Moreover, the discussion related to diaspora connections and international social capital would have been made deeper by discussing the impacts and relevance of different types of migration for instance, return migration, on the resource-constrained ecosystem. Nevertheless, findings from this study did not highlight such a notion as it somehow falls beyond the scope of this study. Hence, further research could link both concepts to one another offering a new lens to examine the strategic implications of international social capital on EEs.

Finally, other data collection techniques like name or resource generators could be adopted to further investigate the configuration as well as the mechanisms of interactions among entrepreneurs and supporting actors. Such techniques could yield results related to the structural configuration of networks of connections held by entrepreneurs and supporting actors, and thus distinguishing for instance between the density of connections among different actors. This could also bring other important attributes to the forefront of research on EEs specifically that related to the network's closure view (Coleman, 1990) or the structural holes view (Burt, 1992).

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Appendices

Appendix I: Theoretical Foundations of Agglomeration Theories

This section presents an overview of the related approaches to territorial economics (Boutillier et al., 2016) referred to as agglomeration theories. Agglomeration relates to proximity (Fujita and Thisse, 2013). These theories call for firms to locate in close proximity to make use of natural resources along with other attributes. Agglomeration is viewed as vital for economies considering the continuous aims of researchers and policymakers to provide needed environments to attract firms to work in close proximity. Agglomeration theories are important to discuss as they give context to EE and are the foundation of it. The following subsections explore these theories and link them to entrepreneurship, which highlights the trail that led to the establishment of EE.

Industrial Districts

Alfred Marshall established the School of Economics in Cambridge where he founded the theory of Industrial Districts, which became one of the legacies of Cambridge Economics department (Belussi and Caldari, 2008). In the classical book of Principles of Economics, Marshall (1890) argued for various advantages for firms locating in close proximity. During that time, business owners would benefit from locating near specific resources like coal, but minding specific characteristics of the locations they need to work in like access to water, good soil, and clay. Furthermore, they would benefit from “the patronage of a court” which encompass a market of rich individuals that attracts skillful workers. According to Alberti (2010) who reviewed the literature on industrial districts, this would today translate to governmental incentives. Industrial districts were a factor of time; if by time more firms were attracted to that specific location, factories were obliged to have more space to accommodate newcomers. Then, they would turn into an industrial district. Belussi and Caldari (2008)

explained that benefits of these districts include “hereditary skills” (distinct skills transferred among people and generations), increase in subsidiary trade (which would eventually enhance the economy of that specific trade), access to a pool of skilled workforce, use of specialized machines. The latter researchers also inferred two other advantages from Marshall’s writings; becoming the leaders of industries and presenting new and innovative work processes (*ibid.*). The Marshallian approach to agglomeration might have encompassed presumptions of entrepreneurs in the market. He explained a great role played by individuals who can change the industry by adding small changes at a time to eventually elevating innovation. This is enhanced by perfect competition. Bula (2012) who delivered a critical review on entrepreneurship theories listed Marshal as one of the scholars who, in part, contributed to the emergence of the entrepreneurial approach.

Industrial Location Theory

Similar to Marshall (1890), Weber (1929) called upon firms to locate in a close proximity in specific regions that had the needed raw materials and are close to their target markets. Morgan et al. (2000) explained that unlike its predecessor, the Industrial Location Theory highlighted the advantage of economies of scale that firms would benefit from, arguing that this is a result of firms’ operations rather than the governmental establishment of a sound economic infrastructure. McCann and Sheppard (2003), on the other hand, presented some changes to the theory based on current economic needs. They argued that Weber’s theory was initially presented as means to comprehend the quick development of the German manufacturing centres. Therefore, the main focus of this theory was on manufacturing alone rather than other industries.

Even though this theory has roots in economics and manufacturing (Weber and Friedrich, 1929), it also signifies the need for clustering of firms, which is the main characteristic in the examined agglomeration theories. Hence, Weber did influence firms to cooperate in a close proximity but his theory does not he prioritize innovative or entrepreneurial activities. The theory, however, emphasize the need for other important attributes for instance economies of scale, stable economic infrastructure and the need for cooperation, which are all general themes found in the following theories.

