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**Investigations of Entrepreneurial Activities in
Crowdfunding**

Denis Frydrych

Doctor of Philosophy

The University of Edinburgh
2015

Declaration of originality

This is to clarify that the work contained within has been composed by myself and is entirely my own work. No part of this thesis has been submitted for any other degree or professional qualification. Preliminary results of this research were presented at the conferences as per list of referred conference papers.

List of referred conference papers:

- Frydrych, D., Bock, A. J., & Kinder, T. (2012). *The effect of crowdfunding on resource assembly process during and after venture formation*. Presentation given at European Conference on Innovation and Entrepreneurship (ECIE), Santarem, Portugal.
- Frydrych, D., & Bock A. J. (2013). *An analysis of reward-based crowdfunding as an entrepreneurial resource assembly process – A resource-based view and agency theory perspective*. Presentation given at British Academy of Management, Liverpool, UK.
- Frydrych, D., Bock, A. J., & Kinder, T. (2013). *Entrepreneurial legitimacy in reward-based crowdfunding*. Presentation given at 13th Academic Research Conference on Finance, Risk and Accounting Perspective, Cambridge, UK.
- Frydrych, D., Bock, A. J., & Kinder, T. (2014). *The effects of network size and quality of network relationships on capital assembly in reward-based crowdfunding*. Presentation given at Strategic Management Society (SMS) extension on ‘Crowdfunding and Entrepreneurship’, San Sebastián, Spain.
- Frydrych, D., Bock, A. J., & Kinder, T. (2014). *The effects of network size and quality of network relationships on capital assembly in reward-based crowdfunding*. Presentation given at Research in Entrepreneurship and Small Business (RENT) Conference, Luxembourg City, Luxembourg.
- Frydrych, D., & Kinder, T. (2015). *How new is crowdfunding? The venture capital evolution without revolution – Discourse on risk capital themes and their relevance to Poland*. Presentation given at Entrepreneurship for XXI century – images and perspectives Conference, Warsaw, Poland.
- Frydrych, D., Bock, A. J., & Kinder, T. (2015). *Entrepreneurial role identity and crowdfunding outcomes*. Presentation given at Research in Entrepreneurship and Small Business (RENT) Conference, Zagreb, Croatia.

Research findings of this thesis were published as per the following list of referred publications.

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Denis Frydrych

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Abstract

Crowdfunding is heralded as ‘the next big thing’ in venture capital, advocating the democratisation of capital access for entrepreneurs through online mechanisms. However, current research indicates that entrepreneurs experience high failure rates in crowdfunding, similar to ‘traditional’ venture capital approaches. This stresses the need for investigations that unveil why some crowdfunding campaigns succeed and others fail.

This thesis examines entrepreneurial activities associated with capital assembly through crowdfunding and comprises a portfolio of three empirical studies. These may be read independently or conjointly, the latter of which allows for a more nuanced understanding of entrepreneurial crowdfunding.

The first study adopts an explorative quantitative research approach, utilising records of 421 crowdfunding campaigns published on Kickstarter, a leading reward-based online crowdfunding platform. Various crowdfunding campaign characteristics are investigated to analyse how these features drive fundraising performance and outcomes. Findings reveal that entrepreneurs can exploit particular online pitch elements to create a project narrative, which enables them to establish project legitimacy within the context of crowdfunding platform communities.

The second study utilises a dataset of 81,829 crowdfunding campaigns and multivariate and probit analysis methods to examine the role of the entrepreneurs’ network size and the quality of the network relationship for capital assembly and fundraising outcome in crowdfunding. The analysis demonstrates that the quality of the network relationship, in addition to the size of the network, contributes to crowdfunding performance and outcomes. Results show that the relationship between the quality of the network relationship, the size of the network and capital assembly in crowdfunding are positive. Further, the results highlight that the addition of network relationship quality specifications improve the explanation of variation in capital assembly. This suggests that estimations that do not include network relationship variables are ineffective in explaining how entrepreneurs can facilitate

capital assembly and achieve success in crowdfunding. Accordingly, the study emphasises the role and importance of network relationship quality activities as additional determinants of crowdfunding outcomes. This study enunciates the importance for entrepreneurs to form ‘project-syndicates’, a project-related community that co-creates the project narrative and legitimacy, leading to better fundraising performance and outcomes.

The third study complements the two previously discussed quantitative studies by comprising qualitative data that elicits interpretations over a twenty-four month period in a longitudinal single case study. This study investigates the role, behaviour and experience of entrepreneurs during the crowdfunding process and relates entrepreneurial activities to fundraising performance. This study reveals three identity strategies, demonstrating how the entrepreneur can leapfrog from one side of the bimodal funding distribution in crowdfunding to the other extreme following an identity transition. This study sheds light on the entrepreneurial micro-foundations of crowdfunding by focusing on the entrepreneur’s processes pre-, during and post-crowdfunding. As such, this research provides valuable insights into entrepreneurial crowdfunding.

This thesis, taken as a whole, contributes to the understanding of entrepreneurial capital assembly through crowdfunding, and develops new theory that advances the current knowledge of crowdfunding performance and outcomes. As such, this thesis contributes to entrepreneurship theory by investigating crowdfunding from three different perspectives, utilising theories related to entrepreneurial narratives and legitimacy, networking and role identity to study the unique context of crowdfunding, where much remains to be explored.

Abbreviations

CFP	Crowdfunding platform
CSO	Colorado Symphony Orchestra
DNI	Doctor Noize Inc.

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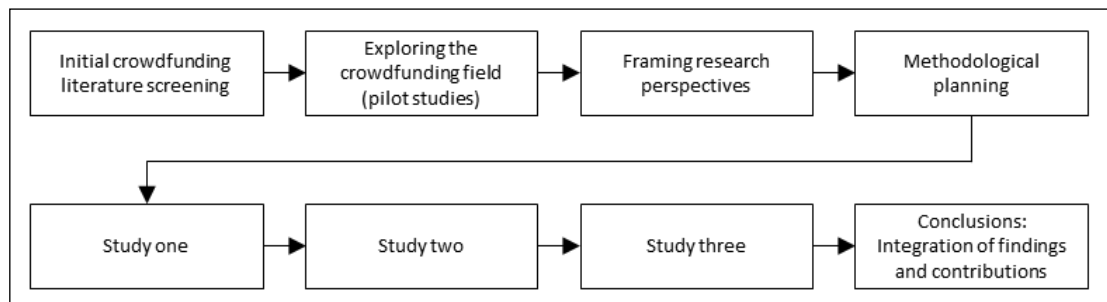
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Thesis portfolio format

This thesis applies a multi-phase research process (containing three studies that were developed in a sequential order). The research uses multiple empirical sources and data collection methods, which form three independent research projects that consider different research questions, yet contribute to the overall research topic: entrepreneurial crowdfunding. The figure below illustrates the research process adopted for this thesis.

Figure 1 Research process



(Source: Author)

Chapter 1: Introduction

“Future generations will likely grow up with crowdfunding and wonder how venture financing functioned any other way” (Lawton and Marom, 2013, p. x).

New venture development and value creation requires the assembly and formation of resources (Schumpeter, 1934; Penrose, 1959). Entrepreneurs, therefore, develop and exploit specific activities and processes to assemble necessary resources from external sources. Accordingly, topics related to entrepreneurial resource assembly and formation contribute to the development of significant research themes in entrepreneurship (Ciabuschi et al., 2012; Kotha and George, 2012). However, studies tend to primarily focus on ‘traditional’ resource sources, such as venture capital¹ firms and business angel investors² or networks (Rosenbusch et al., 2013; Vanacker et al., 2013). Emerging alternative seed and early stage finance instruments lack holistic and comprehensive analysis (Harrison, 2013; Bruton et al., 2015). As markets and technologies change, the type, availability and access of venture capital must adapt. Consequently, the evolution and emergence of alternative venture capital instruments is inextricably linked to the goal of closing the gap between resource requirements and the associated growth of more social-, service- and knowledge-based products from less asset-rich ventures. This development pushes ‘traditional’ venture capital activities away from seed and early stage investments, and more towards sectorial specialisation with larger investments being made in later stages (Bygrave and Timmons, 1992; Rosiello et al., 2011). This, however, creates a funding gap for asset deficient ventures (Stamp, 1931; Lam, 2010). Nonetheless, this

¹ The term ‘venture capital’ is often used differently in North America and Europe. In Europe, ‘venture capital’ usually refers to all private equity modalities, including buyouts, late stage and mezzanine financing. In North America, these modalities create different investment classes; as such, ‘venture capital’ refers to the equity-investment into usually small and young (entrepreneurial) firms that are characterised as high-risk, high-reward ventures (Gompers and Lerner, 2001, 2004). This thesis adopts the North American understanding of ‘venture capital’. The emphasis is on seed and early stage ‘venture capital’ investment activities, including non-equity seed and early stage investments.

² A business angel investor is defined as “a high net worth individual, acting alone or in a formal or informal syndicate, who invests his or her own money directly in an unquoted business in which there is no family connection and who, after making the investment, generally takes an active involvement in the business, for example, as an advisor or member of the board of directors” (Mason and Harrison, 2008, p. 309). It is estimated that around 18,000 business angels exist in the UK, investing around £850m per annum in seed and early stage ventures (UKBAA, 2015a).

funding gap provides opportunities for new modalities of venture capital to enter the seed and early stage market segment, while the nature of venture capital remains unaltered: unsecured investment in return for a share of future profit.

Crowdfunding is one form of crowdsourced venture capital that has become a global phenomenon using different modalities to narrow the seed and early stage venture capital gap. Crowdfunding enables entrepreneurs to leapfrog Stinchcombe's (1965) 'liability of newness', which has historically posed as a significant barrier for entrepreneurs and young ventures hoping to access 'traditional' venture capital instruments. Without resources it is difficult to create venture legitimacy and this leads to difficulties in assembling resources. It has been argued that crowdfunding is one way to overcome this lack of access to capital and resources (Kim and Hann, 2014; Koning and Model, 2014). Accordingly, crowdfunding may soon establish a wider investor footprint than both venture capital and business angels. The opportunities derived from an increase in information and communication technologies (ICTs), facilitate a high level of interactivity and close engagements between investors and investees. While some traditional capital intermediaries are provided online (e.g. peer-to-peer lending), alternative service platforms, such as crowdfunding platforms (CFPs), have emerged, which take over the tasks from offline venture capital entities. This facilitates and simplifies the social processes and financial transactions associated with entrepreneurial resource assembly (Allen and Yago, 2010; Bruton et al., 2015). As a result, entrepreneurs worldwide have started to exploit crowdfunding for capital assembly to facilitate business development.

This thesis aims to contribute to the knowledge and understanding of entrepreneurship by investigating the entrepreneurial activities in crowdfunding. The research brings together literature from entrepreneurial narratives and legitimacy, networks and role identity to study the unique context of capital assembly through crowdfunding. The objective of this thesis is to build upon established concepts from the entrepreneurship field to investigate questions related to the role of the entrepreneur and associated entrepreneurial characteristics (e.g. narratives and legitimacy, networks and role identity) that work to impact capital assembly in crowdfunding. It also explores how such characteristics relate to the performance and

outcomes in crowdfunding, which serves as the guiding foundation of this research. Ultimately, this research offers new theory, based upon empirical findings, to facilitate a more thorough understanding of how entrepreneurial capital assembly works through crowdfunding. The following sections discuss the research context of this thesis (i.e. entrepreneurial crowdfunding) and explains how it is framed within entrepreneurship perspectives.

1.1 Research context: Crowdfunding

Throughout history, specific developments and innovations in financing have extended accessibility to capital for individuals in order to exploit venturesome business opportunities (Allen and Yago, 2010). New forms of finance have evolved based not only on new technologies and organisational forms, but also in alignment with social and economic changes. At various times, historical venture capital, business angel funding and more recently, crowdfunding, have all been heralded as the ‘next big thing’ in terms of entrepreneurial capital assembly.

Crowdfunding is generally characterised as a sub-concept of the broader notion of crowdsourcing (Lehner, 2013; Belleflamme et al., 2014; Mollick, 2014). From this perspective, entrepreneurs prefer to exploit a large distributed group of individuals (the crowd), rather than professional ‘agents’ gathered for a specific purpose (capital assembly in crowdfunding). Further, crowdfunding is also understood as a finance mechanism that has strong links to the broader field of microfinance (Marom, 2013; Bruton et al., 2015). While most scholars agree upon these two characteristics of crowdfunding, no universal definition exists due to its multidisciplinary nature where different research disciplines focus on various perspectives of crowdfunding, resulting in a broad range of diverse definitions (Valanciene and Jegeleviciute, 2013). Within the entrepreneurship field, crowdfunding is often conceptualised following Belleflamme et al.’s (2014, p. 588) definition: “Crowdfunding involves an open call, mostly through the Internet, for the provision of financial resources either in the form of donation or in exchange for the future product or some form of reward to support initiatives for specific purpose.” Mollick (2014, p. 2) provides an

additional definition considering an entrepreneurial context: “Crowdfunding refers to the efforts by entrepreneurial individuals and groups – cultural, social, and for-profit – to fund their ventures by drawing on relatively small contributions from a relatively large number of individuals using the internet, without standard financial intermediaries.”

This thesis builds on these two definitions, which essentially suggest that crowdfunding refers to an entrepreneurial process with the objective of assembling resources. Accordingly, this thesis offers the following definition for crowdfunding:

Crowdfunding describes the entrepreneurial process of approaching and exploiting small or large groups of individuals (networks) in order to access the capital embedded in these groups in exchange for some type of compensation (e.g. rewards, equity shares and/or return on investment).

Accordingly, this thesis suggests that the term ‘crowdfunding’ has not emerged based on a revolutionary approach to raising venture capital, but rather as a way to provide a new taxonomy for understanding a ‘traditional’ capital assembly process: raising capital through a distributed heterogeneous group of small or large capital suppliers (i.e. investors, customers or supporters). In its central conception, crowdfunding, as a taxonomy, describes the process that individuals or organisations undergo in assembling financial capital through the exploitation of an affinity based social-network group. Specialised online-based CFPs are an important intermediate that enable crowdfunding to thrive for entrepreneurial capital assembly (Ingram et al., 2014).

Crowdfunding establishes a particular interesting innovative finance mechanism, as it leverages online social networking and social media tools for fundraising purposes. Initially, entrepreneurs from particularly underserved funding areas, such as social (e.g. Lehner, 2013) and creative domains, started to exploit crowdfunding, insofar as it offers greater market-oriented approaches for project founders³ and entrepreneurs to access and secure external capital. However, in recent years, crowdfunding has developed into several modalities, including reward-based, lending-based and equity-

³ The terms ‘project founder’ and ‘campaign founder’ are used interchangeably in this thesis.

based crowdfunding⁴ (Massolution, 2015), serving different groups from the demand side (e.g. entrepreneurs, social enterprises, communities and organisations) and the supply side (e.g. network of donors, customers, investors and funding institutions). Accordingly, crowdfunding is utilised for capital assembly purposes by entrepreneurs, small and medium sized businesses and international corporations. Hence, it is evident that entrepreneurs and their nascent ventures are not limiting their capital assembly, venture creation, growth and internationalisation strategies to ‘traditional’ venture capital sources (Eckhardt et al., 2006; Witt and Brachtendorf, 2006).

Entrepreneurs exploit crowdfunding globally to finance venture development and growth. Since 2012, the crowdfunding market has experienced rapid growth, which has continued to accelerate annually. Based on the most recent available data about the crowdfunding market and industry, it is evident that crowdfunding has been adopted worldwide, constituting a global phenomenon (Massolution, 2015). Crowdfunding continues to experience an acceleration of steep market growth, reporting an annual global investment volume of US\$16.2bn (£9.83bn⁵), which represents a growth rate of 167% from 2013. In terms of regional investment distribution, North America represents the largest crowdfunding market with an investment volume of US\$9.46bn (£5.74bn). Asia and Europe follow with US\$3.4bn (£2.06bn) and US\$ 3.26bn (£1.98bn), respectively. Table 1.1 provides an overview of the development of the global crowdfunding market from 2011 until 2015 (predictions).

⁴ This thesis utilises empirical data derived from the reward-based crowdfunding modality. As such, if not otherwise mentioned, the term ‘crowdfunding’ implies the reward-based crowdfunding form.

⁵ The exchange rate used for the conversion is the twelve month average GBP/USD exchange rate for 2014 (1 GBP = 1.648 USD).

Table 1.1 Development of the crowdfunding market

	2011	2012	2013	2014	2015 (predictions)
Number of CFPs worldwide	452	813	1,013	1,250	N.A.
Investment volume in US\$	1.47bn	2.67bn	6.1bn	16.2bn	34.4bn
Annual growth rate	63% ^{a)}	81%	125%	167%	112%
Regional investment volume in US\$					
North America	837.2m	1,606m	3.86bn	9.46bn	17.25bn
South America	-	0.8m	34.13	57.2m	85.74m
Europe	583.9m	945m	1.35bn	3.26bn	6.48bn
Africa	-	0.065m	11.88m	12m	24.16m
Asia	-	33m	809.8m	3.4bn	10.54bn
Oceania	-	76m	27.16	43.2m	68.6m
Other Regions	48.8m ^{b)}	-	-	-	-

Notes: Data from Massolution (2012, 2013, 2015).

^{a)} Annual growth rate for 2011 is calculated as the average growth rate for 2009-2011.

^{b)} Other Regions compromise South America, Africa, Asia and Oceania in the 2011 report.

Although the crowdfunding market is not by any means ‘mature’, the market and industry data, along with the 2015 predictions demonstrate that crowdfunding may significantly influence the entrepreneurial venture capital industry and market in the near future. Thus, the implications of crowdfunding on entrepreneurship and entrepreneurial processes are widely discussed on policy level: the European Commission in the EU explores the potential value and risk of this non-traditional venture capital mechanism (European Commission, 2013a, 2015a, 2015b). In addition, institutional investors (e.g. venture capital firms) and informal investors (e.g. business angel investors), have started to explore and investigate the associated opportunities and challenges of crowdfunding for their investment strategies (British Business Bank, 2014; UKBAA, 2015b). With new legislations implemented in many countries (e.g. Jumpstart Our Business Startups Act (JOBS Act) in the US⁶ and the

⁶ The purpose of the Jumpstart Our Business Startup Act (JOBS Act) is to “increase American job creation and economic growth by improving access to the public capital markets for emerging growth companies” (SEC, 2012). Title 3 of the Act (“Capital Raising Online While Deterring Fraud and Unethical Non-Disclosure Act of 2012”) regulates online equity-crowdfunding. The JOBS Act and Title 3 provide the legal framework for investees, investors and intermediaries (SEC, 2012).

Financial Conduct Authority (FCA) policy statements for crowdfunding in the UK⁷), crowdfunding has developed into an asset class in its own right and provides a legal framework for the crowdfunding industry to develop into a viable venture capital mechanism.

Policy investigations particularly focus on loan-based and equity-based crowdfunding, as well as issues that relate to the selling of shares over the internet to accredited and unaccredited investors. However, entrepreneurial activities in non-equity crowdfunding (e.g. reward-based crowdfunding) account for around 93% of today's international crowdfunding market (Massolution, 2015), thus emphasises that the wider entrepreneurial picture of crowdfunding should not be neglected. In the long-run, crowdfunding is expected to greatly affect entrepreneurial opportunity recognition and venture creation processes.

Research on the phenomenon of crowdfunding and particularly on entrepreneurial activities and processes within this context is limited⁸. The unique connection between online social media, social networking and venture capital may result into alterations of prior perceptions and understanding of entrepreneurial capital assembly activities. Entrepreneurs identify and exploit non-traditional online tools for their venture development (Franke et al., 2013; Fischer and Reuber, 2014), and crowdfunding offers a new route to pursue business opportunities by accessing and assembling funding from online social networks (Ordanini et al., 2011; Lawton and Marom, 2013).

Consequently, the crowdfunding mechanism introduces interesting opportunities via non-traditional online-driven approaches, which enables entrepreneurs to encourage (prospective) consumers and investors to participate in the funding, (pre-) launch and the growth of the entrepreneurial firm. As such, the online setting of crowdfunding provides a unique context where traditional 'offline' venture capital assembly processes are adapted into 'online' entrepreneurial activities. Thus, the online and

⁷ The Financial Conduct Authority (FCA) is the responsible institutional body in the UK for regulating loan-based and investment-based crowdfunding (FCA, 2014, 2015).

⁸ A literature database search was undertaken to identify the relevant literature pertaining to crowdfunding. This involved searching for the term 'crowdfunding' in titles, abstracts and the provided key words. Refer to Appendix A for the resulting cartography of crowdfunding research.

social-networking based venture capital ecosystem is likely to modify traditional entrepreneurial resource assembly activities. Therefore, this thesis aims to contribute to the following comprehensive research question:

How do entrepreneurs exploit crowdfunding to assemble resources?

