

**Do entrepreneurs *Link(ed)-In*? Exploring Entrepreneurs' Usage of Social Media to Manage Social Capital**

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## TESI DOCTORAL

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Realitzada per Carla Riverola Bataller

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Dirigida per Francesc Miralles Torner



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(\*): Només en el cas de tenir un tribunal de 5 membres

## Abstract

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Entrepreneurship is the process of starting a new business offering a product or service and has received special attention from scholars during the last decade for its impact on the economic system. Specifically, not only do entrepreneurial activities have major implications in terms of economic growth and employability, but also new technology-based firms contribute to technology growth and wealth creation in nowadays competitive environment.

In this vein, one of the main concerns for the entrepreneurs is to deal with dynamic environments characterised by a high degree of uncertainty and rapid change; and access to resources is a key element to advance through the different stages of this entrepreneurial process. Then, under the framework of the Resource-Based Theory, social capital is defined here as the social network of the entrepreneur that provides him with access to resources.

In parallel, social media has challenged how individuals manage their social network, as it offers new means for communication and information sharing among individuals. Research has found that entrepreneurs are active users of social media and they tend to follow specific strategies different from the regular user. In contrast, there is no clear stance on how entrepreneur's usage of social media has improved or impacted their access to resources: whilst some research suggests that entrepreneurs have new opportunities to improve their social capital by maintaining and developing their social networks, other work disagrees with this position and claims that the usage of social media is not directly related to enhancing social capital but it depends on the type of information shared and the active enrolment of the community into these platforms.

This suggests that the entrepreneurs' usage of social media (to manage their social networks) may improve some aspects of their social capital. In order to shed light on these aspects, the current research assumes that entrepreneurs use social media to fulfil specific needs regarding their social capital, and employs the Uses and Gratifications Approach to explore their motives and satisfactions with this decision. Specifically, this work proposes the following research question: *"To what extent do entrepreneurs use social media to manage their social capital?"* in order to explore the impact of social media in the early stages of the entrepreneurial process. Moreover, two sub-research questions have been proposed to explore this research gap in depth, to identify the entrepreneurs motives for engaging in social media: *"Why do*

*entrepreneurs use social media to manage their social capital?”*, and their perceived satisfactions: *“How do entrepreneurs use social media to manage their social capital?”*.

Consequently, to respond to the aforementioned research question and sub-research questions, this work followed an inductive approach based on a mixed method approach that made it possible to combine the entrepreneurs’ perceptions with their network and activity on social media platform. Specifically, this research design was based on a mixed method approach that included two types of data: (1) the exploration of the entrepreneurs’ perceptions through direct semi-structured interviews and (2) a longitudinal analysis of the entrepreneurs’ social media network and activity collected from their main online platforms.

This work identified several new insights on why and how entrepreneurs use social media to enhance their social capital. Firstly, regarding the entrepreneurs motives to use social media, the outcomes of this research suggest that entrepreneurs not only use social media to maintain their social network structures, but that they are also immersed in a dynamic process of ‘network development’, where their resource challenges along the entrepreneurial process encourage them to update their social network structure. Secondly, regarding their gratifications from social media, this work identified that entrepreneurs perceive that by using social media they have a better chance to successfully connect to resource owners through their social network.

In conclusion, the outcomes of this research make important contributions to both scholars and practitioners. On one hand, this work brought new insights on entrepreneurship research by analysing the founder’s motives and gratifications for using social media in order to manage their social capital. Specifically, this work challenges the current knowledge on social capital through a dynamic perspective that takes into account how entrepreneurs manage social media to fulfil their resource requirements, and proposes that this new media provides a new framework for analysing the entrepreneur’s social network. On the other hand, this work also offers entrepreneurs novel ideas on the potential ways to improve their social capital in order to address changing resource requirements during the new venture formation process. In particular, this work identified that some entrepreneurs benefit from social media as a networked context to access resources as they can manage their social network by maintaining their ongoing relationships on a latent state and develop new ties with potential resource owners.

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## Terminology

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This section offers a list of the definitions of the main concepts used in this research. It is important to note that since this is a research work based on social sciences, some definitions are not unique, and may still be under development in the ongoing literature. However, this work justified the definition employed for each concept throughout the literature review, and this section should be used as a summary of these definitions to facilitate the reading of this document.

**Entrepreneurial Process:** Entrepreneurship is the identification and exploitation of opportunistic ideas, on a process-based perspective (Penrose, 1968) where the entrepreneurial process can be divided into three main stages: opportunity, creation and exchange (Martinez & Aldrich, 2011).

**Opportunity-Driven Entrepreneurs:** Individuals who enrol in the entrepreneurial process to exploit an opportunity (Block & Wagner, 2007).

**Necessity-Driven Entrepreneurs:** Individuals who enrol in entrepreneurship as their employment alternative (Block & Wagner, 2007).

**New technology-based firm:** Independent firms established for the purpose of exploiting an invention or a technological innovation (Bailetti, 2012).

**Human Capital:** The entrepreneurs' prior formal education and professional experience that determine the stock of knowledge of the individual (Davidsson & Honig, 2003).

**Social Capital:** The set of contacts and relationships that determine the entrepreneur's social network, that in turn is a potential source of resource acquisition (Adler & Kwon, 2002; Davidsson & Honig, 2003).

**Social Network:** Social relational systems characterized by a set of actors and the relations or ties that hold these actors together (Greve, 1995)

**Strong Ties:** Type of social ties with high emotional commitment and high frequency of contact, such as family, friends or workmates (Granovetter, 1973).



**Weak Ties:** Type of social ties with low emotional commitment and low frequency of contact, such as acquaintances rather than friends (Granovetter, 1973).

**Latent ties:** Established relationships that are currently inactive but with potential to be re-established in the future (Mariotti & Delbridge, 2012).

**Potential ties:** Embryonic relationships that have the opportunity of, and potential for, further development (Mariotti & Delbridge, 2012).

**Direct ties:** Type of social ties that exist if the two parties have engaged in interactions prior to negotiating the resource exchange (Zhang et al., 2011).

**Indirect ties:** Type of social ties that exist if the two parties establish their first contact at the outset of the negotiation and through a common third party referrer (Zhang et al., 2010).

**Social Media:** Digital applications build upon Web 2.0 in terms of their ideological and technological foundations, as they allow to communicate, create content and share it with each other via communities, social networks and virtual worlds (Kaplan & Haenlein, 2010).

**Social Networking Sites (SNS):** Platforms based on the user profiles and their social links that usually include a variety of additional services such as chats, information sharing, etc. (Boyd & Ellison, 2007).

**LinkedIn:** Social networking site that enables individuals to connect to their social network and share information, especially regarding the individual's professional profile<sup>1</sup>.

**Twitter:** Microblogging site that enables to send plain text messages of a maximum of 140 characters (known as Tweets), as well as to follow or be followed by other users<sup>2</sup>.

**Uses and Gratifications Approach:** Framework or research approach useful to study new media that assumes that the user has motives for turning to certain types of media as well as that she can expect to fulfil specific outcomes for that interaction (Joinson, 2008).

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<sup>1</sup> [www.linkedin.com](http://www.linkedin.com)

<sup>2</sup> [www.twitter.com](http://www.twitter.com)

# Chapter 0: Introduction

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## ***To what extent do entrepreneurs use social media to manage their social capital?***

Grounded on the societal relevance of technology-based entrepreneurship as an engine for economic growth and technological development (Fayolle & Wright, 2014; Wiklund et al., 2011; Orsenigo et al., 2001; Colombo & Delmastro, 2001), the main objective of this dissertation is to build upon entrepreneurship theory and practice through analysing the entrepreneurs motives and gratifications to use social media to manage their social capital.

Thus, this introductory section overviews the scope of this dissertation and provides an overall description of the research process. Specifically, this section starts with a “*justification of the research interest*” that is followed by an “*overview of the research gap*” and a “*delimitation of the scope*”. Then, this section offers an “*overview of the research process*” and concludes with a “*description of the organization of the document*”.

### **I. Justification of the research interest**

Entrepreneurship is an important economic force, not only because it promotes self-employment but also because the exploitation of new business opportunities, in particular the technology-based ones, promotes technological change and market growth (Meyer et al., 2014; Shane & Venkataraman, 2000; Colombo & Delmastro, 2001). Thus, in order to improve the entrepreneurial process, research on this specific subject has gained strength in management journals in the recent years (Fayolle & Wright, 2014).

In addition to this increased interest in new venture creation and performance, there is also an increasing interest in studying the impact of social media in organizational settings (Lee & Jones, 2008; Leonardi, 2015; Fischer & Reuber, 2014). In the specific field of entrepreneurship, the impact of social media is relevant in several ways such as on the founders’ managerial skills (e.g. Marion, Barczak, & Hultink, 2014; Trainor, 2012), on the promotion of new ventures (e.g. M. Cooke & Buckley, 2008; Kaplan & Haenlein, 2010) or on the media capabilities to support the entrepreneurial process (e.g. Durkin, McGowan, & McKeown, 2013; Treem & Leonardi, 2012). Thus, this work built upon entrepreneurship research and adopts a managerial

perspective to explore why and how entrepreneurs use social media to manage some aspects of their social capital during the new firm formation process.

## II. Overview of the research gap

Social capital is defined here as the entrepreneur's social network that contributes to their access to valuable resources (Witt, 2004; Bliemel & Maine, 2008; Greve, 1995). Regarding this definition, prior work suggests that social networks are decisive elements during the entrepreneurial process, especially in technology-based contexts where entrepreneurs strongly rely on their relationships to access specific resources such as information, knowledge or financial capital (Witt et al., 2008; Davidsson & Honig, 2003; Elfring & Hulsink, 2007; Sullivan, 2006).

In parallel, social media is defined as a set of web-based applications that have disrupted the way individuals and organizations communicate and share information (Kaplan & Haenlein, 2010; Treem & Leonardi, 2012). From an entrepreneur's individual perspective, it appears that this emergent phenomenon facilitates social interactions as entrepreneurs have now more opportunities to maintain their social network structures as well as to develop new relationships (Kietzmann et al., 2011; Papacharissi, 2009). In contrast, research also points out the difficulties to transform these online relationships into social capital (Wellman et al., 2001; Gerard, 2012). Thus, the aforementioned paradox leaves unclear the impact of social media on the entrepreneurs' social capital.

Despite the theoretical and practical implications of this apparent paradox in the field of entrepreneurship, not much work has been identified that explains why and how some founders use social media to enhance their social capital. In fact, recent research holds that, compared to other types of users, entrepreneurs use social media to maintain a specific strategy when they manage virtual social ties (Fischer & Reuber, 2014; Song, 2015); however, it failed to explain how these strategies were useful during the entrepreneurial process and increased the founders' social capital.

The current theoretical framework suggests that in order to improve the current entrepreneurial process, there is a need to understand the founder's motives for using social media to manage their social capital. However, the reason why entrepreneurs decide to engage in social media, and in turn how they benefit from these new settings to access

resources remains unclear. Then, the aim of this work is to contribute to theory-building in entrepreneurship research under the perspective of the founders' social capital; therefore, providing new insights to improve the entrepreneurial process in such environments of uncertainty and rapid change (Orsenigo et al., 2001; Umesh et al., 2007; Hsu, 2008).

### **III. Delimitation of the scope**

The objective of this dissertation is to enrich entrepreneurship research and practice by looking at the impact of social media on the founders' social capital. Following a managerial perspective, this work was centred on exploring the entrepreneurs' needs for using social media in an attempt to clarify what aspects of the founders' social capital are managed through their usage of social media.

Then, the current study does not attempt to explore the entrepreneur's adoption process from a technological perspective but it draws attention to the motives and gratifications of the individuals to adopt this networked media to improve their social capital. In this vein, the approach adopted was focused on learning from the entrepreneurs' experiences instead of their adoption-decision process. In contrast, further research should benefit from opening this approach to other perspectives such as their difficulties on the adoption process or situations of failure to shed light on the dark side of this phenomenon.

Moreover, the nature of this dissertation is exploratory as the main claim is to understand in detail the impact of social media from the ground. Thus, several opportunity-driven entrepreneurial cases were selected using a theoretical sampling to provide support to the ongoing literature as well as to offer a optimum generalization of the results. Then, even though a validation process was conducted as part of the mixed method approach undertaken in this research, further work would enrich the current insights by using a confirmatory approach to test the propositions arisen.

### **IV. Overview of the research process**

Following the researchers' interest in entrepreneurship and IT management, in December 2012 the main researcher successfully defended to a doctoral committee the current research gap regarding the impact of social media on the entrepreneurial process. More precisely, this work identified a paradox in the current literature unable to explain whether social media

improves the entrepreneur's social capital, and suggested the need to explore in detail why and how some entrepreneurs used these networked media to manage their social capital.

From January 2013 until the end of that year, a deep review of the literature was conducted by the main researcher that concluded with the proposal of a research design. Specifically, at the beginning of the literature review this work identified that research on social media is very intense in marketing research, but that entrepreneurship research – and in particular, social capital - lacked of a clear theoretical framework to explain this phenomenon. For this reason, the literature review was conducted through the exploration of these two research topics independently: social capital and social media, to explore the theoretical tools that could support the study of this phenomenon. Then, the fieldwork was designed based on an inductive approach, where insights emerged from the study of entrepreneurs' experiences as well as the analysis of their social media activity. Finally, a validation process was also conducted at this stage through the doctoral committee to ensure the fit between the research design and the research gap.

The data collection process started in November 2013, and was divided into two main stages: first, the selection of the sample and the execution of the semi-structured interviews and second, the monitoring of the social media activity of the entrepreneurs and their new firms. On one hand, the selection of the cases was based on a theoretical sampling centred on opportunity-driven entrepreneurs, mainly engaged in technology-based ventures, with different educational and professional backgrounds, and the interviewing process went on until October 2014. The interviewing process was useful to capture the entrepreneur's motivations and gratifications for using social media, and the data was recorded and transcribed, then analysed by two independent researchers to minimize possible biases of the analysis. Once the first stage of the research design was completed, in November 2014, the researcher managed to capture some data on the social media activity of the entrepreneurs and their new founded firms. This process went on for 10 weeks until the data collected provided sound support to the initial findings.

Finally, while the data collection and analysis was done in parallel throughout the research process, the last period of this work was dedicated to consolidate the data analysis process and to compile the emerging results of this work. In order to ensure the relevance of the findings, a verification process was also conducted through two main stages: first, the ongoing

work went through the internal doctoral committee quality review process where some formal feedback was collected (March 2015), and second, a three-month stay secondment at the Queensland University of Technology (QUT) was arranged from May to July (2015). Specifically, this secondment helped the researcher to validate the contribution of this work by sharing and discussing the preliminary findings with researchers from the School of Management and the Australian Centre for Entrepreneurship Research (ACE). This not only helped to get fresh insights on the research subject but also to get involved with other researchers on the entrepreneurship field and explore potential future lines of research within this subject.

<p><b>Motivation and identification of the research framework</b></p> <p>January 2012 - December 2012</p>
<p><b>Literature review &amp; Research Question</b></p> <p>March 2012 - June 2013</p>
<p><b>Research design and data collection strategy</b></p> <p>January 2013 - December 2013</p>
<p><b>Data collection I: Entrepreneurs insights through interviews</b></p> <p>November 2013 – October 2014</p>
<p><b>Data collection II: Social media activity reports</b></p> <p>November 2014 – February 2015</p>
<p><b>Data analysis</b></p> <p>November 2013 – June 2015</p>
<p><b>Secondment. Queensland University of Technology</b></p> <p>May 2015 – July 2015</p>
<p><b>PhD Dissertation</b></p> <p>December 2015 – June 2016</p>

*Table 1 Overview of the research*

## V. Organization of the document

The organization of the document is as follows. After this introduction, chapter one revises the state of the art of entrepreneurship research with a special focus on management theories. In this vein, the chapter is organized to review prior research on entrepreneurship theories and social capital, as well as the concepts and theories around the study of social media. Thus, this

chapter offers a critical discussion of the ongoing literature and to provide a clear theoretical framework for the current dissertation that sustains the proposed research question. Moreover, this chapter aims to ensure that the proposed research gap is a significant limitation on the current entrepreneurship research that leads to severe implications not only for researchers but also for entrepreneurs and entities dedicated to support entrepreneurial practices.

In line with the research gap, the second chapter provides an epistemological discussion on the main methodological alternatives that could support this study and describes the research design used in this work to answer the research question exposed in the prior chapter. More precisely, this research is based on an exploratory approach that builds new theoretical lenses to understand the impact of social media on the entrepreneurial process. Moreover, this chapter also includes a description of how data was collected and the analytical strategy employed to build new insights from the emerging data.

Then, chapter three of this dissertation describes the outcomes that emerged from the fieldwork, and entails the current findings to the ongoing literature on entrepreneurship research. Thus, the findings contribute to the social capital by exploring why and how do entrepreneurs use social media to manage their social capital through maintaining and developing their social networks within these virtual spaces.

Finally, the last chapter summarizes the contribution and implications of this dissertation in the field of entrepreneurship research and provides fresh insights to new firm founders and entities dedicated to promote the entrepreneurial process. Moreover, this chapter also analyses the limitations of this research work and proposes future lines of research that would enrich the study of the current phenomenon.

<b>Research Question</b>	
To what extent do entrepreneurs use social media to manage their social capital?	
<b>Sub-Research Questions</b>	
Why do entrepreneurs use social media to manage their social capital?	How do entrepreneurs use social media to manage their social capital?

<b>Theory: Entrepreneurship Research</b>	
Social Capital	Social Media
Uses and Gratifications Approach	

<b>Work Plan</b>		
Chapter 1: Literature Review & Research Gap	Chapter 2: Methodology & Fieldwork	Chapter 3: Findings & Discussion
Chapter 4: Conclusions, Implications, Limitations & Future research		

*Table 2 Organization of the document*





## Chapter 1: Literature Review & Research gap

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Technology-based entrepreneurship is an emergent field of research in nowadays society as these new ventures are drivers of technological change and growth (Hsu et al., 2008; Shane & Venkataraman, 2000; Bailetti, 2012; Shane & Ulrich, 2004). However, entrepreneurs immersed in technology-based firms are exposed to changing environments and high levels of uncertainty (Hsu et al., 2008; Neck et al., 2004; Umesh et al., 2007), thus there is a strong interest in understanding how to improve their entrepreneurial process (Wiklund et al., 2011; Bailetti, 2012; Umesh et al., 2007). This chapter revises in detail the current theoretical framework and the prior literature regarding this research interest.

Specifically, the first section describes the main pillars of this work by defining the concepts of the *“entrepreneur and social media”*; and analysing the recent research regarding this topic. The next section is dedicated to review the concept of *“social capital”*, and analyses the impact of social media in this theoretical framework. Several research points out the importance of social capital on technology-based entrepreneurs as the individual social network can act as a good support to address resource challenges faced during the different stages of the entrepreneurial process. In parallel, social media has challenged how individuals and organizations interact, and in turn, how entrepreneurs manage their social network (Fischer & Reuber, 2014; Trainor, 2012).

Research on the impact of social media in the entrepreneurial context goes beyond social capital, and commonly overlaps with other disciplines such as marketing or information systems (Hensel & Deis, 2010; Carson et al., 2004; Kiselicki, 2013; Mandal, 2015). However, from a management perspective there is a growing interest in understanding whether social media improves the entrepreneur’s social capital (Matei & Ball-rokeach, 2001; Huysman & Wulf, 2004; Wellman et al., 2001; Ellison et al., 2007). More precisely, whereas some research suggests that entrepreneurs use social media to manage their social network (Dunne et al., 2010; Kenneth et al., 2012; Fischer & Reuber, 2014), some research claims the implications of these activities towards improving their social capital (Gerard, 2012; Song, 2015). In this vein, the last section of this literature review analyses the *“research gap”* identified regarding the social capital and proposes the set of research questions that were addressed in this work.

## I. Introduction: Entrepreneurship and Social Media

This work is built under the impact of social media on entrepreneurship research. Thus, this section defines these two pillars by exploring: (1) *“who is the entrepreneur?”* and (2) *“what is social media?”*, and the main elements regarding both concepts. Then, this section concludes with an analysis on the *“recent research in entrepreneurship and social media”* to shed light on how prior work has addressed the intersection between these two elements and their major findings.

### *1.1. Who is the entrepreneur?*

The word “entrepreneur” comes from the French verb “entreprendre” that means “to do something” or “to undertake”. Thus, despite the multiple definitions on who is the entrepreneur, entrepreneurship is usually defined as the process of starting a new business and the entrepreneur is the individual who organizes or operates the business. Moreover, in contrast to managers who are usually defined as individuals that work for others, the entrepreneur is described as someone who starts a new firm and bears the risks (Shane & Venkataraman, 2000).

Literature has tried to enrich this basic definition by studying the phenomenon from different research disciplines such as sociology, psychology, economy, etc. (Simpeh, 2011; Hitt et al., 2011; Kraus & Kauranen, 2009). Thus, this section reviews the main elements around the entrepreneur such as the profile of the individual, the origin of their behaviour, the stages of the entrepreneurial process and the nature of the new firm.

- **The profile of the entrepreneur**

Before entrepreneurial intention models were strongly supported as important predictors of entrepreneurial behaviour (Krueger et al., 2000; Miralles & Riverola, 2012; Liñán & Santos, 2007), most research was focused on identifying common patterns among these individuals in order to understand what type of profile were more inclined towards entrepreneurship (Reynolds et al., 1994; Liñán & Santos, 2007). . Some of these traits included age, gender, education, professional experience, etc. (e. g. Delmar & Davidsson, 2006; V. K. Gupta, Turban, Wasti, & Sikdar, 2009; Levesque & Minniti, 2003; Reynolds et al., 1994; Yordanova & Tarrazon, 2010)

Several research found that young man were more inclined to start a new firm, but not much research identified differences among entrepreneurs in terms of age and gender to explain the entrepreneurial process in terms of survival and success (Gupta et al., 2009). In fact, entrepreneurial success has been better explained through the Resource-Based Theory (or Resource-Based View) which posits that the individuals' human capital and their social capital are important aspects of the entrepreneurial process (Davidsson & Honig, 2003; Simpeh, 2011):

- Human capital: is defined here as the entrepreneurs' prior formal education and professional experience that determine the stock of knowledge of the individual (Davidsson & Honig, 2003; Wright et al., 2007).
- Social capital: is defined here as the set of contacts and relationships made in prior exposure to social environments that determine the entrepreneur's social network, that in turn is a potential source of resource acquisition (Adler & Kwon, 2002; Davidsson & Honig, 2003).

Thus, different compositions of human and social capital significantly influence the entrepreneurs success or failure (Davidsson & Honig, 2003; Pirolo & Presutti, 2010; Elfring & Hulsink, 2003; Mosey & Wright, 2007); that in turn, leads them to gain significant resource advantages and overcome significant resource disadvantages (Alvarez & Busenitz, 2001; Barney, 1991).

- The nature of entrepreneurs

Regarding the nature of the entrepreneur (Block & Wagner, 2007; Wagner, 2005), literature highlights severe differences between those individuals who enrol in the entrepreneurial process to exploit an opportunity (opportunity-driven entrepreneurs<sup>3</sup>) and those who find entrepreneurship as their employment alternative (necessity-driven entrepreneurs<sup>4</sup>). These differences were found relevant in terms of their motivational antecedents and operational systems (Valliere & Peterson, 2009), and became even more significant in terms of the role of the human and social capital to successfully start their new firm (Hsieh, 2007; Foss & Klein, 2005).

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<sup>3</sup> An extended definition of opportunity-driven entrepreneurs is given in the Terminology Section

<sup>4</sup> An extended definition of necessity-driven entrepreneurs is given in the Terminology Section

For example, opportunity-driven entrepreneurs usually have to deal with higher degrees of uncertainty due to dynamic environments they are exposed to, and face important resource constraints over the entrepreneurial process (Hsieh, 2007; Gupta et al., 2006; McMullen & Shepherd, 2006). Thus, opportunity-driven entrepreneurs usually require a more complex set of network structures, whereas necessity-driven ones usually rely on their family and friends and acquaintances (Choi & Shepherd, 2004; Block & Wagner, 2007).

As opportunity-driven entrepreneurs are exposed to severe limitations when dealing with dynamic environments and do not have standard operating systems or structures that they can go back on, the interest of this research is to focus on how this particular entrepreneurs deal with social media to overcome their limitations. In fact, compared to necessity-driven entrepreneurs, those focused on the exploration and exploitation of business opportunities face severe limitations in terms of social capital and they usually cannot rely only in their closest relationships but need to develop new ones (Mosey & Wright, 2007; Umesh et al., 2007). Thus, the decision to focus on this type of entrepreneurs was made to provide a detailed review on this particular profile with strong and dynamic resource requirements; however, this work recommends to rebuild the theoretical framework before generalizing the findings of this research. Additionally, regarding future research on necessity-driven entrepreneurs, this work suggests to take into account the impact of family and strong ties on their entrepreneurial process.

- The entrepreneurial process

Penrose (1968) definition of entrepreneurship included that the essential aspect of entrepreneurship is the identification and exploitation of opportunistic ideas, centring the focus of entrepreneurship research on a process-based perspective (Alvarez & Barney, 2007a; Mitchell et al., 2008). This new perspective has led to the identification of different abilities and resources that the individual needs during the entrepreneurial process to successfully commercialize business opportunities (Wood & McKinley, 2010; Alvarez & Barney, 2007a; Baron, 2006; Dimov, 2007).

This research uses the Bhavé's (1994) classification of the opportunity-driven entrepreneurial process to explore the main stages founders go through and what type of resources do they mainly look for. More precisely, this dominant model in entrepreneurship research is based on a three-stage division of the entrepreneurial process: opportunity development, technology

and organizational creation and exchange (Bhave, 1994). This model has previously been used to analyse the impact of social networks on entrepreneurial process (Martinez & Aldrich, 2011; Greve & Salaff, 2003).

First, during the opportunity development stage (Eckhardt & Shane, 2003; Bhave, 1994; Short, Ketchen, et al., 2009), entrepreneurs need to develop an orientation or interest in creating their own businesses as well as to acquire entrepreneurial skills (Shane, 2000; Klein, 2008). Moreover, regardless of why entrepreneurs decide to create their own ventures, they must find or create opportunities (Zahra, 2008; Baron, 2006).

Secondly, the technology and organizational creation stage identifies those activities that the entrepreneur has to achieve to be ready to transform the opportunity into a business start-up (Stam et al., 2013; Martinez & Aldrich, 2011; Zhang et al., 2011). Three organizational routines are identified within this stage: *team formation*, *capital acquisition* and *employee recruitment and selection* (e.g. Choi & Shepherd, 2004; Delmar & Shane, 2004; Eesley, Hsu, & Roberts, 2011; Hsu, 2004).

Finally, the last stage that entrepreneurs go through is the exchange stage (Bhave, 1994; Elfring & Hulsink, 2003). Whereas established organizations have a set of institutionalized roles and tasks, new firms don't. This is why exchange stage is one of the most difficult stages of the start-ups, as they face liability of newness and smallness, and they need go gain legitimacy in order to create inter-organizational relations and to get to customers (Zhang, 2010; Martinez & Aldrich, 2011; Eckhardt & Shane, 2003; Choi & Shepherd, 2004).

In addition, it is important to highlight that although these stages are not separated in nature – they can occur simultaneously – they have been employed in several occasions for entrepreneurial research as they proved to be good analytic constructs (Martinez & Aldrich 2011).

- What's special about technology-based entrepreneurs?

Finally, the nature of the firm is also a relevant element when analysing opportunity-driven entrepreneurs. New technology-based firms (NTBFs) are defined as independent firms established for the purpose of exploiting an invention or a technological innovation (Bailetti, 2012). However, there is an ongoing argument in the literature whether technology-based

entrepreneurs should be considered a separated stream of research (Colombo & Delmastro, 2001; Hsu et al., 2008).

The perspective of this research is that technology-based entrepreneurs are a type of opportunity-driven entrepreneurs that face specific requirements regarding their resource constraints (Mosey & Wright, 2007; Hsu, 2008). On one hand, due to the technological nature of the firm, these entrepreneurs depend heavily on knowledge and skills (Stuetzer et al., 2013; Wright et al., 2007), and tend to have a considerable experience in technological development activities or research. On the other hand, to respond to the specific requirements of their new venture formation process, technology-based entrepreneurs are very active on social network development as their composition of strong and weak ties is not always enough effective.

- **Summary**

This section described the three main elements regarding the entrepreneur: the profile of the individual, the nature of the venture founder and the entrepreneurial process (Figure 1).

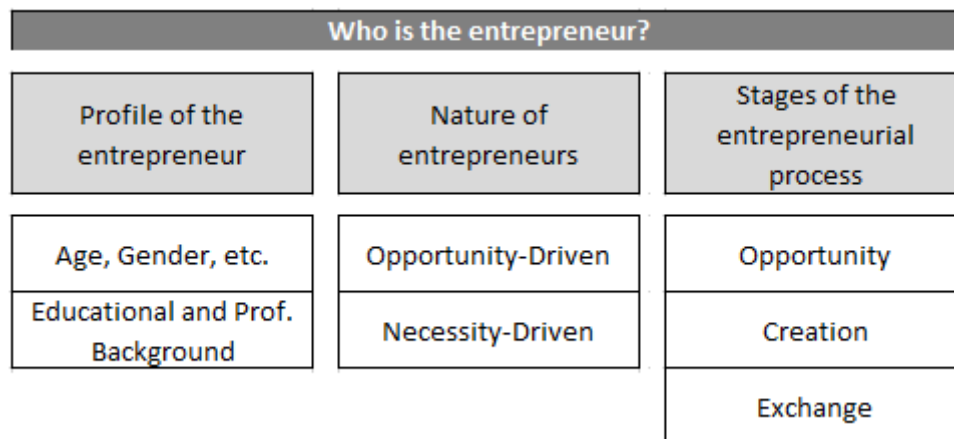


Figure 1. Who is the entrepreneur?

First, regarding the profile of the entrepreneur, this work is based on the literature that studies the impact of human and social capital on entrepreneurship. Specifically, even though elements such as age or gender can be relevant demographic variables to explain the main profile of individuals that start new ventures, the human and social capital of the individuals have been claimed as more reliable predictors of new firm success. More precisely, both the entrepreneurs' human capital and social capital have been proposed as significant measures to analyse the individuals' resource advantages as well as their resource constraints.

Secondly, regarding the nature of the entrepreneur, opportunity-driven ones are defined as those immersed in the identification and exploitation of business opportunities and face significant resource constraints due to the dynamic environments they work in. Moreover, technology-based entrepreneurs are a specific type of opportunity-driven entrepreneurs with special requirements in terms of resources derived to their technological nature.

Finally, regarding the entrepreneurial process, this work explored the different stages of the entrepreneurial process that can be divided into three: opportunity, creation and exchange. The identification of these stages facilitates the classification and study of the resources that the entrepreneur needs during the new venture formation process.

### *1.2. What is social media?*

Although the concept of social media is still quite new and there is not yet a unique definition, this work uses Cooke and Buckley definition of social media: “digital applications build upon Web 2.0 in terms of their ideological and technological foundations, as they allow to communicate, create content and share it with each other via communities, social networks and virtual worlds” (Cooke & Buckley, 2008). Moreover, the platforms that encompass social media go from blogs and social networks to video sharing or virtual worlds, and each platform fulfils a specific purpose (Zhou et al., 2011; Boyd & Ellison, 2007). An extended description of the main social media platforms is provided below.

In this vein, social media has defined a new trend for communication and access to information (Treem & Leonardi, 2012; Leonardi & Bailey, 2008) between individuals constructing a networked context that stimulates new forms of online interaction and enhances online relationships (Pénard & Poussing, 2010; Haythornthwaite, 2002) and several theories have been found useful to explain the impact of this technological applications within nowadays social challenges. Thus, this section also explains some theories that have been employed to study the impact of social media on individuals and business contexts.

Finally, the Uses and Gratifications Approach offers a suitable framework to study the usage of social media by different types of individuals, as it analyses their motives for using media tools and how they obtain different types of satisfactions through its usage.