Economic Development Theory

Schumpeter (1934) added to the previous theories by exploring the benefits of knowledge sharing among cluster participants. He explained that the circulation of tacit knowledge through

close proximity among actors is one of the ultimate benefits of clusters. The theory also places high importance on creation of skills and competencies initially by cooperating with firms. Schumpeter described these as the prerequisites of wealth creation, which is - in turn - based on the firm's capacity to deliver innovative products through innovative business processes and new markets. In his article in 1947, he explained about places in which entrepreneurial activities can be found; namely commerce, industry and finance (Schumpeter, 1947). He also defined the concept of entrepreneurship as the act of selling a product or another action leading to innovative outcomes. In 1949, his famous article "Economic theory and entrepreneurial history" included the theory of the entrepreneur, which explained that entrepreneurs are social creatures where they are highly influenced by the environments they live in (Schumpeter, 1949). In other words, environments must be equipped with entrepreneurial enforcements to enhance entrepreneurial activities. He concludes by emphasizing that entrepreneurs are necessarily single individuals; by this, unlike Marshall's subtle hint related to the importance of entrepreneurship, Schumpeter bluntly gave rise to the concepts of entrepreneurship and the entrepreneurial organisations. Some researchers argue that EEs have basis in the Schumpeterian approach to agglomeration (Fernández et al., 2015).

The three theories were focused on localisation and the need for collaboration among firms located in close proximity. They remained accepted in the literature until early 1970s after which the globalisation trend started. These theories were then put under revision (e.g. Myrdal, 1957; Massey, 1973; Martin, 1966; Wood, 1969). In his book on Geography and Trade, Krugman (1991) argued that the world's globalisation phenomenon ended the classical era of agglomeration benefits. This is due to the various changes that occurred worldwide including powerful technological developments, transportation and communication advancements, changes in economic and trade policies, lessening barriers between countries to enable higher trade and collaborative initiatives, etc. Moreover, considering the availability of cheaper workforce in international economies and the easier access to them, it seemed like the benefits associated with the classical agglomeration theories were remarkably weakened. In their paper on the effects of globalisation on production on US firms, Gourevitch et al. (2000) US firms and other industries with expensive workforce started implementing strategies to enter foreign cheaper markets for lowering production costs. This diverted the focus of agglomeration theories from localisation to internationalisation in the 1980s.

The shift in the literature has caused a paradox. Whilst the field of strategic management accentuated the advantages of moving firms' operations to benefit cost-savings only accessible globally, the economic development field progressively reported examples of enterprises gaining competitive advantage through localisation (Enright, 2000). Similar to their inability to foresee the flood of challenges from the globalisation phenomenon, the classical theories

were comparably not able to handle the impacts of the global paradox on firms' activities. Consequently, Porter (1990) published his book *The Competitive Advantage of Nations* as means of solving this worldwide paradox.

Industry Clusters

Porter's cluster theory (1990) emerged from the aforementioned classical theories. The most prominent similarity between industry clusters and the classical theories is co-location, which is believed to trigger numerous advantages. Porter focused on notions like internationalization arguing that it is crucial for national advantage and competitiveness. For him, international competition is the key point. Using the diamond model, Porter (1990; 1998) discussed the attributes leading to cluster genesis. According to him, developing nations depend either on factor conditions or on unusually high demand conditions for cluster formation; whereas developed nations have various other attributes that interact to form an industry cluster. For instance, related or supporting industries lead to the creation of clusters (which dynamically arise from these industries), spin-offs from laboratories, firms, research institutions, etc. or simply by chance.

Recent findings suggest that cluster theory has several limitations, gaps and unfavourable impacts. For instance, in an article about the limitations of cluster policy, Burfitt and Mac-Neil (2008) raised concerns over the weakness of this theory arguing that the uncertainties that come with industry clusters oblige us to doubt the appropriateness of clusters, actors, policy tools and strategic actions used. Such worries come hand in hand with the limited conceptual and theoretical underpinnings of the concept implicating the worthiness of industry clusters. Moreover, several researchers concluded that the theory could only be applied in large nations (Bellak and Weiss, 1993). Others argued that clusters are useful in those regions that already have global connections (Anderson, 1994). Whilst it is easy for firms to apply differentiation or cost-effective strategies to gain competitiveness over other firms, regions are not single units that can simply decide to produce a differentiated product; there is no such thing as a regionally differentiated product.