1.2 Research motivation

The overall research was stimulated by theoretical, practical and personal motivations. Theoretically, the focus of this thesis on entrepreneurial crowdfunding was motivated given the nascent stage of the crowdfunding literature. More specifically, this research is a direct result of the research calls made from different scholars to investigate the entrepreneurial aspects of crowdfunding. Such research is required in order to advance understandings about the opportunities and challenges of crowdfunding for entrepreneurial venture capital assembly; additionally, it is important to facilitate knowledge about how entrepreneurs might tap into this new financial pool (Ley and Weaven, 2011). Furthermore, Lehner (2013) discusses the significance of applying diverse empirical evidence to capture the multifaceted phenomenon of crowdfunding and suggests the need to provide robust interpretations of findings on crowdfunding to inform both theory and practice. The phenomenon of crowdfunding is of great importance to the entrepreneurship research domain, particularly given the opportunities it opens up for entrepreneurs in gaining access and assembling capital from large distributed groups of individuals (Mollick, 2014). As such, crowdfunding needs to be investigated through integrated entrepreneurship perspectives in order to capture the relationships among all stakeholders. This leads to a greater understanding of the relevant processes and outcomes, particularly when compared to more ‘traditional’ finance mechanisms.

In addition to the relevant calls for research, there is a need for the entrepreneurship field to inform about new financial routes that entrepreneurs can use to create new value and develop new ventures (Harrison, 2013; Burton et al., 2015). The increasing

interest and significance with regard to these new financing mechanisms is evidenced by the growth of this topic in the entrepreneurship research domain⁹.

Pragmatically, the motivation for this research was derived as way to appeal to and inform practitioners, such as entrepreneurs, attempting to use crowdfunding for their capital assembly strategy. It is essential to provide insight on this phenomenon to ensure that entrepreneurs not only understand crowdfunding, but that they can be effective in the crowdfunding processes. This research can assist entrepreneurs understand the importance of particular practices in the crowdfunding process, which may help them save resources, avoid frustration and facilitate more positive outcomes.

The development and undertaking of this research was also a result of personal motivations. The researcher's general interest in entrepreneurship was nurtured throughout his academic career through several entrepreneurship courses and activities. Having been introduced to entrepreneurial finance during his Bachelor's and Master's degree, the researcher was surprised to learn that the scholarly curriculum primarily focused on traditional finance instruments for entrepreneurs (e.g. venture capital and business angel investments). Mixed or alternative financial instruments are often overlooked in curriculums, despite the fact that they play an important role in financing entrepreneurial activities. This ultimately motivated the researcher to dive into the 'big blue ocean', so to say, of alternative entrepreneurial finance instruments, where crowdfunding and its different modalities remained unexplored.

⁹ In recent years, many academic journals have published special issues on topics related to alternative entrepreneurial finance mechanism. For example, *Entrepreneurship Theory and Practice* devoted a special issue on "Seeding Entrepreneurship with Microfinance" (Vol. 39, Issue 1) in January 2015. Other examples include a special issue from *Venture Capital: An International Journal of Entrepreneurial Finance* on "Crowdfunding and the revitalisation of the early stage risk capital market: catalyst or chimera" (Vol. 15, Issue 4) and the announced special issue on "New trends in entrepreneurial finance" of the *Small Business Economics: An Entrepreneurial Journal*, scheduled to be published by 2017.

1.3 Framing research perspectives

Entrepreneurship research has received increased attention from both politicians and economists, resulting in an upward trend in research publications during recent years (Johannisson and Landström, 1999; Busenitz et al., 2003; Shepherd, 2015). Research on entrepreneurship advances our understanding about ‘new value creation’ (Fayolle, 2011) and ‘new venture formation’ (Gartner, 1985; Low and MacMillan, 1988). In general, entrepreneurship literature evolves around central research questions, such as ‘why’, ‘when’ and ‘how’ entrepreneurs discover and exploit business opportunities and ‘what’ are the short- and long-term outcomes of their activities (Gartner, 1988; Shane and Venkataraman, 2000). A key question in this context is how do nascent entrepreneurs manage and finance initial activities to facilitate firm creation and early stage development (Shane and Cable, 2002). The entrepreneurship literature highlights that nascent and small firms have distinct challenges in overcoming the absence of non-financial resources and capital needed to advance firm development (Stinchcombe, 1965). However, given that entrepreneurial activities are frequently recognised as an important pillar of the wealth of the economy (Agarwal et al., 2007; Baumol and Strom, 2007; Hitt et al., 2011), recent research is interested in how entrepreneurs can overcome these issues and have begun studying the specific techniques and actions exploited by entrepreneurs (Hitt et al., 2011; Ciabuschi et al., 2012).

Some of these techniques are related to the entrepreneurial narratives and legitimacy creation processes (e.g. Lounsbury and Glynn, 2001), network exploitation activities (e.g. Gedajlovic et al., 2013) and role identity development (e.g. Navis and Glynn, 2011; Philips et al., 2013). Prior entrepreneurship literature tends to focus exclusively on entrepreneurial activities in different contexts, including the ‘traditional’ entrepreneurial finance setting and considers how these techniques are related to capital assembly from external venture capital sources (Hoang and Antoncic, 2003; Pollack et al., 2012). However, this has yet to be studied in the context of crowdfunding, which provides a unique setting given its emphasis on online networking activities, and thus requires careful investigation.

The following three sections provide a brief background of prior literature and extant knowledge linked to particular entrepreneurship perspectives that are used in this thesis to investigate specific entrepreneurial activities. Each of these research perspectives are discussed in more depth within the three respective studies.

1.3.1 Entrepreneurial legitimacy and narratives

Entrepreneurs often pursue business opportunities under high-levels of uncertainty due to the absence of resources. The resource deficient characteristic implies that entrepreneurs often depend on interactions and relationships with external resource holders for venture success (Gedajlovic et al., 2013). Thus, it is important for entrepreneurs to detract from this resource deficient status and focus on business opportunities and prospects that facilitate relationships and network development with new individuals, organisations and institutions (Sorenson and Stuart, 2001; Martens et al., 2007; Navis and Glynn, 2011; Garud et al., 2014). Entrepreneurs, therefore, tend to utilise less rational decision-making frameworks (e.g. those typically based on the individual's resources and/or record of accomplishments) to develop external relationships, whilst exploring alternative information exchange mechanisms. One crucial activity, which allows entrepreneurs to build relationships with external capital sources and access these networks, is a conferral of legitimacy onto the entrepreneur, innovation, and venture. Establishing and maintaining legitimacy is essential for entrepreneurs, because their early stage business activities depend more on external perceptions rather than on rational metrics, such as financial performance measurements (Zimmerman and Zeitz, 2002). Suchman (1995, p. 574) offers one of the most widely accepted definitions for legitimacy in this context, describing it as “a generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constricted system of norms, values, beliefs, and definitions.”

More specifically, Zimmerman and Zeitz (2002, p. 414) expand on this to provide a definition for organisational legitimacy as “[a] social judgement of acceptance, appropriateness, and desirability, [that] enables organizations to access other

resources needed to survive and grow.” Bruton et al. (2010, p. 427) distinguish between external and internal legitimacy creation factors by contending that legitimacy is conferred as “the right to exist and perform an activity in a certain way.” An organisational legitimacy creation process is impacted by socio-cultural surroundings (external legitimacy), but is also influenced by internal objectives that direct business activities (Aldrich and Fiol, 1994).

This thesis follows Zimmerman and Zeitz’s (2002) definition and adopts Suchman’s (1995) argument that legitimacy can be defined from a ‘managerial’ and an ‘institutional’ perspective. The managerial perspective in relation to organisational legitimacy can be characterised as a strategic managerial technique that allows individuals to manipulate an external audience’s perception by specific individual and firm related practices in order to cultivate societal support for business activities (Suchman, 1995; Tornikoski and Newbert, 2007). In contrast, the institutional perspective characterises legitimacy as an externally created construct, where socio-cultural dynamics cause business entities to adjust to external economic forces (Suchman, 1995). Based on the institutional perspective, legitimacy creation is not driven by internal objectives, but rather by external forces, thus postulating that successful organisations need to comply with external standards and established processes.

Entrepreneurs use legitimacy processes and activities to validate their business activities and their right to exist in the market. The dynamic process of creating legitimacy is understood as ‘cultural entrepreneurship’ (Lounsbury and Glynn, 2001). The aim of entrepreneurial activities is to reduce uncertainty (internal and external) and to seek external acknowledgement (Aldrich and Fiol, 1994). Entrepreneurs and nascent ventures are required to demonstrate that their business activities and objectives are based on legitimate macro-economic and socio-cultural standards and norms (De Clercq and Voronov, 2009; Bitektine, 2011).

This thesis follows the reasoning offered by scholars, such as Delmar and Shane (2004) and Lounsbury and Glynn (2001), who argue that initial entrepreneurial activities are directed towards legitimacy creation and that the early stage resource ‘bundle’ influences their external legitimacy creation processes. However, it is

important to acknowledge that the need for entrepreneurs to legitimate their ventures is externally situated and enforced by external industry norms and standards. Therefore, it is important for entrepreneurs and nascent ventures to acquire the right amount, as well as the right sort of legitimacy, as this can differ across different contexts (e.g. venture capital, business angel investments and crowdfunding) (Zimmerman and Zeitz, 2002).

The successful conferral of legitimacy onto the entrepreneur is measured retrospectively, where “the survival of the organization indicated that legitimacy is present” (Zimmerman and Zeitz, 2002, p. 414). Traditionally, research has treated legitimacy as a dichotomous concept, where an entrepreneurial firm is either legitimate or not (Aldrich, 1995; Scott, 1995). Yet, more recently, legitimacy is measured as a “continuous variable ranging in value from low to high” (Zimmerman and Zeitz, 2002, p. 426), which is more applicable to an entrepreneurial setting, as legitimacy is evaluated subjectively and depends on the context. Accordingly, entrepreneurial activities in early stages are primarily directed towards legitimacy creation, with the objective to facilitate faster and more efficient venture development (Lounsbury and Glynn, 2001; Tornikoski and Newbert, 2007). The conferral of legitimacy, as such, is the reciprocal outcome of specific entrepreneurial techniques and activities that are aimed at building, cultivating and preserving organisational legitimacy.

This thesis builds on the calls from previous research to further investigate the linkage between the legitimacy creation process and the capital assembly process of entrepreneurial ventures (Lounsbury and Glynn, 2001; Zimmerman and Zeitz, 2002). The objective is to study the underlying relationship between legitimacy creation and capital assembly in crowdfunding. Whereas the linkage between legitimacy and entrepreneurial finance through traditional venture capital sources has been widely investigated (e.g. Deeds et al., 2004; Becker-Blease and Sohl, 2015), there exists a knowledge gap with respect to the entrepreneurial legitimacy creation processes in crowdfunding. Therefore, the first study (see chapter 3) aims to answer the following research question (RQ):

RQ1: How do entrepreneurs create and confer project legitimacy for crowdfunding projects?

Entrepreneurial narratives act as an essential tool for entrepreneurs to convey legitimacy onto nascent ventures (Golant and Sillince, 2007; George and Bock, 2012). A common example of an entrepreneurial narrative tool is the business plan, which creates a ‘promotional document’ for facilitating access and assembly of resources through venture capital mechanisms (Kirsch et al., 2009). Other forms have emerged that complement the written business plan and provide additional tools for entrepreneurs to confer their narratives. Business plan presentations using slide shows via PowerPoint and video recordings (Chen et al., 2009; Doganova and Eyquem-Renault, 2009; Pollack et al., 2012) are two frequently utilised examples of oral narration of the entrepreneurial story (also known as ‘business pitch’) (Clark, 2008).

Lounsbury and Glynn (2001, p. 546) state that “stories can provide needed accounts that explain, rationalize, and promote a new venture to reduce the uncertainty typically associated with entrepreneurship.” Entrepreneurial stories link the venture’s intangible and tangible resources into a meaningful account that facilitates sense-making among external stakeholders, encouraging them to mobilise their resources (Shane and Cable, 2002; Smith and Anderson, 2004). Research on entrepreneurial narratives demonstrates that effective stories play an intermediary role between external stakeholders and entrepreneurs to allow for existing entrepreneurial resources to be leveraged (Martens et al., 2007). While emotions and passion are both important components of effective stories, prior research suggests that the coherence of a business plan and the preparedness of the entrepreneur are more influential (Pollack et al., 2012). More specifically, individuals recognise whether a story makes sense based on its content rather on its emotional plot (Fisher, 1987).

Research on entrepreneurial narratives implies that the process of storytelling in early stage ventures is an essential ingredient to establishing firm legitimacy (Martens et al., 2007). Further, it is crucial that entrepreneurs interact closely with external institutions for capital assembly (O’Connor, 2004; Martens et al., 2007). However, prior research imposes two substantial limitations to theory building with regard to the role of narrative in entrepreneurial capital assembly. Firstly, the majority of studies utilise empirical evidence from established ventures that are seeking

investments from formal venture capital, which in actuality only accounts for a small percentage of entrepreneurial funding activity. Secondly, studies emphasise conventional narrative tools, such as business plans and ‘business pitches’, which are often utilised in contexts that are relatively personal and confidential; such contexts also typically assume that entrepreneurs can plan their communication activities and synchronise stories in advance. While historically relevant, online social media, social networking platforms and online finance mechanisms, such as crowdfunding, enable entirely new tools for narrative creation and capital formation (Herzenstein et al., 2011).

The increasing prominence and exploitation of these new online tools suggest significant alterations in the storytelling content, process and development, which entrepreneurs are able to employ as a way to support capital assembly and venture development. Therefore, the role of narrative in online capital assembly requires careful investigation. This introduces the second research question for the first study (see chapter 3):

RQ2: How do entrepreneurs create a project narrative for crowdfunding projects?

1.3.2 Entrepreneurial networks

The study of networks is fundamental in order to understand the workings of entrepreneurial activities (Hoang and Antoncic, 2003). This is particularly the case when investigating entrepreneurial capital assembly, which involves a social process where the entrepreneur, is embedded in a multiplicity of social networks (e.g. personal and professional networks). Accordingly, a large body of entrepreneurship research addresses issues related to entrepreneurs’ network structures (Davidsson and Honig, 2003; Sullivan and Ford, 2013), network relationships (Jack et al., 2004; Jack, 2005), network exploitation abilities (Hite, 2005; Lechner et al., 2006), as well as the role of networks for resource assembly performance and success (Shane and Cable, 2002; Greve and Salaff, 2003; Stuart and Sorenson, 2007; Sullivan and Ford, 2013). In this context, network characteristics establish significant drivers for

entrepreneurial capital formation and opportunity exploitation, requiring entrepreneurs to develop relationships with potential external resource holders to facilitate access to necessary resources (Shane and Cable, 2002; Newbert et al., 2013).

The resource deficient characteristic of young ventures aggravates the network building process. However, as was illustrated in section 1.3.1, entrepreneurs utilise narrative techniques to confer legitimacy onto their innovations and young ventures to facilitate the building of network relationships. Network formation is driven by the ventures' legitimacy and the entrepreneurs' narratives (Delmar and Shane, 2004). At the same time, social networks contribute to ventures' legitimacy, insofar as they establish a 'concept of reputation' (Shane and Cable, 2002; Nagy et al., 2012) and reduce information asymmetry (Baron and Markman, 2003). Entrepreneurial networks, particularly those publically linked to the venture, foster essential frameworks for trust building and legitimacy conferral to individuals outside the entrepreneurial network. Entrepreneurship studies illustrate the importance in venture capital assembly with regard to who the entrepreneur knows, and accordingly, who constitutes the entrepreneurs' network (Uzzi, 1996; Hochberg et al., 2007). These network actors often act as 'gatekeepers', who can restrict or grant access to external capital.

The size of the network proves to have a positive relationship with external venture capital assembly (Davidsson and Honig, 2003; Sullivan and Ford, 2013). A large network increases the multiplier effect and decreases the dependency towards specific individuals within the network (Reagans and Zuckerman, 2008). Hence, networks are essential in gaining access to opportunities for assembling resources (Birley, 1985; Gulati, 2007), as entrepreneurs' are able to externalise some of the venture's risk through involvement in personal or professional networks (Nijkamp, 2003). However, the size of one's network is not the only factor sufficient enough to predict a venture's potential resource accessibility (Zhang, 2010; Semrau and Werner, 2014). The quality of the entrepreneurs' network relationships also plays a significant role in determining the accessibility of resources (Elfring and Hulsink, 2003). Strong relationships can minimise information asymmetry through developing

a shared understanding and knowledge about the entrepreneurial venture, which essentially equates to the establishment of trust (Milanov and Shepherd, 2013). Studies illustrate that the size, structure and quality of entrepreneurs' social networks influence capital assembly, venture development and overall performance.

Previous studies have shown that networks play a significant role in capital assembly via online mechanisms, such as crowdfunding. While network size can be increased by incorporating online communication and networking channels, this creates challenges for the relationship building processes, due to the impersonal setting that exacerbates trust building (Ren et al., 2007; Faraj and Johnson, 2010).

This thesis aims to extend the research on entrepreneurs' networks by investigating the role of networks and entrepreneurial networking activities in crowdfunding. In contrast to other entrepreneurial finance and venture capital contexts, crowdfunding provides a unique setting, as it is built around networks and functions through networking instruments. This particular context facilitates the exploration of how crowdfunding reinforces or contradicts existing theories about entrepreneurial networks and capital assembly. Therefore, the following research question guides the second study (see chapter 4):

RQ3: How do entrepreneurs' social network and networking activities influence capital access and assembly in crowdfunding?

1.3.3 Entrepreneurs role identity

The concept of identity, defined as an individual's perception and manifestation of their person, is adopted in the social sciences in order to examine the relationship between individuals and their social environment (Ashforth and Mael, 1989). Social identity theory postulates that individuals self-categorise themselves in the broader social environment through existing social categories, based on their religious, cultural and organisational affiliations, for example (Tajfel and Turner, 1985). These categories, in turn, are defined by their members (Turner, 1985) and are interpreted distinctly by members and non-members alike, thus creating various categorical

classifications. The relationship between these classifications and an individual's identity fulfil two functions in society. Firstly, individuals create these categories to segment and provide order within their social environment; these categories enable individuals the ability to define others, as each category is characterised by its archetypal features (e.g. Hamilton, 1981). Goffman (1959) refers to these stereotypes as 'ideal typifications'. One who embodies an entrepreneur identity, for example, is often described as being innovative, venturesome and idealistic (Schumpeter, 1934; Brockhaus, 1980; Atherton, 2004; Anderson and Warren, 2011). Secondly, segmenting the social environment into categories allows individuals to position or define themselves within society. An individual's identity is constructed through their own positioning within specific categories, which are based on the fit between the categories and how the individuals personify themselves (Tajfel and Turner, 1985). Individuals who characterise themselves as embodying the personality qualities that constitute the 'entrepreneur' category (e.g. innovative, venturesome and idealistic) thus typically classify and understand themselves as entrepreneurs.

The concept of identity has gained considerable interest and attention within the entrepreneurship field as a way to examine the transition individuals undertake in 'becoming an entrepreneur' or 'acting entrepreneurial' (Carland et al., 2002; Fauchart and Gruber, 2011; Philips et al., 2013). These studies emphasise the reciprocal relationship between an individual's self-proclaimed identity and their activities (Watson, 2009; Fauchart and Gruber, 2011). While individuals are believed to have 'core characteristics' that are reflected in their socially embedded behaviour, beliefs and norms, they are also positioned within society and thus continuously engage in a dialog between their self-identity and the various social identities that co-exist in society (Anderson and Warren, 2011). As such, identity is not a static concepts, but one that requires identity work, which is defined by Watson (2008, p. 129) as:

"The mutually constitutive process in which people strive to shape a relatively coherent and distinctive notion of personal self-identity and struggle to come to terms with and, within limits, to influence the various social identities which pertain to them in the various milieu in which they live their lives."

In cases where individuals transition from one identity to another (e.g. student to entrepreneur to firm founder), the self-identity is “the *self as reflexively understood by the person in terms of her or his biography*” (Giddens, 1991, p. 53 [emphasis in original]). Therefore, the formation and acceptance of a particular identity is path-dependent, and thus, identity work involves maintaining or progressing the personal narrative that aligns multiple social identity accounts. Identities are not formed independently from the social environment. They are a result of a reciprocal engagement between the individual and society (Alvesson et al., 2008). To understand identity formation and modification it is necessary to shift the focus from the individual to the individual’s processes and activities (Watson, 2013).