- **Types of social media platforms**

Social media technologies take on many different forms including blogs, forums, microblogs, social networks, photo sharing, video sharing, etc. Although these applications are isolated in nature, users tend to make a multi-platform usage by sharing content from one platform to another (Nann et al., 2010; Papacharissi, 2009). Moreover, each platform has its specific objective and the main ones highlighted in the literature in professional environments are (Cooke & Buckley, 2008; Kaplan & Haenlein, 2010):

- Blogs are discussion sites that can function as personal online diary or as online brand advertising of a particular individual or company.
- Microblogging platforms are broadcast mediums that allow users to exchange small elements of content such as short sentences, individual images, or video links. Among the most popular microblogs there is Twitter.
- Social networking sites (SNS) are platforms based on the user profiles and their social links and usually include a variety of additional services. Among the most popular social networking sites there are Facebook, LinkedIn, Instagram and Google+.

Regarding the social nature of these applications, research suggests that these platforms are useful to complement the individual's social connections and to build social relations among people who share similar interests, activities, backgrounds or real-life connections (Boyd & Ellison, 2007; Ellison et al., 2007).

- **Theories regarding the analysis of Social Media**

This work identified three main theories recently employed to study the impact of social media into nowadays context: the Uses and Gratifications Approach, Media Richness Theory, Access/quality Theory. These theories are grounded on different research disciplines, specially information systems, and are useful to analyse the functionalities of the media itself and the interaction between the media and the individual (Mandal, 2015).

- **Uses and Gratifications Approach:** This approach assumes that the user has motives for turning to certain types of media and can expect to fulfil specific outcomes for that interaction (Joinson, 2008). Thus, Uses and Gratifications Approach is useful to

understand the motives and satisfactions of people to turn to different types of media (Dunne et al., 2010).

- **Media Richness Theory:** This theory studies how rich is different media in terms of communication (Daft & Lengel, 1986). However, this theory has been criticized for not explaining the richness of email communication, and further research highlights that richness is not a property of the medium but the property (richness) is the interaction between the medium and the members (Mandal, 2015; Dennis & Kinney, 1998; Dennis et al., 1999).
- **Access/Quality theory:** This theory considers information acquisition attributes rather than traits of the media to postulate that cost is associated with accessibility and the benefits are quality information obtained. This theory assumes that information should possess features such as “relevancy, accuracy, reliability, and timeliness” which are grouped as quality characteristics of the system (Mandal, 2015).

The above theories have been used in prior research to shed light on the impact of (social) media on different research settings to investigate the functionalities and capabilities of these tools as well as their impact in social contexts. However, regarding the research interest of this work which mainly lays on analysing the usage of social media instead of its functionalities or capabilities, the Uses and Gratifications Approach has been found a suitable perspective to analyse why and how entrepreneurs use social media to manage their social capital<sup>5</sup>.

- **Summary**

This section described the main elements regarding social media, such as the pillars that define this term, the platforms encompassed within the umbrella of social media and the theoretical approaches used to study this new media platform (Figure 2).

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<sup>5</sup> A detailed description of this decision is provided in Section II.4 of this chapter.

What is social media?		
Definition	Platforms	Theories
Web 2.0 ideologically and technologically	Blogsplaces	Uses and Gratifications
User Generated Content	Microblogging (Twitter)	Other (Media Richness Th., Access/Quality Th.)
	Social Networking Sites (LinkedIn & Facebook)	

Figure 2. What is social media?

First, social media is defined as a group of web-based applications grounded on the ideological and technological foundations of Web 2.0, and that allow the creation and exchange of user-generated content. In this sense, social media are a set of digital technologies that enable individuals to share information, communicate and access to information endorsed by others.

Secondly, build under the definition of social media, several platforms coexist such as social networking sites, blogspace or microblogs. In particular, social networking sites are a group of social media tools that enable individuals to construct a public profile, identify users with common connection and view the social system of others. Moreover, these tools not only are useful for self-promotion but for the maintenance of contacts, useful for both personal and career building.

Finally, among the different theories that study social media, the Uses and Gratifications Approach is useful to understand the motives why individuals engage a specific media and the benefits or satisfactions that they get out of the usage of this media.

### *1.3. Recent research on entrepreneurship and social media*

In order to complete this preliminary theoretical umbrella regarding entrepreneurship research and social media, this introductory chapter concludes with an analysis on the current work done around this topic: the impact of social media on entrepreneurship. More precisely, this section reviews the main research disciplines in the field of entrepreneurship and then analyses, through adopting a management perspective, the main work done on the impact of social media on the entrepreneurial process.

- **Entrepreneurship Research**

In order to contextualize the framework of this research within the management perspective, a brief description has been provided here on the different research fields that study entrepreneurship.

Then, entrepreneurship is not only a way of self-employment, but has also multiple implications from an individual level, an organizational level and a societal level (Lockett et al., 2011; Short, Ketchen, et al., 2009). Several theories have been put forward by scholars to study entrepreneurial process and its performance and these theories have their roots in economics, psychology, anthropology sociology, and management (Simpeh, 2011; Langlois, 2007). Some examples of these perspectives include:

- The Economic Entrepreneurship Theory, built upon the classical and neoclassical theories of economics, explores the economic factors that enhance entrepreneurial behaviour and performance (Schumpeter, 1934; Knight, 1921).
- The Psychological Entrepreneurship Theory is focused on the individuals' psychological factors that may influence entrepreneurial performance, such as personality traits, need for achievement, and locus of control.
- The Anthropological Entrepreneurship Theory studies the origin, development, customs and beliefs of a community, and exposes that both new venture behaviour and performance might be influenced by one's culture (Mitchell et al., 2002).
- The Sociological Entrepreneurship Theory focuses on identifying the social context of the entrepreneur (Reynolds et al., 1994) such as the social bonds of the individual, the life situations of the founders, the ethnic identification or sociological background of the individual and the population ecology.
- From a managerial perspective, two complementary theories were identified. On one hand, the Opportunity-driven Entrepreneurship Theory states that entrepreneurial process can be divided in two stages: opportunity exploration and opportunity exploitation (Shane, 2000). On the other hand, the Resource-Based Entrepreneurship Theory points out that access to resources by founders is an important predictor of opportunity- based entrepreneurship and new venture growth (Alvarez & Busenitz, 2001).

Although the different approaches presented above help to advance on the entrepreneurial research, the focus of this research lays on how entrepreneurs explore and exploit opportunities from a managerial perspective in order to enhance ongoing promotion policies and support practices. Specifically, by focusing on the field of management, this research seeks to enhance the current understanding on entrepreneurship research as well as to shed light on the impact of social media to support the management of new ventures.

- **The impact of social media on entrepreneurship research**

The growing popularity of social media led to a strong academic interest to shed light on the impact of social media towards individuals and organizations (e.g. Durkin et al., 2013; Ellison et al., 2007; Kaplan & Haenlein, 2010; Treem & Leonardi, 2012). Specifically, under the field of entrepreneurship this work identified three main lines of research classified as: (1) the study of the social media adoption among entrepreneurs, (2) the function of social media in new product development and promotion strategies, and (3) the supportive role of social media on the entrepreneur's social network.

First, the study of the social media adoption among entrepreneurs has focused on how nascent entrepreneurs, small and medium-sized firms and university students decide to engage in social media to support their entrepreneurial process (Durkin et al., 2013; Smith et al., 2012; Mandal, 2015). The main outcomes of this research topic can be classified through the entrepreneurial profile and the social media characteristics.

On one hand, regarding the entrepreneurial profile, despite the several attempts to identify common traits that influence the individual's adoption of social media, a recent research found no direct correlation between the founder's identity (Darwinian, Communitarian or Missionary) and their engagement in social networking sites (Smith et al., 2012), suggesting that the individual characteristics and personality factors are poor indicators of adoption.

On the other hand, regarding the characteristics of the medium on the adoption process, recent theses in the information systems field found that collaborative processes to address concerns as well as the usefulness arisen from improved communication and medium richness was a dominant indicator for social media adoption and use (Mandal & Mcqueen, 2012). Moreover, prior to this work, some research conducted through university students also brought parallel inputs by suggesting that students' social influence, enjoyment and

communications effectiveness were indicators of their social media adoption as young entrepreneurs (Zhang et al., 2014)

Second, in line with these results, most research agrees that the main interest of the entrepreneur's social media engagement was to use these web-based applications for marketing purposes such as customer relationship management and branding (Trainor, 2012; Rodriguez et al., 2012). Thus, research on the function of social media in new product development and promotion strategies found support on the use of these applications to increase advertising through virtual marketing strategies (Hensel & Deis, 2010; Kiselicki, 2013) and to build a network of contacts to reach business-to-business clients (Rodriguez et al., 2012).

Finally, in an attempt to shed light on how social media supports founders in the different stages of their entrepreneurial process, some research studied the supportive role of social media on the founder's social network (Marion et al., 2014; Pénard & Poussing, 2005; Wellman et al., 2001). Specifically, this research perspective analyses how social media offers new forms of communication and interaction that promote the management of the individual's social network structure.

For example, some work identified that entrepreneurs used social media to develop relationships with people they might not otherwise have had access to, and to better maintain relationships so they could be utilized offline (Nann et al., 2010; Matei & Ball-rokeach, 2001). Other recent research also found that entrepreneurs have a specific way of managing their virtual social networks by showing patterns of strong cohesion between the different social network sites (Song, 2015).

In contrast to these findings that explore how entrepreneurs manage their social networks, not much has been done to explain why entrepreneurs canalize these efforts through social media and how they benefit from these networked context to enhance their access to resources (social capital)(e.g. Fischer & Reuber, 2014; Marion et al., 2014; Nann et al., 2010). More precisely, this research gap on the impact of the entrepreneurs' virtual social network limits our understanding on social capital, and in turn on their entrepreneurial process.

- Summary

This section defines the theoretical relationship between entrepreneurship and social media (Figure 3) by exploring the trends in entrepreneurship research as well as the latest work on the intersection of the two phenomenon.



Figure 3. Research on entrepreneurship and social media

First, regarding entrepreneurship research, this phenomenon has been studied in several disciplines (economics, psychology, management, etc.) and analysed at different levels (individual, organizational and societal). From the management perspective there is an interest in understanding how to support the entrepreneurial process and to ensure the survival and successfulness of the new firm. Moreover, one of the main elements to study entrepreneurs' survival and successfulness is through their access to resources throughout their process.

Secondly, when analysing the prior work on social media and entrepreneurship, three main research streams were identified within the managerial and information systems research: social media adoption, marketing and promotion strategies and social networks. Moreover, considering that the main usage that founders make of social media is to enhance their social networks and to conduct promotional strategies, this work suggests that the impact of social media on entrepreneurs social networks, and in turn their social capital has not been explored with enough intensity regardless of the severe implications in the entrepreneurial process.

## II. Social Capital

This dissertation explores the impact of social media on the entrepreneur's social capital; thus, the second section of this chapter revises the state of the art of the term "social capital" and the impact of social media on the different elements of the individual's social capital. Then, this section starts with a contextualization of the social capital concept through revising the "different perspectives on the impact of resources in organizations", which is followed by two sections on the theoretical elements of social capital: "a review on the social capital and social network theory" and the "dynamics between entrepreneurship and social capital". Finally, this section concludes with a critical analysis of "the disruptive impact of social media" on the different elements of the social capital.

### *II.1. Different perspectives on the impact of resources in organizations*

Research on the impact of resources within organizations and entrepreneurial practices is extensive and takes different perspectives. For example, some research focuses on how resources flow within the environment and how organizations may be affected by those changes, whereas other research pays attention on the active role of organizations (and entrepreneurs) to manage resources. Thus, this work identified two main perspectives to distinguish how the role of resources is understood (Hitt et al., 2011): the external and the internal perspectives. On one hand, the external perspective believes that resources available in the environment and the role of researchers is to focus on the organizations ability to control the flow of such resources to compete and survive. The main theories and models that emerge from this perspective are the political economy model, power dependence model and resource dependence theory (Sirmon et al., 2007).

On the other hand, the internal perspective is mainly based on the theoretical pillars of the resource-based theory (or resource-based view) and pays attention to how the firm uses its resources to gain survival and competitive advantage (Alvarez & Busenitz, 2001; Sullivan & Ford, 2014; Barney, 1991). In contrast to the prior perspective, this approach is useful to shed light on how individuals acquire and manage resources to explore and exploit business opportunities (Gatewood et al., 1995; Baron, 2006). Moreover, build under the umbrella of the resource-based theory, further theoretical approaches such as dynamic capabilities (Teece et al., 1997), resource orchestration (Sirmon et al., 2007) and entrepreneurial *Bricolage* (Baker &



Nelson, 2005; Steffens et al., 2009) have enriched this perspective through adopting a dynamic perspective.

This internal perspective of the access to resources was of special interest in this research work as the main goal was to understand how entrepreneurs use social media to access resources, and in turn, how they gain competitive advantages and supersede resource disadvantages. Thus, a description is provided below to describe the resource-based theory and the main theoretical perspectives emerged under this framework. In addition, the definition of social capital employed in this research is also aligned to the internal perspective of resources.

- **The resource-based theory**

Entrepreneurship is concerned with the exploration and exploitation of profitable opportunities (Shane & Venkataraman, 2000). More precisely, entrepreneurship is a process that emerges from the identification of a business opportunity to the exploration and commercialization (Bhave, 1994; Choi & Shepherd, 2004; Gatewood et al., 1995). This process can be divided into three stages (Martinez & Aldrich, 2011): 1) the opportunity stage where the main elements are the motivation of the entrepreneur and the opportunity detection; 2) the creation stage where the entrepreneur sets up the founding team, fights for investment and recruits employees; and 3) the exchange stage where the entrepreneur identifies the potential lead customers.

In turn, within these different stages of the new venture formation, entrepreneurs may require different types of resources (Choi & Shepherd, 2004; Sirmon et al., 2007). These kinds of resources can be classified as tangible or intangible (Chrisman et al., 1998). On one hand, the tangible assets would include both financing and facilities (Shane, 2012; Eckhardt et al., 2006). On the other hand, intangible assets encompass skills such as managerial or technical (Stuetzer et al., 2013; Wright et al., 2007), information of and access to distribution channels, suppliers, etc. (Shane & Venkataraman, 2000); access to outside agents such as consultants, government, university or venture capitalists (Adler & Kwon, 2002; Shane & Venkataraman, 2000) and emotional support (Liñán & Santos, 2007).

According to the resource-based theory (Alvarez & Busenitz, 2001), the entrepreneur's resources are important means for explaining new venture formation process; and insufficient

resources are a huge obstacle for the entrepreneurial process (Alvarez & Busenitz, 2001; Davidsson & Honig, 2003). Moreover, regarding the nature and ownership of these resources they are classified as Human, Social and Financial Capital (Simpeh, 2011). Then, *Human Capital* encompasses the stock of knowledge and skills that resides within individuals and may be the result of previously attended work, experience, education or other means that influences the entrepreneur's ability to comprehend interpret and apply social information (Shane, 2000). Alternatively, *Social Capital* considers that the entrepreneurs Social Network (relationships with friends, relatives, workmates, acquaintances, etc.) provides them access to different sorts of resources (such as goods and services, information, skills, etc.) essential for the social venture formation process (Greve, 1995). Finally, the *Financial Capital* takes into account the economic resources of the entrepreneur that may be needed to set up the new firm (Shane & Cable, 2002; de Bettignies, 2008; Hellmann & Puri, 2002).

Based on this classification of the resources, the social capital emerged to shed light on the particular impact of the individuals' social network in their access to resources (Greve, 1995; Greve & Salaff, 2003; Semrau & Werner, 2013; Sullivan & Ford, 2014). Specifically, this theory (explained in detail in the following section), studies what elements of the social network such as the structure, the governance and the content, enhance the entrepreneurs access to resources, and is particularly useful in this research to understand the impact of social media on the entrepreneurial process (Elfring & Hulsink, 2007; Stam et al., 2013; Newbert & Tornikoski, 2012).

- Further dynamic perspectives on the role of resources

In line with the resource-based theory perspective, several theories emerged to shed light on how entrepreneurs deal with the dynamic environments. The current work highlights the importance of dynamic capabilities, resource orchestration and entrepreneurial bricolage as the main approaches made under this umbrella.

First, in order to advance on the aforementioned static perspective of the role of resources, dynamic capabilities were defined to explain and explore the firms' ability to integrate, build and reconfigure internal and external competences to address rapidly changing environments (Teece et al., 1997). Based on this dynamic perspective on the firm's ability to adapt to changing environments, the theoretical framework identified includes the firms' ability (1) to sense and shape opportunities and threats, (2) to seize opportunities and (3) to maintain

competitiveness through enhancing, combining, protecting, and when necessary reconfigure tangible and intangible assets.

Secondly, built upon the asset orchestration (Helfat & Peteraf, 2009) and resource management (Sirmon et al., 2007) perspectives, resource orchestration aims to extent the resource-based theory by introducing how manager’s actions to effectively structure, bundle and leverage firms resources (Hitt et al., 2011). This perspective gives support to the idea that what a firm does with its resources is at least as important as which resources it possesses (Sirmon et al., 2007).

Finally, *Entrepreneurial Bricolage* is a construct developed by Lévi-Strauss (1967) defined as “making do” by “applying combinations of resources at hand to new problems and opportunities” (Baker & Nelson, 2005; Lévi-Strauss, 1967). *Bricolage* is useful to explain how firms overcome resource constrains by engaging in resource seeking behaviours (Senyard et al., 2009; Senyard et al., 2010).

- **Summary**

Research is rich on the study of resources on the entrepreneurial process, and this section revised the different perspectives (internal and external) that current research has taken into account (Figure 4).

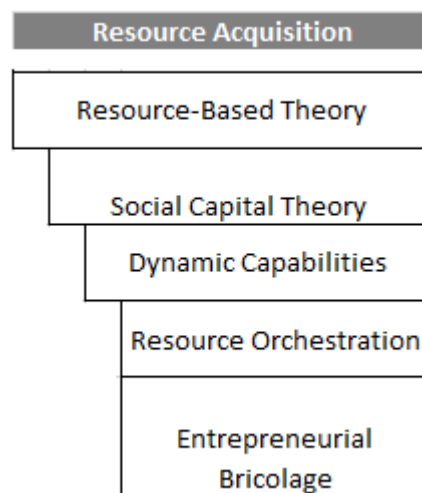


Figure 4. Resource acquisition

For example, whereas the external perspective focuses on studying how the firm adapts through resources, the internal one aims to study how founders manage their resources to gain competitive advantages (grounded on the resource-based theory).

Moreover, the aim of this work is to understand why and how entrepreneurs use social media to enhance their access to resources. Despite the advances made on the resource-based theory by introducing dynamic perspectives and managerial skills, the current work finds that the social capital is the more suitable approach to analyse the impact of these networked contexts based on the individuals' relationships.

### *II.2.A review on the social capital and social network theory*

Several ideas about social capital have emerged in the literature such as "Social capital influences career success", "Social capital facilitates resource exchange and product innovation", or "Social capital facilitates entrepreneurship and the formation of start-up companies" (Adler & Kwon, 2002). Based on Adler and Kwon, the term social capital has been adopted in a wide range of social disciplines in order to study the "good-will that is engendered by the fabric of social relations and that can be mobilized to facilitate action" (Adler and Kwon 2002, p.17).

Regarding the interest of this research, which is to understand how entrepreneurs manage resources (from an internal perspective), this work focuses on the theoretical assumptions of the resource-based theory, and defines the *Social Capital* under the perspective of how individuals and organizations are supported by their *Social Network* during the entrepreneurial process. More precisely, from the field of entrepreneurship, social capital the set of contacts and relationships that determine the entrepreneur's social network (Adler & Kwon, 2002; Davidsson & Honig, 2003) and the study of this concept explores how founder's social network contributes to gain competitive resource advantages and overcome resource disadvantages (Pirolo & Presutti, 2010).

This section reviews the main elements that compose the study of the Social Capital regarding the relationship between the social network of the individual and the types of resources this network provides to the entrepreneur.

- **Introduction to social networks**

First of all, social networks can be viewed as social relational systems characterized by a set of actors and the relations or ties that hold these actors together (Boyd & Ellison, 2007; Wasserman & Faust, 1994; Jamali & Abolhassani, 2006). However, social networks can be seen from two main perspectives: socio-centric and ego-centric views (Bögenhold, 2013; Chung et al., 2005). On one hand, the socio-centric perspective is focused on the study of large groups of people or societies in order to analyse patterns of interactions and how these patterns affect the group as a whole. On the other hand, the ego-centric perspective studies how the personal network can affect the individual. Because the interest of this work is to understand why and how founders engage in social media, the current dissertation used the ego-centric view as a main source of access to resources by entrepreneurs.

Moreover, regarding the social network, there are three main elements that need to be defined: social network structure, content and governance (Newbert & Tornikoski, 2013; Stam et al., 2013; Hoang & Antoncic, 2003). First, the content of the network explains the nature of the relationship and the resource access they provide (information, advice, capital, emotional support) and usually measures the value of contacts (Elfring & Hulsink, 2003; Newbert & Tornikoski, 2012). Second, social network structure refers to the pattern of social ties between actors usually measured through size and frequency of interaction (Newbert & Tornikoski, 2012; Granovetter, 1983). Finally, the governance of the network analyses how the network and the resource flows are coordinated to facilitate resource exchanges, and it is usually measured through duration and multiplexity (Hoang & Antoncic, 2003; Newbert & Tornikoski, 2012).

- **Social Network Content**

The “social network content” is defined as the type of resources that are transferred through the social network of the entrepreneur (Newbert & Tornikoski, 2012; Hoang & Antoncic, 2003; Hansen et al., 2001). More precisely, based on the definition of social capital, this research stream aims to analyse what resources do entrepreneurs possess and which ones they tend to acquire through their contacts (family, friends, workmates, etc.) or affiliations (universities, etc.).

Aligned to this definition, research has classified two types of relationships: arms-length and embedded relationships (Martinez & Aldrich, 2011; Bliemel & Maine, 2008). On one hand, arms-length relationships are economic transactions that devoid of any social commitment or personal obligation, whereas on the other hand, embedded relationships have some additional personal elements attached to them that imply a higher frequency of contact and a degree of commitment (Newbert & Tornikoski, 2013; Newbert & Tornikoski, 2012).

- **Social Networks Structure**

The “social network structure” is grounded on Granovetter’s strength of social ties (Granovetter, 1973) and strongly used in entrepreneurship research (e.g. Hoang & Antoncic, 2003; Newbert & Tornikoski, 2012). The strength of ties has been defined depending on the deepness and closeness of the relationship in terms of amount of time, emotional intensity, intimacy and reciprocal services (Granovetter, 1973). Polar cases in this classification are named after strong and weak ties.

On one hand, strong ties are those relationships with high emotional commitment and high frequency of contact, such as family, friends or workmates (Granovetter, 1973; Granovetter, 1983). These ties are useful to individuals in situations characterized by high levels of uncertainty and insecurity, such as for providing emotional support (Liñán & Santos, 2007; Carr & Sequeira, 2007) or enhancing the acquisition of resources (Lowik et al., 2012; Jack et al., 2004). However, it has been found that Social Networks mainly build on strong ties have the risk of overembeddedness and the danger of being blind to social developments or being “locked-in” (Adler & Kwon, 2002; Hite, 2005).

On the other hand, weak ties refer to a diverse set of persons working in different contexts with which one has low emotional commitment and low frequency of contact, such as acquaintances rather than friends (Granovetter, 1973; Granovetter, 1983). These ties are useful to increase diversity and may provide access to various sources of social and disperse information generating creative ideas (Burt, 2001) and even offer opportunities to meet social people (Adler & Kwon, 2002).

Moreover, these type of relationships can determine the structure of the entire social network: cohesive, closure and diverse (Martinez & Aldrich, 2011). First, the cohesion of a network indicates that there is strong social relations among its members. Second, the closure

of a network indicates that all members are strongly and almost exclusively connected to each other. Finally, the diversity of a network indicates substantial variation in social characteristics among members.

In addition, many scholars have also identified the distinction between bonding and bridging social capital where (1) bonding refers to the value assigned to social networks between homogeneous or strongly tied groups of people and (2) bridging refers to the value of social networks between socially heterogeneous groups that communicate infrequently (Lee & Jones, 2008).

Finally, there is no agreement on what type of network structures are more beneficial on entrepreneurial settings, although most research points out that high quality networks are composed of a variety of relationships (Elfring & Hulsink, 2003).

- **Relational Social Networks**

Finally, another important aspect to take into account is the position of the entrepreneur within the network structure (Cooke et al., 2005). More precisely, some research found that entrepreneurs may be in an advantageous situation depending on their position or location in a network (Burt, 2002; Burt, 2001).

On one hand, some social structures tend to be characterized by dense clusters of strong connections and these clusters usually offer homogeneous and redundant information. On the other hand, two separate clusters possess non redundant information, what is commonly known as structural holes (Burt, 2001; Mariotti & Delbridge, 2012).

Research on the impact of relational social networks identified the benefits of both cohesive and disperse social network structures, although it has been highlighted that entrepreneurs can highly benefit from their position in the network by building structural holes (Burt, 2001; Burt, 2002).

- **Social Network Analysis**

Social Network Analysis is the mapping and measuring of these relationships and flows (Wasserman & Faust, 1994). Thus, in addition to this analysis of the concept of social capital, it is useful to review what social network analysis is and how it has previously been conducted.

On one hand, data to conduct social network analysis can be collected in various ways depending on whether it uses an ego-centric or a socio-centric perspective (Chung et al., 2005), the most common approach is by means of questionnaires (e.g. Greve, 1995; Jack et al., 2004; Newbert & Tornikoski, 2012; Semrau & Werner, 2013; Sullivan & Ford, 2014), but also interviews (e.g. Elfring & Hulsink, 2003; Hansen et al., 2001; Lee & Jones, 2008; Miller, Besser, & Malshe, 2008), observations, and secondary sources are frequently used network data collection methods (Jamali & Abolhassani, 2006).

On the other hand, social networks can also be analysed using different techniques; however, the most common ones are through using mathematical and graphical techniques (e.g. Peter a. Gloor, Dorsaz, Fuehres, & Vogel, 2013; Song, 2015) to represent the descriptions of networks compactly and systematically and also because these representations allow us to apply computers to the analysis of network data (Haythornthwaite, 2002; Park, 2003; Jamali & Abolhassani, 2006).

In addition, the analysis of the social networks needs to take into account whether the relationship is undirected or directed (Jamali & Abolhassani, 2006). On one hand, undirected networks are those where there is a reciprocal connection between both actors and no direction is taken into account. On the other hand, the directed networks are those where the relationship does not necessarily have to be reciprocal: actor A can follow actor B, but this other actor (B) does not necessarily follow actor A.

- **Summary**

Among the different definitions of social capital, the current dissertation uses this term to identify the social ties that the entrepreneur possesses that potentially give him access to resources. Thus, this section reviewed the social capital and social network theory. More precisely, it described the different elements and concepts within these terms, the components of the social network theory and how to analyse social networks (Figure 5).



Social Capital		
The entrepreneur's social network that contributes to resource acquisition		
Social Network	Components of the Theory	Social Network Analysis
Actors and (Directed/Undirected) Ties	Social Network Content	Data Collection: Interviews, observation, etc.
Ego vs socio Centric	Social Network Structure	Data Analysis: Graphs, mathematical formulas, etc.
	Social Network Governance	

Figure 5. Social Capital

First, regarding the social network from an ego-centric perspective where the study is centred in a focal actor, the social network of this actor is defined as the set of (directed or undirected) ties among actors that an individual possesses.

Secondly, regarding prior research, the study of the social networks has mainly considered three components: (1) the content of the resources being transferred, (2) the structure or composition of the individual's social network that can be useful to acquire different types of resources and (3) the position of the individual in the social system.

Finally, research on the (ego-centric) social networks can take several forms and has previously used different tools and techniques such as (1) interviews or observation to collect individuals perspectives, experiences and behaviour; and (2) graphs or mathematical formulas to represent the individuals social system.

### *II.3. Dynamics between entrepreneurship and social capital*

Technology-based entrepreneurs and their ventures are embedded in ongoing social and economic relations, including personal and professional ties, all of which affect the way their career and their firm develop (Vasilchenko & Morrish, 2011; Boccadelli & Magnusson, 2006; Orsenigo et al., 2001). However, most of the literature has paid little attention to the temporal characteristics of ties; in other words, ties have been treated as if they were unaffected by time and history (Witt et al., 2008; Vasilchenko & Morrish, 2011).

This “temporal reductionism” (Granovetter & Swedberg, 1992) limits our understanding of how relationships change and transform over time, and it also restricts the understanding of the role of actors in network change. In an attempt to improve network management, recent research identified that network structures were subject to a process of adding, upgrading and dropping ties, and the result affected the mix of strong and weak ties in terms of network evolution, network renewal and network revolution (Elfring & Hulsink, 2007)

Moreover, through this new perspective of the dynamics of social network structures, Granovetter’s (1973) distinction through the strength of ties was complemented by a temporal variability that enabled the introduction of new elements in the study of the social networks such as the concepts of potential and latent ties, or the direct and indirect ties.

- Time dependent ties

Regarding time dependency, two additional types of ties have been identified: potential and latent ties. On one hand, potential ties are those embryonic relationships that have the opportunity of, and potential for, further development (Mariotti & Delbridge, 2012; Smith & Lohrke, 2008; Sullivan & Ford, 2014). Exchange is restricted to readily codified information about each other from which the parties decide whether to invest further in the relationship.

On the other hand, latent ties are those established relationships that are currently inactive. This, however, is not a permanent condition. Over time, the parties may reverse this state and re-establish meaningful interaction if they become sources of novel ideas and knowledge or circumstances change to create social demands (Mariotti & Delbridge, 2012; Sullivan, 2006; Orsenigo et al., 2001).

The incorporation of this concepts are relevant for their implications to understanding how and why networks emerge, evolve, and change, and to address issues on how to overcome network overload and redundancy (Mariotti & Delbridge, 2012).

- Existence of referral

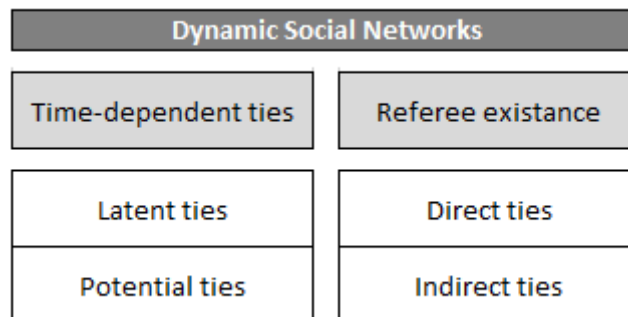
Regarding the existence of a referral within a relationship, ties can be classified as direct or indirect. Direct ties exist if the two parties have engaged in interactions prior to negotiating the resource exchange, whereas indirect ties occur if the two parties establish their first

contact at the outset of the negotiation and through a common third party referrer (Zhang et al., 2010; Zhang et al., 2011; Lee & Jones, 2008).

This concepts are helpful to study not only how the entrepreneurs' structure facilitates access to resources but how entrepreneurs can enhance their access to resources through indirect ties, and how the relationship and knowledge between resource owners, referrers, and the entrepreneur has to be managed in order to conduct a resource exchange (Zhang et al., 2010).

- **Summary**

In addition to the static perspective of social networks that affirms that high quality social network structures are characterized by high number of variety of relations, a dynamic view of the impact of social networks on the resource acquisition process supports that the access and development of ties is essential to create viable organizations. Thus, this section identified two complementary aspects to the prior framework: time dependent ties and the referee existence (Figure 6).



*Figure 6. Dynamic Social Networks*

First, regarding the time dependent ties, this work used the definition of latent ties to identify those existing dormant ties that may be potentially reactivated, and the potential ties as those that can be potentially developed to resource exchange.

Secondly, whether the existence of a referral is needed to develop a resource exchange between two actors, this work also identified the terms of direct (where the individuals have already developed a relationship prior to the resource exchange) and indirect (where there is referral that connects both actors).

#### *II.4. The disruptive impact of social media*

The main motives why individuals decide to use the Internet are information sharing, email, and communication (Pénard & Poussing, 2010; Wellman et al., 2001). Unlike the Web, which is largely organized around content, social media is organized around users. Thus, when it comes to the particular use of social media, individuals also benefit from the social and user-oriented nature of these new tools (DiMicco et al., 2008; Quan-Haase & Young, 2010; Pénard & Poussing, 2010). Thus, the Uses and Gratifications Approach is a useful perspective to explore why and how individuals decide to turn to specific media.