Furthermore, clusters might not be favourable when higher entrepreneurship is the objective (e.g. Viladecans-Marsal and Arauzo-Carud, 2012; Falck et al., 2012; Wishimura and Okamura, 2011; Isenberg, 2011). Feldman (2001) examined the roles of entrepreneurs as change agents in clusters arguing that Porter's diamond model did focus on competition, customers, supporting industries and governmental roles especially in cluster emergence and development; however, he did not explain the role of governments in facilitating entrepreneurship. The researcher explain that entrepreneurs are the change agents, which elevate clusters

and ecosystems to more advanced positions and stages (ibid.). Similarly, Isenberg (2011) argued that several approaches like clustering could hinder feelings of aspiration and the contrarian nature of entrepreneurship in regions where governments have mistaken Porter's cluster theory and translated it into crafting whole new policies and strategies neglecting initial entrepreneurial approaches in the region. Auerswald (2015) favoured governmental indifference towards specificity in terms of industries or products to encourage entrepreneurship arguing that this broadens entrepreneur's options and paths for entering local markets. Mayangsari et al. (2015) studied an industry cluster in Indonesia as means for understanding entrepreneurial approaches for creating an EE in that region. The researchers concluded that the governmental attempts to fostering the cluster were actually hindering entrepreneurship (ibid.). The belief that clustering is not the path to growth and entrepreneurship is also shared by a number of researchers (e.g. Motoyama, 2008; Pitelis, 2012; Mason and Brown, 2014; Motoyama and Watkins, 2014). These limitations have led to a shift in the attention of policymakers and researchers to the novel approach of EE, which favours the entrepreneur as its main actor and entrepreneurship as its main outcome.

Appendix II: Current EE Frameworks

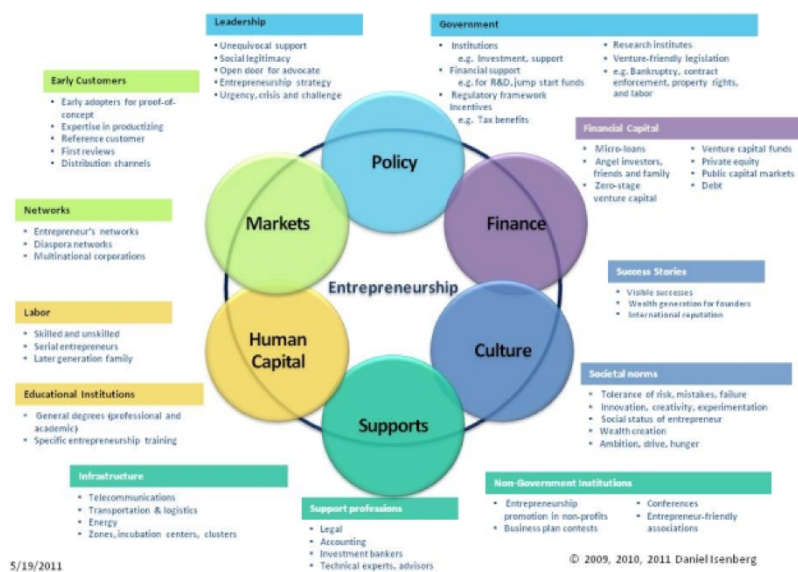


Figure II.1: Elements of EE by ISeberg (2011)