Jain et al. (2009) discuss how academic scientists undergo a role identity modification that invokes personality traits of entrepreneurs during the research commercialising processes. An individual’s social position within society can be gauged through their different identity roles, which are defined by particular behavioural expectations and responsibilities to other individuals (Merton, 1968). An academic scientist, for example, engages in research and education, enacting the role of researcher and educator, respectively. However, when a scientist engages in research commercialisation practises, he or she may adopt an entrepreneurial identity, which facilitates the interpretation and understanding of some activities based on the contextual norms and guidelines that are associated with an academic entrepreneur role identity (Gecas, 1982). An individual’s role is closely aligned with societal expectations, thus, an individual’s identity becomes linked with a particular corresponding contextual and collective identity.

As evidenced in prior literature, it is common to link the two constructs (i.e. roles and identity) together in the entrepreneurship field (Barley, 1989; Ibarra and Barbulescu, 2010). Thus, one’s role identity can be understood as an individual’s or entity’s self-view or ascribed sense of self in association to a particularly accepted role. Insofar as one’s role is situated in the broader context of prevailing identities, individuals or entities tend to behave in accordance to this role identity (George and Bock, 2009). In a similar vein, Hoang and Gimeno (2010) elucidate how prospective founders engage in a role identity transition when adopting new skills and learning

activities that are associated with new venture creation. The researchers highlight that the identity modification process explains variations in how new organisations become imprinted by the founder's identity.

Individuals have a need to be perceived as different and unique (Brewer, 1991), but at the same time, they want to feel included in a group, which speaks to the psychological need of belonging (Tajfel and Turner, 1985). This appears to be particularly true for entrepreneurs. The continuous interplay between these two needs represents the challenges with regard to individual's role identity formation (Shepherd and Haynie, 2009). This is evident particularly when individuals are engaging in entrepreneurial activities, such as venture creation and seed or early stage capital assembly. However, while it is critical for individuals to define and project a clear role identity in order to confer legitimacy (i.e. a clear sense of belonging), it is also essential they foster a sense of innovativeness (i.e. being distinctive) for investors' sense-making purposes that can affect their decision-making process and judgements about investments.

Navis and Glynn (2011, p. 480 [emphasis in original]) define entrepreneurial identity as *“the constellation of claims around the founders, organization, and market opportunity of an entrepreneurial entity that gives meaning to questions of “who we are” and “what we do”.*” Entrepreneurial identity acts as a prominent evaluation criterion in the investment decision-making process of potential capital investors, including venture capital firms and business angel investors (Navis and Glynn, 2011). Entrepreneurs' and new ventures' identity is communicated through business plans and other forms of business narratives which reflect their past and future actions (Lounsbury and Glynn, 2001; Garud et al., 2014), upon which investors base investment decisions.

Identity functions as a critical component for entrepreneurs and new organisations (Glynn, 2000), as it communicates a 'web of meaning' in the sense-making processes for investors (Weick, 1995; Rindova et al., 2009). Nascent ventures and their entrepreneurs have little more than a business plan and a vision to persuade external capital holders to invest (Weick et al., 2005; Zott and Huy, 2007; Wry et al., 2011). Thus, an individual taking on the role identity of an entrepreneur is making a

statement about the distinctiveness of its venture (e.g. innovative, venturesome and idealistic) and, at the same time, confirms its conformity with the milieu (e.g. presence of business astute) (Navis and Glynn 2011). Managing one's role identity and adapting it to the changing market and stakeholder requirements is a critical process for creating legitimacy for the founder and new venture (Downing, 2005). Not only does role identity facilitate the legitimacy creation process, thus establishing distinctiveness and justifying conformity, but it also reduces ambiguity and thereby influences capital assembly.

Contrary to the often personal and synchronised approaches to traditional venture capital sources, alternative approaches, such as crowdfunding predominantly operate via online platforms (Belleflamme et al., 2014). Thus, project creators engage with various social groups with the purpose of assembling capital from a heterogeneous group of individuals. Crowdfunding raises interesting questions about the interplay between the project creators' identity and crowdfunding activities and processes. It is important that activities align with the identities of the creators and supporters in order to establish a 'collective-identity' (Ashforth et al., 2010; Wry et al., 2011).

With the objective of furthering the research on role identity modification and identity work, an investigation of these issues in the context of crowdfunding was undertaken. This shed light on the micro-foundations of entrepreneurship in crowdfunding. More specifically, the focus on individual activities in crowdfunding illuminate the entrepreneur's role throughout the crowdfunding experience, which helps explain the underlying processes and causes of entrepreneurial crowdfunding. Therefore, the following research questions guide the third study (see chapter 5):

RQ4: How are project founders changed by the crowdfunding process?

RQ5: How does an individual's role identity influence campaign activity?

The above sections highlighted and provided background about the following perspectives: 1) entrepreneurial legitimacy and narratives, 2) entrepreneurial networks and 3) entrepreneurial role identity. In order to achieve the delineated research objectives, this thesis undertook three separate, yet interlinked studies. Each study addresses the relevant research question and draws upon the appropriate

perspectives, of which the research questions are based. Together the three studies comprise an inclusive investigation of entrepreneurial activities in crowdfunding. Table 1.2 summarises the three studies, highlighting their research questions and objectives.

Table 1.2 Summary of research questions and objectives

	Research questions	Objective
Study one	RQ1: How do entrepreneurs create and confer project legitimacy for crowdfunding projects?	Explore what crowdfunding campaign characteristics are linked to crowdfunding performance and outcomes.
	RQ2: How do entrepreneurs create a project narrative for crowdfunding projects?	Describe crowdfunding campaign characteristics and their role in legitimacy and narrative creation.
Study two	RQ3: How do entrepreneurs' social network and networking activities influence capital access and assembly in crowdfunding?	<p>Explain the role of networks for capital assembly in crowdfunding.</p> <p>Explain the entrepreneurs' networking activities and how they are linked to crowdfunding performance and outcomes.</p>
Study three	RQ4: How are project founders changed by the crowdfunding process?	Understand the processes and drivers that explain crowdfunding outcomes.
	RQ5: How does an individual's role identity influence campaign activity?	Understand why some crowdfunding projects succeed and others fail.

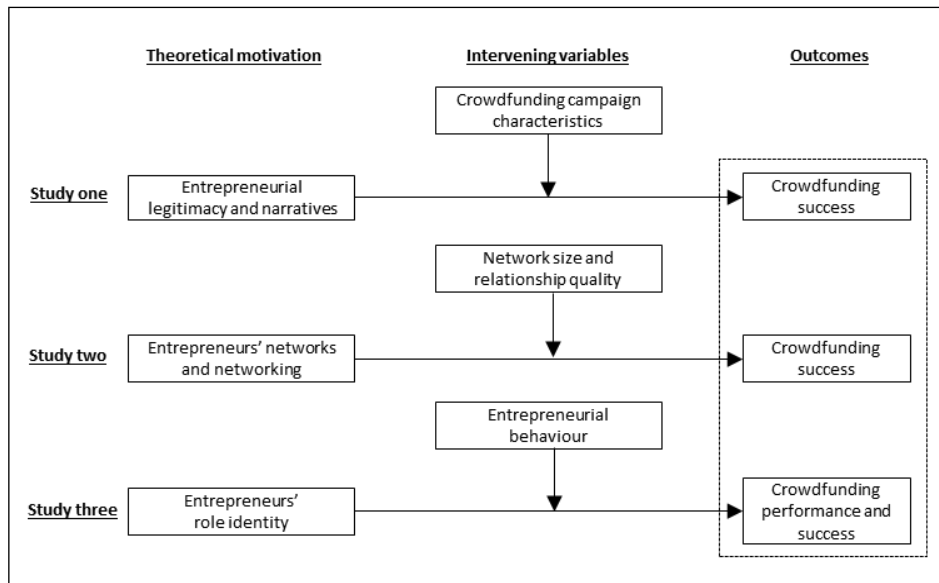
(Source: Author)

Before delving into a detailed discussion of the methodology and the studies in their entirety, the abstracts of the three studies are presented in the following section.

1.4 Abstracts of studies

To address the proposed research questions, the three studies draw on various data sources and data collection methods, which are discussed in greater detail in chapter 2. Figure 1.1 provides a general model of the three studies undertaken in this thesis.

Figure 1.1 General model of studies



(Source: Author)

1.4.1 Study one

The first study explores how entrepreneurs leverage the crowdfunding mechanism to design narratives that foster project legitimacy and enable nascent ventures to assemble funding from distributed and heterogeneous investors.

A growing number of studies investigate crowdfunding as a new entrepreneurial venture capital phenomenon. However, less research explores crowdfunding as a novel online mediated and digital entrepreneurial narrative tool for resource assembly. Narrative is an important instrument for entrepreneurs to legitimise new ventures - a critical feature of venture capital assembly. CFPs provide innovative digital tools that allow entrepreneurs to pitch their business ideas and projects to a broad audience. This study explores which specific tools can be associated with generating a coherent narrative to legitimise unfamiliar business models, thus encouraging resource inflow.

The study reveals how entrepreneurs can design narratives and create project legitimacy by exploiting CFP-specific features. Firstly, lower funding targets and shorter campaign durations confer positive project legitimacy. Secondly, entrepreneurs exploit reward-levels as narrative tools that are aimed to encourage

funders to engage with the project, offering tangible and intangible rewards. Thirdly, visual pitches support entrepreneurs transmitting a broader socio-cultural narrative about their projects, providing emotional rather than financial reasoning. Finally, this study provides tentative understanding of the gender distribution of the founders engaging in crowdfunding. The study approaches crowdfunding from an entrepreneurial narrative perspective and advances the entrepreneurship literature by linking narrative and legitimacy theory to the crowdfunding phenomenon.

1.4.2 Study two

The second study examines the role of entrepreneurs' networks and networking activities for assembling resources through online crowdfunding.

An entrepreneur's network influences capital assembly. This appears to be particularly true for crowdfunding, where the 'crowd' is constructed as a result of the entrepreneurs' network and networking activity, as evidenced in prior literature. However, the crowdfunding literature has primarily focused on the effect of the entrepreneurs' network size on the crowdfunding project outcome; specifically exploring the link between the number of the entrepreneur's online social network actors (e.g. number of Facebook connections) and crowdfunding project outcomes.

This study seeks to extend theories of networking in crowdfunding by investigating the quality of the network relationship in the crowdfunding context. In doing so, this study elaborates on how entrepreneurs can develop the quality of their network relationships by exploiting specific CFP and social media tools. Drawing on data from 21,534 Kickstarter projects, this study finds that entrepreneurs can leverage the quality of their network relationships to create project-focused communities within the CFP. The study introduces the theoretical model of 'project-syndicates', which is critical in the co-generation of a compelling crowdfunding narrative and helps to explain successful project funding. Implications for networking theory and crowdfunding as a capital assembly practice are discussed.

1.4.3 Study three

In contrast to the prior two quantitative studies, the third study applies a qualitative research approach to identify and examine relations between the entrepreneur's role identity transformation and crowdfunding performance.

The accessibility of online crowdfunding datasets has facilitated quantitative research on campaign characteristics and performance. Sophisticated quantitative analyses, however, do not paint a complete picture of the crowdfunding process and associated outcomes. This study explores crowdfunding as an 'entrepreneurial journey' to identify interactions between role identity change and campaign performance. By viewing identity work and strategies as dynamic drivers for crowdsourced capital assembly, this study contributes to the existing understanding of the complex entrepreneurial crowdfunding process.

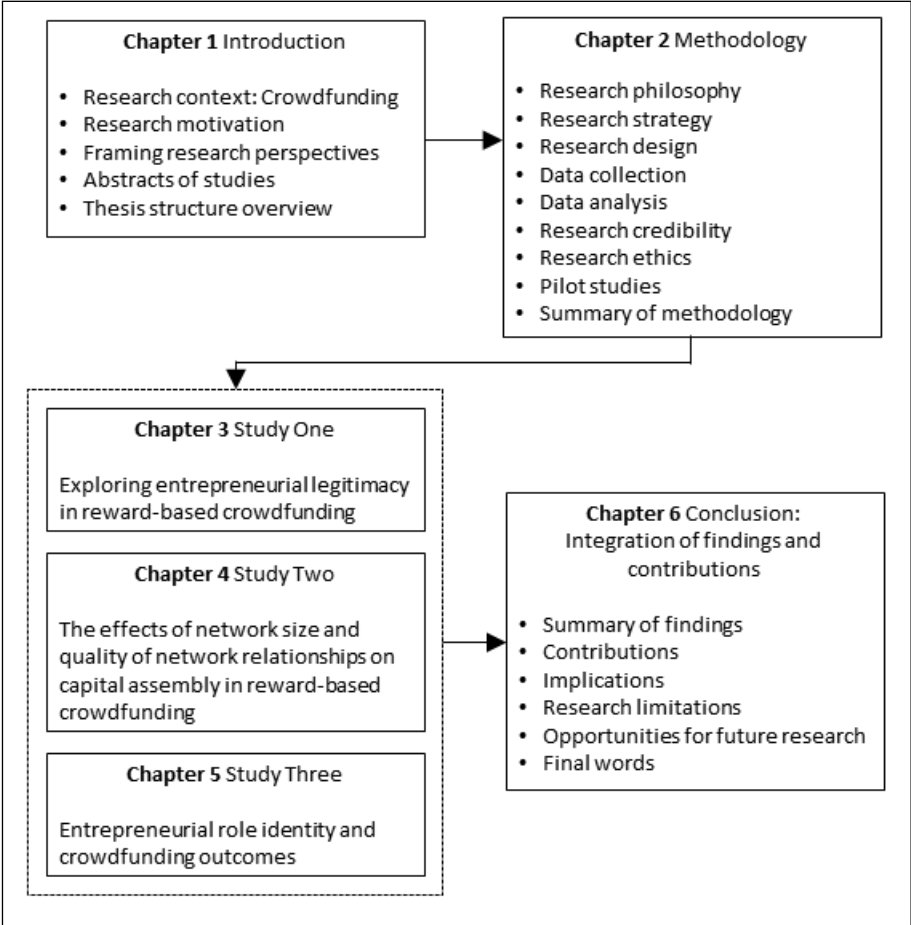
A longitudinal case study follows an entrepreneur's experience, from six-months prior to the crowdfunding campaign and 17-months post-campaign. Adopting an identity perspective, this study develops three identity strategies that can be used during crowdfunding campaigning to facilitate crowdfunding performance. Findings show that the entrepreneur can jump from one side of the bimodal funding distribution to the other extreme by strategically forming a syndicate-based identity that involves co-creation with project supporters. The study complements the extant quantitative research to better explain the entrepreneurial micro-foundations of crowdfunding and its effects on capital assembly outcomes. The results emphasise the importance of qualitative studies to complement statistical research with in-depth micro-level and meso-level theory building.

1.5 Thesis structure overview

The overall structure of this thesis is presented in Figure 1.2, which describes the six chapters that comprise this thesis. Chapter 1 offered an introduction to the thesis that comprises a portfolio of three studies, explicating the research context, research motivation and the aims and objectives of the research. Next, chapter 2 will offer a

comprehensive discussion of the methodological issues related to this research. Chapter 3, 4, and 5 present the empirical studies undertaken in this research. Chapter 6 provides a summary of the key findings of the empirical studies, presents the contributions and implications of this research, and discusses research limitations that offer future research opportunities.

Figure 1.2 Overview of the thesis structure



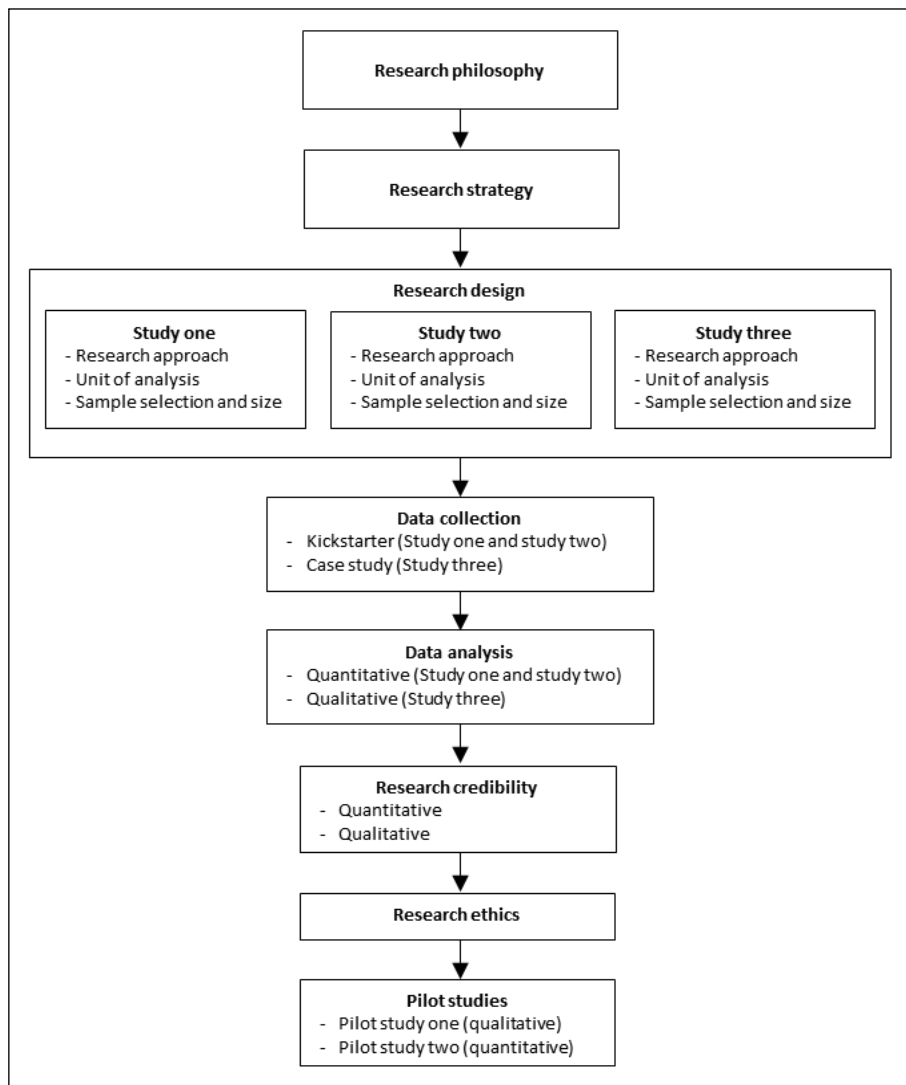
(Source: Author)

Chapter 2: Methodology

2.1 Introduction

This chapter provides an overview of the research methodology adopted in this thesis. Figure 2.1 illustrates the three main areas that together constitute a robust research method. These three areas are as follows: 1) research philosophy and strategy, 2) research design for each study separately, including data collection and data analysis and 3) research credibility and ethics.

Figure 2.1 Overview of the methodology chapter



(Source: Author)

2.2 Research philosophy

It is important for a researcher to understand their role throughout the research process. Individuals' principles and worldviews will reflect in the way research is designed and may affect the "justification of [their] choice and particular use of methodology and methods" (Crotty, 1998, p. 2). The research paradigm influences and shapes how individuals perceive and understand the environment (Saunders et al., 2009). Burrell and Morgan (1979, p. 24) accordingly state that "to be located in a particular paradigm is to view the world in a particular way." Thus, it is important to select a research paradigm before the research project commences (Creswell, 2013). The philosophy of each scholar reflects their fundamental beliefs and assumptions of the nature of reality (ontology) and knowledge generation (epistemology). Accordingly, the generation of knowledge is inseparably tied to the epistemic value of the researcher (Cherwitz, 1977; Rao and Pasmore, 1989). Paradigm differences imply implications for research strategy, design and interpretation of knowledge.

Traditionally, organisational science (e.g. management and entrepreneurship) has been driven by the acceptance that the nature of organisations and how they operate are 'out there' and exist independently from social actors (Gioia and Pitre, 1990). This position represents an objectivist viewpoint, and research explores and discovers organisational phenomena by applying deductive approaches that test hypotheses against empirical data through statistical analysis (Saunders et al., 2009). However, more recently organisational research is increasingly adopting a subjectivist view that recognises that "social phenomena are created from the perceptions and consequent actions of those social actors concerned with their existence" (Saunders et al., 2009, p. 110). For example, when a researcher adopts a subjective view that comprehends organisational phenomena as a process of social change, an objectivist perspective becomes precarious. Particular when studying phenomena that are focusing on subjects (e.g. social actors such as entrepreneurs) rather than objects (e.g. computer mechanism), or on the interaction between both,

meaning and understanding is strongly related to interpretations made by researchers (Morgan and Smircich, 1980)¹⁰.