Moreover, users participating in social media (especially in social networking sites), publish their profile and any content, and create links to any other users with whom they associate (Dunne et al., 2010). The resulting social network provides a basis for maintaining social relationships, for finding users with similar interests, and for locating content and knowledge that has been contributed or endorsed by other users (Chen, 2011; Dunne et al., 2010). But, how does social media impact social capital? By using as a reference the prior framework on the social capital, this section also explores recent work on the impact of social media on both the social network structure and the dynamic network of individual.

- **Uses and Gratifications Approach**

Uses and Gratifications Approach was first defined by Herta Herzog around the beginning of the 1940s to describe radio listeners and classify the reasons why people chose specific types of media. Since then, this approach has been employed to explore the use of other forms of mass communication (Eighmey & McCord, 1998).

Specifically, the “Uses and Gratifications Approach” is based on the assumption that the user has motives for turning to certain types of media, and in turn, expect to fulfil specific outcomes throughout this engagement (Joinson, 2008). Thus, this approach is useful to understand how and why people turn to different types of media (Dunne et al., 2010). On one hand, “Uses” refers to the motivation of specific uses and can be defined as how people choose and interact with media; and on the other hand “Gratifications” looks at the satisfaction people gain from such use by addressing why and what users expect to get out of the media (Quan-Haase & Young, 2010).

Moreover, prior research identified that there are three main types of gratifications from the use of social media: content gratification, process gratification and social environment gratification (Joinson, 2008), where the content gratification defines the actual substance of the media, the process gratification identifies the tangible and repetitive experiences of using a particular form of media and the social environment gratification explains the satisfaction obtained from the communication and the interaction through the Internet and social network sites.

Regarding the interest of this work, the Uses and Gratifications approach has been found useful for several reasons. Specifically, in order to shed light on the impact of social media on entrepreneurship research, this approach is useful to analyse the individuals' (entrepreneurs') needs for using social media through their motivations and satisfactions regarding how they manage their social capital.

Thus, three main reasons supported this decision. First, the interest of this research is to shed light on the entrepreneurs' social capital and how the media supports their managerial decisions. In contrast to other approaches such as media richness theory or access/quality theory, where the focus is to analyse the media platform, the Uses and Gratifications Approach enabled this work to investigate the phenomenon from the entrepreneurs' perspective (Dunne et al., 2010; DiMicco et al., 2008).

Secondly, by using this approach the current work was also capable to make a distinction between the entrepreneurs' needs and challenges to enhance their social capital in contrast to their perceived benefits of the medium. This approach offered this research the tools to capture what entrepreneurs expect from the medium in order to fulfil their needs to enhance social capital, and also to explore what are their perceived benefits from these networked context (Quan-Haase & Young, 2010; Chen, 2011).

Finally, this approach has been recently used for similar purposes such as to analyse youngsters' relationships and behaviours within a social context (Dunne et al., 2010), or explore the individuals' behaviour in work related contexts to understand their motivations to socialize and bond among their peers (DiMicco et al., 2008). Moreover, this work focused its attention on the individual's social environment gratifications to analyse the satisfactions obtained from the communication and interaction in networked context.

- **Social media and social network structure**

One of the dominant description of social network structure is Granovetter's definition of strength of ties that takes into account the amount of time, the emotional intensity, the intimacy of each relationship to categorize the strength of a relationship (Granovetter, 1973). Thus, this work identified recent work that challenges Granovetter's framework through social media (Matei & Ball-rokeach, 2001; Boyd & Ellison, 2007) through: (1) how social media impacts both strong and weak ties and (2) how social media redefines the variables that determine the strength of ties.

On one hand, regarding how media affect the individual's weak and strong ties, this work Haythornthwaite (2002) identified that the impact of new media is dependent on the type of tie connecting communicators. For example, they suggested that stronger ties are affected positively by new means of communication if these new medium provides further means and opportunities for contact and acts as a complement to existing communications methods. In contrast, they also suggested that weaker ties may be affected positively when the medium expands the reach and basis for initiating and maintaining ties but the impact might be negative if it removes the existing connectivity and disrupts the ability for pairs to communicate.

On the other hand, regarding how social media redefines the measures for tie strength in virtual relationships, Gilbert and Karahalios challenged Granovetter's framework of strong and weak ties and suggested that virtual ties introduce new variables to the study of the strength of social ties. They defined a measurement tool based on the intimacy, intensity, duration, social distance, services, emotional support and structure (Gilbert & Karahalios, 2009).

- **Social media and network dynamics**

In addition to the static perspective of how the founders' social networks enrich their access to resources, social media also affects the entrepreneurs' relationships over the time, in terms of how entrepreneurs maintain and develop their relationships.

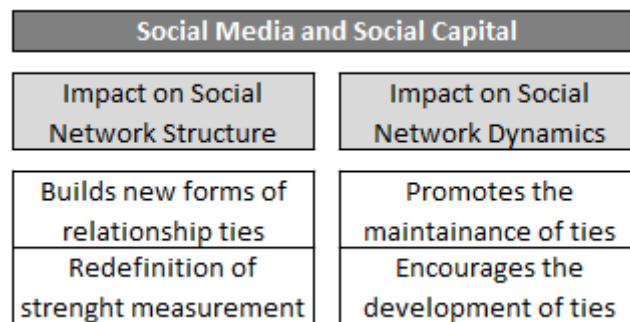
More precisely, Kenneth, Rui and Carley (2012) proposed that this new context is useful to complement the individual's ongoing relationships through virtual spaces and to encourage the development of new social connections through common interests. In fact, entrepreneurs use social media platforms (such as LinkedIn, Twitter and Facebook) to maintain and develop

their social network and that their management and network structure of these platforms is significantly different from the regular users (Song, 2015; Fischer & Reuber, 2014; Gloor et al., 2013).

In contrast, some authors claim that using social media to enhance social capital is not always suitable for career building through social networks as it strongly depends on the particular tool and its characteristics (Wellman et al., 2001; Gerard, 2012). For example, real profits from these tools strongly depend on the active use of this medium by participants and the community. Moreover, despite these digital tools facilitate communication and the exchange of information, successful communication is guaranteed and access to certain types of information is subject to the active users' predisposition (Gerard, 2012).

- **Summary**

Social media has changed how individuals communicate and share information, and in turn, the entrepreneur's social capital. Thus, based on the prior theoretical framework the current section identified the impact of social media into the entrepreneurs' social network (Figure 7).



*Figure 7. The impact of social media in social capital*

On one hand, regarding the impact of social media from a static perspective, research suggests that the entrepreneur's social network structure is now enhanced through virtual ties, and in turn, new parameters have broaden the strength of ties further than the traditional dichotomy of weak and strong ties. On the other hand, regarding the impact of social media under a dynamic perspective of the social networks, recent research also advocates that entrepreneurs have now new means for communicating with their social network and developing new social ties. In contrast, not much has been found on the impact of these aspects on the entrepreneurs' social capital.

### III. Research Gap

The main objective of this research is to improve the technology-based entrepreneurial process by exploring their impact of social media on the founder's social capital. In order to shed light on the aforementioned inquiry, this section summarizes the theoretical framework of this research work "*Entrepreneurship research and social capital*" and describes the paradox identified within the literature regarding "*Social media and the entrepreneur's social capital*". Finally, this section also exposes the research proposal through the "*Definition of the research questions*" that encouraged this dissertation.

#### III.1. *The framework: Entrepreneurship research and social capital*

Entrepreneurship has been studied in different research disciplines (management, economics, psychology, etc.) and at different levels of analysis (individual, organizational and societal) (Davidsson & Wiklund, 2001). From the field of management (Figure 8), there is an interest in understanding the entrepreneurial process and to improve the successfulness of new firms (Gupta et al., 2006; Eesley et al., 2011). Literature has paid special attention on the study of resources during the entrepreneurial process, as, according to the resource-based theory, founders access to resources is a strong indicator of their competitive advantage (Barney, 1991; Alvarez & Busenitz, 2001).

In this vein, opportunity-driven entrepreneurs are immersed in a process dedicated to identify and exploit business opportunities. In particular, technology based entrepreneurs are a specific type of opportunity-driven entrepreneurs that face significant resource constraints due to the dynamic environments they are exposed to; so they tend to rely on their social networks to access valuable resources (Hoang & Antoncic, 2003; Miller et al., 2007). This is known as the entrepreneurs' social capital and considers that the entrepreneur's ego-centric network facilitates the founder's to access resources in order to gain competitive advantages and overcome resource disadvantages.

Moreover, the study of the social capital and its impact on the entrepreneurial process has been done using both a static and dynamic perspective. On one hand, the static perspective includes three main streams of research: the content of the resources being transferred, the structure or composition of the individual's social network, and the position of the individual in the social system (Newbert & Tornikoski, 2013; Hoang & Antoncic, 2003). On the other hand,



the dynamic perspective introduced two additional concepts into the framework: time sensitive ties (latent and potential ties), and the role of referees on the development of ties (Zhang et al., 2010; Zhang et al., 2011). Furthermore, most research on social capital concludes that high quality social network structures are characterized by high number of variety of relations (Elfring & Hulsink, 2003) and that the access and development of ties is essential to create viable organizations (Aldrich, 1999).

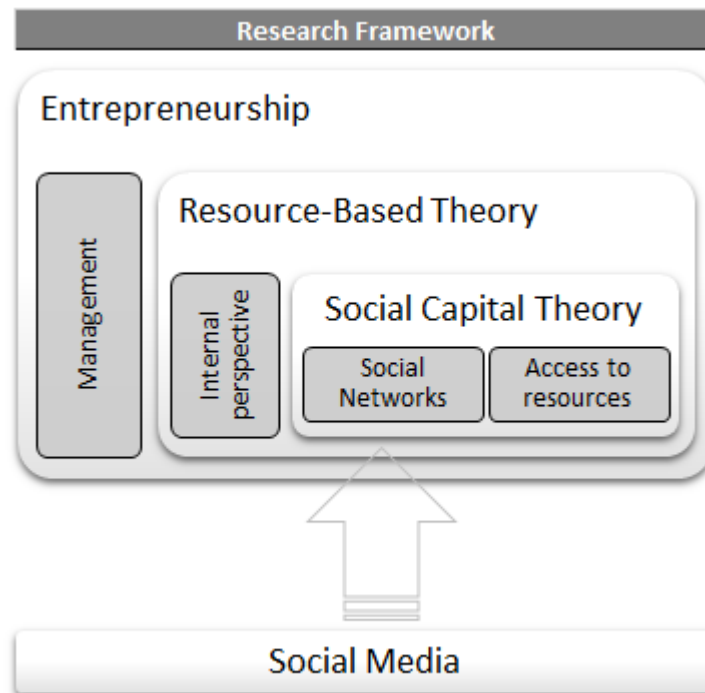


Figure 8. The impact of social media in social capital

Thus, regarding the relevance of social capital on the entrepreneurial process, this research introduced new lenses to the ongoing research through social media. More precisely, considering that entrepreneurs use social media to manage their social networks, this work studied the entrepreneurs' usage of these virtual spaces to enrich some aspects of their social capital (such as content, governance, etc.) that in turn affect their entrepreneurial process.

### III.2. *The paradox: Social media and the entrepreneur's social capital*

Several studies affirm that social networks constitute a significant proportion of resources for the exploration and exploitation of entrepreneurial opportunities (Davidsson & Honig, 2003; Pirolo & Presutti, 2010). In fact, the structure of the ego-centric networks, the content

transferred between ties and the position of the entrepreneur on the network structure can determine the founder's access to resources. Moreover, individuals not only rely on their established network but develop their social networks during the entrepreneurial process (Shane & Venkataraman, 2000; Delmar & Shane, 2004).

In parallel, built on the ideological and technological foundations of Web 2.0 (Kaplan & Haenlein, 2010) social media is a group of Internet-based applications that has changed the way individuals and organizations manage their social networks (Gerard, 2012). Entrepreneurs, who act as individuals and main representatives of their new firm at the same time, are active users of social media and they maintain a strong homogeneity of social contacts among the different virtual platforms they manage (Song, 2015). However, not much has been found on the impact of these strategic actions on their social capital (Fischer & Reuber, 2014; Nann et al., 2010).

In fact, two confronted views coexist to explain the impact of social media on the entrepreneurs' social capital (Figure 9). On one hand, social media positively enhances individual's social capital as it facilitates the communication of the entrepreneurs with their social network, and encourages the development of new social ties with individuals with whom they share common interests (Haythornthwaite, 2002; Boyd & Ellison, 2007) without time and space limitations.

On the other hand, some authors claim that entrepreneurs using social media do not necessarily improve their social capital because both the type of resource and the dependence on the resource owner can be strong barriers to successfully access resources (Kor et al., 2007; Alvarez & Busenitz, 2001). For example, Haythornthwaite (2002) found that robust or complex information tends to be successfully transferred in offline settings, instead of virtual ones suggesting that the type of resource can determine the successfulness of the transaction (Melville et al., 2004). Another example is Gerard (2012), who advocates that some individuals are also reluctant to share certain type of information online such as personal details or professional status. In conclusion, communication and information sharing in social media strongly depends on the active participation and endorsement by users, as well as the type of content (Gerard, 2012; Haythornthwaite, 2002).

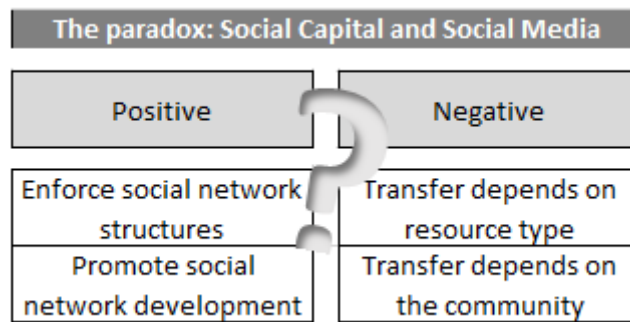


Figure 9. Dynamic Social Networks

Thus, is social media improving the entrepreneur’s social capital? If so, what elements of the entrepreneurs’ social capital are affected or improved by social media? Based on the main interest of this research: “improve our current understanding on the entrepreneurs access to resources through their social network”, and considering that entrepreneurs use social media to manage their social networks, this work shed light on what aspects of the entrepreneurs social capital are managed by their usage of social media.

### III.3. *Research proposal: Definition of the research questions*

The prior paradox leaves unclear what is the impact of social media on the entrepreneurs’ social capital. On one hand it seems that entrepreneurs social network benefits from these virtual platforms as they can now be maintained and developed without time and space restrictions, but on the other hand, the improvement of the entrepreneurs social capital is not guaranteed.

Considering that entrepreneurs are individuals whose structure is limited and tend to be very focused on how they use their resources to gain competitive advantages and reduce competitive disadvantages (Dew et al., 2009; Mariotti & Delbridge, 2012) it seems useful to explore their motives for using social media. Thus, based on the Uses and Gratifications Approach, the fact that entrepreneurs use social media to manage their social networks suggests that entrepreneurs chose social media to satisfy given needs to enhance some aspects of their social capital (Quan-Haase & Young, 2010; Joinson, 2008).

In this regard, the aim of this work is to shed light on the entrepreneurs’ usage of social media to enhance their social capital, in order to explore how these networked context impact the

founder's needs regarding the management of their social capital. Therefore, the current work addresses the following research question:

***“To what extent do entrepreneurs use social media to manage their social capital?”***

Moreover, to explore to what extent do entrepreneurs use social media to manage their social capital, this work employs the Uses and Gratifications Approach to investigate their motives and satisfactions for choosing to adopt social media. Then, the current work proposes two sub-research questions.

On one hand, regarding the entrepreneur's motives for engaging in social media, this work explores how entrepreneurs choose and interact with social media to shed light on how they build their decision to engage in social media in terms of social capital. Thus, this researched explored:

***“Why do entrepreneurs use social media to manage their social capital?”***

On the other hand, regarding the social environment gratifications from social media, this work explores why and what do entrepreneurs expect to get from social media to shed light on how they benefit in terms of managing their social capital. Thus, this research also explored:

***“How do entrepreneurs use social media to manage their social capital?”***

To sum up, this dissertation shed light on the entrepreneurs' social capital in order to improve the entrepreneurial process. Moreover, social media has challenged nowadays relationship and not much has been found on how these networked media impact the entrepreneurs' social capital. Considering that entrepreneurs manage their social networks through social media this dissertation studies why and how entrepreneurs use social media to manage their social capital. Specifically, build on the Uses and Gratifications Approach, entrepreneurs engage into new media to fulfil specific needs; and by exploring their motives and satisfactions for joining social media, this work explored some aspects of the entrepreneurs social capital that are managed by social media (Figure 10).

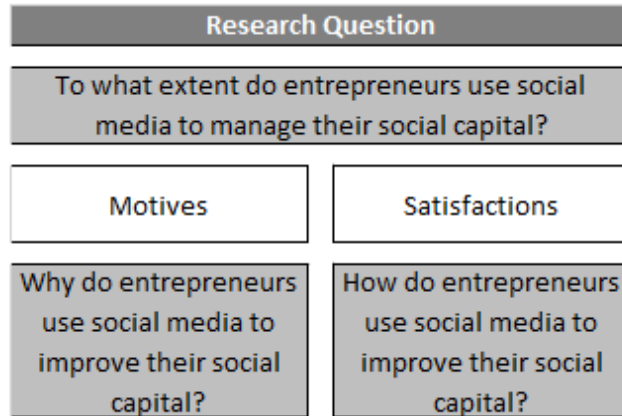


Figure 10. Research question

## Chapter 2: Methodology & Fieldwork

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Under environments of uncertainty and rapid change, a big concern of the technology-based entrepreneurs is to access different types of resources during the entrepreneurial process (Alvarez & Barney, 2007b; Alvarez & Busenitz, 2001). Then, as seen in the literature review, the social capital, defined as the social network of the entrepreneur that gives the individual access to resources, is an important mean during this process. Moreover, social media has challenged the way entrepreneurs manage their social network and there is a growing interest to understand how this new framework impacted their social capital.

In order to shed light on the impact of social media on the entrepreneurs' access to resources during their new venture formation process, this dissertation investigated to what extent do entrepreneurs use social media to manage their social capital. Specifically, this work found no agreement on the literature on whether entrepreneurs improve their social capital through social media and investigated why and how entrepreneurs use social media to manage their social capital.

Then, to respond to this research gap, the current study employed an exploratory approach following a theory-building methodology (Eisenhardt & Graebner, 2007) using the framework proposed by the Uses and Gratifications Approach to detect propositions regarding why entrepreneurs decide to use social media to manage their social network and how they benefit from these tools to enhance their access to resources. More precisely, this work used an inductive approach based on a mixed method (Johnson et al., 2007; Morse, 2003; Creswell et al., 2003) which was organized using two types of data collection strategies (interviews and reports) and analytical techniques (codification and cross-case analysis).

The current chapter describes the research methodology employed in this dissertation, and is organized as follows. First, an opening section defines the "*research design*" of this dissertation based on an epistemological analysis, the research approach, the chronological description of the fieldwork and the research tools employed to conduct the fieldwork. The next section offers a "*sample description*" of this research including the selection criteria, the sample selection process and the characteristics of the final sample. A third section discusses "*data collection strategy*", mainly based on semi-structured interviews and the social media network and activity reports of each case. Then, the fourth section explains the "*analytical strategy*"

employed in this research work and includes a description of the role of the researcher during the analytical process, the codification process of the interviews, and the cross-case analysis through the concepts and the social media reports. Finally, this chapter concludes with a description of the “*quality and ethics*” of this dissertation.

## I. Research Design

In order to understand why and how entrepreneurs use social media to enhance their social capital this work uses an inductive approach based on the study of different case studies (opportunity-driven entrepreneurs). The purpose of this section is to discuss how the proposed method fits the goals of this research work, so it provides a detailed description of the research design, including the different strategies employed to collect and analyse data and a portrait of the chronological stages during the fieldwork.

### *1.1. Selection of the research philosophy: epistemological discussion*

Literature on entrepreneurship agrees on the existence of three main competing research philosophies: positivist, interpretive and critical (Creswell, 2009; Myers, 2009). The positivist perspective usually depends on quantifiable observations that lead to statistical analysis to understand an objective reality; the interpretive gains knowledge about a phenomenon through social constructions such as language, consciousness, and shared meanings; and the critical perspective uses critical analysis and historic reviews to understand contradictory conditions of action (Mandal, 2015; Creswell, 2009). But, which research philosophy best responds to this research inquiry?

To decide which research philosophy was more appropriate to address this work, the main elements that were taken into account were (1) the prior literature on entrepreneurship research and social capital, (2) the research questions based on the study of how and why entrepreneurs decide to engage in social media to enhance their social capital, and (3) the desire to accomplish relevant and valuable outcomes (Creswell, 2009; e.g. Mandal, 2015).

First, entrepreneurship research and in particular the study of their social capital, is rich on the use of different epistemological perspectives for theory-building (Short et al., 2010). However, the particular study of the impact of social media on the entrepreneur’s social capital is still very limited and has no specific theoretical framework to stand by. Thus, in order to avoid the

imposition of prior assumptions into this emergent framework, the current dissertation uses an interpretivist approach to enable the construction of ideas and concepts through an in-depth study of the phenomenon with no predefined theoretical basement (Myers, 2009; Eisenhardt & Graebner, 2007).

Second, regarding the research question “*why and how do entrepreneurs use social media to manage their social capital?*”, the aim of this work was to identify what factors are present in the relationship between the entrepreneur’s social capital and their use of social media. Again, the nature of the research question indicated that instead of the use of pre-established theories to test, interpretivist fitted the requirements of this current research work to gain insights from the phenomenon through the study of the entrepreneur’s experiences and their social media network and activity (e.g. Fischer & Reuber, 2014; Gilbert & Karahalios, 2009; Lee & Jones, 2008).

Finally, regarding the outcomes of this work, these not only must be accurate to respond to the initial inquiries but also have to provide new and relevant insights for scholars and entrepreneurs. For this reason, an interpretivist approach gave support to the current work by enabling the emergence of new theoretical concepts through vivid examples of how social media disrupted the management of their social network by using fresh and in-depth insights from the entrepreneur’s real life experiences as well as data from their network and activity (Short et al., 2010).

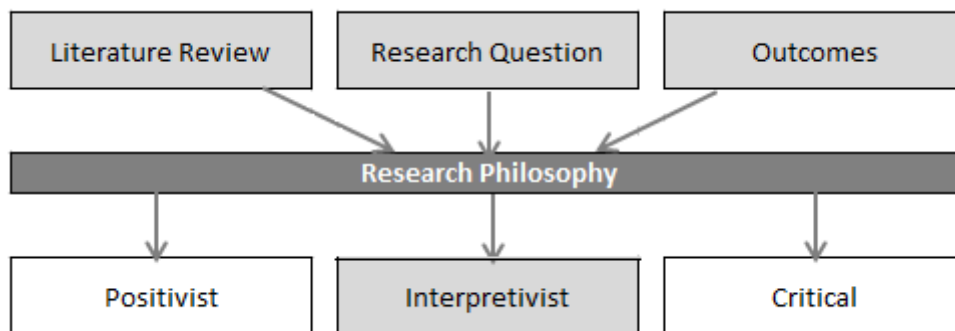


Figure 11. Research philosophy

In summary, based on these three elements: literature, research question and outcomes (Figure 11); the current work found that adopting a positivist and critical views were not



suitable enough for addressing this emergent phenomenon. Interpretivist on the other hand, was found more appropriate because it was strongly supported by prior literature: it responded to the goals of the research question and offered the opportunity to build new and relevant outcomes to respond to the research gap (Turner, 2010; Creswell, 2009).

### *1.2. Inductive approach through case-studies using a mixed method*

Although there is an extensive amount of research on the role of social networks in the entrepreneurial process, not much work has been identified on the impact of social media in entrepreneurial research, specifically regarding why and how founders use social media to manage their social capital. For this reason, the current work required an inductive approach through successful entrepreneurial cases designed using a mixed method approach (Johnson et al., 2007; Morse, 2003).

Whereas a quantitative approach is one in which the investigator primarily uses positivist claims for developing knowledge, a qualitative approach is one in which the inquirer often makes knowledge claims based primarily on interpretivist perspectives. Conversely, a mixed method approach is one in which the researcher tends to base knowledge claims on pragmatic grounds and employs strategies of inquiry that involve collecting data either simultaneously or sequentially to best understand research problems. Moreover, the data collection of a mixed method approach involves gathering quantitative and qualitative data to give response to the research inquiry (Creswell, 2009; Creswell et al., 2003).

Thus, in this particular research, a mixed method approach was particularly useful to combine data from both the entrepreneurs perspectives with their social media network and activity, and has been widely used in both the study both entrepreneurship and social media (e.g. DiMicco et al., 2008; Gilbert & Karahalios, 2009; Quan-Haase & Young, 2010; Sinclaire & Vogus, 2011; Skeels & Grudin, 2009). Moreover, compared to other research strategies, the use of case studies was useful to collect field in-depth data from the entrepreneurs to build new theoretical insights to an emerging phenomenon (e.g. Elfring & Hulsink, 2007; Hite, 2005; Papacharissi, 2009) through the use of interviews (e.g. E. Baker, Onyx, & Edwards, 2011; Elfring & Hulsink, 2007; C. Smith et al., 2012) and (social media) reports (Fischer & Reuber, 2014; Bruns & Stieglitz, 2013).

Then, in consonance with this research objective (“*To what extent do entrepreneurs use social media to manage their social capital?*”) and the philosophical perspective exposed in the previous section (*interpretive*), this work used a mixed method approach based on several case studies (Yin, 2009; Siggelkow, 2007) to explore why and how entrepreneurs engage social media to manage their social capital. Specifically, in order to answer the research goal, this approach included a combination of the study of the entrepreneur’s perceptions and experiences, and the analysis of the social media activity (e.g. Archambault & Grudin, 2012; Bruns & Stieglitz, 2013; Fischer & Reuber, 2014; Papacharissi, 2009) of both the individuals and their new firms, that concluded with the emergence of new theoretical constructions under the social capital (Eisenhardt & Graebner, 2007; Yin, 2009).

Following this approach, the fieldwork was organized in three stages that contributed to shift from a preliminary set of theoretical ideas to a contextualized theoretical framework. Each stage had a sub-goal defined to gain insights towards the final objective, starting with explorative open analysis of the phenomenon, then an alignment of concepts emerged and finally the consolidation of the emerging framework. In addition, each stage within the fieldwork used an iterative process of comparison between the data, the literature and the emerging framework, that helped to maintain the focus of the data and new insights with the existing literature on entrepreneurship research (Turner, 2010; Charmaz, 2008).

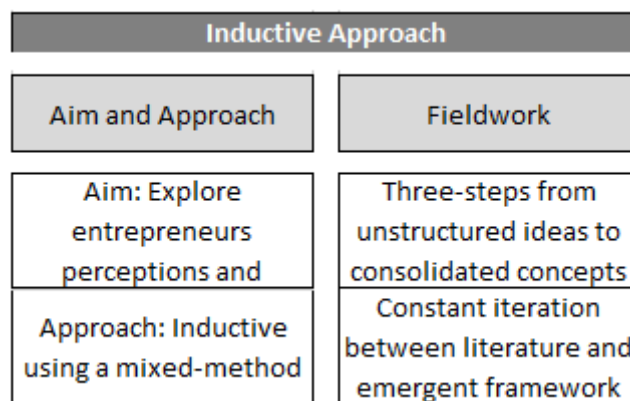


Figure 12. Inductive approach

In summary, the current research used an inductive approach (Figure 12) using a mixed method approach that combined the entrepreneur’s perceptions of the impact of social media towards their social capital and the analysis of their social network and activity through these

virtual spaces. The fieldwork was organized in a three-stage research process and also included a constant iteration between the literature and the emerging framework.

### *1.3. Chronological description of the fieldwork*

In order to shed light on the research gap identified, this work used a mixed method approach following an inductive approach (Morse, 2003; Creswell et al., 2003) to conduct an in-depth study of the impact of social media on technology-based entrepreneurs. Based on the research design defined above, the structure of the fieldwork was organized in three stages that helped to merge data from an open, unstructured basis, to a set of structured concepts that explained to what extent entrepreneurs use social media to enhance their social capital.

The definition of the stages of the fieldwork was as follows. First, the aim of the first stage was to explore through the in-depth study of opportunity-driven entrepreneurs, the scope of the research gap from an open and broad perspective. During this process, seven entrepreneurial cases were selected using a theoretical sampling that encompassed a broad set of characteristics (such as educational background, industry, etc.), and were analysed independently. Although the presence of the research question was determinant to not lose the focus during this process, it was at this stage when the emergent insights helped to contextualize the research scope. Finally, this stage concluded with the conceptualization of a preliminary research framework.

The second stage aimed to build upon the preliminary theoretical assumptions emerged from the prior stage and to align these insights towards a set of sound theoretical concepts. This stage included the study of additional cases selected following a replication logic. Moreover, this stage was useful to enforce the ongoing assumptions and bring in new insights to complement the current framework, and concluded with the saturation level. Thus, the saturation level was reached after 13 additional cases, leading to a final sample of 20 opportunity-driven entrepreneurs in their emergence stage.

Finally, the last stage of this research was included with the main aim to support and consolidate the current theoretical framework by conducting a cross-case analysis among the entrepreneurial cases selected so far. This process not only included evidence from the interviews conducted during the two earlier stages but also used data from their social media

activity to bring in emergent insights to the emergent framework and to provide internal validity of the constructs.

Chronological description of the fieldwork		
First Stage	Second Stage	Third Stage
Aim: open exploration	Aim: consolidate preliminary framework	Aim: validate emergent concepts
Tools: semi-structured interviews	Tools: semi-structured interviews	Tools: cross-case analysis
Results: Preliminary framework	Results: Consolidated framework	Results: Validated framework

Figure 13. Chronological description of the fieldwork

To sum up, the fieldwork of this dissertation has been organized in a three stages (Figure 13) to facilitate the emergence of new theoretical assumptions from an open explorative analytical perspective towards an alignment of the different concepts emerged and leading to a validation stage of the outcomes. Thus, this process helped to address the research question from a grounded perspective, starting with an open focus of the problem and followed by the consolidation of the theoretical concepts (Mäkelä & Turcan, 2007).

#### *1.4. Research tools employed to conduct the fieldwork*

In order to capture the insights on why and how entrepreneurs turn to social media to enhance their social capital, fieldwork required different tools that supported the data collection process and the analytical strategy depending on the goals of each stage (Figure 14).

Tools employed during the fieldwork			
Aim: Shed light on the entrepreneurs perception of social media and its impact on social capital, as well as their network and activity in these			
Fieldwork Stage	1st Stage: Preliminary Framework	2nd Stage: Consolidate the Framework	3rd Stage: Validate the Framework
	(Semi-structured) Interviews		Social Media: Network and Activity
Data collection			
Data analysis	Codification of the Interviews		Cross-case analysis

Figure 14. Tools employed during the fieldwork

More precisely, this research employed a mixed method approach using a combination of interviews and social media reports. Then, during the first and second stages of the fieldwork (design of the theoretical framework), this dissertation focused on the collection and analysis of entrepreneur's perceptions on the phenomenon through semi-structured interviews. In parallel, an ongoing table of concepts was stored and edited after each interview in order to keep track of the common insights that emerged. Finally, once the interviewing process was finalized, the third stage of the fieldwork focused on collecting data from the entrepreneur's social media network and activity and conducting a cross-case analysis (Eisenhardt & Graebner, 2007) to validate the emerging outcomes.

- Semi-structured interviews: data collection and codification.

Following prior work on entrepreneurs social capital (e.g. Davidsson & Honig, 2003; Elfring & Hulsink, 2003, 2007) and the Uses and Gratifications Approach of social media (e.g. Dunne et al., 2010; Pénard & Poussing, 2010; Quan-Haase & Young, 2010), a set of semi-structured interviews (Turner, 2010) was conducted with technology-based entrepreneurs. The main objective of this process was to capture, interpret and evaluate the individuals' motives for using social media to support and develop their social network structure and their perceptions on the benefits from these technological applications to enhance their social capital.

Data was systematically collected and analysed following an iterative process of considering and comparing: earlier literature, data and emerging theory (Glaser & Strauss, 1967). On one hand, interviews were transcribed and codified following the Straussian approach through open, axial and selective coding (Corbin & Strauss, 1990). This codification strategy (explained

further in this document) was very useful to merge from broad data insights to the construction of organized theoretical concepts aligned to the ongoing literature. Moreover, additional notes were taken during the interviews and were transcribed to a research diary<sup>6</sup> to keep track of emerging insights and reflections made by the researcher to support the analytical process.