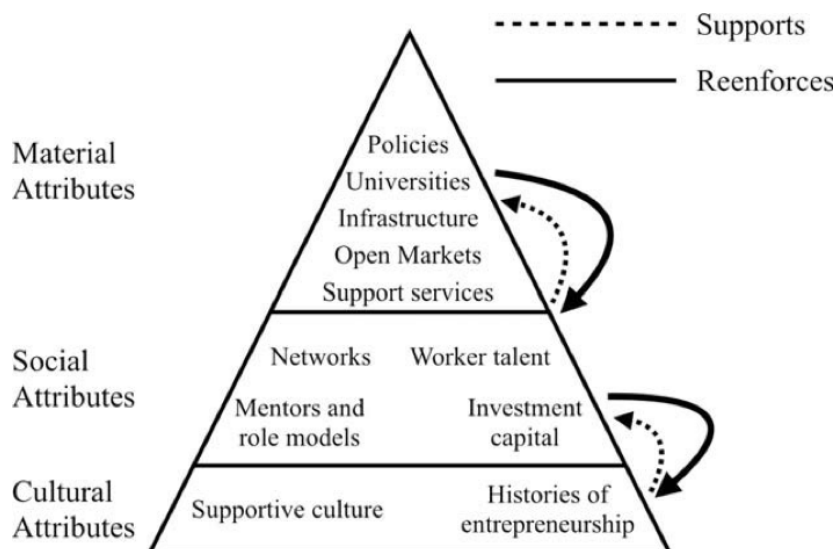


Figure II.2: Relationships among Attributes of EEs (Spigel, 2015)

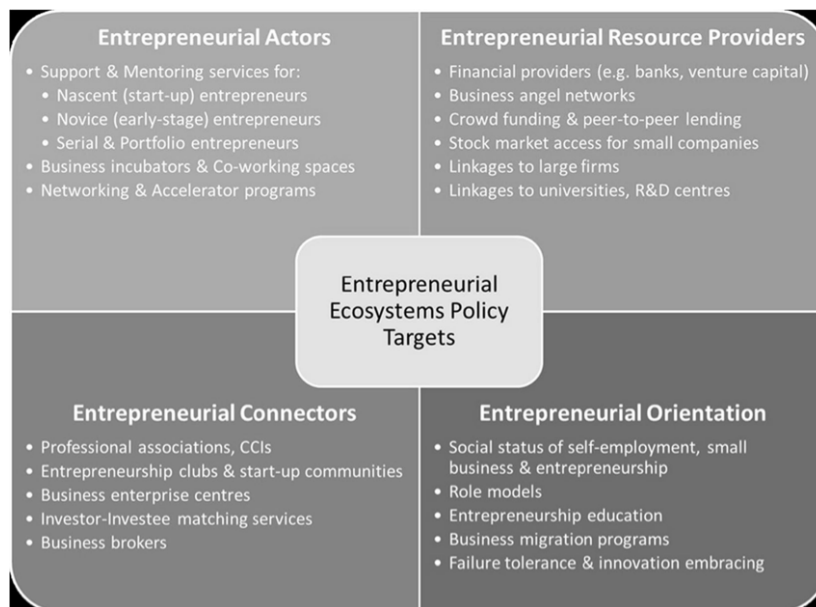


Figure II.3: Key actors and inter-relationships within EEs (Brown and Mason, 2017)

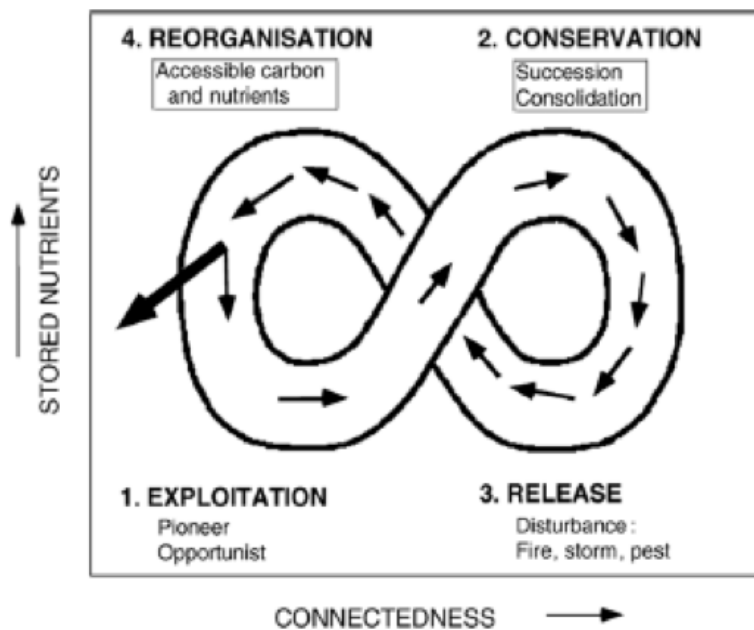


Figure II.4: Succession and Reorganisation of EEs (Bengtsson et al., 2000)