Within the two contrasting philosophical dimensions of objectivist-subjectivist, various research paradigms exist which are positioned in between the two perspectives¹¹. Research paradigms are also often referred to as ‘worldviews’ (Creswell, 2013), and from here onwards the term worldview will be adopted. The worldview comprises of epistemological and ontological beliefs, and methodological actions. Together these components create a worldview that offers “a general philosophical orientation about the world and the nature of research that a researcher brings to a study” (Creswell, 2013, p. 6). Thus, the researcher’s worldview influences how research is conducted.

The following section describes the dominant three worldviews adopted in business and entrepreneurship literature (e.g. Anderson and Starnawska, 2008; Leitch et al., 2010; Kenworthy and McMullan, 2013; Hlady-Rispal and Jouison-Laffitte, 2014): positivism, interpretivism and critical realism.

2.2.1 Positivism, interpretivism and critical realism

The positivist paradigm is positioned within the traditional objectivist natural science philosophy (Saunders et al., 2009). The positivist research stance recognises organisational structures as objective phenomena, which are in an outlying position of and independent to the organisation members or ‘social actors’ (Remenyi et al., 1998). As a result, “organizational structures are seen as shaping the activities of organization members in fairly deterministic ways” (Gioia and Pitre, 1990, p. 590), where extant theory is used to postulate hypotheses to test, extend, or refine theory for a particular context. Thus, analyses are predominantly quantitative, where data collection is structured in relation to the developed hypotheses, and based on scientific instruments and standards following a deductive strategy (Coviello and

¹⁰ The work of Burrell and Morgan (1979) provides a comprehensive overview and clarification of social science paradigms and its relation to organisational analysis.

¹¹ The work of Smircich (1983) offers an interesting debate about the objectivist-subjectivist differences by discussing the value of cultural perspectives for organisational analysis.

Jones, 2004; Hoskisson et al., 2011; Welter, 2011). Therefore, one dominant critic of the positivist paradigm is that it lacks the element of pure discovery in research as it neglects the existent complexity that forms social science studies (Guba and Lincoln, 1994; Sobh and Perry, 2006).

In stark contrast to the positivist stance, the interpretivist paradigm is closely associated with being subjective and suggests that social reality is characterised through the structure and interaction of ‘social actors’ (Guba and Lincoln, 1994; Saunders et al., 2009). The purpose of social science is to offer meaning, explanation and understanding of individuals’ actions and micro-foundations that are situated in and form the social reality. Therefore, organisational studies moved to qualitative investigations of organisations and individual processes to facilitate discovery of the multifaceted realities (Berger and Luckman, 1966).

Interpretivism is one such paradigm, which is grounded on the understanding “that people socially and symbolically construct and sustain their own organizational realities [...]. Therefore, the goal of theory building in the interpretive paradigm is to generate descriptions, insights, and explanations of events so that the system of interpretations and meaning, and the structuring and organizing processes, are revealed” (Goia and Pitre, 1990, p. 588). As such, interpretivism offers the greatest contrast to positivist assumptions. It enables to turn subjective understanding into objective knowledge by considering the research subject’s perspective for knowledge generation (Blaikie, 2010; Hay, 2011).

A common critic of interpretivist research is the challenge to immerse into the social world of the research subjects and understanding reality from their perspective without interfering with the researcher’s own beliefs and meanings (Morgan and Smircich, 1980; Saunders et al., 2009). Another critic of research output that adopts an interpretivism approach is the questions of generalisability of research findings. However, in contrast to the positivist stance, the interpretivist approach focuses more on the richness and understanding of the complexity of social reality, which substitutes concerns about statistical generalisability with analytical generalisation for theory building (Saunders et al., 2009; Yin, 2013). In addition, an interpretivist stance may facilitate the discovery of unexpected findings (Bryman and Bell, 2011).

The interpretivism stance builds on qualitative comprehensive studies that tend to follow an inductive strategy, where the researcher often attempts to take no account of prior theories or ideas in order to minimise researcher biases derived from existing knowledge and interpretations (Easterby-Smith et al., 2002). Data collection tends to emphasise in-depth qualitative data that forms rich representation of the subject under investigation (Saunders et al., 2009). Interpretive theory building derives through an often non-linear and iterative process between data collection, analysis and interpretation (Eisenhardt, 1989; Patton, 2002; Yin, 2013).

The wider acceptance of interpretivist research in social science (Denzin and Lincoln, 2005) calls for more qualitative research approaches in the entrepreneurship domain (e.g. Gartner and Birley, 2002; Neergaard and Ulhøi, 2007; Shepherd, 2015), and reflects the need to address the multidimensional nature of social science research.

Another philosophical paradigm is the critical realism stance. The critical realism philosophical approach can be positioned between the contrasting views of positivism and interpretivism. A critical realist believes that “reality consist not only of events that are experienced but also of events that occur whether experienced or not, and of the structures and mechanisms that produce these events” (Blaikie, 2010, p. 101). The critical realism stance recognises that a reality exists ‘out there’ (similar to the positivist stance), but it also rejects that this external reality can be objectively assessed (Easterby-Smith et al., 2002). It acknowledges that the external reality cannot be measured directly through observable facts, but requires deeper observations in order to interpret causalities that always will be subjective (Bhaskar, 2008): “Critical realist is thus *critical* of our ability to understand the world with certainty” (Sekaran and Bougie, 2013, p. 29). Accordingly, a critical realist accepts that due to the often subjective oriented data collection that aims to capture beliefs, attitudes and meanings, data and its interpretation are imperfect. Therefore, critical realists aim to progress understanding about the truth, but only what can be comprehended probabilistically.

Owing to the critical realists’ combination of beliefs originating from positivism and interpretivism, this philosophical approach is applicable for many quantitative and

qualitative research designs (Fletcher, 2007a; Creswell and Clark, 2010; Mole and Mole, 2010). Accordingly, Blundel (2007, p. 58) advocates the critical realism stance for entrepreneurship research as it can “contribute more ‘useful’ knowledge than rival paradigms” to the domain by moving beyond the adaptation of the contrasting positivism or interpretivism approach. However, the sought understanding and objective of the study affects the research design choices (Sayer, 2000). For example, while external factors that characterise the nature of the independent reality need to be identified and described (e.g. through the application of quantitative research design approaches), these factors influence individuals behaviour and their interpretation of the setting, which can be understood through qualitative research methods. The potential gap between the external reality and the individuals’ subjective experience about the reality in which they are situated can be minimised by triangulating across multiple research methods and data sources (Sekaran and Bougie, 2013; Blumberg et al., 2014). In order to understand the empirical reality, critical realists suggest the use of both quantitative and qualitative methods for an adequate explanation of events. Critical realists acknowledge that “insightful empirical research is a creative activity in which valuable insights cannot be produced by the routine use of particular research techniques” (Fleetwood and Ackroyd, 2004, p. 137).

As illustrated, three different worldviews exist, which have their strengths and weaknesses. It is argued that the research question is the guiding element that leads to the selection of the most sensible paradigm in order to meet the research objective. Thus, researchers have to carefully consider which worldview offers the most value to the research question set¹². Interestingly, a multiparadigm perspective has been put forward as a way to address research objectives in business and entrepreneurship literature (Lewis and Grimes, 1999; Lewis and Kelemen, 2002; Primecz et al., 2009; Romani et al., 2011). The following section reviews the multiparadigm perspective and its appropriateness for this thesis.

¹² Tension exists among the apologists of different worldviews, evidenced in a ‘paradigm war’, which developed into an active ‘paradigm debate’ in management research (see, for example, Shepherd and Challenger, 2013).

2.2.2 Multiparadigm perspective

The objective of this thesis is to explore, describe and explain entrepreneurial activities in crowdfunding and relate their behaviour to capital assembly outcomes. Leitch et al. (2010, p. 79) state that “as entrepreneurship is a multifaceted, complex social construct [...] knowledge production requires inclusivity, diversity, and pluralism in research perspectives and approaches.” In a similar vein, Jennings et al. (2005, p. 148) argue that “the breadth and richness of understanding is surely enhanced by acceptance of the need for pluralism.” Burrell and Morgan (1979) and Frost (1980) recognise that a single research philosophy paradigm produces narrow interpretations of the reality and limits revealing the multifaceted nature of a phenomenon. Lewis and Kelemen (2002, p. 252) further state that “most researchers on both sides of the Atlantic now recognize that a single paradigm is necessarily limiting, helping expose certain facets of organizations, while obscuring others.” This issue has facilitated a growing interest for the multiparadigm perspective.

The multiparadigm perspective enables to use divergent worldviews empirically (Lewis and Grimes, 1999). It allows to qualitatively understand the research phenomenon, and further to explain mechanisms and causal relationships based on quantitative research approaches. Two strategies exist for the use of a multiparadigm perspective (Chell and Allman, 2003). First, a ‘parallel’ multiparadigm perspective can be applied, which allows to use different worldviews for investigating the phenomenon under investigation on equal terms (e.g. Primecz et al., 2015). The parallel perspective enables to investigate, and more specifically analyse empirical evidence through different worldviews. This allows providing different conclusions and thus encourages to compare findings between worldviews. The second strategy for adopting a multiparadigm perspective is the ‘sequential’ approach. This strategy facilitates “cultivating diverse representations to purposely inform each other, as the outputs of one study provide inputs for a subsequent study – seeking to grasp disparate yet complementary focal points” (Chell and Allman, 2003, p. 125).

Gioia and Pitre (1990, p. 591) allude the strengths of adopting, and encourage the use of a multiparadigm perspective:

“Multiparadigm approaches offer the possibility of creating fresh insights because they start from different ontological and epistemological assumptions and, therefore, can tap different facets of organizational phenomenon and can produce markedly different and uniquely informative theoretical views of events under study.”

In addition, Gioia and Pitre (1990, p. 584) point out:

“Traditional approaches to theory building in organizational study have tended to produce valuable, but nonetheless incomplete, views of organizational knowledge, mainly because they have been predicated predominantly on the tenets of one major paradigm.”

A multiparadigm perspective acknowledges the significance of a multi-level study to connect knowledge generated at the micro (e.g. individual), meso (e.g. organisation), and macro (e.g. economy) level to understand the complex empirical reality (Saunders et al., 2009). Based on the objective of this thesis a three study portfolio approach was undertaken to facilitate the investigation of entrepreneurial crowdfunding from multiple perspectives. This approach allows to guarantee a comprehensive initial overview about the limited studied phenomenon and to facilitate sense-making of identified entrepreneurial activities and their relation to resource assembly outcomes in crowdfunding. Therefore, this research adopts a multiparadigm perspective to contribute to the broader understanding of the multifaceted entrepreneurial crowdfunding phenomenon. This enables the researcher to utilise quantitative and qualitative research methods to facilitate exploration about correlation and causation, but also to discover and reveal the micro-foundations of entrepreneurs and their experience and role by interacting with them.

As such, the thesis' research approach follows calls from entrepreneurship scholars such as Glynn et al. (2000) and Shepherd (2015) who are advocating the adoption of different worldviews in studying entrepreneurial phenomena for providing rich exploratory investigations and more varied interpretations to advance knowledge creation. The researcher acknowledges the strengths of adopting a multiparadigm perspective to provide more comprehensive interpretations of the studied phenomenon. Adopting a multiparadigm perspective enables the researcher to utilise different methodological approaches in investigating entrepreneurial activities in

crowdfunding. Table 2.1 summarises the adopted methodological standpoints for each of the three studies.

Table 2.1 Summary of methodological standpoints for each study

	Methodological standpoints	Reasoning
Study one	Exploratory Quantitative (descriptive)	Provide initial understanding about what drives crowdfunding outcome.
Study two	Explanatory Quantitative (testing)	Explain the relationship between entrepreneur's networks and crowdfunding outcome.
Study three	Exploratory and explanatory Qualitative (case study)	Explain outcome drivers, and generate new theory about entrepreneurial crowdfunding.

(Source: Author)

2.3 Research strategy

The research strategy creates the link between theory and the empirical data. As such, the design of the research strategy is based on the appropriateness to best answer the research questions set (refer to chapter 1, Table 1.2) and to meet the research objective (Saunders et al., 2009). Three predominantly utilised research strategies are inductive, deductive, and abductive (Bryman and Bell, 2011; Creswell, 2013). Table 2.2 offers an overview of the objective, research process and outcome of these three research strategies.

Table 2.2 Overview of research strategies

	Inductive	Deductive	Abductive
Objective	To establish descriptions of characteristics and patterns.	To test theories, to eliminate false ones and corroborate the survivor.	To describe and understand social life in terms of social actors' meanings and motives.
Start	Collect data on characteristics and/or patterns. Produce descriptions.	Identify a regularity that needs to be explained. Construct a theory and deduce hypotheses.	Discover everyday lay concepts, meanings and motives. Produce a technical account from lay accounts.
Finish	Relate these to the research question.	Test hypotheses by matching them with data explanation in that context.	Develop theory and elaborate it iteratively.

(Source: Adapted from Blaikie, 2010, p. 84)

The first research strategy is the inductive strategy. Before the research phenomenon can be investigated, the researcher has to select a set of characteristics and decide on what data to collect in order to induce generalisation of the observed phenomenon (Sekaran and Bougie, 2013). Exploratory studies are inherently inductive. Thus, this approach is often utilised to advance knowledge about a research phenomenon that is limitedly investigated. The purpose of inductive research is to provide deep understanding of a particular phenomenon through the investigation of specific observations about characteristics, patterns and regularities (Blaikie, 2010). Based on these observations general conclusions are induced. Therefore, the inductive strategy is also known as a ‘bottom up’ approach, where a researcher can conclude general findings (and construct theory) based on the evidence of particular (few) observations (Trochim and Donnelly, 2006).

Inductive reasoning is appropriate to explore and establish deeply embedded description of phenomena, rather than general conclusions. Blaikie (2010, p. 83) acknowledges this as a limitation: “generalizations are never universal in the social science, patterns in distribution, or substantial associations between such concepts, can be established at a certain time and in certain places.” Thus, integrating one, two or ten observations about one phenomenon does not justify the conclusion that findings are universally true, as there is no evidence that a contrary finding might be found. Therefore, inductive research is closely tied to qualitative data collection methods (Miles et al., 2013).

On the contrary to the inductive strategy, social science can adapt a more natural science oriented research approach and follow deductive reasoning. This approach is able to provide explanations about identified characteristics and patterns of observations. Therefore, the deductive strategy is also characterised as a ‘top-down’ approach (Trochim and Donnelly, 2006). Deductive research begins by using a general theory about a phenomenon, and then creates tentative hypotheses that describe certain relationships to test whether the theory is able to explain the particular observation. The aim of deductive research is, therefore, to confirm theory or refute and propose new theory for particular observations (Saunders et al., 2009; Bryman and Bell, 2011). In order to test theories, the deductive approach

operationalises concepts and descriptions, collects quantitative data and uses statistical analysis tools to explain causal relations between variables (Byrne, 2002). In contrast to the inductive approach, the deductive approach is closely associated with structured quantitative methodology that establishes credibility about the objectivity and thus generalisability of the findings (Saunders et al., 2009).

The third research strategy is the abductive approach. The aim of abductive reasoning is to “discover why people do what they do by uncovering the largely tacit, mutual knowledge, the symbolic meanings, intentions and rules, which provide the orientations for their actions” (Blaikie, 2010, p. 89). The abductive approach acknowledges the importance to familiarise with theory prior to collecting data in order to extend knowledge about a phenomenon, which is similar to the deductive strategy (Miles and Huberman, 1994). This process attempts to reduce research bias as multiple theories are reviewed before commencing empirical research, which simultaneously facilitates the identification of alternative explanations and constructions that can be taken into consideration to study a phenomenon (Alvesson and Kärreman, 2007). Then, the abductive approach moves on from facts that are deduced from extant knowledge (e.g. literature review on the subject) to ideas and theories about an unexplained or unexpected phenomenon, which is then explored empirically (inductive) and findings are reviewed iteratively with previous theories (deductive). Peirce (1978) argues that the abductive approach consists of three steps that guide theory development. Firstly, the researcher identifies and applies an established interpretive imperative (theory). Secondly, in consideration of the theory, the researcher identifies a surprising observation of an empirical phenomenon, which finally encourages the researcher to explore and construct a new interpretive rule (theory) that resolves the surprising ‘mystery’ (Alvesson and Kärreman, 2007). The abductive research approach allows the researcher to use multiple research strategies to use more profoundly grounded theoretical reasoning in empirical evidence to construct more robust and generalisable theoretical contributions (Silverman, 2006).

Table 2.3 summarises the adopted research strategies for each of the independent research studies.

Table 2.3 Summary of adopted research strategies for each study

	Research strategy	Reason
Study one	Inductive	Exploratory - Due to limited literature, an inductive research strategy is applied to explore patterns and discover characteristics of entrepreneurial activities in crowdfunding. - Exploratory data is important for designing the subsequent studies that build this thesis. Particular areas were identified where existing literature and theoretical frameworks have offered, or produced conflicting or inadequate, explanations.
Study two	Deductive	Explanatory - A deductive research strategy is applied to test theory through postulated hypotheses in order to improve existing understanding and construct new theory.
Study three	Abductive	Exploratory and explanatory - An abductive research strategy is applied to provide more comprehensive understanding about the observed patterns and their relationship to crowdfunding performance and outcome. This supports complementing findings from the prior two studies.

(Source: Author)

2.4 Research design

Due to the nature of this thesis, with three separate yet interrelated studies, the layout of discussing the research design adopts a somewhat different structure. First, an introduction to research design is provided. The emphasis lies on a mixed-method research design. Subsequently, the adopted research design for each of the three independent studies is discussed. This comprises of 1) the research approach (quantitative and qualitative), 2) the unit of analysis, and 3) the sample selection and size. This is followed by an overview of the adopted data collection and data analysis procedures. Research limitations are discussed in each empirical study discretely¹³.

¹³ Refer to chapter 3, chapter 4 and chapter 5.

2.4.1 Introduction

The research design provides a technical framework that assists the researcher to identify and select the most appropriate connection between the initial research questions and empirical data to be sought in order to provide explicit conclusions (Saunders et al., 2009).

Yin (2009, p. 26 [emphasis in original]) defines research design as “[...] *a logical plan for getting from here to there*, where *here* may be defined as the initial set of questions to be answered, and *there* is some set of conclusions (answers) about these questions.” The research design supports the reflection on which data collection method and analysis are applicable to study the research questions, and as such rationalises the decisions about which dimensions and variables are of interest (Blaikie, 2010; Bryman and Bell, 2011). The research design, therefore, “deals with a *logical* problem and not a *logistical* problem” (Yin, 2009, p. 27 [emphasis in original]), where decisions for data types and sources, collection methods, and analysis are carefully examined to tie empirical data to the research question and conclusion in a coherent route.

Based on the research question and objective, this thesis adopts a multi-study approach (which includes a research portfolio of three studies). As such, a mixed-method approach is applied, utilising both quantitative and qualitative data and analysis methods (Tashakkori and Teddlie, 2003; Creswell and Clark, 2010). The appropriate approach is adopted that best answers the independent study’s research question set.

Saunders et al. (2009, p. 152 [emphasis in original]) defines a mixed-method approach as follows:

“**Mixed method research** uses quantitative and qualitative data collection techniques and analysis procedures either at the same time (parallel) or one after the other (sequential) but does not combine them [...]. This means that, although mixed method research uses both quantitative and qualitative world views at the research methods stage, quantitative data are analysed quantitatively and qualitative data are analysed qualitatively.”

Quantitative and qualitative research are often seen as opponents in research methodology. However, the researcher acknowledges the richness of qualitative entrepreneurship research, but at the same time embraces the qualities of quantitative research approaches (Morse, 2003). Particularly for the phenomenon under investigation in this thesis, quantitative approaches are valuable when representative descriptions of the phenomenon are limited available. Such initial descriptions can lead the way for further qualitative research approaches to go beyond descriptions and generalisability of empirical studies. Neergaard and Ulhøi (2007) state that the interplay between both, quantitative and qualitative approaches is a fruitful research direction for investigating a particular phenomenon: “The adoption of different and sometimes (at least at first sight) contradictory research methods into the same subject [...] may often pave the way for new inspiration and insight” (Neergaard and Ulhøi, 2007, p. 5).

As the thesis adopts a mixed-method approach with its research portfolio of three studies, the researcher addresses recent calls within the entrepreneurship domain for utilising multiple perspectives and research designs to generate a variety of interpretations in order to provide rich understanding of the complex nature that constitute entrepreneurship phenomena (e.g. Glynn et al., 2000; Molina-Azorin et al., 2012; Shepherd, 2015).