- Data collection from social media network and activity and cross-case analysis

In order to complement and validate the emerging insights, data was collected from the entrepreneurs' social media network and activity to conduct a cross-case analysis among the cases. More precisely, the information on the entrepreneur's social media platforms included available data of the entrepreneur's social media network (through their new connections and online publications) and activity (through their personal profile and the new firm's one)<sup>7</sup>.

On one hand, regarding the social media network and activity of the entrepreneur, this research focused on the analysis of LinkedIn and Twitter, previously identified by the entrepreneurs as the most popular sites to entrepreneurial network (Archambault & Grudin, 2012; Chen, 2011; Gerard, 2012). Data collected from LinkedIn offered information about how much entrepreneurs cared about their professional identity and the dynamics of their (undirected) social ties. Twitter, on the other hand, provided data on the level of engagement and participation (tweets), as well as data on the dynamics of their directional social ties ("Followers" and "Following").

On the other hand, regarding the data of the firm's virtual profile, the research aimed to capture how entrepreneurs complemented their networking strategies as individuals with their new firm's virtual identity. Thus, data was mainly captured through Facebook, Twitter and LinkedIn and focused on analysing the degree of involvement through posts and tweets, and the impact of their activity through the dynamics of new "Followers" or likes (Fischer & Reuber, 2014; Archambault & Grudin, 2012; Song, 2015)

Finally, a cross-case analysis was conducted through the data collected from the interviews and the social media reports, to validate the emerging theoretical framework (Eisenhardt & Graebner, 2007).

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<sup>6</sup> The research diary can be provided under request

<sup>7</sup> Annex A has been included to provide information on the active profiles of the entrepreneurs.

## II. Sample Description

Following an inductive approach (Eisenhardt & Graebner, 2007), this research analysed the impact of social media on a sample of opportunity-driven entrepreneurs in their emergence stage. The selection of the sample was built taking into account the following elements: (1) fit with the research problem and (2) representativeness derived from the variability produced by the elements related to the research approximation. The final set of cases was defined by reaching the saturation level (Glaser & Strauss, 1967; Mäkelä & Turcan, 2007) where no more elements emerged, leading to a final sample of 20 entrepreneurs (Gregory et al., 2015; DiMicco et al., 2008).

Thus, this section provides a description of the selection criteria of the sample based on the research question and the representativeness of the study-cases. Then, it describes the selection process of each case during the fieldwork based on the emerging insights. Finally, the chapter concludes with a description of the final sample.

### *II.1. Selection criteria*

Based on the research question, this work aims to explore to what extent entrepreneurs use social media to access resources through their social network during the different stages of the entrepreneurial process. Specifically, in order to shed light on why and how entrepreneurs decide to use social media to manage their social capital, this dissertation selected significant cases from group of opportunity-driven entrepreneurs based on a theoretical sampling. This selection criterion facilitated that each case introduced new elements that extended the emergent theory. Moreover, the selection of each case was determined by the research question and the main elements identified in the theoretical framework: (1) characteristics of the firm, (2) the profile of the entrepreneur and (3) the social media engagement.

Firstly, in terms of the characteristics of the firm, the selection criteria took into account three main elements: the technological nature, the industry and its maturity stage. On one hand, the sample aimed to provide representativeness on opportunity-driven entrepreneurial firms, with a special focus on technology-based firms due to their exposure to highly dynamic environments (Colombo & Delmastro, 2001; Hsu, 2008; Teece, 2010). Moreover, regarding the industry of the firm, the sample aimed to maintain a broad focus to ensure the results are not limited to a single industry (Short, McKelvie, et al., 2009). On the other hand, regarding the

maturity stage of the firm, a common criterion was to select entrepreneurial cases in an emergence stage. This means that entrepreneurs selected had already engaged in several start-up activities such as getting external funding, contracting human capital, identifying business partners, etc. In terms of answering the research question these elements were central in order to capture the individuals' experiences and difficulties when using social media to face different resource requirements in dynamic entrepreneurial environments.

Secondly, to ensure the fit of the profile of the entrepreneurs to the requirements of this research, two characteristics were considered based on the literature: age and background (Coleman, 1988; Honig & Davidsson, 2000; Shane, 2000; Levesque & Minniti, 2003). On one hand, when it comes to the study of social media, some differences have been found on the impact of age demographics and the individual's ability to work in online settings (Trainor, 2012), especially between millennials or Generation Y (born between 1980s and 2000s) and Generation X (born between 1960s and 1980s). Thus, the sample considered a broad perspective in terms of the age of the entrepreneurs to ensure that results were not limited to only one age demographic category or their ability to use these virtual platforms.

On the other hand, another important aspect that was taken into account was the background of the entrepreneur. Both the formal education and the professional experience of the entrepreneurs is commonly used as an indicator of their human and social capital, and in turn, is strongly related to their social network structure (Mosey & Wright, 2007; Grichnik et al., 2014; Stuetzer et al., 2013). Moreover, the entrepreneur's background can be especially relevant in technology-based entrepreneurship and lead to significant variances depending on whether their profile is business-orientated or technology-based. Thus, this research takes into account variability on these elements through exploring polar cases in terms of educational background, entrepreneurial experience and industry experience.

In addition to the educational and professional background, it is important to highlight another determinant of the individual's background that influences the entrepreneurial process: entrepreneurs whose parents are entrepreneurs may benefit from their experience and entrepreneurs connected to universities or associated to certain types of entities can also benefit from the social network inherent in those communities (Carr & Sequeira, 2007).



Finally, the last criterion to take into account when selecting the cases was the engagement of entrepreneurs in social media platforms (Trainor, 2012; Mandal & McQueen, 2012). More precisely, the cases selected had at least their personal profile in one of the most popular social networking sites (LinkedIn, Twitter or Facebook) to ensure that the cases selected were familiar with social media in order to capture their expertise within this medium during networking.

Selection Criteria		
Characteristics of the firm	Entrepreneur profile	Social media engagement
Technology-Based (vs Non-tech)	Age: From 25 to 50	Social media engagement (at least) in one of those: LinkedIn, Twitter)
Diverse Industries	Educational Background (Business or Technological)	
Maturity Stage: Emergence	Experiential Background (Entrepreneurial or Business Expertise)	

Figure 15. Selection criteria

In summary, the selection criterion of the cases was based on a theoretical sampling and took into consideration three main elements: the characteristics of the firm, the entrepreneur profile and the social media engagement (Figure 15). First, regarding the characteristics of the firm, the cases were selected from technology-based entrepreneurial firms from different industries in their emergence stage. Secondly, regarding the profile of the entrepreneur, the sample paid special attention to technology-based entrepreneurs between 25 and 50 years old, and considered variability on the individuals' educational and professional backgrounds. Finally, the selection criteria also ensured that the cases selected were familiar with social media to ensure they could provide significant insights on their perceptions and experiences.

### *II.2. Sample selection process*

The selection of the sample was conducted during the first two stages of the fieldwork: construction and consolidation of the preliminary framework (Figure 16). First, the selection of

seven cases was done using a theoretical sampling to develop a preliminary framework. Then, 13 additional cases were selected until the saturation level was reached. As the last stage of the fieldwork was focused on the validation of the ongoing theoretical framework, this research did not find necessary to incorporate additional cases during this stage of the analysis.

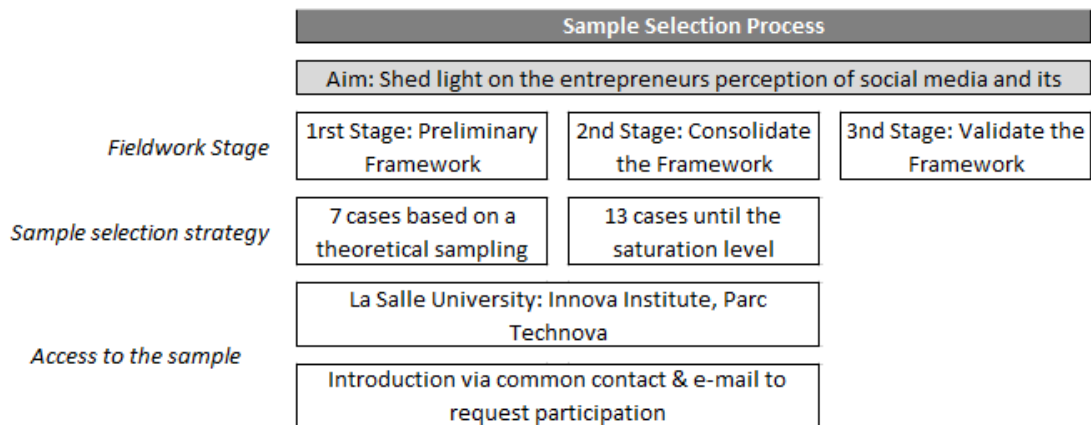


Figure 16. Sample selection process

In order to provide more insights on how the selection of each case fits requirements of the fieldwork (regarding the research question and the representativeness through the theoretical framework), a brief discussion of the selection process is provided below through the two stages. Moreover, a last section has been included to facilitate information on how the researchers accessed the sample.

- **Stage 1: Cases selected to construct a preliminary framework**

During the first stage of the sample selection, several cases were selected to explain the context of the study, leading to a preliminary theoretical framework. These cases were cautiously selected following the aforementioned theoretical sampling in order to provide new insights that illustrated why and how entrepreneurs used social media to enhance their social capital during the early stages of their entrepreneurial process. More precisely, based on the prior definition of the sample, the main elements captured in this stage were the variability in the firm’s industry and in the background of the entrepreneur.

Following this criterion, the selection process started with a technology-based entrepreneur in the healthcare industry (Entrepreneur 1). The main founder had a university degree that was

neither business nor technology oriented and had a limited professional background in terms of industry and entrepreneurial experience (Garcia-Escarré, 2016; Delmar & Shane, 2006; Politis, 2008). The interest of this case lies mainly on the fact that despite the limited background of the individual (social and human capital), he managed to develop a network infrastructure to successfully exploit his new business in the United States.

After the study of this successful case where social media played an essential role on the development of the new firm, a non-technological opportunity-driven case study (Entrepreneur 2) was selected to seek for insights that could explain the possible differences in terms of the role of technology and dynamic environments (Siu & Bao, 2008; Umesh et al., 2007). Thus, in order to avoid significant differences related to the background of the entrepreneur, this study case was selected through the cohesive social network of the prior entrepreneur, and the entrepreneur had a similar formal education and background expertise than the prior case. Moreover, the interesting element of this case was that despite the limited background of the individual, he managed to successfully exploit his new firm and constructed an international network for future expansion.

Once the prior cases were analysed independently and compared, a third entrepreneur (Entrepreneur 3) was selected to seek for some additional insights on the impact of the background of the entrepreneur (Politis, 2008; Delmar & Shane, 2006). Thus, in contrast to the previous entrepreneurs, the third case was a technology-based entrepreneur based on a non-profits organization who had a sound business oriented background in terms of both formal education and experience. This case was specifically relevant to offer representativeness through whether already established social networks influence the entrepreneur's intention to use social media to develop new social ties.

Based on the literature, there are different types of background that can be relevant on the entrepreneurial process. Thus, this far the sample has included two cases of entrepreneurs with limited background and one case with business-oriented formal education and prior entrepreneurial experience. Then, the fourth case of this sample (Entrepreneur 4) aimed to bring another type of background in the analysis by introducing an entrepreneur with a strong technological background instead of a business oriented one (Garcia-Escarré, 2016; Umesh et al., 2007; Mosey & Wright, 2007; Hsu et al., 2008). In contrast to the previous cases, this

technology-based entrepreneur working in the entertainment industry provided another perspective on the impact of background in social media usage towards networking.

In line with the type of background of the individuals, the literature also identifies a difference between entrepreneurial background and industry-related background (Garcia-Escarré, 2016; Delmar & Shane, 2006). Thus, the selection of the fifth case (Entrepreneur 5) was based on a technology-based entrepreneur working in the photography industry and with both entrepreneurial experience and industry-related background. This case was selected for the valuable insights that emerged from a different composition of the social network structure of the individual derived from his background (Davidsson & Honig, 2003; Greve, 1995; Greve & Salaff, 2003).

In addition to the educational and professional experience, having entrepreneurial parents or relatives impacts the individual's human and social capital (Carr & Sequeira, 2007). In this vein, the next case (Entrepreneur 6) was selected to include additional insights from a case with family entrepreneurial background. Then, this case was relevant for two main reasons: first, he was familiar with the entrepreneurial process and secondly, as he was exploiting a new firm strongly related to their family-business, he had sound experience and connections in the industry.

Finally, the last case selected to construct this preliminary framework (Entrepreneur 7) aimed to bring insights on the impact of how the entrepreneur's relationship with university environments affected their implication on social media for social network development (Rothaermel et al., 2007; Díaz-Casero et al., 2012). In this case, the technology-based entrepreneur was dedicated to the tourism industry and had a sound technological background as well as a strong connection with university environments (especially in innovation management schools). In contrast, he had no prior start-up experience, nor experience in the industry of his new-born start-up.

In addition, the following table (see Table 3) summarizes the background of the entrepreneurial cases selected during this first stage of the research process.

<b>Start-Up</b>	<b>Entrepreneurial Experience</b>	<b>Industry Background</b>	<b>Additional comments</b>
Entrepreneur 1	X	X	-
Entrepreneur 2	X	✓	-
Entrepreneur 3	✓	X	-
Entrepreneur 4	✓	X	-
Entrepreneur 5	✓	✓	-
Entrepreneur 6	X	✓	Entrep. Family Background
Entrepreneur 7	✓	✓	Connected to University

*Table 3 Summary of the cases selected during the "Stage 1" of the fieldwork*

- **Stage 2: Cases selected to extend and consolidate the emergent framework**

By using a theoretical sampling, the initial seven entrepreneurial cases were helpful to develop an emergent theoretical framework to explain why and how entrepreneurs used social media to enhance their social capital during their entrepreneurial process. However, these study cases only provided a preliminary framework to respond to the research gap, and further cases were analysed until a saturation level of the emerging theory was reached in order to provide a consistent theoretical framework. For this reason, a second set of interviews was selected to consolidate the initial concepts through the analysis of similar insights as well as the exploration of interrelated concepts.

Then, in order to consolidate the emergent insights, the selection of the cases for this second stage of the fieldwork was based on a theoretical sampling selection process following similar parameters from the prior stage (characteristics of the firm, profile of the entrepreneur and social media engagement). Thus, the cases selected for this second stage were a set of technology-based entrepreneurs in their emergence stage and active in (at least) one of the popular social media platforms (LinkedIn or Twitter) at the time the interview was conducted. Each case was selected once the previous one was fully executed and analysed, in order to ensure that the case selected was suitable to build upon the emerging theory, and that they provided some variability in terms of the background of the entrepreneur.

On one hand, in order to shed light on different background profiles, some cases were selected with a weak educational or professional background (see Table 4) to complement the Entrepreneurs 1 and 2 selected on the prior stage. Specifically, the cases were selected mainly focused on their limited professional experience, or basic industry experience with no specific formal education:

<b>Technological Education No professional experience</b>	<b>“Other” Formal Educational Industry experience</b>	<b>“Other” Formal Educational No professional experience</b>
Entrepreneur 13	Entrepreneur 2	Entrepreneur 1
Entrepreneur 20	Entrepreneur 8	

*Table 4 Summary of the cases selected during the "Stage 2" of the fieldwork (with a limited background)*

On the other hand, in contrast to the prior cases, some additional entrepreneurs were selected to bring insights from a stronger educational or professional background (see Table 5), to complement Entrepreneurs 3, 4, 5, 6 and 7 selected on the prior stage. Specifically, cases were selected based regarding their formal education (technological vs business administration degrees), and their professional experience on the industry as well as on prior start-up practices:

<b>Technological Education</b>			<b>Business Education</b>	
<b>Both types of experience</b>	<b>Entrepreneur. experience</b>	<b>Industry experience</b>	<b>Entrepreneur. experience</b>	<b>Industry experience</b>
Entrepreneur 5	Entrepreneur 4	Entrepreneur 9	Entrepreneur 3	Entrepreneur 6
Entrepreneur 7	Entrepreneur 15	Entrepreneur 12	Entrepreneur 10	Entrepreneur 14
	Entrepreneur 16	Entrepreneur 17	Entrepreneur 11	
		Entrepreneur 19	Entrepreneur 18	

*Table 5 Summary of the cases selected during the "Stage 2" of the fieldwork (with a strong background)*

Finally, the selection of new cases was conducted until emerging data did not convey to new theoretical concepts (known as the saturation level). This happened after 13 additional cases leading to a final sample of 20 opportunity-driven entrepreneurs.

- Access to the sample

The selection of the sample greatly benefited from La Salle – Universitat Ramon Llull structure, network and entrepreneurial training courses: 19 technology-based firms were selected from the list of firms incubated in Parc Technova (a technological incubator allocated at the university) as well as from the list of participants of the Tech Demo Day, an entrepreneurial event organized by Parc Technova. Finally, the remaining firm (non-technological one) was recommended and addressed through one of the participants.

A standard procedure to approach the entrepreneurs was defined with the objective to reduce potential biases before the interview. Entrepreneurs' participation was requested via email, usually after having received an introduction from a common contact. The pre-interview communication with the entrepreneurs included an invitation to participate in a research project. The level of response to the contact efforts were highly satisfactory; among the entrepreneurs that were contacted, only in 3 cases our contact requests did not finish in a successful interview (20 interviews out from 23 requests – 87% response rate).

### *II.3.Characteristics of the final sample*

After a description has been given on the selection criteria of the sample, how the different entrepreneurs were approached and what was the selection process behind each case study, this section aims to describe the final sample that composed the fieldwork of this dissertation.

Specifically, in order to summarize the structure of the final sample, this section is organized in two parts to describe the characteristics of each new firm selected and the profile of the entrepreneur.

- Firm profile

The final sample selected in the fieldwork of this dissertation included opportunity-driven entrepreneurial firms on an emergence stage. Although the main goal was to focus on technology-based firms due to their dynamic nature, some variability was included in terms of their technological orientation (software, Hardware and eCommerce), and their industrial sector (see Table 6).

Code	Start-up	Technology	Industry
C01	PsicoExpress	Software	Healthcare
C02	GreenPallet	Non-Tech	Agriculture
C03	TeamUp	eCommerce	Non-Profits
C04	BeTheQ	Software	Entertainment
C05	Pick-App	Software	Photography
C06	eDesk	eCommerce	Business services
C07	PlayTrip	Software	Tourism
C08	DoctorIn	Software	Healthcare
C09	MediaTel	Sw / Hw	Telecommunications
C10	Movelt	Software	Logistics
C11	Run&Us	Software	Sports
C12	Net-Look	Software	Mass Media
C13	TeleMod	Sw / Hw	Telecommunications
C14	Mass Rock	Software	Mass Media
C15	Movelt	Software	Logistics
C16	TrendApp	Software	Entertainment
C17	KidStore	Software	Education
C18	GamIng	Software	Business services
C19	ePromote	eCommerce	Marketing
C20	CountFoot	Software	Marketing

*Table 6 Sample description of the firm's technological focus and industry*

On one hand, the final sample was mainly composed for software developers (14 out of 20) distributed between those dedicated to develop social networking sites and those who developed analytical software to support business activities. The other firms were distributed as follows: three dedicated to eCommerce, two dedicated to telecommunications and finally a non-technology-based firm with a sound presence in social media platforms.

On the other hand, in order to capture potential sources of variability regarding the research problem, the sample included 19 technology-based entrepreneurs (and 1 non-tech) in different industrial settings in different industries such as: healthcare, agriculture, non-profits, entertainment, photography, business services, tourism, telecommunications, logistics, sports,



mass media, marketing and education. Moreover, the distribution among industries was not used as a criterion to select the entrepreneurs, nevertheless there was an intention to capture information from diverse industries, expecting to capture more variance related to the phenomena object of study.

- The founding team

In line with the prior description of the selection criteria of each entrepreneurial case-study, apart from taking into account a variability on the age of each entrepreneur to ensure a representativeness of the outcomes, the current section describes the profile of the entrepreneur in terms of their formal education and their professional experience (Table 7).

Code	Start-Up	Entrepreneur	Educational Background	Entrepreneurial Experience	Industry Background
C01	PsicoExpress	Co-Founder	Other	X	X
C02	GreenPallet	Co-Founder	Other	X	✓
C03	TeamUp	Founder	BA	✓	X
C04	BeTheQ	Co-Founder	Tech	✓	X
C05	Pick-App	Co-Founder	Tech	✓	✓
C06	eDesk	Founder	BA	X	✓
C07	PlayTrip	Co-Founder	Tech	✓	✓
C08	DoctorIn	Founder	Other	X	✓
C09	MediaTel	COO	Tech	X	✓
C10	Movelt	Co-Founder	BA	✓	X
C11	Run&Us	Co-Founder	BA	✓	X
C12	NetLook	CTO	Tech	X	✓
C13	TeleMod	Co-Founder	Tech	X	X
C14	Mass Rock	Founder	BA	X	✓
C15	Movelt	Co-Founder	Tech	✓	X
C16	TrendApp	Co-Founder	Tech	✓	X
C17	KidStore	Co-Founder	Tech	X	✓
C18	Gaming	Co-Founder	BA	✓	X
C19	ePromote	Founder	Tech	X	✓
C20	CountFoot	Founder	Tech	X	X

Table 7 Sample description of the founder's educational and professional background

On one hand, regarding the educational background of the individual, the interest was to capture the variability of the sample in terms of the type of formal education of the individual through making the distinction between a technological education (Tech), a business-oriented university degree (BA) and other types of formal education (Other). More precisely, the sample included 11 entrepreneurs with a technological background, six business oriented profiles, and three individuals with other types of formation.

On the other hand, regarding the professional experience of the entrepreneurs, two main types of background were analysed: their entrepreneurial experience measured through their prior start-up experiences, and their business (or industry) related experiences measured by their prior professional experience in the industry of their start-up. The final sample included 9 experienced entrepreneurs, and 10 founders with experience in the industry.

### III. Data Collection Strategy

Based on the research design and the fieldwork process explained previously, data was collected following two strategies: semi-structured interviews with the main founders and the social media activity and network for each case study (Figure 17) organized on a three-stage research process. More precisely, during the stages one and two of the fieldwork, this research focused on capturing the entrepreneurs' perceptions through interviews and stage three of the fieldwork collected data from the entrepreneurs social media network and activity and constructed a table with the relevant data emerged from each case.

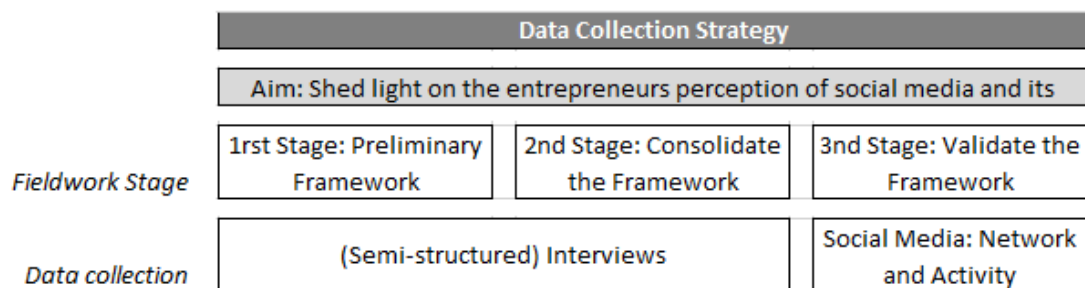


Figure 17. Data collection strategy

Thus, this section is organized in two subsections and includes a description of the semi-structured interviews as well as the social media network and activity of the founders. In addition, it is important to remark that in line with the iterative nature of this research approach (Glaser & Strauss, 1967), the researchers introduced data analysis processes in between the data collection stages.

### *III.1. First and second stages in the data collection process*

The design of this research was structured in three stages where data collected emerged from a broad perspective of the research approach to a set of theoretical concepts that helped to explain the impact of social media on entrepreneurial social capital (Eisenhardt & Graebner, 2007; Glaser & Strauss, 1967). During the initial stages of this fieldwork (stages 1 and 2), a set of semi-structured interviews were conducted with the main founders to capture the entrepreneur's perceptions and experiences of the use of social media to enhance their social capital (Elfring & Hulsink, 2003; e.g. Quan-Haase & Young, 2010; Turner, 2010).

- **Interviewing procedure**

In line with the research design (described in the prior section), the interviewing procedure was conducted during the two first stages of the fieldwork. First, a first group of interviews was conducted to seven opportunity-driven entrepreneurs to shed light on the research gap based on a broad perspective of the theoretical framework. This first stage of the interviewing procedure started in November 2013 and concluded with a preliminary framework that responded to the research question in July 2014. Then, a second group of data was collected from September until October 2014 to consolidate the preliminary theoretical framework. These interviews were conducted until the saturation level, where after 13 more entrepreneurial cases no more concepts emerged leading to a final sample of 20 interviews. Moreover, after each interview was conducted, it was transcribed and analysed prior to the selection and execution of the following interview, in order to build upon the emerging theory and adjust the selection criteria for the next one.

During this data collection process, special attention was given to additional sources of information, such as direct participant observation (Creswell, 2009). For this reason, in most of the cases (17 out of the 20) the interviews were conducted at the entrepreneur's premises, either their own office, or at La Salle (see Table 8). In two cases the interviews were conducted

through an informal lunch or dinner meeting (classified as *other*) and only one of them was done remotely (Remote).

The interviews were conducted either in Spanish or Catalan, depending on the entrepreneurs' linguistic preferences and there was a preparation prior to the interview that included a profile check of the entrepreneur using public available data in internet, and an informative review of their website.

<b>Code</b>	<b>Start-up</b>	<b>Date</b>	<b>Location</b>
C01	PsicoExpress	18 <sup>th</sup> of November 2013	Office
C02	GreenPallet	18 <sup>th</sup> of November 2013	Office
C03	TeamUp	16 <sup>th</sup> of December 2013	La Salle
C04	BeTheQ	11 <sup>th</sup> of April 2014	La Salle
C05	Pick-App	1 <sup>st</sup> of July 2014	Office
C06	eDesk	2 <sup>nd</sup> of July 2014	Other
C07	PlayTrip	17 <sup>th</sup> of July 2014	Other
C08	Doctor-In	17 <sup>th</sup> of September 2014	Office/ La Salle
C09	Media-Tel	17 <sup>th</sup> of September 2014	Office/ La Salle
C10	Movelt	18 <sup>th</sup> of September 2014	Office/ La Salle
C11	Run&Us	18 <sup>th</sup> of September 2014	Office/ La Salle
C12	Net-Look	18 <sup>th</sup> of September 2014	Office/ La Salle
C13	TeleMod	18 <sup>th</sup> of September 2014	Office/ La Salle
C14	Mass Rock	19 <sup>th</sup> of September 2014	Office/ La Salle
C15	Movelt	25 <sup>th</sup> of September 2014	Office/ La Salle
C16	Trend-Ing-App	26 <sup>th</sup> of September 2014	La Salle
C17	KidStore	6 <sup>th</sup> of October 2014	Office/ La Salle
C18	GamIng	6 <sup>th</sup> of October 2014	Remote
C19	ePromote	20 <sup>th</sup> of October 2014	Office/ La Salle
C20	Count-Foot	29 <sup>th</sup> of October 2014	La Salle

*Table 8 Interviewing procedure*

In addition, the use of interviews as data collection method offered support to capture the stories and complexities perceived by the entrepreneurs in its full richness, but in comparison

to other data gathering instruments, it required a higher dedication from the researchers in the data collection process. In this study, the duration of the interviews was from 30 to 90 minutes, and the structure of the interviews was slightly different depending on the stage within the research process.

Specifically, the interviews conducted at earlier stages were designed using a wider perspective where the researcher challenge was to capture as many insights as possible regarding the entrepreneurs' motives and satisfactions for the usage of social media. In turn, these interviews were lengthy (between 60 and 90 min) compared to the later interviews where the aim was to capture in-depth insights and refine the emergent framework (that usually lasted between 30 and 70 minutes).

- **Structure of the interviews**

The main objective of the interviews was to capture, interpret and evaluate the entrepreneur's perceptions on the impact of social media on their social capital. The structure of the interviews was designed beforehand using as a reference the existing literature on social networks (Elfring & Hulsink, 2003; Elfring & Hulsink, 2007; Davidsson & Honig, 2003) and the motivations and satisfactions of social media (Quan-Haase & Young, 2010; Dunne et al., 2010; Pénard & Poussing, 2010).

Using prior literature an outline was designed for conducting the first set of semi-structured interviews. A preliminary version of this outline was revised by a focus group in order to receive insights on the structure and understanding of the questions. Then, this outline was used as a reference for the first set of semi-structured interviews. During the second stage of the research process, a slight adaptation of this outline was required to focus the questions towards preliminary theoretical context developed and to prioritize the objective of the upcoming interviews to incrementally complete the ongoing framework.

Thus, the general structure of the outline was mainly divided in three blocks of questions<sup>8</sup>. First, a set of structured and semi-structured questions was formulated to obtain a general insight of the start-up and the profile of the respondent. The main aim was to capture information about the firm such as the industry and the maturity of the firm as well as a

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<sup>8</sup> A description of how the outline used during the interviewing process was designed as well as a sample version of it has been included in Annex B

detailed description of the entrepreneur's personal and professional background, accounting for their education, professional experience and entrepreneurial experience. In addition, this part was complemented with additional insights on the respondent's social media participation and engagement: the aim was to know whether the respondents were active users of social media and how much effort did they dedicate to these platforms.

Secondly, a set of semi-structured and open questions were dedicated to understand why entrepreneurs used social media for professional issues (e.g. Chen, 2011; DiMicco et al., 2008; Dunne et al., 2010). The main aim of these questions was to capture those elements that drove entrepreneurs engage in social media activities for networking as well as what type of social media platforms they used.

Finally, a third block of questions was designed to ask respondents about their strategic choices for using social media and the impact of those strategies on their social network structure and, in turn, their resource acquisition during the early stages of the entrepreneurial process. The main stages analysed were (Bhave, 1994): opportunity, creation and exchange stage. In addition, each interview was independent and there was space to include additional questions to get further insights on emergent concepts and ideas.

### *III.2. Third stage in the data collection process*

In line with the research design, the third stage of data collection process was designed to consolidate the emerging theoretical framework through a cross-case analysis. To conduct this analysis the insights that emerged during the interviews were complemented by data on the social media network and activity of the entrepreneurs as well as their virtual network of contacts (e.g. Archambault & Grudin, 2012; Fischer & Rebecca Reuber, 2014; Song, 2015). This process started in November 2014 (once the interviewing process and analysis was completed) and collected the social media network and activity of the entrepreneur's public virtual profiles during a period of 10 weeks.

More precisely, based on the insights captured from the interviews, the analysis was done through the entrepreneurs' personal profiles on Twitter and LinkedIn, as well as the firm's profile on Facebook and Twitter. The selection of the platforms was mainly based on the initial outcomes of the interviews, as entrepreneurs agreed these were the platforms where they developed most of their online strategies for networking: entrepreneurs were especially

interested in developing personal networking strategies through LinkedIn and Twitter as they perceived them as the strongest professional networking sites, and they enhanced the firm's reputation through Facebook and Twitter as it was an easy way to get in contact with potential customers and be part of the online conversations about their firm.

The data collected through these platforms (LinkedIn, Twitter and Facebook) was mainly numerical, in terms of number of contacts, "Followers", likes, etc. (Fischer & Reuber, 2014); and the collection of this data was limited by the pre-established configuration of these platforms. The information collected was public and this work ensured that the participants were aware of the research process and agreed that this analysis was done through their public virtual profiles. Data included the entrepreneurs' personal profile as well as the firm's virtual identity.

- **Data gathered from the personal profile**

The virtual personal/professional profile of the entrepreneur was analysed through LinkedIn and Twitter. On one hand, data captured through LinkedIn included numerical information about the initial contacts of the entrepreneur (at the moment of the data collection process) as well as the new relationships developed weekly. On the other hand, data collected through Twitter included the number of "Followers", the number of profiles the entrepreneur is following and the number tweets, and this information was also collected at the start of the process and was monitored weekly.