Appendix III: Lebanese Context; Key Players and the Diaspora

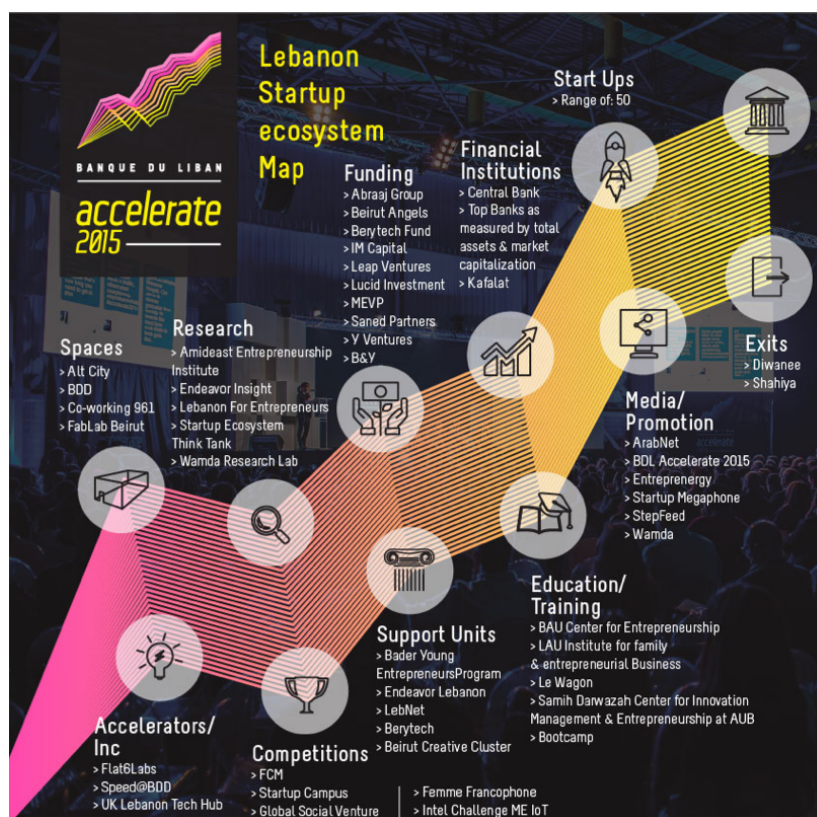


Figure III.1: Lebanese EE Map of key Supporting Actors (BDL Accelerate, 2015)

Economic/ Financial	Political	Social	Cultural	Religious
<ul style="list-style-type: none"> Remittances Tourism Government bonds Businesses Property investments Property improvements 	<ul style="list-style-type: none"> Lobbying groups Overseas branches of main political parties and movements Advocacy groups Human rights organizations Testimonies Political media Funding political candidates or groups 	<ul style="list-style-type: none"> Social remittances such as ideas and values Village associations and organizations Family associations Development organizations Philanthropic projects Charitable organizations Hospital support Educational support Village infrastructure Municipal support Village websites 	<ul style="list-style-type: none"> Cultural tourism Cultural festivals Musical exchanges Educational exchanges Internet websites Blogs and other internet discussion groups Printed media Visual media Satellite TV Art exhibits Theater Sports exchanges 	<ul style="list-style-type: none"> Building religious edifices Religious pilgrimages Printed material Visual material Satellite TV programs Religious ceremonies Religious feasts Religious websites

Figure III.2: Selected Types of Lebanese Diaspora Networks with Homeland (Hourani, 2007)