In the following sections, each of the three studies systematically adopts the following structure: 1) Restating the study’s objective and research questions, 2) explaining the research approach, 3) identifying the unit of analysis and 4) discussing the sample selection and size to illustrate the conformity to each study’s designated research objective.

2.4.2 Study one

The objective of the first study is to explore crowdfunding characteristics and their links to fundraising performance and outcomes in crowdfunding. It further aims to describe identified crowdfunding campaign characteristics and their role for

campaign narrative creation and legitimacy conferral. Therefore, two research questions guide this study:

RQ1: How do entrepreneurs create and confer project legitimacy for crowdfunding projects?

RQ2: How do entrepreneurs create a project narrative for crowdfunding projects?

2.4.2.1 Research approach

The internet provides a rich source of information about social phenomena. Individuals and organisations engage, communicate, share information and execute (financial) transactions over various online mechanisms such as online social network platforms (Garton et al., 1997; Katz et al., 2003; Schlosser et al., 2006; Fernhaber et al., 2009; Fischer and Reuber, 2014). Studying these online mechanisms offers a vital understanding about interactions between individuals and organisations. As such, analysing social phenomena in online social network platforms facilitate insights and interpretation about social constructs that underline entrepreneurial activities in web-enabled networks (Avgerou and Li, 2013).

The vast majority of explorative research in the crowdfunding literature uses a quantitative explorative approach (e.g. Mollick, 2014; Rao et al., 2014; Agrawal et al., 2015). The quantitative explorative approach qualifies as appropriate due to the large amount of available and accessible data through CFPs, which is systematically operationalisable to provide descriptive measurements to understand particular entrepreneurial activities in crowdfunding. A quantitative research approach, therefore, enables to capture a large sample size to provide a broad overview of the phenomenon under investigation.

Following the study's explorative research objective, an inductive research strategy is applied and a quantitative explorative approach is used to provide initial understanding of the underlying dynamics about entrepreneurial crowdfunding. In doing so, this approach allows to explore crowdfunding campaigns and project characteristics to familiarise with campaign patterns and dynamics that reflect

entrepreneurial activities in crowdfunding. It further supports the exploration and identification of variables and facilitates understanding about their association to entrepreneurial activities in crowdfunding.

2.4.2.2 Unit of analysis

The unit of analysis is the entrepreneurs' crowdfunding campaign, which is the designed and publicly available business plan of entrepreneurs about their business opportunity and project. This business plan is communicated on CFPs (in this case through 'Kickstarter') and represent an entry point for entrepreneurs to interact with and access the platform's social network that is formed by a large heterogeneous group of individuals, with the aim to secure venture capital. Each crowdfunding campaign has its own campaign or project site on the CFP, allowing the entrepreneur to provide a textual and audio-visual presentation about the campaign and project. Consequently, these crowdfunding campaign sites (or project sites) present a significant element for entrepreneurial narrative construction and legitimacy conferral. Potential investors use information that is provided on the crowdfunding campaign sites for their 'investment' decision-making process. As such, the crowdfunding campaign site is comparable with a 'traditional' business plan, which creates the entry document for negotiations with venture capital and business angel investors (e.g. MacMillan et al. 1985; Mason and Stark, 2004; Chen et al., 2009).

The campaign site's characteristics are explored to identify patterns of the campaign's content features and to link these to the entrepreneur's capital assembly outcome. As such, content elements such as communication and interactivity components (e.g. number of project updates and project comments), and data regarding the amount of funding and the return on investment offered (e.g. funding goal and rewards) are investigated. These variables are used to uncover how entrepreneurs seek to establish narrative creation and legitimacy conferral, to facilitate understanding about crowdfunding outcomes.

2.4.2.3 Sample selection and size

In order to investigate the entrepreneurs use of the crowdfunding campaign site features for narrative and legitimacy construction, a CFP has to be selected which forms the study's sample. Understanding the characteristics of crowdfunding campaigns and relating them to successful and failed capital assembly outcomes provides additional interpretations about entrepreneurial activities.

The selected CFP for this thesis is Kickstarter (2015). Kickstarter is a leading reward-based online CFP, which was founded in 2009 and launched its platform on the 28th April 2009. Kickstarter is based in New York City, NY, U.S., but since its inception launched in eighteen countries¹⁴ (Kickstarter, 2015a). Based on Kickstarter's current published business figures, over US\$1.6bn were distributed through over 9.3m project supporters (also called project 'backers' on Kickstarter) to support over 90,000 project campaigns since the platform's launch (Kickstarter, 2015a). Kickstarter was chosen for this research due to its leading role within the reward-based crowdfunding market, where it outperforms competing CFPs in terms of the number of registered 'backers' and published project campaigns. As a result, the term Kickstarter is commonly used as synonym for crowdfunding, and surpasses the more generic term crowdfunding in Google's search interest measurement¹⁵. Other CFPs (i.e. Indiegogo) adopt similar platform structure elements and design features, enabling to argue that investigating entrepreneurial activities on Kickstarter can lead to results that are more likely generalisable to the overall reward-based crowdfunding market. Further, Kickstarter is a commonly studied CFP in entrepreneurial crowdfunding literature (e.g. Mollick, 2014; Colombo et al., 2015; Lehner et al., 2015).

¹⁴ Kickstarter started in 2012 gradually to allow individuals from outside the U.S. to raise capital through its platform. Kickstarter and its service are available in the United Kingdom, Ireland, Canada, Australia, New Zealand, the Netherlands, Spain, France, Germany, Austria, Spain, Italy, Switzerland, Belgium, Luxembourg, Sweden, Denmark, and Norway.

¹⁵ Google Trends analytics were used to measure the search interest for the term 'crowdfunding' and 'Kickstarter' for the duration from 2004 to 2015. Since 2009, the search term 'Kickstarter' shows larger search interest than 'crowdfunding'. Interestingly, the search term 'crowdfunding' reveals a larger interest within the European region (e.g. the Netherlands, Austria, Spain and Germany), while 'Kickstarter' represents a larger interest for the North American region and in Far-East Asia.

More specifically, while Kickstarter creates the study's CFP sample, the first study focuses on the exploration of crowdfunding campaign characteristics on campaigns that originate in New York City, NY, U.S.. The regional sample selection was based on its predominant proportion of crowdfunding activity on Kickstarter: 13.5% of all U.S. and 11.9% of all global Kickstarter campaigns originate in New York City (Kickstarter, 2014a). Data of 421 campaign projects were collected, representing the sample size for the first study. The data sample for the first study consists of:

1. Projects that are based in New York City, NY, U.S.,
2. Projects that completed the full campaign period (successful and failed projects) and projects which were cancelled during the campaign,
3. Projects that were listed between June and July 2012,
4. Project campaigns from all thirteen categories¹⁶.

2.4.3 Study two

The objective of the second study is to explain the role of networks for fundraising performance and outcomes in crowdfunding. Thus, the study investigates the entrepreneurs networking activities on CFP to advance the understanding about the role of entrepreneurs' networks and networking activities for capital assembly in crowdfunding. Therefore, the study is guided by the following research question:

RQ3: How do entrepreneurs' social network and networking activities influence capital access and assembly in crowdfunding?

2.4.3.1 Research approach

This study adopts an explanatory quantitative research approach using a dataset that comprises data from Kickstarter. The first study provided insights into the characteristics of CFPs and crowdfunding campaigns, which supported to identify particular dynamics due to descriptive statistics and interpretations on frequencies, tendencies, and distribution of campaign variables. Therefore, the findings of the first

¹⁶ Kickstarter provides thirteen project categories, which include art, comics, dance, design, fashion, film and video, food, games, music, photography, publishing, technology, and theatre.

study in combination with the logical combination of knowledge from extant literature enabled to develop a theoretical framework about entrepreneurial networks and networking in crowdfunding: a topic that creates a fascinating research direction in crowdfunding literature (e.g. Mollick, 2014; Bruton et al., 2015) and entrepreneurship (e.g. Gronum et al., 2012; Leyden et al., 2014). Based on the theoretical framework, three hypotheses are developed about network relations among the entrepreneur and individuals within the CFP. A deductive approach is adopted to test the hypothesised relationships through multivariate statistical analysis. The multivariate regression analysis tests the relationship between two dependent variable (campaigns' assembled capital and funding status) and a set of independent variables that measure networking and social relationship among entrepreneurs and potential investors in crowdfunding (for exact variables refer to chapter 4, section 4.3).

In contrast to the first study, the second study is explanatory and adopts a deductive research strategy to test whether the relationships that have been theorised hold true. As a result, this study enhances methodological and analytical rigor by applying a similar research approach that is adopted by scholars such as Mollick (2014) and Colombo et al. (2015) to advance the understanding about entrepreneurial activities in crowdfunding.

2.4.3.2 Unit of analysis

Based on the second study's objective (refer to chapter 4, section 4.2) the unit of analysis is the relation between the entrepreneur (campaign creator) and the individuals (potential campaign supporters) within the CFP. As such, the study investigates the relations, communication and organisation of social relationships among individuals or organisations in order to investigate the formation and characteristics of social relations. Thus, the interesting feature of relations is its structure and patterns (Wellman, 1997). Although it is acknowledged that characteristics of the individual influence the features of relations (Levine and Mullins, 1978), the emphasis lies on the relationship among, and the relationship

creation activities of, the individuals (e.g. Greve and Salaff, 2003). Thus, this study does not consider specific characteristics of the entrepreneur and the individuals for their relations, but rather focuses on their use of communication and interaction features with reference to developing and maintaining social relations among them. The second study, therefore, aims to obtain interpretations of social relationships among entrepreneurs and potential investors on online CFPs and relate these to capital assembly performance and outcomes in crowdfunding (e.g. Belleflamme et al., 2014; Lehner, 2014; Bruton et al., 2015).

2.4.3.3 Sample selection and size

Similar to the first study, this study uses Kickstarter as the CFP for investigating entrepreneurial activities in crowdfunding. However, the sample size is increased due to a modified ‘web scraper’ software (refer to section 2.5.1), which allowed to collect campaign characteristic of 81,829 listed campaign projects on Kickstarter as opposed to 421 in study one. Accordingly, the available data comprises around 80% of all listed campaigns on Kickstarter between April 2009 (the launch of Kickstarter) and October 2013.

This study follows sampling criteria that are adopted in prior literature and replicates Mollick’s (2014) sampling procedure. As such, the sample for the second study consists of:

1. U.S. based Kickstarter projects (projects from outside the U.S. were removed),
2. Projects that completed the full campaign period (cancelled and suspended projects were removed),
3. Projects that were listed between April 2009 and October 2013,
4. Project campaigns from all thirteen Kickstarter project categories,
5. Projects that have linked their campaign to a Facebook account,
6. Projects that seek funding for US\$5,000 or more (projects that seek less than US\$5,000 were removed).

Using these criteria, the resulting sample size for the second study is 21,534 Kickstarter projects. The updated data and sample size offers a reliable and generalisable dataset to investigate and interpret evidence for knowledge creation, allowing to build on the explorative and descriptive findings of the first study, and to contribute to the scholarly dialog on crowdfunding by replicating and advancing findings.

2.4.4 Study three

The third study of this thesis aims to understand the processes and drivers that explain crowdfunding outcomes. More specifically, this study aims to extend understanding of entrepreneurial activities in crowdfunding through an in-depth study to provide a more comprehensive understanding about success and failure in capital assembly through crowdfunding. This study is guided by two research questions:

RQ4: How are project founders changed by the crowdfunding process?

RQ5: How does an individual's role identity influence campaign activity?

2.4.4.1 Research approach

In contrast to the first two empirical studies and their quantitative research approaches, the third study adopts a qualitative research approach with an abductive research strategy. As discussed in the multiparadigm perspective and research strategy sections (see section 2.2.2, and 2.3), this thesis aims to provide more conclusive research findings about entrepreneurial activities in crowdfunding by adopting a multi-perspective on the phenomenon under investigation. Therefore, the third study aims to provide more in-depth understanding about some facets of crowdfunding (specifically about the role of the entrepreneur), which quantitative methods are less suitable to uncover. The application of an explanatory and qualitative research approach, is therefore best suited (Eisenhardt, 1989; Saunders et al., 2009; Yin, 2013).

Qualitative research in the entrepreneurship field often adopts the use of case studies (Hlady-Rispal and Jouison-Laffitte, 2014). A case study is defined by Robson (2002, p. 178) as “a strategy for doing research which involves an empirical investigation of a particular contemporary phenomenon within its real-life context using multiple sources of evidence.” This enables the researcher to study multifaceted social phenomena without departing and ‘zooming-out’ from the real-life events that are under investigation (Yin, 2013).

A qualitative research approach that adopts case studies benefits from its ability to use insightful qualitative data to investigate complex processes which quantitative data by itself is not able to disclose. As such, valuable insights can be obtained through case studies, which other methods such as large-scale surveys or quantitative datasets are unable to reveal (Creswell, 2013). Therefore, following with a qualitative study to the first two quantitative studies allows providing more comprehensive interpretations of findings, and enables to advance understanding about the subject under investigation.

2.4.4.2 Unit of analysis

Following the objective of the third empirical study to investigate the role of the entrepreneur throughout the crowdfunding process, the entrepreneur is the unit of analysis for this study (Scott and Rosa, 1996; Davidsson and Wiklund, 2001).

Prior literature mainly studies the campaign characteristics that are observable on CFPs (e.g. Mollick, 2014; Ahlers et al., 2015), which limits the focus to only understand entrepreneurial activities on CFPs. Thus, while providing visibility of activities on these platforms, the entrepreneur’s role, processes and activities ‘behind the curtains’ remain invisible. Therefore, the third study expands research to focus more on the individual and their activities. More specifically, gains more comprehensive understanding about the ‘real’ complexity for entrepreneurs to prepare and manage a crowdfunding campaign.

The study’s emphasis on the entrepreneur, therefore, improves interpretations about the capital assembly performance and outcomes in crowdfunding. Crowdfunding is a

process that is entrepreneur-centred, implying that the entrepreneur makes sense and interprets CFP features to utilise these instruments for processes linked to crowdfunding. The focus on the individual entrepreneurs allows to shed new light on how crowdfunding is conceptualised.

2.4.4.3 Sample selection and size

The third study adopts a longitudinal single-case study method to facilitate the exploration and explanation of entrepreneurial activities in crowdfunding by incorporating different perspectives through various sources of data.

A longitudinal case study is defined by Yin (2009, p. 49) as “studying the same single case at two or more different points in time.” Therefore, longitudinal research is conducted over the course of time during which the anticipated transformation or phenomenon under investigation is likely to take place, typically involving multiple data collection periods (Hassett and Paavilainen-Mäntymäki, 2013). Generally, two types of longitudinal studies can be defined: 1) prospective studies, which enable to research a phenomenon ‘on the go’ across a certain period of time, creating time series data (Brundin, 2007; Blaikie, 2010;), and 2) panel studies, which involve cross-sectional data collection at particular intervals over a period of time, creating panel data¹⁷ (Blaikie, 2010; Bryman and Bell, 2011). In addition, longitudinal studies can use retrospective analysis (e.g. use of historical documents) and real-time analysis (e.g. Pettigrew, 1990). The third study of this thesis adopts a two year prospective longitudinal case study, which is commonly found in the entrepreneurship literature (e.g. Clarysse and Moray, 2004; Rasmussen et al., 2011).

Yin (2013) argues that the adoption of a longitudinal research project serves as a substantial reason for conducting a single-case study. Accordingly, scholars including Eisenhardt and Graeber (2007) reason that theory building from case studies does not follow statistical case selection and sampling methods, but rather

¹⁷ The Global Entrepreneurship Monitor (GEM), for example, provides panel data about individuals’ perception of entrepreneurship and entrepreneurial activities across a wide range of countries through the annual administration of national surveys to create a ‘snapshot’ of country’s entrepreneurship state of affair (GEM, 2015).

relies on theoretical sampling, which “simply means that cases are selected because they are particularly suitable for illuminating and extending relationships and logic among constructs” (Eisenhardt and Graeber, 2007, p. 27).

However, a general critic about single-case studies exists, which is grounded on the potential limitations about generalisability of findings and its lack of robust theoretical construction (Eisenhardt, 1989; Yin, 2013). Having said this, regardless of how many cases are used, research that uses data deriving from one or ‘*n*’ case studies “get much closer to theoretical constructs and provide a much more persuasive argument about causal forces than broad empirical research can” (Siggelkow, 2007, pp. 22-23). Especially the single-case study approach benefits from a carefully and strategic case selection process, which aims to gain and accumulate new insights and knowledge on a specific phenomenon (e.g. Datta and Gailey, 2012; Philips et al., 2013). The researcher acknowledges that for this study depth is the main focus, which is more suited due to the limited research undertaken on this topic and to answer the research question set.

The case selection was driven by several reasons and follows the general sample selection procedure for single-case studies (Siggelkow, 2007; Yin, 2013). Firstly, accessibility to in-depth information are critical factors for a case study method. Accessibility issues create a central concern in research and especially in the case where access to data is difficult to establish the availability and ease of data access takes a primary factor for case selection (Saunders et al., 2009). Therefore, the specific case was selected “precisely because it is very special in the sense of allowing one to gain certain insights that other organizations would not be able to provide” (Siggelkow, 2007, p. 20). The contact to the case entrepreneur was established through the utilisation of the researcher’s Ph.D. advisor’s network, who had previously studied the entrepreneur and had engaged in ‘pro bono’ business advisory to the entrepreneur in the past. As a result, the case entrepreneur informed the researcher’s Ph.D. advisor about the intention to assemble capital through crowdfunding, and connected the entrepreneur with the researcher to discuss the possibility of a research project. The entrepreneur agreed to engage with the researcher for a longitudinal research study, which made it possible to conduct a

detailed investigation of the complete crowdfunding campaign¹⁸. The single case offers unique access to a ‘living case’ (Yin, 2013), enabling the observation of the entrepreneur and the venture as it develops through the crowdfunding process.

The second rationale for the selection of the particular single case entrepreneur is that the case exemplifies a ‘representative or typical case’ (Yin, 2013). Kickstarter as the leading reward-based CFP defines itself as a “new way to fund creative projects” following the mission to “help bring creative projects to life” (Kickstarter, 2014b). Accordingly, the majority of crowdfunding projects derive from the music (approx. 20%), film and video (approx. 24%) and theatre (approx. 4%) domain, representing ca. 48% of all Kickstarter projects. Moreover, those categories have the highest number of successful projects on Kickstarter with a success rate between 40% (film and video) and 64% (theatre) (Kickstarter, 2014c).

Therefore, a creative entrepreneurial venture was selected for the single-case study in order to represent the majority of projects listed on Kickstarter. Hence, the data permits building logical conclusions that can be insightful for similar cases (Saunders et al., 2009; Yin, 2013). The selected case represents an entrepreneurial firm that is based in Colorado, U.S.. The firm represents an independent creative music and art venture that produces music albums, musical theatre, live interactive shows, books and apps for children to inspire creativity.

The entrepreneur started to embrace crowdfunding for capital assembly in early 2013, and the study follows the entrepreneur’s ‘journey’ from April 2013 until May 2015. Thus, the complete pre-crowdfunding campaign preparation timeframe, the online campaign and the post-campaign period could be captured for a longitudinal investigation of the entrepreneur’s activities in a ‘real-time’ process study (Brundin, 2007).

Finally, the limited availability of qualitative studies in the field of crowdfunding, encourages the use of a single-case study to address the complexity of the novel

¹⁸ Refer to Appendix B for the ‘participant information letter’, and Appendix C for the ‘participant’s consent form’.

phenomenon and to provide more comprehensive understanding about entrepreneurial activities in the capital assembly process through crowdfunding.

2.4.5 Research design summary

In view of the overall objective of the thesis, the researcher constructed a research design for each independent study separately in conformity to the study's designated research objective. Table 2.4 provides a summary of the research design for each study.