- **Data gathered from the firm virtual profile**

The virtual profile of the firm was analysed through Twitter and Facebook. On one hand, data collected through Twitter was similar to the data collected on the entrepreneur profile and included the number of "Followers", the number of profiles the entrepreneur is following and the number tweets, and this information was also collected at the start of the process and was monitored weekly. On the other hand, data captured on the firm's profile on Facebook included the number of "Followers" (Likes), the number of news posted weekly and the impact of these posts in terms of likes and shares.

## IV. Analytical Strategy

Aligned to the three-stage research design proposed in this dissertation, the analytical procedure used different sets of techniques that go from the codification and in-depth study of each interview to a cross-case analysis based on the interviews and the social media reports. A schema of the analytical strategy has been synthesised in Figure 18.

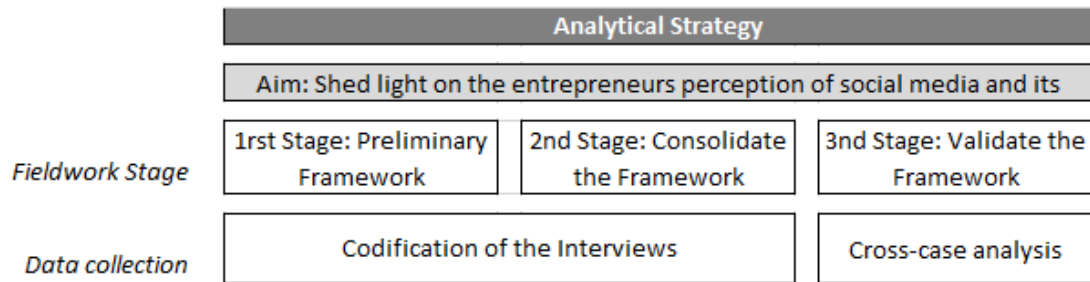


Figure 18. Analytical strategy

This section is organized as follows. First, a subsection illustrates the analytical process of this research work and the role of the researcher. Then, the next subsection defines the codification strategy employed during the analysis of the interviews. Finally, the last subsection describes the cross-case study.

### IV.1. Analytical process and role of the researcher

The current research work shed light on the motives and satisfactions of entrepreneurs for using social media to manage their social capital during the early stages of their new venture formation. In order to address this research goal, the fieldwork was organized into a three-stage research process (using a mixed method approach) that started with the construction of a preliminary framework through the direct interaction with entrepreneurs (Stage 1 of the fieldwork), then some additional interviews helped to consolidate the emerging concepts (Stage 2 of the fieldwork), and finally, a cross-case study among the different entrepreneurial cases to validate the emerging theoretical framework (Stage 3 of the fieldwork).

Specifically, during the first stage of this fieldwork, seven in-depth interviews were conducted to shed light on the scope of the research gap using a theoretical sampling. Each of these interviews was analysed following a codification process based on open, axial and selective



coding, and the emergent insights were constantly compared to the literature and the emergent theory (Eisenhardt & Graebner, 2007; Mäkelä & Turcan, 2007; Charmaz, 2008). Further explanation on the codification procedure of this stage is explained in the following section (*codification of the interviews*). Finally, this stage concluded with a preliminary theoretical framework based on some propositions that helped to explain why and how entrepreneurs use social media for networking.

The second stage of this research process explored additional cases to consolidate the ongoing framework and seek for further insights to refine the emergent theory. The interviews conducted during this process were selected following a theoretical sampling and were analysed following the codification process explained in the following chapter. Moreover, this process concluded with a solid configuration of theoretical concepts that responded to the research question proposed for this work, that was found through the saturation threshold (Glaser & Strauss, 1967; Eisenhardt & Graebner, 2007).

Finally, the third stage of this analytical process was a cross-case analysis to reinforce the emergent theory by comparing the insights through the different study cases (Corbin & Strauss, 1990; Mäkelä & Turcan, 2007; Eisenhardt & Graebner, 2007). The analysis started with the elaboration of a comparative table that included the emergent concepts arisen from each interview and the data collected through the social media reports. Finally, each set of data from this table was analysed through the appropriate statistical tool such as descriptive analysis, t-test or correlation (Myers, 2009).

In addition, in order to ensure the validity of the research, all the analytical process was conducted in parallel by two independent researchers. At the end of each stage of the analytical process the two researchers compared and contrasted the emerging insights. Most results emerged similarly between the two researchers, and when a disjunction was identified the literature was used as a reference to build.

#### *IV.2. Codification of the interviews*

Codes can be words, phrases, sentences or whole paragraphs and they help to organize the data into concepts and speed up the analysis (Charmaz, 2008; Myers, 2009). They can be descriptive codes (open codes), interpretive codes (axial or selective codes), theoretical codes, pattern codes, etc. Following prior research the codification of the interviews was done by

using open, axial and selective coding where each of these coding strategies contributes to the process of advancing from the data collected in the interviews into the generation of the research results (Corbin & Strauss, 1990; Charmaz, 2008).

One of the main challenges of qualitative design is that validation of “good research” is not only dependent on the outcome but also on a solid analytical base of the data collected. Following the analytical process explained above, this section revises the codification process employed throughout the analysis of the interviews.

- Structure of the codification process

Regarding the analytical process employed for the codification of the interviews, this dissertation used open, axial and selective coding, and each set of emerging data was constantly compared with the literature and the emerging theory (Figure 19).

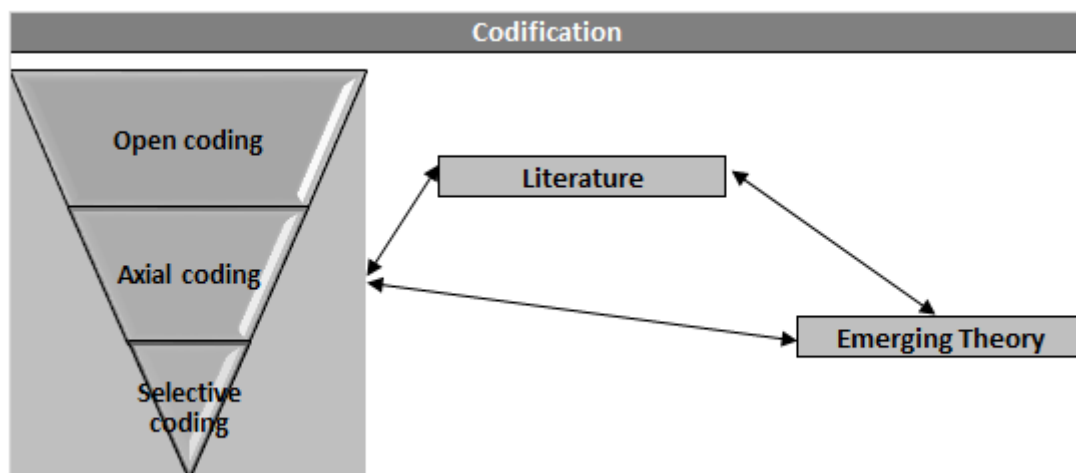


Figure 19. Structure of the codification process

The first type of coding, open coding, was useful to construct concept codes through the key points identified from the typescripts. Then, the next step was to conduct an axial coding to combine the prior codes into emergent concepts. Finally, the last step was the selective coding that helped to integrate the prior codes into theoretical propositions integrates and refines the analysis towards a larger theoretical scheme or category that forms the basis for the theory (Corbin & Strauss, 1990; Mäkelä & Turcan, 2007).

In summary, this codification process was useful to bring in a set of theoretical concepts that helped to explain why and how entrepreneurs used social media for networking during the different stages of the new venture formation process, and that were also validated through a cross-case analysis. The codification process is explained below and the final set of concepts is explained in detail in the next chapter (Findings and Discussion).

- Open coding through key points and concept codes

The first analytical process was conducted through open coding by using key points that emerged to concept codes. In fact, open coding is usually the first data classification as it is useful for indexing, classifying and explaining data. Thus, each interview was transcribed and analysed using open coding to break down, analyse, and compare and categorize the emerging data (Corbin & Strauss, 1990; Creswell, 2009; Eisenhardt & Graebner, 2007).

The open coding can be done through micro-coding or key point; mainly depending on the objective and the type of data collected. As micro-coding is not very useful when there are large sets of data and does not allow capturing part of the meaning of the words on its context. Thus, for this research the key point was identified as more useful as the main idea was to analyse sentences or groups of words within its context (see table 9).

<p><i>Why did you create a LinkedIn account?</i></p>	<p><i>Well, I was working in something else that was medicine (C08-001) and at a professional level the start-up did not have a presentation card (C08-002), which was the way to let...</i></p>
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*Table 9 Example of key point identification in the transcript<sup>9</sup>*

Moreover, In order to keep a consistent approach in the selection of key points, this process was strongly based on research question and those elements involved in the research framework that helped to understand why and how entrepreneurs decided to use social media to enhance their social capital.

Between 17 and 31 key points were selected for each interview and an identification code (ID) was assigned to each of the key points. Then, these key points were transformed into code of

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<sup>9</sup> Original data prior to translation has been included in Annex C-Transcript 1

one or two words to describe the main idea behind (Content Code). Finally, the identification code, the key point and the content code altogether were transcribed into a workable coding spreadsheet (see Table 10) that was used as a starting point for the next codification process (Axial coding).

ID	Key point	Content code
C08-01	... I was working in something else that was medicine ...	<i>Entrepreneurial experience</i>
C08-02	... at a professional level the start-up did not have a presentation card	<i>Entrepreneurial profile</i>

Table 10 Example of the code extraction from a key point<sup>10</sup>

Moreover, the list of codes was maintained under a workable number (less than 20) to avoid entering in unmanageable amounts of codes.

- Axial coding through concepts

The second stage of the codification process was the axial coding in order to construct emergent concepts from the open codes emerged in the previous stage. The goal of this codification process was to make explicit connections between theoretical concepts to be able to find a more developed or fuller picture of the relationships and explanations that exist in relation to the data and the research question (Corbin & Strauss, 1990; Glaser & Strauss, 1967; Creswell, 2009).

The axial coding moved the data to a higher hierarchical level of abstraction. Thus, this analytical process was based on the identification of incidences or events that are related to each other in some non-apparent way, usually by linking codes together in order to proceed with the explanatory concepts.

Then, while the interviews were being coded, for each interview codes were also abstracted into a parallel table (see Table 11). For every interview similar codes were identified and a concept would combine the meanings that the codes captured. During this stage the key points behind the codes had to be often revised to get a closer definition of the emerging concept.

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<sup>10</sup> Original data prior to translation has been included in Annex C-Transcript 2

<b>Emergent Concepts</b>	<b>Code Reference</b>
<i>Entrepreneurs use social media to build their online profile (display window).</i>	<i>C08-01, ...</i>
<i>Entrepreneurs with low entrepreneurial experience engage in social media</i>	<i>C08-02</i>

Table 11 Example of aggregation of codes and concept identification

To sum up, the axial coding was useful to bring the conceptual codes derived from the open coding process to a higher level of analysis where the relationship and dependence of the emerging data was analysed through causal flowcharts and conceptual maps.

- Selective coding to build theoretical concepts

Selective coding integrates and refines the analysis towards a larger theoretical scheme or category that forms the basis for the theory. Moreover, according to Straus and Corbin selective coding also includes the validation of the systematic relationships between the central or the core concepts (Corbin & Strauss, 1990).

<b>Category</b>	<b>Sub-Category</b>	<b>Case Category</b>	<b>Keypoint</b>
<i>Creation</i>	<i>Team Members</i>	<i>Team Members</i>	<i>Social media is useful to search for skilled human capital to be part of the funding team</i>
<i>Creation</i>	<i>Recruitment</i>	<i>Recruitment</i>	<i>Social media is useful to share job vacancies (calls) online</i>
<i>Creation</i>	<i>Investment</i>	<i>Investment</i>	<i>Social media is useful to identify contact information about investors</i>
<i>Exchange</i>	<i>Diffusion</i>	<i>Diffusion</i>	<i>Social media supports the process of sharing information about our product between users</i>
<i>Medium</i>	<i>Complementarity</i>	<i>Complementarity</i>	<i>Social media complements offline environments through the communities of interest</i>
<i>...</i>	<i>...</i>	<i>Increase access</i>	<i>Social media makes it faster to access information</i>
		<i>Recruitment</i>	<i>Social media helps to identify possible referees to potential job candidates</i>

Table 12 Example of the category construction

Thus, at this point the key points have been selected and codified through open coding, and theoretical concepts have emerged through axial coding. The last stage of the codification process is the selective coding where the main goal is to organize the prior data into theoretical concepts through the identification of further commonalities among the emerging concepts (see table 12), and the constant comparison with the literature (Glaser & Strauss, 1967).

In addition, it is important to note that during the analysis of the interviews, the term social media was subject to different conceptualizations. Thus, a description of the researchers' measures to deal with this term has been included in Annex D.

### *IV.3. Cross-case analysis and the verification of the framework*

According to the objective of this dissertation, the analysis of the data included two different strategies: the codification of the interviews described in the prior section, and a cross-case analysis among the final sample composed of 20 opportunity-driven entrepreneurs. More precisely, this cross-case study had two major objectives: first, to ensure the reliability of the results by triangulating the insights of the interviews with the data collected through social media reports; and second, to complement the theoretical assumptions arisen by complementary and comparable data sets.

In this vein, the first stage of this analytical process was to construct a table with the relevant data collected through the interviews and the social media reports. This table was constructed by two independent researchers and then compared and contrasted to verify the data included was consistent. This construction of the table included three types of information: control variables from each case study, concepts emerged through the interviews conducted to entrepreneurs, and the social media network and activity of each case.

First, the data grouped as "control variables" included information on the profile of the entrepreneur (such as year of birth, educational background, entrepreneurial experience and business experience), the characteristics of the firm (type of industry, technology vs non-technology-based, type of customers and year of birth). Then, a second section included the final theoretical concepts emerged from the interviewing process. Finally, the last section of this table registered data on the virtual network of the entrepreneur and the level of activity of their virtual profiles.

As the objective of this analysis is not to provide quantitative evidence but in contrast to enforce the emergent theoretical framework, this table was convenient to conduct basic descriptive statistics to show the correlation between the entrepreneur's insights (analysed and organized as theoretical concepts) and their social media activity and network. Further information on the structure and the data contained in this table and some "raw data" is provided in Annex E.

## V. Quality & Ethics

To finalize this chapter, there are some considerations that need to be taken into account in terms of the quality and ethics of the data collection process. For this reason, this research work ensured that the data collected was relevant and interesting to provide some insights on the impact of social media on the entrepreneurial process, and that it reached some quality standards and that was not invading any privacy or personal concerns of the entrepreneurial cases analysed<sup>11</sup>.

First, regarding the quality of the data gathered, two main measures were considered. On one hand, this work aimed to collect direct data as much as possible to ensure the richness and the flexibility of the insights captured, as well as to maintain an alignment between the emerging insights and the inquiry of the research. On the other hand, another important concern when doing qualitative work was to manage the data collection process in a balanced and non-intrusive base to ensure the emerging insights were not biased by the researcher (Creswell, 2009; Fayolle & Wright, 2014).

Second, regarding the ethics of the research process the main concern was to provide each entrepreneur with complete and clear information of the whole research and to address any possible concerns at the beginning and throughout the research process. Thus, at the beginning of each interview, entrepreneurs were informed of the aim of this research and the types of data that were going to be collected from them: semi-structured interviews and social media reports. On one hand, regarding the interviewing process, the entrepreneurs were given an outline of the interview, and on the other hand, they were informed of the type of data that was going to be collected through their virtual profiles through a template (Fayolle & Wright, 2014; Myers, 2009).

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<sup>11</sup> European Charter for Researchers. <http://ec.europa.eu/euraxess/index.cfm/rights/europeanCharter>

Moreover, a major concern was identified regarding the social media data through the entrepreneur's public profiles and their firms: some platforms are restrictive on how individuals can use the public information available to conduct research (Myers, 2009; Creswell, 2009; Fayolle & Wright, 2014). Sticking to this restriction, data collected on social media activity was provided by the entrepreneur or in under the entrepreneur's request the researcher was specifically allowed to collect the data.

Finally, once the data collection process and the objective of the research were explained in detail, and further inquiries or concerns were resolved, entrepreneurs were asked to fill in an informed consent to make sure they had been well informed about the research process and they confirmed their willingness to participate as well as to terminate their involvement for any reason at any time. In addition, in order to preserve the individuals' identity, acronyms have been used to identify each case throughout the research.





## Chapter 3: Findings & Discussion

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The technology-based entrepreneur is an individual who explores and exploits business opportunities that contribute to technological change and development (Colombo & Delmastro, 2001; Shane & Ulrich, 2004; Wiklund et al., 2011). The nature of these practices implies uncertainty and rapid change, and entrepreneurs need to access distinct resources such as specific knowledge or expertise (Vasilchenko & Morrish, 2011; Bailetti, 2012; Hsu, 2008). In line with this, the entrepreneurs' social capital is defined as the social network of the entrepreneurs that facilitates access to resources in order to support their entrepreneurial process<sup>12</sup>. In an attempt to improve the entrepreneurial process, there is a strong interest in understanding and extending the current knowledge on their social capital (Witt, 2004; Klyver & Hindle, 2007).

In parallel, nowadays environment is dominated by social media, where entrepreneurs use these web-based tools to interact with their social network (Quan-Haase & Young, 2010; Ellison et al., 2007; Petróczi et al., 2006). However, whereas it seems that this new environment should enhance the entrepreneurs' social capital, this work identified confronted views in the literature: on one hand social media facilitates the maintenance and development of the individuals social network but on the other hand, resource exchange is not guaranteed (Nann et al., 2010; Gloor et al., 2013).

Then, by using an inductive approach (Eisenhardt & Graebner, 2007; Charmaz, 2008) this dissertation explored *"to what extent do entrepreneurs use social media to manage their social capital?"*. A mixed method was useful to conduct a three-stage research process that explored the entrepreneurs' motives and gratifications of social media usage and exposed new theoretical insights regarding why and how entrepreneurs use social media to manage their social capital. Based on this research approach, this work was able to merge from the entrepreneurs' perceptions and their social media network and activity to a set of new insights on the social capital theory within this new context.

The aim of this chapter is to respond to the research question with a description of the concepts emerged during the fieldwork and to offer a discussion of the implications of these

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<sup>12</sup> See Section II from Chapter I for a detailed definition of Social Capital.

outcomes on the entrepreneurship literature. Then, this chapter is organized as follows. The first section “*Why do entrepreneurs use social media to manage their social capital?*” analyses the entrepreneur’s motives to join social media to provide insights to the first sub-research question. The next section “*How do entrepreneurs use social media to manage their social capital?*” studies the entrepreneur’s satisfactions for joining social media to provide insights to the second sub-research question. Finally, grounded on these findings the third section “*To what extent do entrepreneurs use social media to manage their social capital?*” aims to respond to the research question presented in this work through discussing the relationship of the prior results with the ongoing literature.

## **I. Why do entrepreneurs use social media to manage social capital?**

Entrepreneurs face several resource constraints during the different stages of their new firm formation process (Sullivan & Ford, 2014; Newbert & Tornikoski, 2013; Sirmon et al., 2007). Whereas some entrepreneurs have these resources themselves, others use their social networks. Taking into account that entrepreneurs use social media to manage their social networks (Fischer & Reuber, 2014; Nann et al., 2010; Gloor et al., 2013; Song, 2015), the first section of this chapter shed light on the motives of entrepreneurs for using social media to connect to resource owners<sup>13</sup>.

Specifically, based on the analysis of the entrepreneurs’ motives for using social media to improve their social capital two main concepts emerged suggesting that: (1) the different resource challenges determine the need of entrepreneurs to improve their social capital (through social media); and (2) entrepreneurs perceive that the type of resource needed determines the use social media connect to potential resource owners. This theoretical concepts are further developed in the following sections.

### *1.1. Resource challenges determine the need to improve social capital*

Grounded on the social capital, the entrepreneur’s social network facilitates access to resources (Adler & Kwon, 2002); and in turn, social media is a tool that supports the

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<sup>13</sup> As the objective of this research was to shed light on why founders used social media within the entrepreneurial context and learn from their experience, the study was focused on entrepreneurs who already adopted social media prior to the interviewing process. Thus, this research also identified that in most cases, the social media adoption process of the individuals was prior to their usage in the entrepreneurial context.

individuals' social networks. Thus, when analysing why entrepreneurs used social media in this regard, most entrepreneurs agreed that their main interest was to *stay in contact* with their social system in general (Joinson, 2008; Sheldon, 2008). Moreover, in the particular terms of their new firm, entrepreneurs were also stimulated to use social media to *store their business contacts* and *develop new relationships* with potential resource owners.

- Emergence of the theoretical concepts through the entrepreneurs perceptions

This section chronologically revises the different insights that emerged during the interviews and how these ideas were systematically contrasted to the literature to build an emergent theoretical conceptualization.

### **Entrepreneur 1**

During the first interview, the "Entrepreneur 1" perceived that social media was useful to enhance his social capital for two main reasons: (1) to supersede specific constraints due to his limited background in terms of industry and entrepreneurial expertise, and (2) to build potential competitive resource advantages from a constant development of his network.

On one hand, the founder was not familiar with the (healthcare) industry, as his formal education was on Physics, and he had no relevant experience on starting his own business. Thus, his limited knowledge in both the industry and entrepreneurship affected his entrepreneurial process in several ways and he used social media to overcome these limitations.

For example, in terms of his lack of industry experience, the entrepreneur found it difficult to judge whether his product fit the market needs, so he used social media to validate his value proposition with some potential customers:

*"...I wanted to validate whether my product would be useful to the psychologists in America, I wanted to know whether the market would pay for it, so I did a search in LinkedIn through 'psychologist', 'associations of psychologists in San*

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*Francisco' and I started sending emails to schedule meetings with them to present my idea." (Entrepreneur 1)<sup>14</sup>*

and to connect to potential advisors:

*"I also wanted to find an advisor from Stanford that could provide medical reputation to my product, so I went back to LinkedIn and typed 'Stanford', 'department of psychology', and I send them emails to contact them."(Entrepreneur 1)<sup>15</sup>*

Another example was found regarding his lack of entrepreneurial expertise, as he felt he needed some assessment through the entrepreneurial process, so he also used social media to engage in communities or groups to get in contact with other entrepreneurs:

*"Social media is a constant source of information, especially if you are in groups of Newsletters or Meetups, or if you have friends on Facebook that are from the 'entrepreneurial world', as you will always receive this type of inputs such as courses and etc." (Entrepreneur 1)<sup>16</sup>*

On the other hand, "Entrepreneur 1" was also motivated to use social media in order to constantly connect and develop his social network as a strategic action to build and bond social capital:

*"You never know when the contact you need will appear, or when new ideas can come through, so the more relationships you have the better. (...) And we have this through Meetup and other communities where they put in contact entrepreneurs or people with common interests." (Entrepreneur 1)<sup>17</sup>*

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Based on the insights emerged from the first entrepreneurial case, at this point the two main motives for entrepreneurs to engage in social media during the entrepreneurial process were:

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<sup>14</sup> Original data prior to translation has been included in Annex F-Quote E1-1

<sup>15</sup> Original data prior to translation has been included in Annex F-Quote E1-2

<sup>16</sup> Original data prior to translation has been included in Annex F-Quote E1-3

<sup>17</sup> Original data prior to translation has been included in Annex F-Quote E1-4

- *Entrepreneurs use social media to develop their social network in order to overcome specific resource constraints*
- *Entrepreneurs use social media to constantly develop their social network, and in turn social capital*

These insights are aligned to prior work on the dynamic networks (Orsenigo et al., 2001; Sirmon et al., 2007), where not only the entrepreneurs' social network helps them to progress on their new firm, but also that their new firm also develops the entrepreneurs' social network (Baker et al., 2011).

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## **Entrepreneur 2**

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In order to enrich the prior findings, the second entrepreneur was selected to provide representativeness from a non-technological opportunity-driven entrepreneurial case. Thus, "Entrepreneur 2" was selected regarding a similarity on his background compared to the prior case to minimize additional insights not reflecting differences based on the tech vs non-tech dichotomy.

Again, in line with prior insights, "Entrepreneur 2" was motivated to use social media to improve his social capital in order to face different resource challenges derived from his limited expertise on the industry settings of the new-born start-up as well as on his inexperience as an entrepreneur.

For example, one of the main challenges of this case was to disseminate the innovation through the industry and he used social media to connect to potential customers:

*"...above all, social media platforms such as Facebook or LinkedIn provide the entrepreneur with an easy way to reach the general public." (Entrepreneur 2)<sup>18</sup>*

Another example was identified regarding the entrepreneurs limited expertise in prior start-up practices, and he was motivated to use social media to engage in communities of entrepreneurs in order to get emotional support and advice through other founders:

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<sup>18</sup> Original data prior to translation has been included in Annex F-Quote E2-1

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*“And through Meetup you can meet people, like in my case from the social entrepreneurship, and then you share your problems or your value proposition and you get support or feedback.” (Entrepreneur 2)<sup>19</sup>*

Finally, no insights were identified in this case to support that the entrepreneur used social media to strategically develop his social network as a regular activity.

Although no new insights emerged during this case to support that entrepreneurs usage of social media was due to his motivation to regular action to enhance his social capital, this second case helped to complement the initial insights on how entrepreneurs overcome their limitations in terms of the industry and entrepreneurial experience by improving their social capital (Stam et al., 2013; Newbert & Tornikoski, 2012).

Moreover, the objective of this case was to enrich the prior insights from a non-technology based context. In contrast, no major differences were identified so far regarding their usage of social media.

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### **Entrepreneur 3**

The prior insights that suggest the entrepreneur’s prior education and experience motivate the individual to use social media to enhance their social capital. Then, to complement the emerging findings through a case with significant prior entrepreneurial expertise, “Entrepreneur 3” was selected because of the individual’s prior entrepreneurial expertise in contrast to his limited background on the non-profits organizations (industry of his new-born firm).

The study of this case identified that the entrepreneur was motivated to use social media for the promotion and growth of his new firm within the industry:

*“We haven’t invested in buying traffic we only provide the information and people move it around the social media. (...) Social media is another communication tool, just as a newspaper or a journalist.” (Entrepreneur 3)<sup>20</sup>*

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<sup>19</sup> Original data prior to translation has been included in Annex F-Quote E2-2

<sup>20</sup> Original data prior to translation has been included in Annex F-Quote E3-1

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Moreover, no insights emerged regarding his use of social media to enhance his social network with other entrepreneurs.

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In summary, the insights emerged from this third case were useful to contrast the impact of the profile of the entrepreneur with a different degree of expertise (Delmar & Shane, 2006; Wright et al., 2007). Aligned to the prior findings, these results also support the relationship between the entrepreneurs' prior knowledge and their motivation to use social media to improve their social capital.

Moreover, these results also support prior research on the entrepreneurs' well-known practice of using social media for promotion (Cooke & Buckley, 2008; Rodriguez et al., 2012).

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#### **Entrepreneur 4**

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Based on the different types of background that can be relevant on the technology-based entrepreneurial process, the fourth study case was selected to provide theoretical representativeness through a profile with a technological experience. Specifically, by maintaining a criterion of limited industry (entertainment) and entrepreneurial expertise, "Entrepreneur 4" was selected because of his sound technological background from both an educational and professional perspective.

The insights emerged during the interviews align to prior findings and suggest that the entrepreneur used social media to overcome specific resource limitations. For example, "Entrepreneur 4" used social media to contact powerful bloggers to access potential customers through their network:

*"We are developing a 'Public relations' campaign with bloggers that we identified through social media, as these bloggers have a list of fans and we want to get to their fans to promote our product." (Entrepreneur 4)<sup>21</sup>*

"Entrepreneur 4" also explained that when he had no clue on how to obtain certain resources (because of his lack of knowledge), social media was a useful tool to identify some references

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<sup>21</sup> Original data prior to translation has been included in Annex F-Quote E4-1



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through groups or communities:

*“Usually, if you have direct contacts you don’t use LinkedIn, but there are times when you don’t know anyone in that particular field but then you go to social media and search through groups, for example...” (Entrepreneur 4)<sup>22</sup>*

In addition, this case also provided new light on how entrepreneur’s resource constraints are not necessarily approached through social media. For example, “Entrepreneur 4” explained that, despite his expertise on the technological contexts, if he failed to identify a resource owner through his existing network, he would not necessarily turn to social media:

*“...within the technological department we contacted and contracted some of our contacts, as we came from the technological environments, but there were some profiles that we could not find so we had to work with head-hunters.” (Entrepreneur 4)<sup>23</sup>*

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This fourth case provided supporting insights to the prior framework, especially in terms of how entrepreneurs use social media to enhance their social capital in order to overcome their resource constraints, especially when their professional background on the industry is considerably limited (Mosey & Wright, 2007; Coleman, 1988).

Moreover, based on the second idea emerged during the interview (social media is not always useful to address resource challenges when the social network is insufficient), a deeper analysis was conducted to shed light on this concept in the next section.

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### **Entrepreneur 5**

To fulfil the variety of professional backgrounds identified in the literature, the fifth case was selected to fulfil a different profile. Specifically, this singular case was a technology-based entrepreneur with experience in the (photography) industry and a sound prior entrepreneurial expertise.

During the interview with “Entrepreneur 5” additional ideas emerged on how different

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<sup>22</sup> Original data prior to translation has been included in Annex F-Quote E4-2

<sup>23</sup> Original data prior to translation has been included in Annex F-Quote E4-3

resource constrains motivated the entrepreneur to improve his social capital to overcome some resource limitations, not only to enhance his entrepreneurship expertise and his knowledge on the industry, but also to seek for human and financial capital.

In fact, this entrepreneurial case explained the usage of social media during the different stages of the entrepreneurial process to enhance his social capital in order to acquire different types of resources such as financial capital through getting access to potential investors:

*“...many of these investors, we capture them through LinkedIn. Specially, we have met some of them before or we know that they are investors that tend to invest in our type of business but we have never met them, so LinkedIn is the perfect place to contact them for the first time.” (Entrepreneur 5)<sup>24</sup>*

Or human capital through the recruitment of employees:

*“When we had to recruit a programmer, we found it more useful to use specialized social networking sites as it was easier to specify the type of profile that we were looking for, while in a generic social networking site it was more difficult to introduce specific field within the profile we were looking for.” (Entrepreneur 5)<sup>25</sup>*

Moreover, despite the entrepreneurs expertise on prior start-ups, he also explained how he improved his entrepreneurial knowledge and support through specialized groups or communities of entrepreneurs:

*“Meetup is useful to follow certain types of groups or communities that organize regular meetings. These are usually interesting meetings where entrepreneurs share their knowledge and experiences, and these types of events are interesting to me.” (Entrepreneur 5)<sup>26</sup>*

and how useful it was for him to be in social media to maintain and enhance their contact

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<sup>24</sup> Original data prior to translation has been included in Annex F-Quote E5-1

<sup>25</sup> Original data prior to translation has been included in Annex F-Quote E5-2

<sup>26</sup> Original data prior to translation has been included in Annex F-Quote E5-3

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with potential customers:

*“...in (name of the company) we use Facebook and Twitter as these are the platforms where our users are. All our communication is done through these channels to connect with the community and with the aim that our information is shared to reach a higher number of potential customers.” (Entrepreneur 5)<sup>27</sup>*

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In contrast to the prior cases, this fifth case provided fresh insights from an entrepreneur with a sound professional expertise (Davidsson & Honig, 2003; Garcia-Escarré, 2016) in terms of both the industry and entrepreneurship. Built on the ongoing conceptual framework, new insights emerged during this case on how entrepreneurs use social media to enhance their social capital not only to overcome resource constraints based on their background limitations, but also to gain competitive network connections.

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### **Entrepreneur 6**

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Based on a theoretical sampling, the sixth case was selected focused on his strong background: his parents owned a family business in the same industry of the new-born firm. More precisely, this entrepreneurship reference within the founder’s profile was particularly relevant as the entrepreneur had strong connections not only with other entrepreneurs but also with different stakeholders within the industry.