Appendix IV: Interview Questions Guide

Interview Questions for Entrepreneurs

- **Part 1:**

1. Please tell me about your background (Education, family, position).
2. Please tell me why and how you started your business? (entrepreneurial background)
3. What do you think social capital is? How would you define social capital?
4. What are the key aspects/components of social capital?
5. Why is social capital important for entrepreneurial start-ups and growing ventures?
6. What are the current networks/ties that you are associated with?
7. How close are you to your networks of ties?
8. How do you maintain these ties/networks?
9. Describe factors that might limit your social capital.
10. How do you overcome these factors, if existent?
11. Describe the sense of commitment among your network of ties.
12. Describe whether the ties are based on the norm of reciprocity?
13. Describe the roles of expertise and tenure in the domain on the benefits circulation process.
14. Describe the impact of sharing the same language on the benefits circulation process.
15. Describe the impact of having similar basic knowledge bases with your network of ties on the benefits circulation process.
16. How would you evaluate the role of social capital in your work?
17. How would you describe your relationship with financial institutions? Universities? RDAs? Government? International development agencies?
18. Describe the benefits incurred from such relationships. For example, advice, access to resources or emotional support.
19. How do you relate to your ties? How often? Formally or informally? Give examples.

20. What is the importance of digital channels? Do you make use of social media to strengthen your ties? How? Examples.
21. What is going well in these relationships? How could it be improved?

Define the term entrepreneurial ecosystem, then:

22. How do you benefit from working within an EE?
23. What are the opportunities you can gain/access when working within an EE?
24. What are some limitations of working within an EE?
25. What should change? How can the work in your EE be improved?

• **Part 2:**

26. Refer to the relationships discussed earlier (with governments, financial institutions, etc.) and specify those who were more important in the birth stage of the EE and other who were more important during the growth of it.
27. At which stage do you think you need more support? Why?
28. At which stage you gained more benefits from your network of ties? Why?
29. Can you associate specific types of benefits to specific stages (for instance, advice, access to resources or emotional support)?
30. Contrast social capital at the birth and growth stages of the EE.

• **Part 3:**

31. Are there any international organisations that you network with? List them please.
32. Please explain their relative importance to you.
33. Have you benefited from any of them? Give examples please.
34. What do you think about the importance of international ties/networks for EE development? How does it work in your industry? Lebanese EE? Middle Eastern region? Give examples please.
35. Do you relate differently with such organisations than local ones? Give examples.
36. Describe the difficulty or ease of access to such ties/networks?
37. How do you maintain international ties/networks?
38. Would you describe these international ties as strong or weak?
39. In terms of the incurred benefits, which type of ties are more important (local or international)?
40. Is there anything I should have covered but did not so far? Is there anything that you want to add?

Interview Questions for Supporting Actors

1. Please tell me about your current position and your background.
2. Please tell me about your involvement in supporting/working with entrepreneurs and small business owners.
3. Who do you think are the key actors in the EE of Lebanon and the region?
4. How do you view the current networks/support structures for EE development in Lebanon? Region?
5. What does work well in the EE?
6. What are the drawbacks in the EE?
7. What is the added value of your corporation to the EE in different stages (birth, growth)?
8. Can you give me any examples of social capital development activity/networking activity to boost EE and support entrepreneurs?
9. How do you maintain these ties/networks? Do you often prefer meeting formally or informally with entrepreneurs?
10. Would you describe these ties as weak or strong? Why?
11. Which kind of benefit do you think you provide best to entrepreneurs; advice, access to resources or emotional support?
12. Thinking about your own perception of your position in the process of benefit circulation in your network of ties, rate the influence of your position on the benefit circulation among your network of ties.
13. Describe the sense of commitment among your network of ties.
14. Describe whether the ties are based on the norm of reciprocity?
15. Describe the roles of expertise and tenure in the domain in the benefits circulation process.
16. Describe the impact of sharing the same language on the benefits circulation process.
17. Describe the impact of having similar basic knowledge bases with your network of ties on the benefits circulation process.

18. How would you evaluate the role of social capital in your work?
19. Do you have any schemes/initiatives to strengthen international ties/networks? How do they operate?
20. How do you evaluate your relationship with entrepreneurs and other actors? (list all the actors here).
21. Is there anything I should have covered but did not so far? Is there anything that you want to add?

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