Table 2.4 Summary of research design

	Research questions	Research approach	Unit of analysis	Sample selection and size
Thesis	<ul style="list-style-type: none"> - How do entrepreneurs exploit crowdfunding to assemble resources? 	<ul style="list-style-type: none"> - Mixed-methods (quantitative and qualitative) 	<ul style="list-style-type: none"> - Multiple units of analysis: <ul style="list-style-type: none"> - Crowdfunding campaign characteristics - Social relation - The campaign founder (entrepreneur) 	<ul style="list-style-type: none"> - Two pilot studies (5 interviewees and 125 Kickstarter campaigns), - Kickstarter (crowdfunding platform) - Study one: 421 Kickstarter projects - Study two: 21,534 Kickstarter projects - Study three: Longitudinal single-case
Study one	<ul style="list-style-type: none"> - How do entrepreneurs create and confer project legitimacy for crowdfunding projects? - How do entrepreneurs create a project narrative for crowdfunding projects? 	<ul style="list-style-type: none"> - Quantitative - Explorative - Inductive 	<ul style="list-style-type: none"> - Crowdfunding campaign characteristics (on Kickstarter) 	<ul style="list-style-type: none"> - Kickstarter, - Campaigns from New York City, NY, U.S., - Time period: June-July 2012 (cross-sectional), - No project category restriction, - No funding restriction, - 421 Kickstarter campaigns.
Study two	<ul style="list-style-type: none"> - How do entrepreneurs' social network and networking activities influence capital access and assembly in crowdfunding? 	<ul style="list-style-type: none"> - Quantitative - Explanatory - Deductive 	<ul style="list-style-type: none"> - Social relation (between the entrepreneur and individuals on CFPs) 	<ul style="list-style-type: none"> - Kickstarter, - U.S. originated campaigns, - Time period: April 2009-October 2013 (cross-sectional), - No project category restriction, - Campaigns with linked Facebook accounts, - Campaigns seeking US\$5,000 or more, - 21,534 Kickstarter projects.
Study three	<ul style="list-style-type: none"> - How are project founders changed by the crowdfunding process? - How does an individual's role identity influence campaign activity? 	<ul style="list-style-type: none"> - Qualitative - Explorative - Explanatory - Abductive 	<ul style="list-style-type: none"> - The entrepreneur (campaign founder) 	<ul style="list-style-type: none"> - Longitudinal (24-months), - Prospective (living case), - Single-case (representative case), - Context: U.S. based, - Theoretical sampling.

(Source: Author)

2.5 Data collection

Two data collection procedures were undertaken due to the thesis' portfolio format that is comprised of three studies¹⁹:

1. Two quantitative large-scale datasets were developed; collecting relevant crowdfunding campaign characteristic data from Kickstarter for the first two studies, utilising quantitative data collection tools and techniques.
2. A single-case study was developed, using evidence from multiple data sources, including interviews, documents, observations and the crowdfunding campaign website.

This section provides background information about the applied data collection tools and data collection procedure for the empirical studies.

2.5.1 Web data extraction from Kickstarter (study one and two)

The internet offers a large and rapidly growing source of information of any type and form. Interestingly, most of the information that is available on the internet is provided in a relatively structured form, as most online websites are built and designed around database structures (Abiteboul et al., 1994). For example, e-commerce websites (e.g. Amazon and eBay) adopt a common template upon which information is published similarly throughout the website. This structured approach improves user experience because it simplifies the information retrieval process.

Various online CFPs, including Kickstarter similarly adopt a structured template upon which information is made available in equal measure on their websites (e.g. Indiegogo, 2015; Kickstarter, 2015a). For entrepreneurs, the CFPs' website template creates the 'playing field' to present and communicate their business opportunities and plans for capital support. Although, the platforms provide well-structured

¹⁹ Initial data collection was undertaken for two pilot studies, which supported the planning and performance for the main data collection procedures (refer to section 2.9).

templates and require the entrepreneurs to adjust and adapt their business plans to the platforms template, campaign site contexts and presentations still vary greatly in quality. This exemplifies that entrepreneurs interpret and utilise available features and tools differently. Hence, it is of interest to capture the campaign site's contents and presentations to investigate the complexity and variety of entrepreneurial campaign sites on CFPs to study campaign characteristics and their relationship to entrepreneurial capital assembly in crowdfunding.

The adopted structured scheme for data provision on CFPs enables to retrieve large (often at first sight complex) data in a controlled, reliable and resourceful method. Generally, such data collection methods are facilitated by the use of 'web data extraction tools' (also referred to as 'data scraper') (Thelwall, 2001; Ferrara et al., 2014), which can autonomously and automatised collect predetermined data from websites. Based on the thesis' objective to study entrepreneurial activities in crowdfunding, it is essential to capture the online CFP characteristics to understand the underlying social dynamics (Mollick, 2014). The vast development and expansion of crowdfunding resulted into increasing entrepreneurial online activity and consequently into rapidly growing amount of produced data on CFPs. It is an imperative requirement to explore social phenomena that take place in these online CFPs to analyse the complexity of the entrepreneurial crowdfunding phenomenon. As a result, such web data extraction methods are increasingly accredited by researchers to analyse social phenomenon in online environments (e.g. Berger and Milkman 2012; Mollick 2014). The use of web data extraction tools provide an efficient method to collect the required data for investigation without consuming a large amount of resources (e.g. time, costs and human labour) (Ferrara et al., 2014). Thus, it is increasingly applied in social science (Ackland, 2013), management and entrepreneurship research (Lin et al., 2013; Colombo et al., 2015).

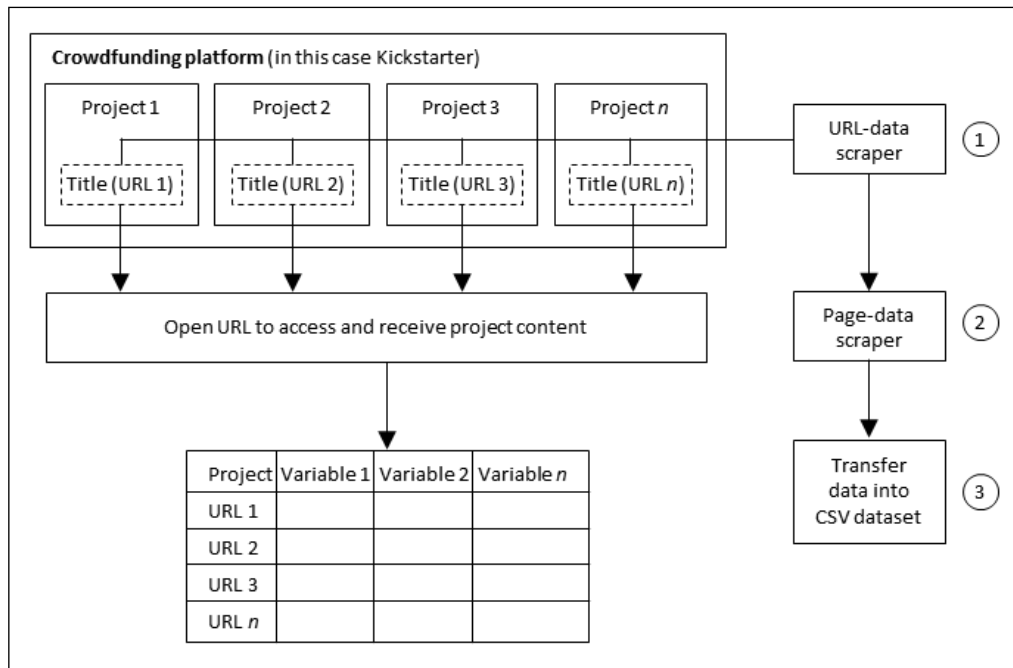
Based on the first and second study's research objective, crowdfunding campaign data from Kickstarter was collected with the use of a web data extraction software. However, as no predefined web data extraction programme was available, a collaboration with a software developer within the University of Edinburgh Business School was initiated to build an internet 'data scraper' software to automatically

gather information from the Kickstarter website. The ‘data scraper’ software was written in PHP. PHP was selected as appropriate due to the ease of use and access to a PHP webserver that was used to run the ‘data scraper’ for collecting the data and to store the generated datasets. The development of the ‘data scraper’ software was completed in May 2012 and took one month of part-time work. After a few tests, the ‘data scraper’ has been optimised using multithreading and regular expressions to capture vast amount of data in real-time. The final software consists of a main ‘data scraper’ gathering uniform resource locator’s (URL’s) for all projects that are listed under a specific pre-filtered category such as a particular city on Kickstarter, and another ‘data scraper’ which uses these URL’s and extracts information using regular expressions from each campaign website (see Figure 2.2). Combining the two ‘data scrapers’ in a recursive procedure allowed to reduce the data collection time from three minutes to under 40 seconds.

As a result, the ‘data scraper’ managed to go through all live campaign websites for the specified geographical area of New York City, NY, U.S., during 30 consecutive days from June to July 2012. The ‘data scraper’ collected data every day at 9am UK time (4am EDT time) to bypass high-traffic on the platform and avoid duplicate entries. Over the 30 day period of data collection there was always a potential risk of denied access and change of page structure, which could result in loss of data. However, the CFP itself has been carefully observed to account for potential changes before the ‘data scraper’ has started each day.

Additional descriptions on the dataset and the particular set of variables used in the first study can be obtained in the methodology section in chapter 3.

Figure 2.2 Data scraper design



(Source: Author)

The second empirical study adopts a ‘web data extraction’ data collection method *ad idem* with the first study. In the same way, Kickstarter continues to be the CFP used to study entrepreneurial activities. However, the data for the first empirical study included campaign characteristics for 421 projects, which originated from New York City, NY, U.S., and only captured activities for a particular timeframe of one month in 2012. The geographical restricted sample size and limited timeframe was identified as a potential limitation for generalising findings. With the objective to capture a broader perspective of social activities in crowdfunding and to improve validity and reliability of findings, a new ‘web data extraction’ procedure was undertaken in October 2013. The ‘data scraper’ software was developed similarly to the prior programme, however, included modifications that allowed to collect information of 81,829 campaigns, which captured around 80% of all listed campaigns between April 2009 (the inception of Kickstarter) and October 2013. This dataset, creates a cross-sectional characteristic and captured the state of play of all past campaigns (e.g. failed, succeeded, cancelled and suspended). Comparable campaign characteristics were collected (similar to the first study), retrieving 21 fixed variables for each campaign, resulting in 1,718,409 data points. Additional

descriptions on the dataset and the particular set of variables used in the second study can be obtained in the methodology section in chapter 4.

A detailed data dictionary in Appendix D provides additional information about the collected variables that create the database for study two (chapter 4).

2.5.2 Crowdfunding case study (study three)

Empirical evidence for case study research can derive from various sources (Yin, 2013). Data can be collected “from a number of entities by a direct observer(s) in a single, natural setting that considers temporal and contextual aspects of the contemporary phenomenon under study, but without experimental controls or manipulations” (Meredith, 1998, pp. 442-443). For this reason, case study research methods hold high acceptance in the entrepreneurship and small business management field (Dyer and Wilkins, 1991; Perren and Ram, 2004; Hlady-Rispal and Jouison-Laffitte, 2014): its suitability to discover and explain causalities in real-life involvements and observations is distinctive.

The third study uses four primary data sources for generating empirical evidence. Firstly, open-ended interviews with the case entrepreneur are conducted to facilitate the interviewee to tell their ‘life-story’ (Atkinson, 2002; Fletcher, 2007b). A narrative interview approach was adopted according to the exploratory purpose of the qualitative study (Elliot, 2005; Venkataraman et al., 2013). This approach minimises the interviewee’s bias response due to prejudiced articulated questions that lead to reflexivity issues, where the interviewee tells what the researcher wants to hear (Yin, 2013). The open-ended interview style, further allows probing ideas, enquiring about missing pieces in the story and requesting explanations (Rubin and Ruben, 2005). As such, the interviews started with a narrative approach in order to allow exploration of themes that the interviewee recognises as important, enabling to capture the ‘real’ story and perspective. This approach allowed to provide certain flexibility in structuring the order and development of ‘new’ questions while the interviews took place (Bryman and Bell, 2011).

Secondly, a large set of documents form insightful sources of evidence. Documents included email correspondence (e.g. emails between the case entrepreneur and business advisors), firm related archival material (e.g. figures about the personal and firm finances), and crowdfunding campaign related documents such as initial campaign ‘brainstorming’ notes. The addition of these documents aided to provide a comprehensive perspective and an in-depth understanding of the entrepreneur and the firm (Bryman and Bell, 2011; Yin, 2013). The use of documents were valuable in order to corroborate evidence from other sources such as interviews, and provided additional personal and public accounts (Payne and Payne, 2004). Documents, in addition, support to construct a chronology of the entrepreneur’s and the firm’s development in longitudinal studies (Myers, 2013). The case entrepreneur, furthermore, provided permission to access confidential documents kept in the personal and firm’s ‘cloud storage’.

Thirdly, data from the case’s Kickstarter campaign website was collected in real-time during the campaign duration, allowing to track activities and campaign performance ‘on the go’. Similar campaign characteristic variables were collected during the 30 day duration of the campaign (2nd October to 1st November 2013), as the ‘data scraper’ software collected for the first and second quantitative study in this thesis.

Lastly, the case data was complemented with data gathered from direct observations. The researcher has been accompanied the case entrepreneur in October 2014 for a five day trip to Prague, Czech Republic, where the recording of the crowdfunded music-album was scheduled to take place. As such, the researcher could spend five days with the case entrepreneur, resulting in 72 hours of exclusive direct observations including 18 hours of recording sessions that allowed covering events as they happened. During this time, the researcher was able to attend formal meetings but also informal sidewalk happenings, collecting data in a natural setting of the case entrepreneur (Yin, 2013). The researcher took field notes, photographs and audio-visual recordings to triangulate the evidence from the fieldwork with the other data sources.

The use of different data sources enabled the researcher to collaborate the information which is known in research as ‘triangulation’ (Denzin, 2009). This

involves “the collection of data through different methods or even different kind of data on the same phenomenon” (Ghauri, 2004, p. 115). More specifically, data-data triangulation was used in the third study. More detailed information and description about the data collection procedure is presented in the third study (see chapter 5, section 5.2).

2.6 Data analysis

As mentioned in section 2.4, a comprehensive discussion on data analysis is provided in each study (refer to chapter 3, chapter 4 and chapter 5). Table 2.5 offers a detailed overview of the adopted data analysis procedure.

Table 2.5 Detailed overview of data analysis

	Data analysis step	Adopted procedures
Study one	Coding the evidence	- Nine variables were selected, which form the standard characteristics of the crowdfunding campaign content.
	Data entry	- The utilised web data extraction software (Thelwall, 2001; Ferrara et al., 2014) entered the collected raw data automatically into a Comma Separated Values (CSV) database.
	Editing data (SPSS)	- Correcting inconsistent data and incorrect extraction information (Sekaran and Bougie, 2013). - Explored database through summary statistics to check for outliers and omission of entries (e.g. frequency tables, scatterplot and boxplot methods). - Data reduction to increase ‘fit of the data’ for research credibility purpose (Sekaran and Bougie, 2013; Punch, 2014).
	Data transformation (SPSS)	- Computing new variables based on the original quantitative values to avoid data representation issues and improve data presentation (e.g. funding ratio variable) (Treiman, 2009).
	Descriptive statistics (SPSS)	- Patterns and correlation exploration approach to discover and identify commonalities for crowdfunding campaigns to provide descriptive understanding of characteristics (Sekaran and Bougie, 2013). - Providing visual summary of the data to show frequency, central tendency and dispersion of variables (Anderson et al. 2010).

(Table 2.5 Continued)

Study two	Coding the evidence	- 21 variables were selected, which form the standard characteristics of the crowdfunding campaign content.
	Data entry	- The utilised web data extraction software (Thelwall, 2001; Ferrara et al., 2014) entered the collected raw data automatically into a Comma Separated Values (CSV) database.
	Editing data (Stata)	- Correcting inconsistent data and incorrect extraction information (Sekaran and Bougie, 2013). - Data reduction to increase 'fit of the data' to prior studies for consistency and research credibility purpose. Adopted similar data reduction method as Mollick (2014): e.g., exclusion of cancelled and suspended campaigns, removal from non-U.S. based campaigns, limit sample to campaigns that seek funding of US\$5,000 or more.
	Data transformation (Stata)	- Logarithmic transformation of variables to represent data closer to a more evenly distributed curve (natural logarithm was used for calculations) (Wooldrige, 2009).
	Descriptive statistics (Stata)	- Providing summary of the data to show frequency, central tendency and dispersion of variables (Anderson et al. 2010). - Summary statistics and Pearson's correlation matrix are reported.
	Hypotheses testing / Statistical technique (Stata)	- Multivariate regression analysis (Wooldrige, 2009; Sekaran and Bougie, 2013). - Probit regression analysis (Wooldrige, 2009; Verbeek, 2012).
<hr/>		
Study three	Narrative analysis	- Developed a case narrative that follows chronological order to familiarise and provide broader description of the case (Eisenhardt, 1989; Yin, 2013).
	Data reduction (NVivo)	- Transcribing interviews, pattern matching initial data coding to reduce, reorganise and incorporate evidence from different sources (Miles and Huberman, 1994; Bryman and Bell, 2011; Yin, 2013). - Data was handled and analysed using the computer-assisted qualitative data analysis software (CAQDAS) NVivo to increase methodological and analytical rigour (Saunders et al., 2009).
	Data display	- Using the 'Gioia method' (Gioia and Poole, 1984; Gioia et al., 2013) in order to present evidence from the raw data (e.g. interviewee) to code and categorise into research-based concepts and dimensions (Miles and Huberman, 1994).
	Drawing conclusions and verification	- The case entrepreneur verified the correctness of the initial case narrative. - Iterative workflow between data and theories as the investigation progressed (Wodak, 2004). - Linking initial evidence to subsequent observations as the data collection progressed, iterating between data sources along the longitudinal case study (Morgan, 1983; Pettigrew, 1990).

(Source: Author)

2.7 Research credibility

In order for quantitative research projects to be credible it is essential to illustrate the logical and organised application of the appropriate research methods, which connect the identified problem with empirically collected data to draw valid conclusions. The quality of quantitative studies is assessed through seven concepts or tests (Sekaran and Bougie, 2013). These seven quality criteria were applied for the first and second study to ensure research credibility, and this is illustrated in Table 2.6.

Table 2.6 Credibility checks for quantitative research

Credibility checks	Details
Rigor	- The research's theoretical foundation and methodological design (Byrne, 2002; Dean et al., 2007; Sekaran and Bougie, 2013).
Study one	- Application of the appropriate methodology, collect the right information based on the theoretical foundation.
Study two	- Use of appropriate sample, data collection based on the theoretical foundation, control variables reduce degree of bias, application of appropriate methodology (e.g. Mollick, 2014, Semrau and Werner, 2014).
Testability	- Creation of hypotheses, i.e. carefully grounded on prior theoretical and empirical work to build a tentative statement about an expected prediction of the empirical findings (Saunders et al., 2009; Sekaran and Bougie, 2013).
Study one	- N.A. ^{a)}
Study two	- Hypotheses construction is based on prior theoretical and empirical findings (e.g. Mollick, 2014; Semrau and Werner, 2014)
Replicability	- Produce a detailed description of the research design and methods. Replicability illustrates that the findings have not been driven or supported by chance (or data bias) and that results reflect the population (Byrne, 2002; Sekaran and Bougie, 2013).
Study one	- Data sampling choice, data collection and analytical approach are reported to provide sufficient information to repeat the study (in the same or a different context).
Study two	- Data collection and data analysis procedure follows similar approach that have been applied in prior studies (Mollick, 2014).
Precision of confidence	- Ensure that findings are as close to reality (the population) as possible (Sekaran and Bougie, 2013; Schwab, 2015).
Study one	- Careful selection of sample selection.
Study two	- Reported through the confidence interval and significant level (95% level where $p = 0.05$) in statistical analysis (Wooldrige, 2009; Anderson et al. 2010).
Objectivity	- Conclusions and interpretations of the research's findings should be solely based on the study's results and not interfere with subjective values or beliefs (Sekaran and Bougie, 2013; Schjoedt and Bird, 2014).
Study one	- Conclusions are driven by factual, data-driven findings.
Study two	- Results are presented upon which conclusions are made, and hypotheses are accepted or rejected.

(Table 2.6 Continued)

Generalisability	- Applicability of findings to other research context (Saunders et al., 2009; Sekaran and Bougie, 2013).
Study one	- N.A.
Study two	- Carefully and logically developed methods based on prior research standards (Mollick, 2014).
Parsimony	- Reduction of variables to decrease complexity in explanation of phenomenon, i.e. construct a framework with “lesser number of variables that explain the variance far more efficiently than a complex set of variables that only marginally add to the variance explained” (Sekaran and Bougie, 2013, p. 23). Thorough understanding of prior literature and extant theories to simplify the foundation of a conceptual theoretical model (Denzin and Lincoln, 2005).
Study one	- N.A.
Study two	- Complexity of the conceptual theoretical model was minimised through corroborating understanding from theories and prior literature (Mollick, 2014; Semrau and Werner, 2014).

Notes: ^{a)} N.A. indicates that due to the explorative research nature of the first study, this credibility test is not applicable. (Source: Author, adapted from Sekaran and Bougie, 2013)

The quality of social science research and the trustworthiness of qualitative studies is commonly evaluated through four tests: construct validity, internal validity, external validity (generalisability), and reliability (Gibbert et al., 2008; Gibbert and Ruigrok, 2010; Yin, 2013). These four tests ensure credibility for qualitative social science research, and were applied for the third qualitative study in this thesis, as summarised in Table 2.7.