During the interview, “Entrepreneur 6” mentioned that his entrepreneurial expertise as well as his connection with potential stakeholders was strongly supported by his actual connections (family) and he was not focused on social media to enhance his social capital in this base. However, he highlighted his motivation to use social media to recruit skilled human capital:

*“We have a person in charge of the community management that we recruited through a social network site that connects students with enterprises called*

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<sup>27</sup> Original data prior to translation has been included in Annex F-Quote E5-4

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*‘Student Job’, and what you do is you post your job vacancy, you receive the candidates and then you choose the most suitable profile.” (Entrepreneur 6)<sup>28</sup>*

and to maintain a tight relationship with his potential customers:

*“...we provide a one-to-one system of customer assistance; however, more than once our clients have used Twitter to openly ask for further support.” (Entrepreneur 6)<sup>29</sup>*

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Thus, this sixth interview suggests that even though some entrepreneurs are keener to use social media to enhance their social capital compared to others, entrepreneurs perceive that using social media can be useful to manage their social networks (Papacharissi, 2009; Murchu et al., 2004) in order to address resource constraints.

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### **Entrepreneur 7**

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Finally, in line with the theoretical sampling proposed, the last case selected to complete this preliminary framework on the entrepreneur’s motivations for using social media to enhance their social capital was selected to bring additional insights from an entrepreneurial case that was strongly connected to university environments.

More precisely, “Entrepreneur 7” was a technology-based entrepreneur with a sound professional expertise on technological contexts, and was an ongoing lecturer at the university. In contrast, the founder had no prior attempts to start his own company and he was not familiar with the (tourism) industry.

During the interview, “Entrepreneur 7” identified that his main motives for using social media were to address resource challenges specially derived from his limited background in the (tourism) industry, and entrepreneurial settings, as well as to recruit new employees with specific expertise.

For example, regarding his challenges in the industry, the entrepreneur used social media to

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<sup>28</sup> Original data prior to translation has been included in Annex F-Quote E6-1

<sup>29</sup> Original data prior to translation has been included in Annex F-Quote E6-2

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identify stakeholders:

*“We need social media, for example in our case we have the challenge to identify and connect to content creators, those touristic hosts that can be interested in our platform, so here, we need social media to be visible to these profiles.” (Entrepreneur 7)<sup>30</sup>*

and potential customers:

*“...and obviously, we also need to engage in social media to be visible to our end customers...” (Entrepreneur 7)<sup>31</sup>*

Another example was identified on how he enhanced his contact with other entrepreneurs and he used social media to connect to informal communities of new venture founders:

*“The Meetup is very useful to register in groups where you can find their ongoing activities and join them. (...) And you can find these type of informal profiles through Meetup.”(Entrepreneur 7)<sup>32</sup>*

Moreover, regarding the entrepreneur’s need to acquire specialized knowledge, the founder highlighted how social media facilitated access to talented human capital:

*“...whereas before you had to buy professional knowledge through courses or consultancy, now this is available online, I mean, you can find qualified profiles with skills and knowledge.”(Entrepreneur 7)<sup>33</sup>*

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This last entrepreneurial case provided support to the emerging framework by suggesting that the different resource challenges determine the entrepreneur’s need to improve their social capital (Hoang & Antoncic, 2003; Neergaard, 2005), and in some cases the entrepreneurs were motivated to use social media to do so.

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<sup>30</sup> Original data prior to translation has been included in Annex F-Quote E7-1

<sup>31</sup> Original data prior to translation has been included in Annex F-Quote E7-2

<sup>32</sup> Original data prior to translation has been included in Annex F-Quote E7-3

<sup>33</sup> Original data prior to translation has been included in Annex F-Quote E7-4

At this point two major findings were identified (Figure 20) on why entrepreneurs were motivated to use social media during the entrepreneurial process: (1) to address their resource challenges and (2) to regularly develop their social network.

	Entr. 1	Entr. 2	Entr. 3	Entr. 4	Entr. 5	Entr. 6	Entr. 7
Address their resource challenges	X	X	-	X	X	X	X
Regularly develop their social network	X	-	-	-	X	-	-

Figure 20. Summary of the Preliminary Framework

These two concepts emerged during the first stage of the fieldwork, that was responsible of openly explore the entrepreneurs' motivations to use social media. Then, a second stage of the fieldworks, based on the analysis of additional case until the saturation level was reached (a total of 13 additional cases) and its constant comparison to the literature, helped to consolidate the emerging theory (concepts). This second stage of the fieldwork led to the emergence of two propositions (Riverola & Miralles, 2016):

First, inherent to the entrepreneurial process there is the need to develop the individual's social capital (Neergaard, 2005; Slotte-Kock & Coviello, 2010), and some entrepreneurs use social media as a complementary tool to develop new relationships that potentially increase their social capital (Song, 2015; Nann et al., 2010). In this vein, and based on the insights captured through the interviews, this work proposed that:

***P1-A. Entrepreneurs use social media to manage their social network regularly in order to enhance their social capital during the entrepreneurial process.***

Secondly, whereas some entrepreneurs may find potential resource owners within their social network, other entrepreneurs face significant limitations during their entrepreneurial process and turn to social media to develop specific new connections that can address their resource needs (Sullivan & Ford, 2014; Sullivan, 2006). In this sense, this work found that some entrepreneurs use social media to conduct purpose-driven networking strategies to fulfil specific resource requirements. Then, this work proposed that:

***P1-B. Entrepreneurs use social media to develop specific social ties with potential resource owners to overcome specific resource challenges during the entrepreneurial process.***

To sum up, following the analysis of the first two stages, this study found that some entrepreneurs are motivated to use social media: (1) to constantly manage their social network and (2) to develop their social network as a purpose-driven reaction to specific resource challenges (Neergaard, 2005; Riverola & Miralles, 2016).

- Validation of the emergent concepts through a cross-case analysis

Finally, the third stage of the fieldwork was useful to validate the prior findings through a cross-case analysis. This analysis used the concepts emerged previously through the typescripts of the interviews and the control variables collected from each case, such as the entrepreneur profile. More precisely, in order to explore the prior propositions, this section discusses the impact of prior background (regarding the industry and start-up experience), on the founders motivations to use social media.

On one hand, on behalf of the background on the industry, data was correlated from the entrepreneurs' professional background and their motivation to use social media to enhance their social capital in those activities related to the industry (see Table 13). Specifically, the variable "Industry Background" identifies whether the entrepreneurs had significant formal education or professional experience in their new-born firm's industry, and the variable "SM motivation - I" identifies (using the concepts from the interviews) whether the entrepreneurs used social media to enhance their social capital in one of the following: product validation and stakeholders<sup>34</sup>.

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<sup>34</sup> The entrepreneur's motivation to engage in social media to connect to potential customers was not included unless it was strictly mentioned as a direct networking activity to avoid to include marketing or promotion practices in this category.

	Industry background	SM motivation - I
Entrepreneur 1	0	1
Entrepreneur 2	1	0
Entrepreneur 3	0	0
Entrepreneur 4	0	1
Entrepreneur 5	1	1
Entrepreneur 6	1	1
Entrepreneur 7	1	1
Entrepreneur 8	1	1
Entrepreneur 9	1	1
Entrepreneur 10	0	1
Entrepreneur 11	0	1
Entrepreneur 12	1	1
Entrepreneur 13	0	1
Entrepreneur 14	1	1
Entrepreneur 15	0	0
Entrepreneur 16	0	1
Entrepreneur 17	1	1
Entrepreneur 18	0	1
Entrepreneur 19	1	0
Entrepreneur 20	0	0

*Table 13 The industry expertise and the motivation to use social media to enhance social capital*

Results show that 15 out of 20 entrepreneurs used social media to enhance their social capital within the industry, showing that there is a strong motivation among entrepreneurs to use social media to conduct a product validation process through potential customers and other stakeholders (Rodriguez et al., 2012; Cooke & Buckley, 2008).

Moreover, regarding the entrepreneurs experience in the industry (Garcia-Escarré, 2016), two major analyses were conducted to validate the prior propositions. First, from the 10 entrepreneurs without prior industry experience, only three of them did not use social media to enhance their social capital in the industry settings. This suggests that some entrepreneurs are motivated to use social media to overcome specific resource challenges related to the industry, mainly due to their limited background in the field. Secondly, eight out of the 10 entrepreneurs who already had experience on the industry used social media to enhance their current social capital within the industry. This second analysis also suggests that some entrepreneurs are motivated to use social media to constantly manage their social capital within the industry settings (Nann et al., 2010; Gloor et al., 2013; Fischer & Reuber, 2014).



On the other hand, on behalf of the entrepreneurial expertise (Garcia-Escarré, 2016), data was correlated from the entrepreneurs' prior start-up experience and their motivation to use social media to enhance their social capital through building connections with other entrepreneurs (see Table 14). Specifically, the variable "Entrepreneurial Background" identifies whether the entrepreneurs had significant prior start-up attempts, and the variable "SM motivation - E" identifies (using the key points from the interviews) whether the entrepreneurs used social media to enhance their social capital through engaging with other entrepreneurs or enrolling in virtual entrepreneurial groups or communities (Joinson, 2008; Nann et al., 2010; Fischer & Reuber, 2014).

	Entrepreneurial background	SM motivation - E
Entrepreneur 1	0	1
Entrepreneur 2	0	1
Entrepreneur 3	1	0
Entrepreneur 4	1	0
Entrepreneur 5	1	1
Entrepreneur 6	0	0
Entrepreneur 7	1	0
Entrepreneur 8	0	0
Entrepreneur 9	0	0
Entrepreneur 10	1	0
Entrepreneur 11	1	0
Entrepreneur 12	0	1
Entrepreneur 13	0	0
Entrepreneur 14	0	1
Entrepreneur 15	1	1
Entrepreneur 16	1	0
Entrepreneur 17	0	1
Entrepreneur 18	1	1
Entrepreneur 19	0	0
Entrepreneur 20	0	0

*Table 14 The entrepreneurial expertise and the motivation to use social media to enhance social capital*

Results show that eight out of 20 entrepreneurs used social media to enhance their social capital to gain entrepreneurial exposure, suggesting a growing motivation among entrepreneurs to use social media to interact with other founders and engage in different activities regarding their entrepreneurial process.

Moreover, regarding the entrepreneurs prior experience in founding a new firm (Davidsson & Honig, 2003; Garcia-Escarré, 2016), two major analyses were conducted to validate the prior propositions. First, from the 11 entrepreneurs without prior entrepreneurial experience, only five of them used social media to connect with other entrepreneurs. This suggests that even not many, some entrepreneurs are motivated to use social media to overcome specific resource challenges through connecting with other entrepreneurs. Secondly, three out of the nine entrepreneurs who already had prior entrepreneurial experience used social media to connect to other entrepreneurs. Then, this second analysis also suggests that not many entrepreneurs are motivated to use social media to constantly manage their social capital within other entrepreneurs.

To sum up, even though the motivation to enhance the entrepreneurs' social capital within the industry was higher than their motivation to enhance their social capital by connecting to other entrepreneurs, this validation process found support to the initial propositions. Thus, this dissertation suggests that:

- P1-A. Entrepreneurs use social media to manage their social network regularly in order to enhance their social capital during the entrepreneurial process.
- P1-B. Entrepreneurs use social media to develop specific social ties with potential resource owners to overcome specific resource challenges during the entrepreneurial process.

In addition, the inconsistencies identified in these findings suggest to clarify the impact of the type of resource on the founder's choice to develop social capital through social media.

### *1.2. The fit between type of resource and the social media*

Based on the prior findings, this work identified that one important reason why entrepreneurs use social media to develop their social network is to address their resource constraints. However, the outcomes identified in the prior subsection<sup>35</sup> left some uncertainty on whether social media is always useful to address the different resource challenges. Thus, this section revises why some entrepreneurs use social media and others not to access different types of resource constraints.

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<sup>35</sup> Section I.1. Resource challenges determine the need to improve social capital

- Emergence of the theoretical concepts through the interviews

This work uses Bhave's (1994) stages of the entrepreneurial process<sup>36</sup>: (1) the identification and validation of a business opportunity, (2) the creation of the necessary infrastructure, and (3) the exchange of the product into the marketplace (Bhave, 1994; Martinez & Aldrich, 2011), to identify the resource challenges that the founders face during the entrepreneurial process and analyse why do they use social media to acquire them. By structuring the entrepreneurial process through different stages, this work was able to capture the activities and resource needs the entrepreneurs face during their new firm formation process.

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### Opportunity Stage

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Along with the interviews conducted, entrepreneurs highlighted the role of social media to enhance their social capital during the opportunity stage in order to gain entrepreneurship support and to conduct a product validation process.

On one hand, whereas some entrepreneurs already had prior entrepreneurial experience or strong relationships with other founders with whom they discussed their initial concerns on starting their own business, novice entrepreneurs with no connection with other founders usually lack of the guidance and support. Thus, some entrepreneurs reported how useful it was to use social media to enhance their social capital with other founders through virtual entrepreneurial communities. In fact, they explained that this process was mainly conducted through Meetup, an online platform that enabled entrepreneurs to find other users with common interests and organize events to get together:

*"...through Meetup you can do networking, and this is exactly what I was looking for in this case of social entrepreneurship, and you share your problems or even your project and you receive feedback... and this is helpful" (Entrepreneur 2)<sup>37</sup>*

On the other hand, some entrepreneurs explained that they used social media to access to conduct a product validation process not only to obtain information about potential customers' behaviour and needs and possible competitors:

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<sup>36</sup> These stages have been already described in Chapter 1

<sup>37</sup> Original data prior to translation has been included in Annex G-Quote O1

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*“Information is more available to everyone, so it is easier that the competition will identify you, but for me this is not a problem. I mean, I think this is useful to me as I prefer to know whether I have competitors and who they are, and whether they would be interested in my product.” (Entrepreneur 1)<sup>38</sup>*

But also to engage in online communities to connect and interact to potential customers in order to get valuable feedback on their new product:

*“...these are the ones I contacted to validate my product. After I identified them through social media, I contacted them by email, I organized one-to-one meetings with them, I identified their needs and they are also open to try my product and provide feedback.” (Entrepreneur 1)<sup>39</sup>*

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Based on the aforementioned analysis on the opportunity stage, the insights suggest that entrepreneurs use social media to enhance their social capital during this stage to connect to other entrepreneurs and to conduct product validation process with potential customers (Cooke & Buckley, 2008; Marion et al., 2014).

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### **Creation Stage**

Secondly, apart from validating their business idea entrepreneurs also need to build the necessary infrastructure to bring their idea to the market place. Thus, during the creation stage entrepreneurs need to acquire the human and financial capital to exploit their opportunity. Thus, regarding these two main challenges, some entrepreneurs used social media whereas others did not recommend its usage.

On one hand, regarding the construction of the working team, this process included both the integration of complementary talented individuals as part of the entrepreneurial team, and the recruitment of skilled employees. However, the particular case of entrepreneurial practices and small firms in general is slightly different to incumbent firms because they do not have the stability and staying power of larger organizations and they do not have the time

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<sup>38</sup> Original data prior to translation has been included in Annex G-Quote O2

<sup>39</sup> Original data prior to translation has been included in Annex G-Quote O3

and resources to conduct a large selection process. Thus, some entrepreneurs rely on their family members or close friends to support their entrepreneurial team:

*“...our team is mainly composed by my brother-in-law and myself, we complement each other very well as I am the (industry) expert and he is an engineer with sound prior start-up experiences, he already created two or three start-ups before.” (Entrepreneur 8)<sup>40</sup>*

Due to the specific knowledge required in the technology-based entrepreneurial process, in some cases the entrepreneur’s strong ties are not enough to cover certain types of profiles and they can struggle to capture human capital. Thus, this work identified that some entrepreneurs took advantage of their strong relationship with the university to access skilled employees:

*“As we are in contact with university students from the engineering school, we usually access them first...” (Entrepreneur 17)<sup>41</sup>*

In contrast, some entrepreneurs still used social media to identify talented individuals that became part of their entrepreneurial team:

*“To obtain medical credibility, I needed prestigious doctors as members of my team, and I have searched for those through LinkedIn.” (Entrepreneur 1)<sup>42</sup>*

as well as to conduct the recruitment process to identify skilled employees:

*“I started it, but then a friend of mine joined and we are two co-founders of the firm, and we also have a developer. Since we could not identify any developer within our network, we basically found him through social media, we posted an offer on LinkedIn.” (Entrepreneur 1)<sup>43</sup>*

*“...we tried to use LinkedIn to connect to potential employees, but we found it more useful to identify those profiles through specialized social networking sites,*

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<sup>40</sup> Original data prior to translation has been included in Annex G-Quote C1

<sup>41</sup> Original data prior to translation has been included in Annex G-Quote C2

<sup>42</sup> Original data prior to translation has been included in Annex G-Quote C3

<sup>43</sup> Original data prior to translation has been included in Annex G-Quote C4

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*as you usually get a lot of responses and then the chances to obtain interesting candidates is higher.” (Entrepreneur 5)<sup>44</sup>*

On the other hand, during the creation stage entrepreneurs also look for external funding through formal and informal investors. Whereas some entrepreneurs found social media useful to access information about open calls for formal investment, very rarely they found that this medium was useful to get a first contact with potential investors. In fact, most entrepreneurs did not mention their use social media to access business angels or venture capitalists, and even some of them disagreed that social media was the appropriate tool to network with this type of profiles:

*“... the investors that we reached come from an acceleration program in the U.S.A where we met venture capitalists and business angels, and now we have a good network of investors that we can contact when we think it’s the appropriate moment. However, we haven’t found these types of profiles through social media as these type of contacts must be introduced, you need to have a reference, as by sending an email it is very difficult that they will reply” (Entrepreneur 1)<sup>45</sup>*

and even some entrepreneurs claimed that:

*“Investors are not active in these online environments, I mean, they have their profile because they have to, and because the initial contact with most of them is done through these networks, and because they want to be found...” (Entrepreneur 5)<sup>46</sup>*

Only few entrepreneurs took advantage of this networked settings to identify and connect to potential investors:

*“... some of these investors are contacted through LinkedIn. I wouldn’t say that we have a 100% of effectiveness in getting their reply, but I think it is normal in this type of situations.” (Entrepreneur 5)<sup>47</sup>*

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<sup>44</sup> Original data prior to translation has been included in Annex G-Quote C5

<sup>45</sup> Original data prior to translation has been included in Annex G-Quote C6

<sup>46</sup> Original data prior to translation has been included in Annex G-Quote C7

<sup>47</sup> Original data prior to translation has been included in Annex G-Quote C8

Regarding these insights, entrepreneurs used social media during the creation stage to recruit human capital and connect to potential investors (Martinez & Aldrich, 2011; Zhang, 2010). However, these emergent insights also suggest that developing social networks in some contexts (such as entrepreneurial communities and customers) is more common than others (such as investors). Moreover, entrepreneurs perceive that some industries or profiles are not very active in social media settings, and in turn, are not motivated to use social media to develop these specific types of social relationships.

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### Exchange Stage

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Finally, the last stage that the entrepreneurs go through during the early stages of their start-up process is the exchange stage, where they are challenged to take their product into the marketplace even though they lack of the solid structure and reputation<sup>48</sup>.

During the interviews, entrepreneurs pointed out that they used social media on their exchange stage to build reputation and connect to potential customers. More precisely, entrepreneurs highlighted that social media was useful to create a virtual identity that was accessible and available to the any participant of the online communities, as a way to promote themselves though publishing information and news about their product:

*“Social networking sites are very relevant to us specially to show our work, specially to our end customers.” (Entrepreneur 7)<sup>49</sup>*

And in turn, facilitate their promotion and engagement with potential customers:

*“...all our promotion campaigns go through the social media, as we can find our potential customers in Facebook and Twitter. And we need to be there for sure.” (Entrepreneur 5)<sup>50</sup>*

Moreover, some entrepreneurs also explained that they used this virtual profile as a support tool when they wanted to identify and connect directly to early adopters and potential

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<sup>48</sup> This is also known as the liability of newness and smallness, and refers to the limitations faced by new firms compared to organizations in terms of their newness within the industry and their size.

<sup>49</sup> Original data prior to translation has been included in Annex G-Quote E1

<sup>50</sup> Original data prior to translation has been included in Annex G-Quote E2

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customers:

*“Through social media we identify content creators that, at the end, will be our clients as they will use our platform to complement their work.” (Entrepreneur 7)<sup>51</sup>*

In contrast, some entrepreneurs did not use social media to enhance their social capital with potential customers as they claimed that:

*“Our sector is not very strong on social media, so the use of these tools in terms of obtaining benefits for our business is not an option to us.” (Entrepreneur 15)<sup>52</sup>*

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Finally, the results on the exchange stage are aligned to both of the prior findings, and suggest that some entrepreneurs also use social media to enhance their social capital during the exchange stage by networking with potential customers and conducting promotional campaigns, and that entrepreneurs only use social media to enhance their social capital when they perceive a fit between the resource type and the media platform.

More precisely, based on these insights on the motivations of the founders to use social media to improve their social capital, this research proposes that:

***P2-A. Entrepreneurs use social media to improve their social capital at the different stages of the entrepreneurial process when they perceive a fit between the resource type and (social) media.***

To sum up, these results show that some entrepreneurs manifested that social media can be useful to connect to communities of interest (Kleinberg, 2008; Hindle, 2010) to identify different profiles such as stakeholders, other entrepreneurs, etc., as well as to engage on direct one-to-one relationships, but that the perceived fit of the resource with the type of media is determinant to encourage entrepreneurs using these networked tools.

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<sup>51</sup> Original data prior to translation has been included in Annex G-Quote E3

<sup>52</sup> Original data prior to translation has been included in Annex G-Quote E4



- Validation of the emergent concepts through a cross-case analysis

Third stage of the fieldwork (validation process), compared the motives of the entrepreneurs for using social media during the different stages of their entrepreneurial process: opportunity, creation and exchange stage (see Table 15) through the main activities identified: (1) connect to the market to conduct a product validation process and to connect to other entrepreneurs (during the opportunity stage), (2 & 3) to connect to skilled professionals to construct a working team and to connect to potential investors (during the creation stage), and (4 & 5) to create a virtual profile and to connect to their potential customers (during the exchange stage).

	Opportunity stage		Creation stage		Exchange Stage
	Product validation	Connect to entrepr.	Working Team	Potential investors	Potential customers
Entrepreneur 1	1	1	1	0	0
Entrepreneur 2	0	1	0	0	1
Entrepreneur 3	0	0	0	0	1
Entrepreneur 4	1	0	0	0	1
Entrepreneur 5	1	1	1	1	1
Entrepreneur 6	0	0	1	0	1
Entrepreneur 7	1	0	0	0	1
Entrepreneur 8	1	0	-1	1	1
Entrepreneur 9	1	0	-1	0	1
Entrepreneur 10	0	0	1	-1	-1
Entrepreneur 11	0	0	1	0	1
Entrepreneur 12	1	1	1	0	1
Entrepreneur 13	1	0	-1	0	-1
Entrepreneur 14	0	1	1	0	1
Entrepreneur 15	0	1	-1	0	1
Entrepreneur 16	0	0	1	-1	1
Entrepreneur 17	0	1	1	1	1
Entrepreneur 18	0	1	1	-1	0
Entrepreneur 19	0	0	-1	0	-1
Entrepreneur 20	0	0	-1	-1	0

Table 15 Entrepreneurs using social media during the entrepreneurial process<sup>53</sup>

<sup>53</sup> The table uses “1” when the entrepreneurs explicitly mentioned (during the interviews) their usage of social media to enhance social capital during that stage, “0” when they don’t, and “-1” when they claimed that social media was not a suitable tool to enhance social capital within this context.

Looking at the entrepreneurial usage of social media during the different stages of the entrepreneurial process, this work identified that a total of 13 entrepreneurs used social media during the opportunity stage to either connect to other entrepreneurs or to conduct a product validation process (Foss & Foss, 2008; Choi & Shepherd, 2004). Specifically, from those 13 entrepreneurs, eight of them reported their use of social media to gain entrepreneurial support and eight reported that social media was useful to enhance their social capital through engaging with potential customers in order to validate their value proposition. These findings support the prior proposition through showing that some entrepreneurs use social media during the opportunity stage of their process.

Regarding the creation stage, not all entrepreneurs agreed that social media was useful to gain access to resources (Zhang, 2010; Witt et al., 2008). For example, 10 entrepreneurs used social media to complement their working team with talented members or to recruit skilled employees but six entrepreneurs explicitly mentioned the inappropriateness of using social media for this purpose. Another example was found when entrepreneurs wanted to connect to potential investors as only three of them used social media, and four entrepreneurs did not agree that was a good strategy to obtain external funding. Then, although these findings support the prior proposition through showing that although entrepreneurs may use social media during the creation stage, they do not always perceive its usefulness.

Finally, regarding the entrepreneurial usage of social media during the exchange stage (Stam et al., 2013; Cooke & Buckley, 2008; Rodriguez et al., 2012), most entrepreneurs (14 of them) used social media to share information (news and activities they were enrolled in) to build reputation about the firm and to connect to potential customers and only three entrepreneurs did not find social media useful. Moreover, these three cases suggested that the reason why they were not motivated to use social media was because the industry of their new-born firm was not active enough in such environments. Again, these findings support the prior proposition through showing that although entrepreneurs may use social media during the exchange stage, they do not always perceive its usefulness.

In summary, this section explored the motivations of the entrepreneurs to use social media to manage their social capital during the different stages of the entrepreneurial process. On one hand, according to this sample, results suggest that entrepreneurs usage of social media is strong during the opportunity stage (13 entrepreneurs) and exchange stage (14

entrepreneurs), but it is not as strong during the creation stage which correlates with prior work on the stronger relevance of social capital during the first and last stages of the entrepreneurial process (Semrau & Werner, 2009; Sullivan & Ford, 2014). On the other hand, nine entrepreneurs also indicated negative implications on the usage of social media for at least one of the activities conducted specially during the creation stage. This finding supports prior work on the idea that resource exchange is a process that not only depends on the entrepreneurs' intentionality but also on the resource owner (Vissa, 2011).

In conclusion, by exploring the entrepreneurs' motives for using social media during the opportunity, creation and exchange stages, this work supports the prior proposition: P2-A. Entrepreneurs use social media to improve their social capital at the different stages of the entrepreneurial process when they perceive a fit between the resource type and (social) media.

## **II. How do entrepreneurs use social media to manage social capital?**

The results identified so far show that entrepreneurs use social media to enhance their social capital during the different stages of the entrepreneurial process; and they do so to both overcome specific resource limitations and enhance their access to potential resource owners (Sirmon et al., 2007; Sullivan, 2006; Orsenigo et al., 2001). But how do entrepreneurs' social capital benefit from their usage of social media?

Then, the second section of this chapter *"How do entrepreneurs use social media to manage their social capital"* shed light on the satisfactions of entrepreneurs for using social media to connect to resource owners. Specifically, this section is organized to describe the main concepts emerged on the entrepreneurs' gratifications for using social media to manage their social capital. Specifically, findings obtained from exploring the entrepreneurs' perceptions on the benefits of social media suggest that: (1) entrepreneurs use social media to manage their social network, and (2) entrepreneurs use social media to access resource owners.

### *II.1. Entrepreneurs use social media to manage their social networks*

Internet and social media affect individuals' relationships. But how does entrepreneur's usage of social media impact their social capital? Whereas some research suggests that social media enhances social capital in terms of community participation specially in politics or voluntary

work, other fields such as psychology claim that individuals who are more involved in virtual settings might not be paying enough attention to their offline networks (Wellman et al., 2001).

In contrast, in the field of management, the impact of social media on the entrepreneurs' social capital is usually complementary, as it is considered another platform where this individuals can manage their social ties (Pénard & Poussing, 2005; Kaplan & Haenlein, 2010). More precisely, in addition to the prior findings on why do entrepreneurs use social media<sup>54</sup>, this work suggests that entrepreneurs benefit from social media as a complementary tool to actively maintain their relationships and develop new ties. In contrast, no evidence was found on entrepreneurs obtaining value from social media to bond social capital.

- The entrepreneur's usage of social media to maintain their social capital

First, the current work identified that entrepreneurs benefit from social media as a complementary tool to maintain their social capital. For example, for some entrepreneurs social media was useful to keep information and contact details of their contacts:

*"LinkedIn for me is like a card holder. All the contacts that I make are on LinkedIn, and sometimes when I have a need I go to LinkedIn and I search, and I find interesting things" (Entrepreneur 6)<sup>55</sup>*

As they perceived it as a way to keep in touch with their social contacts:

*"At a personal level, LinkedIn is also very useful to maintain the connection with those providers that we have already worked with in the past." (Entrepreneur 5)<sup>56</sup>*

And to establish a common connection point with recently established contacts:

*"...everyone I meet, I establish a connection through LinkedIn, so I maintain a connection with them." (Entrepreneur 4)<sup>57</sup>*

In summary, even though no evidence was found that entrepreneurs use social media to bond social capital, some insights were identified that suggest that some entrepreneurs use social

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<sup>54</sup> Findings described in section I. "Why do entrepreneurs use social media to manage social capital?"

<sup>55</sup> Original data prior to translation has been included in Annex H-Quote CO1

<sup>56</sup> Original data prior to translation has been included in Annex H-Quote CO2

<sup>57</sup> Original data prior to translation has been included in Annex H-Quote CO3

media as a complementary tool to maintain their social capital (Fischer & Reuber, 2014; Kaplan & Haenlein, 2010). Then, these emerging insights suggest that the following proposition can be exposed:

***P3-A. Entrepreneurs benefit from the usage of social media to maintain their social capital.***

In order to validate these preliminary insights, the cross-case analysis executed during the third stage of the field work compared how entrepreneurs maintain their social network through the number of contacts of their professional social networks (LinkedIn and Twitter). Concretely, an analysis of the size of the entrepreneurs social network was done through the information collected on the number of undirected networks from the entrepreneur’s LinkedIn, and the directed connections (in terms of “Followers” and “Following”) from the entrepreneur’s Twitter in order to analyse the size of the entrepreneur’s network (see Table 16).

	LinkedIn Connections	Twitter “Followers”	Twitter “Following”
Entrepreneur 1	+500	250-499	250-499
Entrepreneur 2	-	-	-
Entrepreneur 3	0-49	0-49	0-49
Entrepreneur 4	+500	-	-
Entrepreneur 5	+500	250-499	250-499
Entrepreneur 6	+500	0-49	50-249
Entrepreneur 7	0-49	50-249	250-499
Entrepreneur 8	50-249	-	-
Entrepreneur 9	250-499	0-49	50-249
Entrepreneur 10	250-499	50-249	250-499
Entrepreneur 11	+500	50-249	250-499
Entrepreneur 12	+500	250-499	50-249
Entrepreneur 13	+500	50-249	50-249
Entrepreneur 14	250-499	50-249	250-499
Entrepreneur 15	+500	50-249	50-249
Entrepreneur 16	250-499	50-249	50-249
Entrepreneur 17	50-249	50-249	50-249
Entrepreneur 18	+500	+500	+500
Entrepreneur 19	0-49	+500	+500
Entrepreneur 20	+500	-	-

*Table 16 The entrepreneur’s number of contacts in social media on LinkedIn and Twitter*

Aligned to the prior proposition, the study on the entrepreneurs' virtual social network shows that entrepreneurs have large social network structures, what suggests that they are active on maintaining their relationships in social media. For example, a great proportion of the 19 entrepreneurs who used LinkedIn tend to have a large number of contacts: 10 of the entrepreneurs using LinkedIn had more than 500 contacts and only three LinkedIn users had less than 50 contacts. A similar example was found for the case of Twitter, where the entrepreneurs using this platform to maintain their social networks also kept large amount of contacts and the average number of connections among Twitter users was between 50 and 499.

Moreover, the study of the entrepreneurs' social networks on Twitter was more complex than LinkedIn, as this platform is built on directional relationships ("Followers" and "Following") and not all the entrepreneur's relationships were reciprocal (e.g. six entrepreneurs had less followers than the profiles they follow, and one entrepreneur was not following all his followers).

Finally, even though the use of LinkedIn was more popular among entrepreneurs to maintain their relationships, 16 entrepreneurs used both LinkedIn and Twitter to maintain their network. In fact, from the 16 entrepreneurs using both platforms, only three had a similar network size amongst both platforms, whereas 11 had developed larger networks on LinkedIn (compared to Twitter). Finally, these findings are aligned to prior work on the entrepreneurs' social network structure in social media and support the prior proposition (Gloor et al., 2013; Nann et al., 2010; Song, 2015).

- The entrepreneur's usage of social media to develop their social network.

In addition to the entrepreneur's usage of social media to maintain their social network, this work also identified that founders use social media to create new social ties in order to develop their social capital during the new venture formation process (Sullivan & Ford, 2014; Audretsch, 2012).