Table 2.7 Credibility check for qualitative research

Credibility checks	Details
Construct validity	<ul style="list-style-type: none"> - Ensure that the phenomenon is conceptualised through the correct variables (Gibbert et al., 2009; Yin, 2013). - Define concepts based on prior literature (Bryman and Bell, 2011). - Use various data sources (interviews, documents, observation) to construct a logical chain of evidence (triangulation) (Ghauri, 2004). - Research was presented at conferences and workshops, and discussed with Ph.D. advisors for preparation for publications. - Case entrepreneur has reviewed the manuscript draft to verify interpretations and understanding.
Internal validity	<ul style="list-style-type: none"> - Identification of accurate relationships between the variables and measurements (Yin, 2013). - Focus on a particular and clearly defined research setting (crowdfunding process through Kickstarter)
External validity	<ul style="list-style-type: none"> - Generalisability of research results (Bryman and Bell, 2011). - Use of prior literature and theory (Miles et al., 2013). - Case selection driven by analytical generalisation purpose.

(Table 2.7 Continued)

Reliability	<ul style="list-style-type: none">- Minimising research bias and analysis errors by ensuring a detailed and traceable research procedure (Gibbert and Ruigrok, 2010; Yin, 2013).- Case study protocol was applied to record the procedure of the longitudinal data collection process.- Created a case database that includes the raw data and the documentation for replication purpose (Van de Ven and Poole, 1990).- Findings discussed with Ph.D. advisors, presented and discussed on several conferences.
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(Source: Author, adapted from Yin, 2009, 2013)

2.8 Research ethics

The thesis and its portfolio of three research studies complies with the ‘Level One’ research ethics policy and guidelines formulated by the University of Edinburgh. Prior to undertaking the research studies, the researcher was carefully familiarised with the ethical standards and framework of the University of Edinburgh College of Humanities and Social Science²⁰ and audited the research project by utilising its ‘Research Ethics Checklist’ to assure that the research follows the ethical standards.²¹

The research utilises two main data sources, one quantitative and one qualitative data source. Regarding the quantitative data and its collection, the researcher complies with the ‘British Psychological Society’s Ethics Guidelines for Internet-mediated Research’²². The large-scale quantitative data utilised in this thesis was collected from the online CFP Kickstarter, which is publicly available and does not require any form of registration or membership to be accessed and viewed. The CFP’s ‘Terms of Use’ section about the content and license state the following:

²⁰ The University of Edinburgh adopted the UK ‘Research Integrity Office’s Code of Practice for Research’ framework. All research conducted at the University of Edinburgh has to comply with this framework, which can be obtained from the following source for further details: <http://www.ed.ac.uk/schools-departments/humanities-soc-sci/research-ke/support-for-staff/college-research/ethics-framework>.

²¹ The researcher took two research training courses (‘Research Skills for the Social Sciences: Data Collection’, and ‘Research Design’) which were examined by the Graduate School of Social and Political Science at the University of Edinburgh as part of the Ph.D. programme, where ‘Ethics of Social Research’ was taught.

²² Detailed information about these guidelines can be obtained from the following source: <http://www.bps.org.uk/system/files/Public%20files/inf206-guidelines-for-internet-mediated-research.pdf>

“The Company grants to each User of the Service a worldwide, non-exclusive, non-sublicensable and non-transferable license to use and reproduce the Content, solely for personal, non-commercial use. Use, reproduction, modification, distribution, or storage of any Content for other than personal, non-commercial use is prohibited without prior written permission from the Company, or from the copyright holder. You shall not sell, license, rent, or otherwise use or exploit any Content for commercial use or in any way that violates any third-party right.” (Kickstarter, 2014d)

The data was collected for research purpose solely and variables for statistical analysis are not able to be traced back to individual projects, thus provide anonymity.

In regards to the qualitative data, all participants were informed through a ‘Participation Information Letter’ (see Appendix B and C), which contained detailed information about the nature of the research and the required resources from the potential participants (e.g. amount of time). The researcher communicated the rights of the interviewees such that participation is voluntary and that they can withdraw from the research at any time. Further, to assure confidentiality, participants could choose to be anonymised by concealing the participant’s names, firm(s) and any obtained data that might lead to identification (Sieber, 1992), following advice that research “should be carried out in ways designed to avoid risks to participants” (Fowler, 2009, p. 163), which complies to the University of Edinburgh’s ethical standard. Each participant was informed in writing and verbally that the obtained data would be recorded and stored on secured computer files, which are only accessible by the researcher. The researcher assured participants transparency throughout the research process and shared research findings through copies of conference papers and other forms of writings such as work-in-progress papers and PowerPoint presentations prepared for conferences or teaching (Van de Ven, 2007). The researcher remained in regular contact with the participant to offer transparency in regards to the use of the obtained data. Findings of this research were communicated with the participant in order to show the value of the studies, especially since their is limited research conducted on this topic.

Data collection for the third empirical study was partially funded by the UK-based Research and Development Management (RADMA) programme²³. This thesis was not sponsored by external sources, thus no conflict of interest can be reported. As such, the professional judgement concerning this research are not influenced by any external interest and solely reflect the researcher's carefully worked out conclusions.

2.9 Pilot studies

Pilot studies can be conducted for several reasons, but ultimately support improving the quality and credibility of the research project by exploring the phenomenon under investigation briefly, and testing potential research designs (Van Teijlingen and Hundley, 2001). For example, pilot studies can be initiated to explore the broader research topic in order to familiarise, discover and identify themes and patterns that need further investigation (adopted in pilot study one). On the other side, pilot studies allow to test and clarify methodological issues such as potential data collection difficulties (adopted in pilot study two) and support refining data collection plans (Van Teijlingen and Hundley, 2001; Yin, 2013).

In accordance with reasons suggested, among others, by Bryman and Bell (2011) and Yin (2013), two pilot studies were undertaken to provide initial understanding of the, at the time of the start of this research project, emerging phenomenon of entrepreneurial crowdfunding. Limited empirical work existed at this stage upon which could be build on. Thus, the exploration and initial identification of potential key constructs was critical for the design of the research project and its three empirical studies. This follows Geertz's (1973, p. 5) argument that "if you want to understand what a science is, you should look in at the first instance not at its theories or its findings, and certainly not at what its apologists say about it; you should look at what the practitioners of it do."

²³ RADMA is a UK charity (registered number 4757596), and is a part owner (together with WileyBlackwell) of the R&D Management Journal. The researcher was awarded funding from the 'Postgraduate Project Support Programme', and became a RADMA Fellow and part of the RADMA community. Further information is available through the following link: <http://www.radma.ltd.uk/>

Both pilot studies were carried out within the first seven months of this research project. In the following two sections a summary of each pilot study is provided and the resulting alterations for the research projects, which are based on the initial findings and conclusions, are summarised in Table 2.8.

2.9.1 Pilot study one (qualitative)

Limited research has considered the underlying processes of entrepreneurs and the follow-on funding implications of crowdfunding for entrepreneurs and their new ventures. Thus, the objective of this explorative and qualitative first pilot study was to investigate crowdfunding by applying the resource-based view (Alvarez and Busenitz, 2001), a framework that is utilised frequently in the entrepreneurship literature to investigate venture capital assembly (e.g. Delmar et al., 2003; Eckhardt et al., 2006; Ciabuschi et al., 2012). Two research questions guided this pilot study:

Pilot RQ1: How does crowdfunding affect downstream financing opportunities for the focus firm?

Pilot RQ2: What is the impact of crowdfunding on the firm's long-term resource assembly process?

To provide answers to the two research questions, this pilot study utilised explorative interviews with five individuals: three German entrepreneurs who successfully secured capital through equity-crowdfunding, one Scottish-based entrepreneur who failed to secure capital through reward-crowdfunding, and one England-based entrepreneur who has been in the developing process to start a donation-based CFP in the UK²⁴. The interviews were unstructured and included 20 open-ended questions. Interviewees were invited to recall their rationales and strategic practices used during the pre-crowdfunding, crowdfunding and post-crowdfunding period. Most questions focused on issues related to the resource assembly process and

²⁴ The England-based entrepreneur served as a 'crowdfunding market expert' interviewee. This interview did not follow the same approach as with the other four entrepreneurs, but rather focused on gaining insights about the UK crowdfunding landscape including regulatory framework and key-players within the industry.

downstream finance opportunities of the firm. The interviews were recorded, transcribed and analysed.

The pilot study provided preliminary insights into the general equity- and reward-based crowdfunding market, which was valuable to broaden the researcher's understanding of the field. However, the dominant focus on the equity-based crowdfunding model and market proved non-valuable to gain a 'holistic' perspective of entrepreneurial crowdfunding activities due to its novelty in 2012 with only few completed equity-based crowdfunding campaigns. Accordingly, there was a limited possibility to gain insights into the post-crowdfunding period. As such, the early research questions proved to be valueless due to the novelty of the topic under investigation. Further, the initial research focus on equity-based crowdfunding revealed to be challenging, due to two main reasons:

1. The equity-crowdfunding market was not regulated, thus created a 'grey zone' with a high likelihood in regulatory changes, which might weaken the value of the research findings.
2. Equity-based crowdfunding created a small market, with limited CFPs and campaigns undertaken, increasing difficulties to obtain data access.

As a result, the researcher was motivated to undertake a second pilot study, modifying the research approach (from small-scale in-depth qualitative to large-scale quantitative explorative research) and the research context (from equity- to reward-based crowdfunding), due to the limited availability of evidence.

2.9.2 Pilot study two (quantitative)

The second pilot study followed a quantitative research approach and was conducted in order to follow up with the initial empirical insights from the first pilot study to identify additional patterns for improving understanding of the emerging phenomenon. However, it also involved assessing whether the planned quantitative large-scale data collection technique is effective (e.g. testing the 'goodness of data',

see Sekaran and Bougie, 2013) and to identify logistical issues to run a web data extraction software (e.g. IT resources, statistical software familiarity).

This pilot study aimed to analyse and interpret whether reward-based crowdfunding follows traditional understanding of entrepreneurial resource assembly processes by applying a resource-based and an agency theoretical perspective. The resource-based view proposes that legitimacy creation of entrepreneurial ventures is important to access and assemble capital from external capital sources. Alternately, agency theory suggests that nascent ventures are required to overcome information asymmetry issues to facilitate resource assembly processes.

Data of 125 successful funded crowdfunding campaigns from Kickstarter, which was gathered through the testing phase of the developed web data extraction software for the first empirical study (see section 2.5.1) was used for this pilot study.

The pilot study supported a preliminary analysis of crowdfunding campaign characteristics and provided understanding about the use of CFP instruments such as project updates and comment functions as potential determinants for resource assembly performance in crowdfunding. Initial findings from this pilot study illustrated that communication might take a greater emotional and less information driven part in reward-based crowdfunding. Thus, the findings exemplified that legitimacy creation plays an important role in reward-based crowdfunding for capital assembly. However, the pilot study also revealed that additional campaign variables have to be identified in order to operationalise campaign legitimacy in the crowdfunding context.

2.9.3 Alterations to studies

In combination, the qualitative and quantitative pilot study were conducted to provide an initial exploration opportunity of a relatively unexplored topic to offer primary information about the emerging phenomenon, but also to assess the suitability of the planned methodologies (Tashakkori and Teddlie, 2003). Table 2.8 summarises the implemented alternations for the research project.

Table 2.8 Alterations to the research project

	Identified issues	Alterations
Pilot study one	<ul style="list-style-type: none"> - Equity-crowdfunding not regulated, and regulatory framework is expected to develop. - Equity-crowdfunding creates a ‘small market’, providing limited data access and accessibility issues, due to investment nature. - Long-term perspective not possible due to novelty of the emerging market. - Interviews provided fewer ‘exploration’ opportunities than expected, as interviewees reported similar issues with short term focus. - Context: Europe as it creates the leading market in equity-based crowdfunding. - Use of the resource-based view as a theoretical lens. 	<ul style="list-style-type: none"> - Reward-based crowdfunding provides a more stable research context, due to redundant regulatory framework. - Reward-based crowdfunding activities account for ca. 90% of the crowdfunding market, providing a large market with lower barriers for data access due to funding nature. - Reward-based crowdfunding offers a long-term perspective with data accessibility going back to 2009. - Longitudinal single-case study provides more in-depth understanding. - Prospective case study enables collection of process data to facilitate exploration ‘on the go’. - Context: U.S. as it creates the leading market for reward-based crowdfunding, with the largest CFP. - Focus on resource assembly processes through legitimacy and narrative, networking, and identity theoretical lenses.
Pilot study two	<ul style="list-style-type: none"> - Initial developed ‘data scraper’ requires further development for larger data collection process. - ‘Data scraper’ ran daily to collect time series data, resulting in a sample size of 125 campaigns. - The collected time series data required resource intensive data cleaning and consolidation for analysis. - Risk of access denial for the ‘data scraper’ and loss of data due to CFP’s page structure changes. - Crowdfunding characteristics variable provide valuable measurements. - Use of resource-based and an agency theoretical perspective for studying the variables. 	<ul style="list-style-type: none"> - In October 2013, a modified ‘data scraper’ software was finalised to allow to collect ca. 80% of the available data on Kickstarter, the selected CFP. - Shift from time series data to cross-sectional data collection to increase sample size. - Cross-sectional data requires less data cleaning, providing a ‘ready-to-analyse’ dataset. - ‘Data scraper’ collected data during one day (23.10.2013) and provided cross-sectional data from ca. 80% of all campaigns between 28.04.2009 and 23.10.2013. - Refined crowdfunding campaign characteristic variables based on data availability. - Focus on resource assembly processes through legitimacy and narrative, networking and role identity theoretical lenses.

(Source: Author)

2.10 Summary of methodology

This section provides an overall summary of the three studies undertaken. The objective is to provide a concise overview of the main methodology issues, necessary to undertake rigorous research (see Table 2.9). The next chapter begins with the first study.

Table 2.9 Summary of methodology

	Study one	Study two	Study three
Worldview	Critical realist	Positivist	Critical realist
Research strategy	Inductive	Deductive	Abductive
Research design			
Research approach	- Quantitative - Explorative and descriptive	- Quantitative - Explanatory	- Qualitative - Explorative and Explanatory
Unit of analysis	Crowdfunding campaign	Social relation	The entrepreneur (campaign founder)
Sample selection and size	- Kickstarter - 421 campaigns	- Kickstarter - 21,534 campaigns (81,829 campaigns pre data reduction)	- Longitudinal - Prospective - Single-case
Data collection	Cross-sectional 'data scraper'	Cross-sectional 'data scraper'	Longitudinal prospective case study
Data analysis	Patterns and correlation exploration approach to discover and identify commonalities (SPSS)	Hypotheses testing / multivariate statistical technique (Stata)	'Gioia method' to present evidence from data, code and categorise based on concepts (NVivo)

(Source: Author)

Chapter 3: Exploring entrepreneurial legitimacy in reward-based crowdfunding

Introductory statement

This statement is provided as of the University of Edinburgh Business School regulations to testify that the thesis' author has taken the principal authorship role for this co-authored published article²⁵:

Frydrych, D., Bock, A. J., Kinder, T., & Koeck, B. (2014). Exploring entrepreneurial legitimacy in reward-based crowdfunding. *Venture Capital: An International Journal of Entrepreneurial Finance*, 16(3), 247-269. DOI: 10.1080/13691066.2014.916512

The thesis' author was responsible for the original research design, background reading, literature review and data gathering, data input, data analysis, interpretation of the results and theoretical underpinning. The co-authors contributions primarily concerned parts of reviewing the manuscript.

²⁵ Permission to reproduce the material from *Venture Capital: An International Journal of Entrepreneurial Finance* in this thesis was granted by the Taylor & Francis Group.

3.1 Introduction

Early stage venture funding is difficult. Accelerating rates of innovation and market adoption increase the attractiveness of distributed online financing for new ventures. Although online social networking emerged as a consumer-driven service, entrepreneurs have now begun to exploit formal and informal networks for capital assembly.

Crowdfunding, a form of crowdsourced venture funding, is an online ecosystem experiencing rapid growth. Resource deficient entrepreneurs utilise crowdfunding as an innovative capital management mechanism to bypass early-stage capital gaps by pre-funding production and sales (Harrison, 2013). Entrepreneurs target ‘amateurs’ or affinity-based consumers to pre-finance a service or product, rather than pitch professional investors. Crowdfunding helps entrepreneurs and investors reduce the risk of underfunding a project, since investments are not executed unless the minimum funding amount is met.

Crowdfunding may facilitate legitimacy development for nascent ventures. The market-facing funding approach offers entrepreneurs a ‘tailor-made’ solution to assemble and allocate finance (Belleflamme et al., 2014). Crowdfunding engages prospective customers and investors in the funding, (pre-) launch, or growth of entrepreneurial projects and firms (Burtch et al., 2013; Mollick, 2014). Entrepreneurs can establish strong networks in the market and utilise traction from the distributed group of individuals to increase organisational legitimacy and facilitate financial capital assembly.

As Reuber and Fischer (2011) note, online reputation and brand communities support entrepreneurial activities in internet-enabled markets by attracting investors: the firm’s reputation with customers is co-created with legitimacy in an online environment. Online brand communities may confer market validity, encouraging investors and customers to engage with an entrepreneurial venture. Crowdfunding enables entrepreneurs to create, develop and foster online reputation and community using social-psychological incentives (Lehner, 2013). Some entrepreneurs exploit these heterogeneous communities to mobilise socially embedded financial capital.

Legitimacy may be an important driver of financial resource assembly for these ventures (Mollick, 2013). As crowdfunding is a recent phenomenon, understanding of the drivers of legitimacy during crowdfunding and venture development has not been investigated. This study explores (1) how entrepreneurs facilitate organisational legitimacy creation during crowdfunding, and (2) how the process affects the financial outcome in reward-based crowdfunding. This study discusses how entrepreneurs promote legitimacy through specific crowdfunding features, and reveals some of the narrative processes that entrepreneurs deploy to establish legitimacy in reward-based crowdfunding.

3.2 Research motivation

3.2.1 Crowdfunding practice

The fundamental concept of crowdfunding – assembling financial capital from social networks – is not new. Historical examples of crowdfunding include the (family) partnership system in the late middle age (Lane, 1944), charitable fundraising (Bremner, 1996; Ingenhoff and Koelling, 2009) and microfinance (Morduch, 1999). However, recent developments in information and communication technology (ICT) facilitate the development and professionalisation of crowdfunding via distributed, open access, online systems. Specialised online crowdfunding platforms (CFPs) are at “the heart of crowdfunding [and] drive the implementation of the crowdfunding model” (Ingram et al. 2014, p. 4556).

CFPs are developing into capital intermediates (Harrison, 2013; Lehner, 2013). There were more than 800 active online CFPs in 2012, listing over 1.1 million crowdfunding projects and invested capital of US\$2.7 billion (Massolution, 2013). Kickstarter surpassed US\$1 billion in funded projects in early 2014; crowdfunding’s growth may ultimately impact the traditional venture capital market. The rapid growth of crowdfunding justifies research to better understand similarities and distinctions from traditional venture finance.

3.2.2 Crowdfunding theory

Nascent entrepreneurs and *de novo* firms face the disadvantage of small size and limited access to resources. Some entrepreneurs overcome the ‘liability of newness’ (Stinchombe, 1965) through a series of techniques and actions to facilitate resource assembly (Hitt et al., 2011; Ciabuschi et al., 2012). It is unclear whether innovative ICT platforms are simply another tool in the entrepreneur’s resource assembly toolkit, or an entirely distinct mechanism for capital formation processes. Reward-based crowdfunding presents additional challenges to the traditional model, because it may represent a mechanism for generating ‘pre-production sales’, reducing or eliminating the venture’s initial working capital deficit.

Crowdfunding takes traditional ‘offline’ business processes into an online environment, enabling entrepreneurs to nurture and facilitate business development. Features such as online-based communities and interaction mechanisms generate new settings for capital assembly, suggesting the potential for distinctive or novel entrepreneurial processes and potentially different success drivers. The use of ICT-enabled tools may also introduce different investment dynamics effecting processes and activities associated with organisational legitimacy creation and resource assembly.

The links between venture creation, resource assembly, and crowdfunding processes merit careful investigation. Crowdfunding, including reward-based crowdfunding, may require new theories of resource assembly and venture heterogeneity. The drivers, processes, and outcomes of venture capital activity may not be entirely applicable in the context of crowdsourced finance.

3.3 Literature review

Crowdfunding represents an apparently novel platform for early stage capital assembly. Its underlying practices and mechanisms have been examined in various literatures, including the resource-based view, social network theory, and micro-economic pricing models. This study examines the characteristics of crowdfunding

through the lens of prior research to specify novel aspects and potential deviations from prior research.