For example, during the entrepreneurial process, entrepreneurs look for different types of resources such as emotional support, product validation, etc., and social media is useful to connect and network to individuals with common interests (Boyd & Ellison, 2007; Gerard, 2012), that in turn, are potential resource owners:

*“From the point of view of contacts, it (social media) helps me to identify people through groups or keywords, depending on what I am looking for.” (Entrepreneur 4)<sup>58</sup>*

Another example was found when entrepreneurs needed to access skilled individuals to construct a working team and develop their product (Zhang et al., 2011), and they used social media to post their needs online (e.g. a job offer) to claim virtual help to access resource owners:

*“We currently have a community manager that we found through an online social network that puts together students with firms (Student Job), so we published our offer, then you receive the candidates and choose, and you can have more power over the recruitment process compared to traditional recruitment firms.” (Entrepreneur 6)<sup>59</sup>*

Finally, another example was also identified during the exchange stage (Rodriguez et al., 2012; Cooke & Buckley, 2008), where entrepreneurs engaged in groups or market niches to connect to potential customers:

*“I registered in a group on (industry), I found somebody that made an interesting comment and I contacted him, and since then we have established a commercial relationship.” (Entrepreneur 7)<sup>60</sup>*

In summary, this findings suggest that entrepreneurs can employ multiple strategies through social media to develop new social ties with potential resource owners, from being involved in active searches to participate in virtual groups or communities of interest, these emerging insights suggest that the following proposition can be exposed:

***P3-B. Entrepreneurs benefit from the usage of social media to develop their social capital.***

In order to validate the preliminary insights of proposition P3-B, a cross-case analysis compared how entrepreneurs develop their social network through the activity on their professional social networks (LinkedIn and Twitter). Concretely, an analysis of the activity of

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<sup>58</sup> Original data prior to translation has been included in Annex H-Quote CO4

<sup>59</sup> Original data prior to translation has been included in Annex H-Quote CO5

<sup>60</sup> Original data prior to translation has been included in Annex H-Quote CO6

the entrepreneurs social network was done through the information collected on dynamics of the number of undirected networks from the entrepreneur’s LinkedIn, and the directed connections (in terms of “Followers” and “Following”) from the entrepreneur’s Twitter over a period of 10 weeks (see Table 17).

	LinkedIn Activity	Twitter Activity
Entrepreneur 1	2	2
Entrepreneur 2	-	-
Entrepreneur 3	0	1
Entrepreneur 4	2	-
Entrepreneur 5	?	1
Entrepreneur 6	?	0
Entrepreneur 7	?	1
Entrepreneur 8	1	-
Entrepreneur 9	1	0
Entrepreneur 10	2	2
Entrepreneur 11	?	0
Entrepreneur 12	2	2
Entrepreneur 13	2	2
Entrepreneur 14	1	0
Entrepreneur 15	2	2
Entrepreneur 16	1	1
Entrepreneur 17	1	1
Entrepreneur 18	2	1
Entrepreneur 19	0	2
Entrepreneur 20	?	-

*Table 17 The entrepreneurial active use of social media through LinkedIn and Twitter<sup>61</sup>*

Aligned to the prior proposition, the study on the entrepreneurs’ management of their virtual social network shows that entrepreneurs develop their social network regularly. In fact, five entrepreneurs were using both platforms strongly to develop their social networks and a total of eight showed a strong usage of at least one of the platforms.

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<sup>61</sup> The activity value for each case was measured depending on the number of new relationships regularly developed by the entrepreneurs. Then, “2” stands for “strong activity”, “1” stands for “regular activity”, “0” stands for “no regular activity”, “?” stands for “no information available”, and “-” stands for “none active platform”.



Moreover, 12 out of 14 entrepreneurs showed either moderate or strong activity to develop their social ties through LinkedIn, and 12 out of 16 entrepreneurs had a high networking activity to develop their social ties through Twitter. Only two entrepreneurs had no activity on LinkedIn and four entrepreneurs had no activity on Twitter.

Finally, regarding the type of activity, seven out of 12 entrepreneurs had a similar activity on developing their social networks through LinkedIn and Twitter, which is also aligned to prior research on how entrepreneurs manage their social media (Fischer & Reuber, 2014; Song, 2015). Specifically, Song (2015) suggested that, in contrast to regular users of social media, entrepreneurs' social network structures tend to be homogeneous among different platforms.

### *II.2. Entrepreneurs use social media to access resource owners*

Social networks are not static, but they are developed over the time (Sullivan, 2006; Hite, 2005; Jack, 2005). This means that some entrepreneurs, apart from maintaining their social capital, they also bridge new relationships to improve their social capital. Then, regarding the framework on dynamic networks, this work identified that social media impacts both the direct and indirect ties of the entrepreneurs<sup>62</sup>.

- **The impact of social media on the entrepreneur's direct ties**

Entrepreneurs explained that by using social media they had new tools to maintain their relationships (Mislove & Marcon, 2007; Pénard & Poussing, 2010). Specifically, entrepreneurs used LinkedIn (and Twitter) to connect and accumulate large sets of business related connections, at a low cost and with the opportunity to have them more accessible (Haythornthwaite, 2002; Mariotti & Delbridge, 2012; Petróczi et al., 2006).

*"...everyone you meet, you add them on your LinkedIn as it is a way to add them on your contact network, but now you have them more receptive if you need to contact them again in the future." (Entrepreneur 4)<sup>63</sup>*

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<sup>62</sup> As explained in Chapter I, both direct and indirect ties are good sources to access resources. In contrast to direct ties, indirect ties are usually subject to a referee that supports the potential resource exchange.

<sup>63</sup> Original data prior to translation has been included in Annex I-Quote EN1

Moreover, entrepreneurs perceived that having these ties in a latent state was useful in two ways: (1) these ties were potential resource owners and (2) they also were referees to potential resource owners.

On one hand, when entrepreneurs access social networks to obtain external support, they tend to connect, in the first place, to established ties with whom they have interacted before as the chances of successful resource exchange are higher than with those with those where there is no prior engagement:

*“At the end, I usually contact with people that I know who they are, that I already met from somewhere else, as it is easier to get a positive response.” (Entrepreneur 5)<sup>64</sup>*

Thus, entrepreneurs perceived that social media was useful to enrich their access to their direct social network as well as to obtain real-time information about their latent ties:

*“All my contacts are on LinkedIn so whenever I need something, the first thing I do is go on LinkedIn and I usually find something interesting such as someone who recently changed his job, someone who I know that could be interested in what we are doing, etc.” (Entrepreneur 6)<sup>65</sup>*

On the other hand, entrepreneurs also perceived that social media was useful to benefit from their direct ties as referrals to potential resource owners. More precisely, entrepreneurs explained that information about their social system’s ties was useful to identify potential resource owners to contact to:

*“It is interesting as I can see the information about my contacts, who do they know, etc. and maybe while you are looking at that you think ‘ohh, I would like contact him...’ (Entrepreneur 6)<sup>66</sup>*

In summary, some entrepreneurs benefited from the usage of social media to maintain large social network structures in a latent stage that can be reactivated (Mariotti & Delbridge, 2012; Sullivan, 2006; Sullivan & Ford, 2014) as potential resource owners or referees to other

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<sup>64</sup> Original data prior to translation has been included in Annex I-Quote EN2

<sup>65</sup> Original data prior to translation has been included in Annex I-Quote EN3

<sup>66</sup> Original data prior to translation has been included in Annex I-Quote EN4

resource owners, and that are maintained at a low cost. Regarding this finding the current work proposes that:

***P4-A. Entrepreneurs benefit from social media to improve their social capital through enhancing the value of their direct ties***

The current work could not validate these emerging insights through the social media network and activity, as not enough data was available.

- The impact of social media on the entrepreneur's indirect ties

During the interviews, entrepreneurs also explained that by using social media they had new tools to develop new relationships (Mislove & Marcon, 2007; Pénard & Poussing, 2010). In fact, entrepreneurs benefited from this networked environments to identify, and connect to potential resource owners:

*"...in fact, there are people that we know they are investors, and that invest in firms similar to ours but we have never met them personally. We find that LinkedIn is the perfect place to contact them for the first time." (Entrepreneur 5)<sup>67</sup>*

However, one of the main challenges of entrepreneurs is not to identify resource owners but to find a way to access them:

*"It is not difficult to identify a list of businessmen (resource owners), the difficult thing is to access them directly." (Entrepreneur 6)<sup>68</sup>*

Thus, in order to address these challenges, the entrepreneurs strategies to benefit from social media to connect to resource owners identified in this work are two: (1) to track the referees between them and a resource owner, and (2) to use social media as a referral.

On one hand, some entrepreneurs found social media useful to access potential resource owners in a second (or third) degree of separation as they could track information about their social system and potential referrals to support the creation of the new relationship and the potential resource exchange:

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<sup>67</sup> Original data prior to translation has been included in Annex I-Quote EN5

<sup>68</sup> Original data prior to translation has been included in Annex I-Quote EN6

*“What is really helpful is to identify the degrees of separation with a person (resource owner) because I see what link do we have and I have a reference on how can I approach this person” (Entrepreneur 7)<sup>69</sup>*

This was particularly helpful to the entrepreneurs because they perceived that having access to resource owners through common contacts (or referees) is the best option to start a new relationship:

*“(When doing networking) If you can access him through one of your contacts its better, because they can act as an ice-breaker.” (Entrepreneur 4)<sup>70</sup>*

as these referees validated somehow the newly created relationship and potential resource exchanges:

*“Through LinkedIn, a mechanism that is very interesting is the ‘introduction’, that a common contact can introduce you (to a resource owner). This validates the relationship, right?” (Entrepreneur 7)<sup>71</sup>*

On the other hand, some entrepreneurs also found that social media itself was a useful tool to use as a virtual referral when no common referrals were found to validate the relationship between them and the resource owner (Zhang et al., 2010):

*“If you want to knock a door, and they don’t know you, what you can do is use LinkedIn as a reference, so they can see who you are and they can make the decision to listen to you or not.” (Entrepreneur 4)<sup>72</sup>*

as these platforms are useful to facilitate information about the individual’s (entrepreneur) professional background:

*“LinkedIn is the showcase of your professional identity. I mean, whereas Facebook is a platform for adolescents to “show off”, this social network site “LinkedIn”*

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<sup>69</sup> Original data prior to translation has been included in Annex I-Quote EN7

<sup>70</sup> Original data prior to translation has been included in Annex I-Quote EN8

<sup>71</sup> Original data prior to translation has been included in Annex I-Quote EN9

<sup>72</sup> Original data prior to translation has been included in Annex I-Quote EN10

*enables professionals show their achievements, the investments they have made, their CV.” (Entrepreneur 5)<sup>73</sup>*

as well as information about the firm:

*“... and you can use Twitter to build a virtual identity to your product, so it can be used as a reference. In fact, we develop our diffusion strategy through a business that has a lot of contacts, lots of influencers that “help” you to expand your product” (Entrepreneur 4)<sup>74</sup>*

In summary, some entrepreneurs benefited from the usage of social media to connect to potential resource owners by identifying potential referrals within their social systems or by using social media as a virtual referral where they could introduce themselves and share information about their new firm. Regarding this finding the current work proposes the following:

***P4-B. Entrepreneurs benefit from social media to identify potential referrals through their latent social network useful to bridge relationships with potential resource owners.***

***P4-C. Entrepreneurs benefit from social media as a referee to bridge relationships with potential resource owners.***

The current work could not validate these emerging insights through the social media network and activity, as not enough data was available.

### **III. To what extent do entrepreneurs use social media to manage their social capital?**

Entrepreneurs face several resource challenges during their entrepreneurial process such as access to information, recruitment of skilled employees or financial capital. In order to acquire these resources, entrepreneurs strongly rely on their social networks (Elfring & Hulsink, 2003; Elfring & Hulsink, 2007). In fact, compared to other market methods, entrepreneurs’ social networks are a source to reduce the costs of resource acquisition as well as can also offer

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<sup>73</sup> Original data prior to translation has been included in Annex I-Quote EN11

<sup>74</sup> Original data prior to translation has been included in Annex I-Quote EN12

other resources unavailable in the market (Zhang, 2010; Greve, 1995). This is known as the entrepreneur's social capital.

Grounded in the Uses and Gratifications Approach and also taking into account that entrepreneurs strongly align their daily activities towards managing their new firm, the fact that they use social media to manage their social networks suggests that they fulfil some specific needs (through this medium) regarding their social capital. In contrast, not much is known on why and how entrepreneurs decide to use social media and how they perceive these new settings fulfil their challenges and there is a growing interest in understanding the impact of social media on entrepreneurs' social capital (Riverola & Miralles, 2014; Wellman et al., 2001; Nann et al., 2010).

By studying this research gap, the current work builds new theoretical knowledge on the social capital of the entrepreneurs through studying their motives and gratifications for using social media. First, regarding why entrepreneurs use social media, this work identifies that not only entrepreneurs benefit from their social network to access resources but they also develop their network to overcome specific resource challenges. This finding is explained in detail in the following section: "Motivations for using social media". Secondly, regarding how entrepreneurs satisfy their needs through social media, this work identified that some social environment gratifications are useful to identify and connect to resource owners. This finding is explained in detail in the following section: "Social media gratifications".

### *III.1. Motivations for using social media*

The entrepreneur's social capital analyses how the entrepreneur's social network provide the individual with access to resources to both overcome resource limitations and generate competitive advantages (Semrau & Werner, 2013). In this regard, the current work identified two main usages of social media to manage the entrepreneurs' social capital<sup>75</sup>:

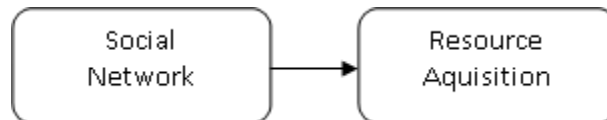
#### ***P1-A. Entrepreneurs use social media to manage their social network regularly in order to enhance their social capital during the entrepreneurial process.***

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<sup>75</sup> See Section I of this chapter.

***P1-B. Entrepreneurs use social media to develop specific social ties with potential resource owners to overcome specific resource challenges during the entrepreneurial process.***

Based on the traditional concept of “social capital” (Figure 21) a one-way relationship is usually established from the founders’ social network to the different types of resource challenges they face during the entrepreneurial process (Honig & Davidsson, 2000; Stam et al., 2013).



*Figure 21 Social Capital*

As seen during the prior sections, entrepreneurs are motivated to use social media to maintain and have more accessible their social network as well as to develop new social ties to overcome specific resource constraints. Based on these findings, the current research suggests that the traditional static view of social capital is not enough to explain nowadays dynamic environments (Orsenigo et al., 2001; Boccardelli & Magnusson, 2006) where entrepreneurs use their social network to access resources and also have new tools to develop their social network to address specific needs. In other words, this research identified that entrepreneurs who do not possess access to the resources they need (through their social capital), they can still acquire those resources by developing their social capital through social media.

In order to illustrate this emergent idea, the current work proposes a new concept named ‘network development’ (Figure 22) that explains the dynamics of this process. Thus, based on the figure below, the traditional relationship between the social network and the resource acquisition is complemented by this new term (‘network development’) that reflects how the entrepreneurs conduct purpose-driven actions to develop their social networks in order to address some specific resources when their social network is not useful enough.

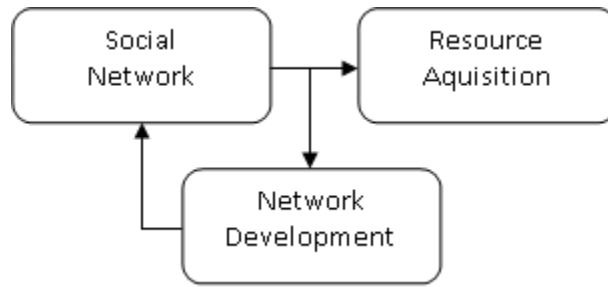


Figure 22 Dynamics of the social capital

Moreover, based on the motivations of entrepreneurs to use social media (previously explained), the ‘network development’ process needs to be managed carefully (Figure 23) taking into account that not all types of resources and resource owners are valid for establishing a relationship (Seppanen & Makinen, 2007; Sirmon et al., 2007) through social media. For example, some cases were identified of entrepreneurs who found it difficult to establish virtual relationships with potential investors or to connect to stakeholders from some industries, as they suggested that these profiles were not very active in this virtual spaces. Then, this work also proposed the following:

***P2-A. Entrepreneurs use social media to improve their social capital at the different stages of the entrepreneurial process when they perceive a fit between the resource type and (social) media.***

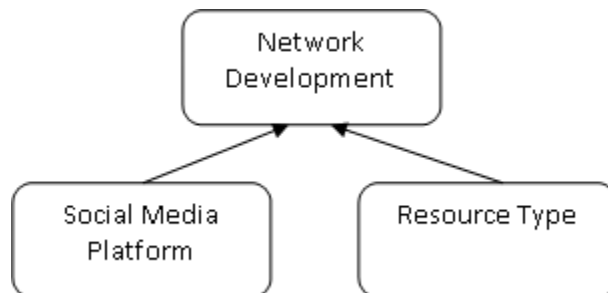


Figure 23 Considerations for ‘network development’

In conclusion, this dissertation challenges whether the traditional concept of social capital is still a good measurement tool to study how entrepreneurs access resources throughout their entrepreneurial process and suggests that a dynamic view of this concept is more enclosed to the changing environments technology-based entrepreneurs are exposed to.



### III.2. Social media gratifications

In addition to the re-evaluation of the concept of social capital through a dynamic perspective to face nowadays dynamic context, this work also explored how entrepreneurs benefited from the usage of social media to manage their social capital by maintaining and developing their social network. Specifically, this research raised two main propositions in this regard<sup>76</sup>:

***P3-A. Entrepreneurs benefit from the usage of social media to maintain their social capital.***

***P3-B. Entrepreneurs benefit from the usage of social media to develop their social capital.***

Moreover, in line with the ongoing literature (Zhang et al., 2010), entrepreneurs can access resource owners through their direct and indirect ties (Figure 24), and social media was also found useful among some entrepreneurs.

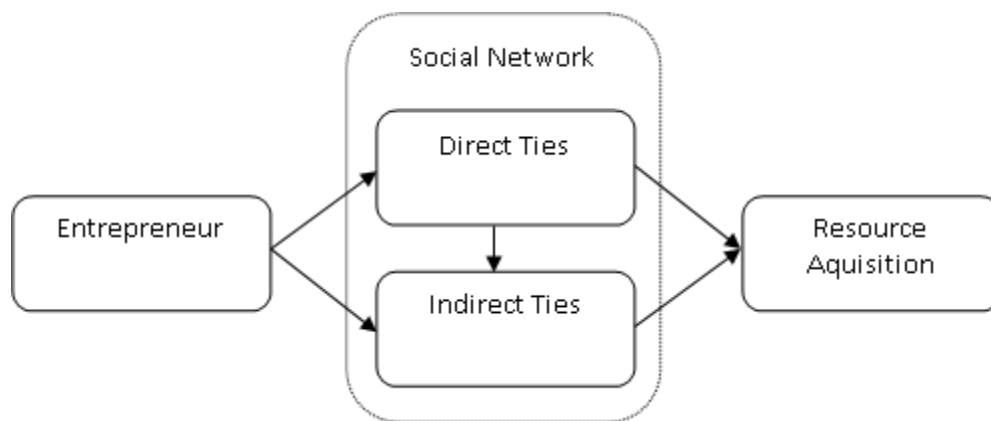


Figure 24 Entrepreneurs relationship with their social ties

Thus, the analysis of the entrepreneur's usage of social media to enhance the founder's social capital provided new insights on the impact of these relationships when entrepreneurs aimed to acquire resources. Specifically, this work raised two main propositions regarding the impact of social media on direct and indirect ties.

***P4-A. Entrepreneurs benefit from social media to improve their social capital through enhancing the value of their direct ties***

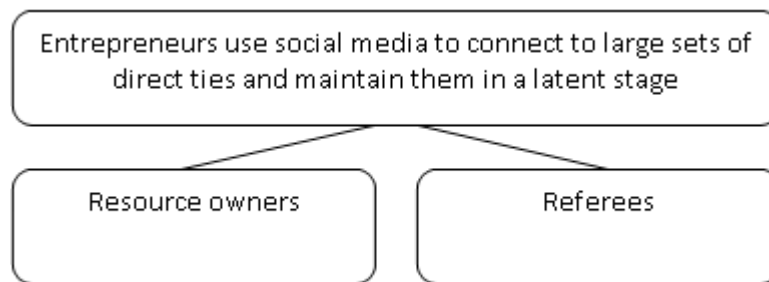
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<sup>76</sup> See section II of this Chapter

On one hand, regarding the impact of social media to access resources through direct ties, this work suggests that entrepreneurs may benefit from the usage of the social media platforms to maintain large set of contacts at a low cost of maintenance (latent stage) that can be reactivated as resource owners because of the information availability throughout the platforms (Mariotti & Delbridge, 2012; Jack, 2005) or as potential referees to other resource owners (Figure 25):

***P4-B. Entrepreneurs benefit from social media to identify potential referrals through their latent social network useful to bridge relationships with potential resource owners.***

More precisely, as the information about the ties of the entrepreneur’s social system was (usually) available and updated, this tool facilitates the founder’s to identify resource owners within their social system. This is an important finding because entrepreneurs tend to prefer to access resources through direct ties because these types of connections are usually build on prior knowledge and trust among the individuals.



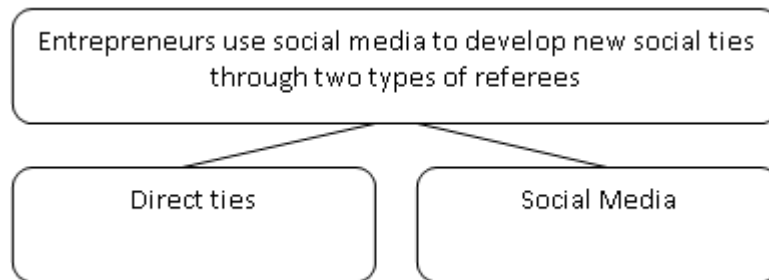
*Figure 25. The impact of social media on the entrepreneur’s direct ties*

On the other hand, and aligned to the fact that social media enables the entrepreneurs’ social network as a potential source of referrals to resource owners, when entrepreneurs don’t have resource owners within their social system, they might access resources through building indirect relationships (Zhang et al., 2010):

***P4-C. Entrepreneurs benefit from social media as a referee to bridge relationships with potential resource owners.***

More precisely, these ties were traditionally developed through common contacts or by attending entrepreneurial events, but with the emergence of social media, this framework has

been enhanced in two ways (Figure 26). First, entrepreneurs may have more opportunities to connect to indirect social ties throughout a common referee because they control larger social systems and they have access to information about potential referees to resource owners (Gerard, 2012; Joinson, 2008). Secondly, entrepreneurs may also use social media as a platform to connect to individuals with common interests and connect to them (Kenneth et al., 2012; Joinson, 2008).



*Figure 26. The impact of social media on the entrepreneur's indirect ties*

In conclusion, this dissertation also identified that entrepreneurs may use social media to enhance their social capital because they perceive they have better access to resource owners, either as through their direct social ties or by having more tools to develop indirect ties.

## Chapter 4: Conclusion

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Access to resources is one of the main elements to understand how entrepreneurs progress on the different stages of their entrepreneurial process (Alvarez & Busenitz, 2001; West & Noel, 2009; Katila & Shane, 2005); and technology-based entrepreneurs strongly rely on their social networks to access those resources they don't possess themselves. Moreover, these entrepreneurs face additional challenges to the other types of founder's related to the dynamic environments they are exposed to and the types of resources they may need to access (Orsenigo et al., 2001; Umesh et al., 2007; Bailetti, 2012).

In parallel this research identified that the social media has changed how individuals communicate and interact, making everyone more connected (Nann et al., 2010; Kaplan & Haenlein, 2010). While entrepreneurs working in such contexts have access to new tools to manage their social network, some research claims that the impact of these networked applications on the entrepreneur's social capital is not clear. Then, under the perspective of the Uses and Gratifications Approach, this work studied the entrepreneurs' motivations and satisfactions to use social media in order to shed light on what aspects of their social capital are affected by these networked platforms.

The outcomes of this dissertation offer two new insights to the social capital. On one hand, aligned to prior work on network dynamics (Slotte-Kock & Coviello, 2010; Witt, 2004), this research proposes that social capital is developed as a result of the entrepreneur's resource challenges throughout the new firm formation process. Specifically, by studying the entrepreneurs motivations to use social media, this work identified that entrepreneurs not only use social media to connect to their social networks as a potential source of social capital, but that they are also motivated to use social media to develop new social ties to overcome some resource constraints. Moreover, this work identified that in order to develop a relationship with a potential resource owner, the 'network development' was subject to encounter a fit between the type of resource and the (social) media platform. This suggests that social media is not a neutral platform because when entrepreneurs use social media, the successful management of their social network is dependent on this platform.

On the other hand, regarding the social environment gratifications for using social media, this work identified that entrepreneurs use social media to manage their social capital by

maintaining their relationship with their social networks as well as by developing new social ties through this networked environment. In this vein, these results also suggest that entrepreneurs' emergence or development of indirect ties can also happen through social media, and this offers a new framework to study the role of referrals in resource exchange through indirect relationships. In this vein, this work also supports that social media offers a networked context where entrepreneurs can be more connected to potential resource owners.

Finally, this work contributes to entrepreneurship research through the social capital and brings new knowledge on the impact of social media on entrepreneurial settings. Specifically, this work identified that entrepreneurs have some motivations to use social media regarding their resource challenges, and that they benefit from social media to enhance their social network that potentially contributes to their access to resource owners. Thus, the current research has implications for both scholars and practitioners that are discussed in detail in the following section of this chapter.

In addition, this research is not exempt of some important limitations in terms of the research design, the sample, the data collection and the analytical strategy, that are discussed in section two of this chapter.

## I. Implications

The implications of this research can be for both entrepreneurship research scholars based on the managerial field, and practitioners such as entrepreneurs or entities dedicated to the promotion and support of the new venture formation process.

### *1.1. Implications for researchers*

From a scientific point of view, this study shed light on the impact of social media on entrepreneurial research using the perspective of the individual's social capital. Thus, by studying why and how entrepreneurs use social media to manage their social capital this dissertation made several theoretical contributions to entrepreneurship, social capital and social media.

First, grounded on entrepreneurship research, this work supports that the Resource-Based Theory is a useful framework study the relevance of resources on the entrepreneurial process (Alvarez & Busenitz, 2001). However, this research suggests that, when studying entrepreneurial practices in dynamic contexts, such as technology-based, dynamic approaches are recommended to capture how founders deal with higher levels of uncertainty and rapid change (Boccardelli & Magnusson, 2006; Sullivan, 2006). Moreover, this work also supports that prior knowledge and experience of the entrepreneur, earned through prior education, exposure to professional settings (mainly related to the industry), and prior start-up experiences, may impact the management of their social capital, and in turn why and how they use social media during the entrepreneurial process (Davidsson & Honig, 2003; Mosey & Wright, 2007; Coleman, 1988).

Secondly, this dissertation also made specific contributions to the social capital framework. On one hand, this research supports recent work on the dynamic perspective of social capital, where this is accumulated over the time and can be developed in consequence to individual needs (Witt et al., 2008; Sullivan, 2006). Specifically, this work proposed the concept of 'network development' that identifies how entrepreneurs can manage their social capital through social media in order to fulfil their resource challenges. For example, some entrepreneurs constantly developed their social network through social media as a strategic action to accumulate social capital, whereas other entrepreneurs developed their social network to overcome specific resource constraints during the entrepreneurial process (Witt, 2004; Sullivan, 2006; Slotte-Kock & Coviello, 2010; Elfring & Hulsink, 2007).

Moreover, under the concept of 'network development', this work shows that the successful creation of new ties with potential resource owners strongly depends on the correct fit between the type of resource and the networking strategy (social media) (Haythornthwaite, 2002; Lee & Jones, 2008). In turn, this finding suggests that social media is not a neutral platform but that can interfere in the successful management of social capital.

On the other hand, regarding how individuals manage their social network to gain social capital, this research identified how entrepreneurs use social media to both maintain and develop their social network as part of their 'network development' (Zhang et al., 2011; Zhang et al., 2010). Specifically, this work found that social media can be seen as a networked platform to both accumulate and develop social capital (Baron & Markman, 2003; Smith et al.,

2012; Fischer & Reuber, 2014; Stam et al., 2013) as this networked platform makes individuals more connected to their social network which in turn enhances their chances to identify potential resource owners as well as referrals to indirect ties. Thus, social media creates a networked context for entrepreneurs to manage their social capital.

Finally, by applying the Uses and Gratifications Approach to the field of entrepreneurship, this dissertation also contributed into the current knowledge of social media by enforcing and enriching the current literature through this particular field (Quan-Haase & Young, 2010; Chen, 2011). Specifically, this work suggests that the study of social media adoption and usage within professional settings is strongly related to the individuals' management of their social capital (Ellison et al., 2010; DiMicco et al., 2008). Moreover, social media can be a powerful tool specially in dynamic contexts where resources are limited or specific such as technology-based environments (Fischer & Reuber, 2014; Fischer & Reuber, 2011) as it enables a networked platform where entrepreneurs are more connected to potential resource owners.

In addition, by studying the motivations and satisfactions of entrepreneurs for joining social media, this research identified that because the social media is not a neutral platform, the management of the ego-centric social network is one of the main elements why entrepreneurs decide to engage in these types of platforms as they expect to obtain certain types of social environment gratifications enabled by this space that support their maintenance and development of social capital.

To sum up, scholars dedicated to the study of entrepreneurship with a special focus on the managerial field may benefit from this work to gain additional tools to understand the concept of social capital and 'network development' in nowadays settings; where entrepreneurs' usage of social media makes them work in a networked context to manage their social networks. Moreover, the current work can also be of interest for scholars studying the impact of social media on nowadays networked and dynamic context as a platform that strongly impacts individuals' social network.

### *1.2. Implications for practitioners*

From the practitioners' point of view, there is also a strong interest in understanding whether social media is a useful tool for the new firm formation process and how entrepreneurs can benefit from these networked environments. Thus, this research provides some insights on

why and how entrepreneurs can benefit from social media to access different types of resources such as human and financial, potential customers, etc. during the early stages of their entrepreneurial process. For example, this work found that the entrepreneurs' social network has been enriched by social media, as this new platform is not only an alternative communication channel for entrepreneurs but it also enables them to manage their social contacts efficiently by empowering the role of latent ties (Mariotti & Delbridge, 2012).

Another example of the main implications of this work relates to the novel insights regarding the resources entrepreneurs tend to access through social media, as these experience can serve as an advice to other entrepreneurs of the main advantages and disadvantages of the use of social media. Thus, independently of the background of the entrepreneur, this work identified that some entrepreneurs use social media during the opportunity stage to socialize with other entrepreneurs and to engage within different actors of their industry. Other entrepreneurs also use social media during the exchange stage to build their entrepreneurial team, recruit skilled employees or search for potential investment, and during the exchange stage to engage with potential customers. In contrast, despite social media can be used to network at any stage of the entrepreneurial process, some entrepreneurs perceived difficulties to benefit from social media specially to search for potential investment. Finally, other entrepreneurs also noted that it is difficult to network within specific industries (such as logistics) as they identified that actors within these industries are not very active in these virtual platforms. In order to provide a brief summary of the preliminary implications of this work regarding the impact of social media on entrepreneurs, the prior insights have been synthesised in Table 18.

	Opportunity stage	Creation stage	Exchange Stage
Advantages	Useful to conduct a product validation through interacting with the industry	Useful to build a working team (entrepreneurial team members and recruitment of skilled employees)	Useful to identify and connect to potential early adopters / customers
	Useful to connect to other entrepreneurs	Useful to identify and potential investors	Useful for promotion / dissemination
Disadvantages	Some industries are not very active within this platforms - Difficulties to conduct product validation through social media within those industries		
	Some firms find it difficult to engage with investors within these platforms		

*Table 18 Implications for practitioners: The impact of social media during the entrepreneurial process*



In overall, this dissertation made three main practical contributions to entrepreneurs and entities dedicated to support the entrepreneurial process. First, as a way to face challenging resource constraints or to develop strategically actions towards a constant development of their social network (and in turn, social capital), the current findings support that entrepreneurs can improve their process through their access to resources with social media. Specifically, in contrast to prior research, this research posits that entrepreneurs whose social capital is limited, can manage their social network through social media and enhance their social capital by a constant management of their social network (Neergaard, 2005; Kietzmann et al., 2011). These individuals are potential resource owners throughout the entrepreneurial process.

Secondly, in line with the previous contribution, the current findings also support that the entrepreneurs usage of social media to manage their social capital needs to be strategically designed. More precisely, entrepreneurs need to take into account that social media is not always the best tool to develop new relationships (Kietzmann et al., 2011; Quan-Haase & Young, 2010; Kenneth et al., 2012). For example, elements such as the industry or some types of resources (e.g. finance or specialised human capital) are more difficult to acquire through social media. Thus, entrepreneurs need to take into account that when they manage their social networks, and especially develop new social ties with potential resource owners, they need to align their resource needs to the media platform.

Finally, a last major contribution of this dissertation is to offer entrepreneurs new insights on how to manage their social network through social media, especially on how to strategically maintain and develop social ties. For example, based on prior research, entrepreneurs tend to use their established social network to address their resource challenges because the chances of obtaining a positive resource exchange are higher than when the relationship needs to be developed. (Mariotti & Delbridge, 2012). Then, social media offers entrepreneurs a complementary platform where they can maintain their social network in a latent state, at a lower cost but with richer information available of the evolution of their social networks (Boyd & Ellison, 2007; Gilbert & Karahalios, 2009). In turn, social media offers entrepreneurs a complementary tool to manage their social network.

In addition, when entrepreneurs cannot address their resource needs through their direct social network, entrepreneurs may also benefit from these tools to develop new social ties

with potential resource owners (Joinson, 2008) by identifying potential referees within their social network as well as contact information from potential resource owners.

To sum up, entrepreneurs dedicated to the exploration and exploitation of new business opportunities and other entities in charge of providing support to the entrepreneurial process may find this study useful to gain additional tools to benefit from social media as a complementary tool to manage their social capital.

## **II. Limitations & Future Research**

Throughout this research a set of decisions have been made in terms of the research design, the sampling, data collection or data analysis and have been substantiated by appropriate arguments. However, these choices inevitably give birth to some limitations; because inherent to the decision to do something there is also the decision not to do something else. Thus, this section summarizes the main limitations of this work.

First, regarding the research design of this work, this followed an inductive approach to study 20 entrepreneurial cases. Although the research used a theoretical sampling to provide the maximum generalization from the sample, it's a must to take into account the limitations of this research for providing an empirical generalization of the current outcomes. In fact, further research would benefit from analysing the propositions emerged on a broad sample of entrepreneurial cases to shed quantitative evidence on findings.

Moreover, in line with the limitations regarding the research design, this work explored the motives and gratifications of the entrepreneur's usage of social media to enhance their social capital; however, the research design was based on the perceptions of the main founder's from their prior experiences and their social media network and activity for a period of 10 weeks to capture their regular dynamics. In contrast, the current research was not able to capture real-time data on the entrepreneur's usage of social media for resource acquisition. Further work could also explore other research techniques to collect data from ongoing resource exchanges and 'network development' through social media.

In addition, another limitation on the research design is due to the aim of the research question proposed. More precisely, this research did not seek to learn about the entrepreneur's managerial strategies when using social media, and how the level of expertise

can influence their ability to enhance social capital. Further research could also benefit from exploring the current research field from a managerial view by adopting the resource orchestration or entrepreneurial *bricolage* perspectives (Baker et al., 2003).

The last limitation regarding the research design was that the aim of this work was to evaluate the positive outcomes from social media by looking at the entrepreneur's motives and gratifications of their engagement to enhance their social capital. However, no research was done on how long (account of time) entrepreneurs spend in social media to know about the problems or difficulties of using these tools. Further research could also benefit from including a time variable in this framework to shed light on the "dark side" of these tools.

Secondly, regarding the sampling of this research work, there are some important limitations to take into account. For example, when selecting the profile of the sample, this research paid special attention to the opportunity-driven entrepreneurs, and especially those engaged in new technology-based firms as they are representative of the entrepreneurial process on dynamic settings. Although the sample captured a control case from a non-technological entrepreneurial firm, further work should also seek for a broader sample on other opportunity-driven entrepreneurial practices as well as to explore these settings on necessity-driven entrepreneurs to propose the generalization of the results.

Another example regarding the limitations of the sample is that this work aimed to explore the motives and gratifications of the entrepreneur's usage of social media. Thus, the sample selected was mainly based on actual social media users and did not take into account founders with no usage or experience in social media. This decision limits the current results in two ways. On one hand, by only taking users that were already engaged in social media, the current work did not take into account the entrepreneur's adoption decision process and the characteristics of it. On the other hand, this sample also limits the results to potential insights on why some entrepreneurs probably started using social media and stopped. Thus, further research could also benefit from comparing different types of entrepreneurs regarding their social media usage to shed light on their adoption process as well as potential motives for quitting entrepreneurial usage of social media.

Moreover, another example of the limitations of this sample was to focus on entrepreneurs without taking into account the other participants on the resource exchange process in social

capital. More precisely, further work could benefit from studying other participants such as research owners (investors, job seekers, etc.), referees, or “the community” to triangulate the results. Moreover, by exploring other actors within this framework, additional theoretical support might be found to analyse in depth some findings related to the fit between social media and resources, and provide complementary practical implications to this research.

In addition, a final example of limitations regarding the sample was from a cultural perspective. Due to the focus of the research, the small sample selected to conduct the current in-depth analysis was chosen from a similar cultural area (Spain) and this research did not focus on gathering and comparing different culture values. Further research could also explore how cultural values affect the current framework.

Finally, several limitations emerged regarding the decisions and tools used during the data collection and analysis of this dissertation. For example, one of the main outcomes of this research was that the entrepreneur’s background was an indicator of their further development of social network through social media. However, further research should check for deeper and broader insights into the impact of different professional backgrounds and the entrepreneur’s usage of social media to enhance social capital.

In line with these findings on why entrepreneurs decide to use social media to enhance their social capital, this research was not able to address in detail what resources (or resource owners) were better to address through each medium. More precisely, although some insights emerged during the interviews, the fieldwork was strictly aligned to the focus of this research to not miss the main objective.

Another limitation regarding the data collection and analytical strategy was on studying how entrepreneurs benefited from the usage of social media to enhance their social capital. Several insights emerged on the impact of these tools on the entrepreneurs direct and indirect social networks. However, due to the research design and the analytical tools employed, this work was limited to the available data on the entrepreneur’s social media network and activity without being able to correlate their efforts on the social media platforms with their ongoing new venture formation process. Further research would benefit from a closer approach to shed insights on how these types of virtual relationships are influenced by the entrepreneurial process.

The last limitation regarding tools employed during the fieldwork, was the difficulties to measure the impact of social media on the entrepreneur's social capital. More precisely, this work identified that entrepreneurs benefit from social media as they have improved access to direct and indirect potential resource owners. However, this research was not able to capture direct information of the causal relationship between the different social media strategies for social network development and the final resource acquisition. Further research could explore advanced research tools to approach this.

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## Annex A: Entrepreneurs' Social Media Profiles

Concerned about the impact of social media on nowadays environment some entrepreneurs adopted any type of social site "just in case": "I sign up to almost every social network; I know there are not many people with my same name, but I want to have my account just in case" (Entrepreneur 7).

In contrast, the fact that entrepreneurs had a strong adoption of SNS did not mean that they engaged and make use of the platform regularly, but the majority of the entrepreneurs were concerned about the efforts and time consumption related to this type of platforms, so they were very cautious and selective when it came to enrolling in social sites. For this reason, they only engaged in those social networks with a (perceived) additional value (usefulness) such as LinkedIn, Twitter and Facebook, and even some of them run a Blogspace.

	Blog	LinkedIn		Facebook		Twitter	
		Personal	Firm	Personal	Firm	Personal	Firm
Entrepreneur 1	N	Y	N	Y	Y	Y	Y
Entrepreneur 2	Y	N	Y	Y	Y	N	Y
Entrepreneur 3	N	Y	Y	Y	Y	Y	Y
Entrepreneur 4	N	Y	Y	Y	Y	N	Y
Entrepreneur 5	N	Y	Y	Y	Y	Y	Y
Entrepreneur 6	Y	Y	Y	Y	Y	Y	Y
Entrepreneur 7	N	Y	Y	Y	N	Y	Y
Entrepreneur 8	N	Y	N	N	Y	N	Y
Entrepreneur 9	N	Y	N	Y	N	Y	Y
Entrepreneur 10	N	Y	Y	N	Y	Y	Y
Entrepreneur 11	N	Y	Y	Y	Y	Y	Y
Entrepreneur 12	Y	Y	N	Y	Y	Y	Y
Entrepreneur 13	N	Y	Y	Y	Y	Y	Y
Entrepreneur 14	N	Y	Y	Y	Y	Y	Y
Entrepreneur 15	Y	Y	N	Y	Y	Y	Y
Entrepreneur 16	N	Y	Y	Y	Y	Y	Y
Entrepreneur 17	Y	Y	Y	Y	Y	Y	Y
Entrepreneur 18	N	Y	N	Y	Y	Y	Y
Entrepreneur 19	Y	Y	N	Y	Y	Y	Y
Entrepreneur 20	N	Y	N	N	N	N	N

Table 19 Entrepreneurs social media profile

Regarding the active profiles entrepreneurs manage (Table 18), the most common SNS was LinkedIn for professional networking and both Twitter and Facebook for supporting networking strategies through a firm profile (19 and 17 entrepreneurs). It was not very common that entrepreneurs used Facebook for professional networks, as that was mainly used for maintaining informal ties. Finally, only 6 entrepreneurs managed a blogspace basically because its maintenance was time consuming.

## Annex B: Design of the outline for the interviews

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The objective of this work is to shed light on the impact of social media on entrepreneurs. Specifically, based on the research gap identified, this work explored the following research question “To what extent do entrepreneurs use social media to manage their social capital?”, with a special attention paid to the following sub-research questions: “Why do entrepreneurs use social media to manage their social capital?”, and “How do entrepreneurs use social media to manage their social capital?”.

In order to design a suitable outline for the interviews, this research reviewed the literature and organized the outline in two main blocs: “The entrepreneur and general issues about the start-up” and “Uses and Gratifications of the social media”. Thus, based on the literature, the first bloc was designed to capture both the entrepreneurs’ profile (through exploring some personal characteristics and their personal and professional background) and the main characteristics of the new firm. Then, the second bloc was designed to explore the entrepreneur’s motivation of social media and their perceived gratifications. This second bloc also adjusted similar research based on the Uses and Gratifications Approach.

This outline was a template for conducting the interviews, but was not a rigid outline, meaning that the researchers were flexible to restructure or rephrase some questions based on the flow of the interview. Then, the structure of the outline used to conduct the interviews to the entrepreneurs was the following:

- 1) The entrepreneur and general issues about the start-up

Entrepreneur’s personal characteristics: Could you tell us about yourself?, Are you a membership in professional or social Organizations related to your start-up? ...

Entrepreneur’s personal background: Could you tell us about your personal background? Where do you "grew up"? Who did you grow up with?, What were your parents’ major occupation? Was anyone self-employed and/or owned a business? If so, what type of business did s/he owe? What attitude has s/he towards your business venture? ...



Entrepreneur's professional background: Could you tell us about your educational background? What qualifications have you achieved that may be relevant to your current professional career? Could you tell us about your professional background? ...

Type of business (high-tech): Can you tell us about your business? What type of business do you own? What does your firm do? How long have you run your current business? How are you making money? How do you perceive the future of your company: (growing / staying about the same size / shrinking)?

## 2) Uses and Gratifications of the social media

Uses: Are you familiar with the social media? What social media platforms are you more familiar with? Why? Why do you use this them? What business usage do you make of the social media? Why do you use social media to interact with your social contacts for business issues?

Gratifications: Based on your experience, how do you think social media have affected your business process? What benefits do you get from social media?

## Annex C: Original transcripts. Analytical Strategy

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This section includes the original transcripts included at the section IV. Analytical Strategy, “Codification of the interviews”.

### **Transcript 1, Analytical strategy**

<i>Perquè et vas crear un compte de LinkedIn?</i>	<i>Doncs com que jo <b>em dedicava a una altra cosa que era la medicina (C08-001) i a nivell professional de start-up no tenia targeta de presentació (C08-002), era una manera de ...</b></i>
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Table 20 Original Transcript. Example of key point identification in the transcript

### **Transcript 2, Analytical strategy**

<b>ID</b>	<b>Key point</b>	<b>Content code</b>
<i>C08-01</i>	<i>... em dedicava a una altra cosa que era la medicina...</i>	<i>Entrepreneurial experience</i>
<i>C08-02</i>	<i>... a nivell professional de start-up no tenia targeta de presentació</i>	<i>Entrepreneurial profile</i>

Table 21 Original Transcript. Example of the code extraction from a key point



## Annex D: Terminology of the concept Social Media

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Social media identifies those technological devices developed for communication and information sharing, where the content is mainly endorsed by other users. In this vein, social media encompasses different types of platforms such as social networking sites, blogs and microblogs, content sharing, etc. (Boyd & Ellison, 2007; Kaplan & Haenlein, 2010).

The interest of this research was to understand why and how entrepreneurs use these technological devices (mainly cultivated by active users) to network with other individuals in order to get access to resources during their entrepreneurial process. In contrast, during the interviews two main obstacles were found when it came to using the term “social media”: (1) the concept was too broad so respondents were overwhelmed by the amount of platforms social media encompasses, (2) entrepreneurs did not distinguish internet in general from the particular concept of social media, and (3) this online tools were so much entangled to the offline settings that it was difficult to treat the term isolated from traditional settings.

First, when the entrepreneurs were first asked about their use of social media, the main concern was that the term was too open so it often required further clarification from the researchers side (Kietzmann et al., 2011; Boyd & Ellison, 2007). Thus, apart from a full introduction and debate about the different social media platforms was included at the beginning of each interview to get entrepreneurs familiar with the spectrum of this term, during the interviews the focus was kept on those platforms that required entrepreneurs’ engagement and active participation such as social networking sites, blogs or microblogging. More precisely, as the interest was in identifying what actions entrepreneurs did in such platforms (creating a profile, searching for ties, etc.) to build their networking strategies, it was found more useful to use the term social networking sites (or the name of specific platforms when applied) to refer to the particular tools that they engaged in.

Secondly, social media is nowadays such an important part of the internet that some entrepreneurs considered all the different online platforms as a whole, all part of “the internet”. This meant that they were so immersed in the online ecosystem where all platforms are interconnected that they struggled to identify each platform as an independent tool. For example, some entrepreneurs who located some information through twitter were redirected to blogs, LinkedIn profiles, or other platforms for further data. In consequence, this added

some difficulties when trying to understand social media separately from internet, so while interviewed, entrepreneurs were given freedom to use the term “Internet” to refer to “any online tool available” but were additionally asked to reflect on the interplay of social media and traditional settings.

Finally, social media is also so immersed on our daily routines that has become a complementary tool for communication and information sharing. For this reason, during the interviews it was sometimes difficult to treat each social media platform independently, or isolated from the traditional settings. For example, some entrepreneurs identified potential ties through social networking sites, contacted them through email and then established the connection through in-site meetings, so their networking strategy was developed through the intersection of online and offline settings. In this vein, again entrepreneurs were asked to reflect on this interaction dynamics to get more insights on the role that social media plays in traditional environments.

## Annex E: Table of variables for the cross-case study

In order to conduct the cross-case analysis, several elements were taken into account. This elements were collected from the interviews as well as from the public social media data.

On one hand, after the interviews, a table was constructed to summarize the information of each case through the individual profile. Specifically, information was collected regarding their nationality and age, as well as from their prior educational and professional background on technological settings, entrepreneurship or the industry of their new-born firm (Table 22).

Individual Profile		
Nationality (N), Age (A)		
Experience	Techno (ET)	Yes/No & Length (y)
	Entrepreneurship (EE)	Yes/No & Length (y)
	Industry (EI)	Yes/No & Length (y)
Specific Formation	Techno (FT)	Yes/No
	Entrepreneurship (FE)	Yes/No
	Industry (FI)	Yes/No

Table 22 Cross-case analysis parameters (Individual profile)

An example of this table is provided below (Table 23) using the codes above as references for the description of each column:

Individual Profile								
# Entrepreneur	N	A	ET	EE	EI	FT	FE	FI
Entrepreneur 1	Spain	1982	6	X	X	Y	Y	X
Entrepreneur 2	Spain	1981	X	X	2	X	X	Y
Entrepreneur 3	Holland	1967	X	10	X	X	Y	X
...								

Table 23 Example of cross-case analysis parameters (Individual profile)

On the other hand, the social network and activity collected from the social media identities of the entrepreneurs for both the personal and the professional virtual profiles (Table 24). This data was first collected after the interviewing process was completed and data was regarded for a period of ten weeks. For each case, an independent template was developed to facilitate the analytical process.

Social Media Data		
Personal	LinkedIn	# Relationships (I-L-R)
		# Groups (I-L-R)
	TW	# Following (I-T-I)
		# Followers (I-T-E)
Professional	FB	# Likes (I-F-L)
		# Posts (I-F-P)
	LinkedIn	# Likes (F-L-L)
		# Posts (F-L-P)
	TW	# Following (F-T-I)
		# Followers (F-T-E)
		# Tweets (F-T-T)

Table 24 Cross-case analysis parameters (Social Media data)

An example of this table is provided below for Entrepreneur 1 (Table 25):

Social Media Data - Example								
Entrepreneur 1	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	...
I-L-R	415	431	438	442	447	449	457	
I-L-R	14	14	14	14	15	15	15	
I-T-I	399	400	400	401	403	404	403	
I-T-E	244	244	244	246	256	255	256	
I-T-T	567	567	567	567	568	568	568	
I-F-L	151	163	166	178	198	198	198	
I-F-P	5	4	4	4	3	5	3	
F-L-L	28	29	29	30	30	30	31	
F-T-I	873	874	876	877	878	878	877	
F-T-E	339	355	350	353	355	360	363	
F-T-T	367	376	378	385	390	394	397	

Table 25 Example of cross-case analysis parameters (Social Media data)

Finally, regarding the different theoretical concepts arisen from each case, an additional table was constructed to summarize the insights captured for each entrepreneur (Table 26).

Theoretical Concepts - Example						
# Entrepreneur	Concept 1	Concept 2	Concept 3	Concept 4	Concept 5	...
Entrepreneur 1	1	1	1	0	0	
Entrepreneur 2	1	0	0	0	1	
Entrepreneur 3	0	0	0	0	1	
...						

*Table 26 Example of cross-case analysis parameters (Theoretical concepts)*





## Annex F: Original transcripts. Discussion I-A

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### Quote E1-1

*"...volia validar si el meu producte els hi serviria als psicòlegs d'allà Amèrica, volia veure si el mercat me'l compraria, i per tant vaig buscar al LinkedIn "psicólogo", "asociación de psicólogos de San Francisco" i vaig començar a enviar mails per reunir-me amb ells i presentar-los el tema." (Entrepreneur 1)*

### Quote E1-2

*"Volia també trobar un advisor de Standford que em pogués donar reputació mèdica al producte, per tant anar a LinkedIn i vaig buscar "Standford", "departamento de psicología", i a enviar-los mails per contactar-los." (Entrepreneur 1)*

### Quote E1-3

*"El social media és una font d'informació constant si estàs a grups de Newsletter, o Meetup, o bueno, tens al Facebook que són gent del món de l'emprenedoria, segur que sempre rebràs inputs d'aquests tipus de cursos i d'altres." (Entrepreneur 1)*

### Quote E1-4

*"No saps mai quan pot aparèixer el contacte que necessites, o quan poden sorgir noves idees, per tant contra més relacions tinguis millor. (...) Això ho tenim a través de Meetup i altres comunitats que posen en contacte a emprenedors o persones amb interessos comuns." (Entrepreneur 1)*

### Quote E2-1

*"...sobretot les xarxes socials com pot ser el Facebook o el LinkedIn, donen a l'emprenedor una forma molt senzilla d'arribar al gran públic." (Entrepreneur 2)*

### Quote E2-2

*“A través del Meetup pots conèixer gent, com en el meu cas d'emprenedoria social, i després comparteixes problemes o fins i tot el teu projecte i reps suport o feedback” (Entrepreneur 2)*

**Quote E3-1**

*“No hemos invertido ni en comprar tráfico, sólo hemos proporcionado la información y la gente lo mueve a través de las redes sociales. (...) El social media es otro medio de comunicación, como un periódico o un periodista.” (Entrepreneur 3)*

**Quote E4-1**

*“També estem muntant una campanya de ‘Public Relations’ amb bloguers que hem identificat al social media, perquè aquests bloguers tenen una llista de fans i el que volem és que a través d'aquests bloguers arribem als seus fans i puguem donar a conèixer la plataforma.” (Entrepreneur 4)*

**Quote E4-2**

*“Moltes vegades si tens contactes directes no vas al LinkedIn, però hi ha vegades que no coneixes a ningú concret en aquell tema, i vas i busques a social media a través de grups, per exemple...” (Entrepreneur 4)*

**Quote E4-3**

*“...dins el departament tecnològic vàrem contactar-ne i contractar-ne alguns a través nostre perquè veníem del món de la tecnologia, però hi havia alguns perfils que no vàrem poder trobar i vàrem haver de treballar amb head-hunters.” (Entrepreneur 4)*

**Quote E5-1**

*“... molts d'aquests inversors els captem a través de LinkedIn. Sobretot n'hi han alguns que ens els hem creuat alguna vegada, o sabem que són inversors que inverteixen en empreses tipus la nostra i no l'hem conegut mai, LinkedIn és el lloc perfecte per contactarlos la primera vegada” (Entrepreneur 5)*

#### **Quote E5-2**

*“Teníem que contractar un programador, i vàrem trobar més útil fer-ho a través de xarxes especialitzades ja que pots concretar més el perfil que vols, mentre que en una genèrica és difícil introduir camps específics del perfil que buscàvem.”  
(Entrepreneur 5)*

#### **Quote E5-3**

*“El Meetup els faig servir per seguir determinats grups o comunitats que fan reunions regulars. Solen ser trobades interessants on els emprenedors comparteixen el seu coneixement i experiències, i és un tipus d'esdeveniment que m'interessa.” (Entrepreneur 5)*

#### **Quote E5-4**

*“...a (nom empresa) usem tant Facebook com Twitter perquè és on estan els nostres usuaris. Tota la comunicació la fem per allà per connectar amb la comunitat i amb l'objectiu que es comparteixi, i cada vegada captar més potencials usuaris.” (Entrepreneur 5)*

#### **Quote E6-1**

*“Tenim una persona de community manager que l'hem trobat a través de una xarxa social que posa en contacte a estudiants amb empreses (Student Job), i el que fas és que poses la teva oferta i hi ha candidatures, te les envien, i tu esculls el perfil que t'interessa.” (Entrepreneur 6)*

#### **Quote E6-2**

*“...tenim l'atenció amb els clients amb un sistema més de tu a tu, però més d'una vegada algú ens ha preguntat alguna cosa de forma oberta a Twitter.”  
(Entrepreneur 6)*

#### **Quote E7-1**

*“Necessitem les xarxes socials, per exemple en el nostre cas tenim el repte de trobar i captar creadors de continguts, aquests amfitrions turístics que puguin estar interessats en el producte, llavors, en aquests perfils ens hem de mostrar.”  
(Entrepreneur 7)*

**Quote E7-2**

*“... i per l'altra banda evidentment, també necessitem les xarxes socials per ser visibles a nivell del consumidor final ...” (Entrepreneur 7)*

**Quote E7-3**

*“El Meetup és útil per apuntar-se a grups a partir dels quals he vist les activitats que fan i he anat a algun Meetup professional. (...) I, trobes més gent d'aquesta informal en l'àmbit dels Meetups.” (Entrepreneur 7)*

**Quote E7-4**

*“...si abans tu volies accedir a coneixement professional havies d'anar a comprar-lo com a cursos, en forma de consultora, però ara ho tens allà, pots trobar un perfil bastant bo i amb coneixements de qualitat” (Entrepreneur 7)*

## Annex G: Original transcripts. Discussion I-B

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### Quote O1

*“A través del Meetup pots fer networking que era precisament el que m’interessava a mi en aquest cas d’emprenedoria social, i bueno comparteixes problemes o fins i tot el teu projecte, reps feedback... I va bé en aquest sentit”*  
(Entrepreneur 2)

### Quote O2

*“La informació està més a l’abast de tothom, i llavors la competència et descobrirà més ràpid, però no crec que això sigui un problema. Vull dir, crec que em serveix, perquè prefereixo saber si tinc competència, i qui són els meus competidors, i si els podria interessar el meu producte.”* (Entrepreneur 1)

### Quote O3

*“...aquests són els que he contactat per validar el producte. Després de identificar-los a través del social media, els he anat contactant per correu, m’he reunit amb ells, he vist que tenen una necessitat i estan disposats a provar un producte no acabat i donar-me feedback.”* (Entrepreneur 1)

### Quote C1

*“...el nostre equip esta principalment compostat per el meu cunyat i jo, ens complementem molt bé perquè jo soc l’expert (industria) i ell és un enginyer amb experiència rellevant en l’emprenedoria, ell ja havia creat dues o tres start-ups abans.”* (Entrepreneur 8)

### Quote C2

*“Donat que estem en contacte amb estudiants d’enginyeria de la universitat, normalment accedim primer a ells...”* (Entrepreneur 17)

### Quote C3

*“Per tenir credibilitat mèdica necessito gent amb prestigi per formar part de l'equip, i a aquests els he buscat a través de LinkedIn.” (Entrepreneur 1)*

#### **Quote C4**

*“Doncs vaig començar jo però es va unir un amic meu i som els dos co-fundadors de l'empresa, i també tenim un desenvolupador que com que no vam identificar-ne cap an el nostre entorn, el vàrem trobar per les xarxes socials bàsicament, vàrem posar una oferta al LinkedIn.” (Entrepreneur 1)*

#### **Quote C5**

*“...hem intentat usar el LinkedIn per al recruitment, però hem trobat que el que és útil per a trobar aquests perfils especialitzats és fer-ho a través de xarxes socials especialitzades, perquè normalment reps moltes respostes i així la possibilitat que els candidats siguin interessants és més alta.” (Entrepreneur 5)*

#### **Quote C6**

*“... els inversors que hem trobat provenen d'un programa d'acceleració de U.S.A on vàrem conèixer venture capitalists i business angels, i ara tenim una bona xarxa d'inversors que quan sigui el moment podrem contactar. Però aquests perfils no els hem buscat per les xarxes socials, aquests te'ls han de presentar o has de tenir alguna referència perquè sinó enviant un correu és molt difícil que et responguin.” (Entrepreneur 1)*

#### **Quote C7**

*“Els inversors no són actius en aquestes xarxes socials... es a dir, tenen el seu perfil perquè l'han de tenir, i perquè el contacte inicial amb molts d'ells s'estableix a través d'aquestes xarxes, i perquè els hi interessa ser trobats,” (Entrepreneur 5)*

#### **Quote C8**

*“... alguns d'aquests inversors els contactem a través de LinkedIn. No diria que tenim un 100% d'efectivitat de respostes però vaja és lo normal en una comunicació d'aquest tipus.” (Entrepreneur 5)*

### **Quote E1**

*“...totes les nostres campanyes passen a les xarxes socials, perquè trobem els nostres potencials clients tant a Facebook com a Twitter. I hem d’estar allà per descomptat.” (Entrepreneur 5)*

### **Quote E2**

*“Les xarxes socials són molt rellevants per nosaltres, precisament per mostrar, a nivell de consumidor final.” (Entrepreneur 7)*

### **Quote E3**

*“A través del social media identifiquem creadors de continguts, que al cap i a la fi, seran els nostres clients ja que usaran la plataforma per complementar la seva feina.” (Entrepreneur 7)*

### **Quote E4**

*“El nostre sector no és massa fort en el social media, així que l’ús d’aquestes eines per obtenir beneficis per al nostre negoci no és una opció per a nosaltres.” (Entrepreneur 15)*





## Annex H: Original transcripts. Discussion II-A

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### Quote CO1

*“El LinkedIn el faig servir com a targeter. Tots els contactes que faig estan a LinkedIn, i de tant en quan si tinc alguna necessitat vaig a LinkedIn i busco i trobo coses curioses (...)” (Entrepreneur 6)*

### Quote CO2

*“A nivell personal, el LinkedIn ens va molt bé per mantenir el contacte amb proveïdors amb qui hem treballat en el passat.” (Entrepreneur 5)*

### Quote CO3

*“...tota la gent que vas coneixent, te la vas incorporant al LinkedIn perquè la mantenir la relació activa amb ells.” (Entrepreneur 4)*

### Quote CO4

*“Des del punt de vista de contactes (el social media) em permet identificar persones a través de grups o paraules clau, depenent del que busco.” (Entrepreneur 4)*

### Quote CO5

*“Actualment tenim un community manager que hem trobat a través de una xarxa virtual online que posa en contacte estudiants amb empreses (Student Job), així que vàrem publicar la oferta, després vàrem rebre els candidats i així podem tenir més poder sobre el procés de selecció, comparat amb els processos tradicionals.” (Entrepreneur 6)*

### Quote CO7

*“Em vaig registrar a un grup (indústria) i vaig trobar un comentari interessant, el vaig contactar i des de llavors hem establert una relació comercial.” (Entrepreneur 7)*



## Annex I: Original transcripts. Discussion II-B

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### Quote EN1

*"...tota la gent que vas coneixent, te la vas incorporant al LinkedIn, perquè és una manera d'agregar-los a la teva xarxa de contactes i tenir-los més receptius si els has de contactar en un futur." (Entrepreneur 4)*

### Quote EN2

*"Al final, acabo contactant amb gent que ja conec, que ja he conegut d'alguna altre cosa, ja que és més fàcil tenir una resposta positiva." (Entrepreneur 5)*

### Quote EN3

*"Tots els meus contactes estan al LinkedIn, així quan necessito alguna cosa, la primera cosa que faig és anar al LinkedIn i normalment trobo alguna cosa interessant com per exemple que algú ha canviat de feina recentment o algú que conec que podria estar interessat en el que faig, etc." (Entrepreneur 6)*

### Quote EN4

*"Es interessant perquè puc veure la informació dels meus contactes, a qui coneixen, etc. i potser mentre estàs mirant això penses "ostres" amb aquest m'interessaria contactar..." (Entrepreneur 6)*

### Quote EN5

*"...de fet, hi ha gent que sabem que són inversors que inverteixen en empreses tipus la nostre i no l'hem conegut mai. Pensem que LinkedIn és el lloc perfecte per contactar-los la primera vegada." (Entrepreneur 5)*

### Quote EN6

*"No és difícil fer una llista d'empresaris, el que és més complicat es accedir-hi d'una forma més directe." (Entrepreneur 6)*

#### **Quote EN7**

*“El que m'ajuda molt és conèixer els graus de separació amb persones que vull contactar, perquè així veig quina vinculació tenim, tinc una referència de com m'hi he d'acostar.” (Entrepreneur 7)*

#### **Quote EN8**

*“(Mentre faig networking) si pots accedir a través de contactes, millor, perquè t'obren una porta i així no vas en fred.” (Entrepreneur 4)*

#### **Quote EN9**

*“A través del LinkedIn un mecanisme molt interessant és el de introducció, que un contacte en comú et pugui introduir. Això valida aquesta relació, no?” (Entrepreneur 7)*

#### **Quote EN10**

*“Si tu vols picar una porta i no et coneixen, doncs el que fas és ajudar-te del LinkedIn, i així veuen qui ets i poden prendre la decisió de rebre't o no.” (Entrepreneur 4)*

#### **Quote EN11**

*“LinkedIn és un aparador del teu perfil professional. Es a dir, si Facebook proporciona una plataforma als adolescents per demostrar lo “guais que són”, doncs aquesta xarxa LinkedIn els permet als perfils professionals mostrar els grans èxits que han tingut, les inversions que han fet, el seu curriculum” (Entrepreneur 5)*

#### **Quote EN12**

*“... i pots usar el Twitter per posicionar la identitat del teu producte, i així que pugui ser usat com a referència. De fet fem la difusió a través d'unes empreses que tenen molts contactes, tenen influenciadors dintre d'aquestes xarxes que t'ajuden (sota uns dinerets) a expandir el teu producte.” (Entrepreneur 4)*