3.3.1 Crowdfunding as transaction mechanism

Four models of crowdfunding have been observed: donation-, reward-, lending-, and equity-based. All rely on the crowdsourcing mechanism to obtain capital from a previously distributed and heterogeneous group (the crowd) who provide the capital injection in exchange for tangible or intangible returns.

Mollick (2014) argues that the difference between crowdfunding models lies in the goals of the entrepreneurs and supporters. Equity- and lending-based models rely on relatively traditional investment mechanisms. The lending-based model link founders and supporters in a debtor and lender relationship, and the equity-based model (similar to traditional venture capital) creating an entrepreneur-investor relationship. In donation-based models, project creators are social entrepreneurs while supporters serve as philanthropists. In the case of reward-based crowdfunding, the predominant online model, entrepreneurs are characterised as ‘creators’ or ‘project founders’ and project supporters represent early customers or co-creators rather than investors.

The donation-based crowdfunding model is relatively well-aligned with models of social entrepreneurship (Lehner, 2013). The other three models align more closely with traditional venture capital, since they assemble risk capital for entrepreneurial activities (Mollick, 2013). Reward-, lending-, and equity-crowdfunding models feature a tangible or monetary exchange. This creates contractual relationships and instruments between the entrepreneur and stakeholders comparable to those in traditional venture capital (Ley and Weaven, 2011; Agrawal et al., 2015). Crowdfunding also provides an ecosystem facilitating broader resource exchange between stakeholders (Belleflamme et al., 2013). This potentially facilitates the collective development of a business plan or other knowledge exchange not found in venture capital, which judges rather than co-creates the business plan. Crowdfunding participants may be able to use these ecosystems to increase market awareness and receive customer feedback.

Crowdfunding may be understood as a product pre-ordering model that enables price discrimination among early adopters (Belleflamme et al., 2014). For example, reward-based crowdfunding projects commonly have pre-order mechanisms integrated into their reward-structure (e.g. invest US\$10 to a music project and receive the recorded music album once it is completed). This presents a zero-cost capital management technique to fuel organic growth in early business stages (McKelvie and Wiklund, 2010; Vanacker and Manigart, 2010).

Crowdfunding may also facilitate investment based on alternative investor utility factors, including social good or other non-fiduciary values (Lehner, 2013). From this standpoint, legitimacy incorporates social and business goals in investors' evaluations. In this case, social and psychological factors may be equally or more important than strictly financial returns. This suggests that narrative may play a significant role in successful crowdfunding activities by establishing a convincing and compelling investment story distinct from the novel product or service attributes (Lounsbury and Glynn, 2001).

Crowdfunding is an inherently distributed and socially-embedded process. Equity- and lending-based crowdfunding activities may incorporate significantly more social and psychological processes than observed in traditional venture capital (Mollick, 2014). Although equity-crowdfunding is financially driven, investors might obtain utility from the excitement or sense of community associated with the process itself. This is supported by the characteristics of some equity-crowdfunding contracts, which are generally long-term and non-voting equity investment contracts (e.g. 10 years) without dividends.

3.3.2 Crowdfunding as social exchange

Social dynamics are fundamental features in the crowdfunding ecosystem, which is constructed around the relationships in heterogeneous social networks. Crowdfunding is intended to leverage the 'wisdom of the crowd', (Surowiecki, 2004), but entrepreneurs must identify or create a suitable community accessible via the online platform (Belleflamme et al., 2014). Peer-effects are

important in these communities since membership and communications are publicly observable and likely to influence individual decisions and pitch outcomes as Ward and Ramachandran (2010) demonstrate. The development of social interactions surrounding a given project, and the nature of the development process itself, may be critical to the outcome of the crowdfunding effort (Burtch et al., 2013). The demonstrated interest and positive conversation about a given project may be drivers of project legitimacy – supporting some projects just enough but others not at all (Zhang and Liu, 2012; Burtch et al., 2013).

Resource assembly through traditional venture capital tends to be geographically contingent (Rocha, 2004; Harrison et al., 2010). By contrast, crowdfunding may facilitate resource assembly that is independent of geography. Although ICT reduces a variety of business barriers (Anderson, 2004), there is some evidence that offline social relationships and perceptions of trust may not be easy to entirely virtualise. It cannot be expected that new business models or wider broadband eradicate cultural and institutional boundaries and geographically de-structure investment clusters. This study consent to Mollick (2014) and Agrawal et al. (2015) who argue that space continue to matter and offline social relationships and perceptions of trust continue to shape patterns of crowdfunding interactivity: the potential of crowdfunding to overcome long-distance investment barriers is limited. Nor is crowdfunding likely to globalise attitudes towards risk-taking in science-based ventures, since crowdfunding investors bring to sites their inherited predilections and habituations. International patterning of technology-based firm investments is likely to persist for some time, despite the access opportunities crowdfunding sites create. As such, urban clusters of particular technologies (e.g. software or games in San Francisco, apps in Bangalore) continue providing new business pitches and investors from amongst offline communities with pre-understanding of the technology.

3.3.3 Crowdfunding as legitimacy building

Organisational legitimacy helps explain why some nascent entrepreneurial activities develop into successful firms and others do not (Suchman, 1995). Indeed, Ahlstrom

and Bruton (2002) found that organisational legitimacy may be understood as a resource, as well as a signal for resource assembly in entrepreneurial processes and activities. The lack of organisational legitimacy restricts access to prospective resource holders and hinders early-stage development (Alvarez and Busenitz, 2001; Tornikoski and Newbert, 2007). Establishing legitimacy may facilitate faster and efficient capital acquisition (Lounsbury and Glynn, 2001). Legitimacy and resource assembly are likely co-created during organisational development (Zimmerman and Zeitz, 2002). Legitimacy gives ventures access to external stakeholders and is associated with inflow of exogenous resources (Mason and Harrison, 2000; Chen et al., 2009).

Organisational legitimacy is associated with a variety of individual and firm-level characteristics. These include founder education level and experience as well as the heterogeneity of the entrepreneurial team (Cohen and Dean, 2005; Packalen, 2007; Balboa and Marti, 2007; Zimmerman, 2008; Dalziel et al., 2011). Firms may institutionalise entrepreneurial narrative into artefacts or market-facing documents to communicate internally-generated legitimacy (Aldrich and Fiol, 1994; Delmar and Shane, 2004). Firms may seek conferral of legitimacy from external sources through certifications or authorisations (Rao, 1994; Sorescu et al., 2007). Some ventures seek legitimisation by communicating projections of the firm's intended operational or commercial pathway (Baron and Markman, 2003; Anderson, 2005). Legitimacy may be primarily conferred through intangible and socially-centred resources precisely because the firm has no financial history, operations, or assets that may be rationally valued (Khair, 2010).

It is possible that online CFPs play to the strengths of new venture legitimisation. The lack of assets or operations is not a hindrance to establishing a positive reputation in a fully virtualised context. Crowdfunding participants may have little or no expectation for physical demonstrations of venture viability, precisely because the media establishes a level playing field in which reputation may be the primary currency.

The evidence, however, suggests that legitimacy is not easily obtained during crowdfunding. Mollick's (2014) study reports that unsuccessful projects fail their

funding target by large amounts while successful projects exceed their targets by small amounts. This suggests that project legitimacy is relatively difficult to achieve. Projects that do achieve legitimacy do not generally benefit from a ‘tipping point’ model of broad acceptance.

3.3.4 The role of narrative in establishing crowdfunding legitimacy

Cultural entrepreneurship theory emphasises that the subjective perception of the firm to external agents, regardless of the objective value of the firm’s resource stock, may be essential to legitimisation and ultimate resource assembly (Lounsbury and Glynn, 2001). This contrasts with bounded rationality approaches to venture capital investment that rely on models of risk minimisation and management (Zimmerman and Zeitz, 2002). When risks are not easily quantified at new ventures, “stories can provide needed accounts that explain, rationalize, and promote a new venture to reduce the uncertainty typically associated with entrepreneurship” (Lounsbury and Glynn 2001, p. 546).

Research suggests that effective storytelling is essential to establishing firm legitimacy and acquiring capital (Roddick, 2000; O’Connor, 2004). By packaging the firm’s intangible and tangible resources into a meaningful bundle, entrepreneurial narratives reduce the appearance of uncertainty to external stakeholders, encouraging investment at the margin (Shane and Cable, 2002; Smith and Anderson, 2004). Stories provide a link for shared sense-making between the entrepreneurs and the stakeholders (Martens et al., 2007). In this framework, the video pitch and text narrative provided by the entrepreneur would appear to be the primary tools for conveying a compelling narrative. Potential investors are attracted to projects that ‘appear likely to succeed’ (Mollick, 2014).

Crowdfunding enables entrepreneurs to facilitate organisational legitimacy primarily through cultural entrepreneurship activities rather than via demonstrated resource configurations. In contrast to the traditional venture capital market, crowdfunding

leverages interactive ICT features to create a dynamic environment that could nurture and build organisational legitimacy.

Using crowdfunding mechanisms, entrepreneurs are able to construct storylines that communicates static information but also establishes an interactive narrative through specific online-related features such as visual updates and synchronous and asynchronous textual communication. This study anticipates verifying Reuber and Fischer's (2005) idea that active engagement facilitates ventures establishing organisational legitimacy with their customers, leveraging cultural dynamics inside online communities to support capital assembly.

3.4 Research design and data

This study seeks to link specific features of reward-based CFPs with organisational legitimacy creation and successful crowdfunding outcomes. Thus, this investigation applies an explorative empirical research method. Research on crowdfunding is relatively new, so the focus is on identifying patterns and potential causal relationships to generate preliminary conclusions and advance further studies (Cornelius et al., 2006; Blaikie, 2010).

This study analyses the dynamics and particular features in crowdfunding, contributing towards knowledge of entrepreneurial legitimacy creation in reward-based crowdfunding. Whilst data is presented that has been subject to statistical analysis, this study does not attempt to validate a hypothesis. Instead, given that this is an emergent area of research, the issues that arise out of the data are discussed from an organisational legitimacy perspective triangulating with existing theory to develop new (Eisenhardt, 1989).

The exploratory analysis draws upon a dataset derived from Kickstarter (2014), a successful CFP established in 2009 that employs ICT features facilitating entrepreneurial organisational legitimacy construction and resource exchange and is the leading reward-based CFP. According to Kickstarter's statistics 136,000 projects were launched using Kickstarter since 2009, reporting an investment volume of

US\$1 billion and a community of ca. 5.7 million individual backers (Kickstarter Statistics, 2014). In terms of crowdfunding success rate, Kickstarter reports that around 57,500 projects were successful (42.3%) in their financial capital assembly, capturing an investment volume of US\$867 million (86.7% of the total investment volume). Approximately 74,500 projects (54.8%) were unsuccessfully funded with a total investment size of US\$118 million, representing 11.8% of the total investment volume of Kickstarter (Kickstarter Statistics, 2014)²⁶.

3.4.1 Data collection

This study used a web data extraction method to capture detailed data from the Kickstarter website, similar to other crowdfunding studies (Mollick, 2014). Web data extraction facilitates the collection of relatively large datasets with high levels of data validity because the site is in active use and the data generated specifically for web-based transmission (Kosala and Blockeel, 2000; Thelwall, 2001; Chang et al., 2006).

Applying this data collection method enabled to capture activities of all projects listed on Kickstarter in New York City, NY, U.S. between June and July 2012 having chosen New York City since it originates 13.5% of all U.S.-based Kickstarter crowdfunding and 11.9% of all global Kickstarter crowdfunding projects (Kickstarter, 2014c). This dataset allows to explore Kickstarter's diversity and enables to generalise findings to the Kickstarter population. By collecting variables such as the project-funding target, number of backers, the reward-level structure, and other project related data it is possible to make a first attempt to study entrepreneurial practices in the development of organisational legitimacy and capital assembly in reward-based crowdfunding. The data sample represents 421 projects and captures an investment volume of US\$3,514,125 provided by 44,578 backers.

²⁶ The provided percentages do not equal 100% as numbers were rounded.

3.4.2 Variables

This section details and justifies the variables featuring in this study, which has been chosen as (1) projects required to provide information variables, and (2) they represent potential organisational legitimacy criteria as those variables are publicly observable and thus likely to influence crowdfunding efforts.

Funding target: Every crowdfunding project requires a funding target, which represents the amount of financial capital that project creators or entrepreneurs seek to assemble. On Kickstarter, entrepreneurs only receive the assembled financial capital when the funding target is achieved - the threshold crowdfunding model.

Final funding: The total amount of funds that the project collected between the starting date and the designated end date of the crowdfunding campaign. Reporting a final funding lower than the funding target means an unsuccessful effort. The final funding amount may be larger than the funding target, indicating that the respective crowdfunding project is overfunded.

Funding ratio: The funding ratio denotes the percentage of the funding target achieved at the end date of the crowdfunding campaign.

Backers: Individuals who financially support a project through Kickstarter represent the number of backers per project.

Funding per backer: Financial support per backer calculated as the final funding amount divided by the number of backers where high funding per backer indicates a project attracting less backers transacting a higher financial support. *Argumentum e contrario*, project creators were successful in communicating organisational legitimacy to stimulate backers to perform higher financial injections into the project.

Duration: The period of time (days) which projects can receive financial support from backers, which at Kickstarter is a maximum of 60 days.

Reward-level: The number of different reward-levels from which backers can select to financially support a project. Reward-levels are created and defined by project creators. Every project has a minimum of one reward-level with no maximum. Each

reward-level will be given a predetermined price (maximum of US\$10,000 on Kickstarter) and a specific configuration of intangible or tangible qualities.

Visual pitch: In addition to a textual pitch, projects can implement videos. This variable represents a dummy variable, where dummy = 1 if a crowdfunding project has a video.

Founding team composition: Crowdfunding projects provide additional information about the project creator in form of a user profile. This variable explores whether a project was created by an individual or by a team and categorises the number and composition of the founding team.

3.4.3 Descriptive statistics

Table 3.1 provides the descriptive statistics of the main variables.

Table 3.1 Descriptive statistics

		Successful						
Variables	N	Min	p25	Mean	p75	Max	SD	
Funding Target (\$)	227	100.00	2500.00	9460.61	10,000.00	100,000.00	14,132.11	
Final Funding (\$)	227	100.00	3101.00	12,903.67	11,920.00	287,342.00	26,228.73	
Funding Ratio (%)	227	100.00	103.76	133.31	133.89	953.50	79.85	
#Backers	227	5	40	170	140	4242	374	
Funding/Backer (\$)	227	15	49	88	98	729	73	
Duration	227	8	30	33	36	60	11	
Video								
No	21							
Yes	206							
#Reward-Levels	227	2	7	9	10	32	4	
		Failed						
Funding Target (\$)	177	57.00	5000.00	31,840.86	30,000.00	1,000,000.00	82,803.79	
Final Funding (\$)	177	0.00	45.00	3244.36	2631.00	53,422.00	8082.12	
Funding Ratio (%)	177	0.00	0.46	12.04	17.00	82.57	17.02	
#Backers	177	0	1	33	29	515	72	
Funding/Backer (\$)	177	0	23	74	97	1007	104	
Duration	177	10	30	37	45	60	13	
Video								
No	33							
Yes	144							
#Reward-Levels	177	1	6	9	10	33	5	

(Table 3.1 Continued)

Cancelled							
Funding Target (\$)	17	1500.00	5000.00	28,794.12	50,000.00	124,000.00	36,920.97
Final Funding (\$)	17	0.00	100.00	631.82	775.00	4550.00	1083.96
Funding Ratio (%)	17	0.00	0.88	5.84	3.86	56.88	13.51
#Backers	17	0	2	9	14	37	9
Funding/Backer (\$)	17	0	24	61	89	228	60
Duration	17	21	30	37	41	60	11
Video							
No	2						
Yes	15						
#Reward-Levels	17	1	7	9	11	16	4
Total							
Funding Target (\$)	421	57.00	3000.00	19,650.57	15,000.00	1,000,000.00	56,166.83
Final Funding (\$)	421	0.00	360.00	8347.09	7647.00	287,342.00	20,547.55
Funding Ratio (%)	421	0.00	4.50	77.18	112.49	953.50	85.19
#Backers	421	0	7	106	96	4242	287
Funding/Backer (\$)	421	0	38	81	97	1007	87
Duration	421	8	30	35	40	60	12
Video							
No	56						
Yes	365						
#Reward-Levels	421	1	6	9	10	33	4

(Source: Author)

From the total sample of 421 projects, 227 projects (53.9%) successfully achieved their funding target, 177 projects (42%) were unsuccessful and 17 projects (4%) were cancelled before they reached the official end date (see Table 3.1). The success rate in the sample is about 10% higher than the official Kickstarter statistics (Kickstarter Statistics, 2014). The sample exhibits a strong deviation in terms of project's funding target in reward-based crowdfunding, with a minimum funding target in the sample of US\$57, and the maximum funding target of US\$1,000,000. The average funding target for the sample size is US\$19,650. The average final funding is US\$8,347. The largest project achieved a final funding of US\$287,342. The average number of backers for projects is 106 individual backers. The largest backer number for a crowdfunding project is 4,242. The samples average funding per backer is US\$81.27.

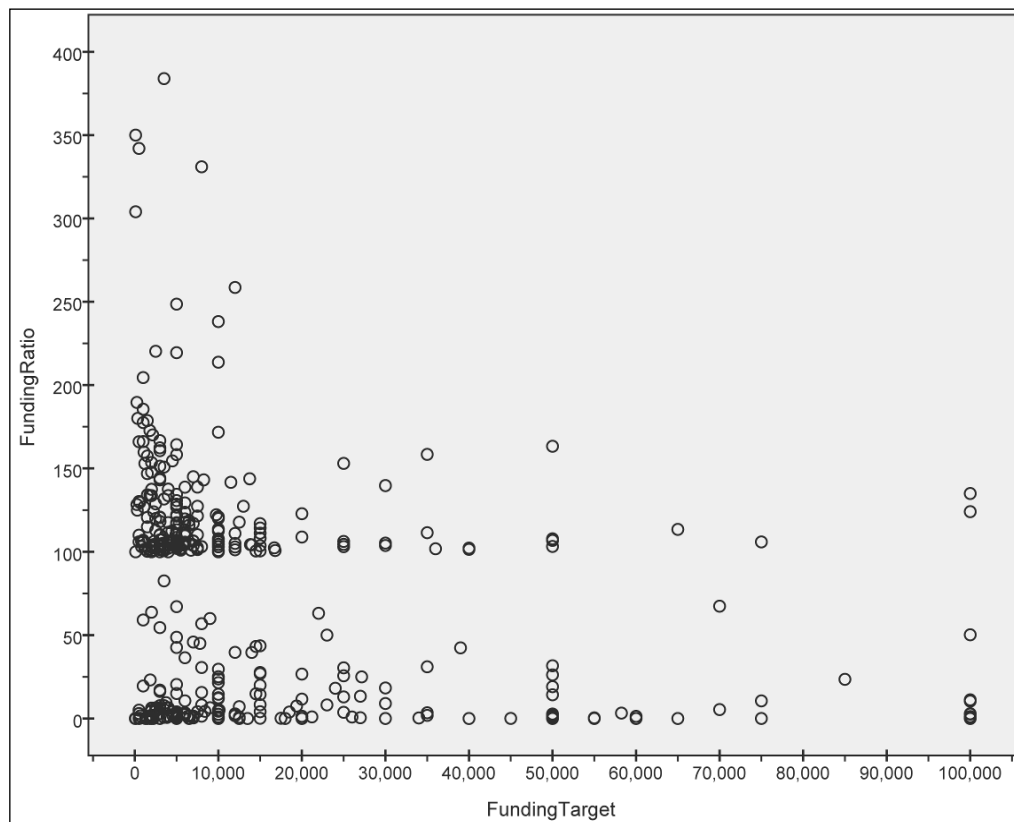
3.5 Findings

3.5.1 Funding target and final funding

Successful projects tend to have a much lower funding target (US\$9,415) in comparison to unsuccessful (US\$32,002) and cancelled (US\$30,281) projects (see

Table 3.1). However, the mean final funding for successful projects is US\$12,807, hence, successful projects tend to get over-funded by 32.6% on average. Figure 3.1 illustrates the distribution of the sample plotted against projects funding target and funding ratio showing that the density of projects lie in the funding area between 100-150% for successful projects and between 0-25% for unsuccessful projects. The mean funding ratio value for successful projects is 133.31% whilst for unsuccessful and cancelled projects the funding ratio illustrates that projects fail by large margin, with mean values of 12.04% and 5.84%, respectively.

Figure 3.1 Scatter-plot for funding target and funding ratio

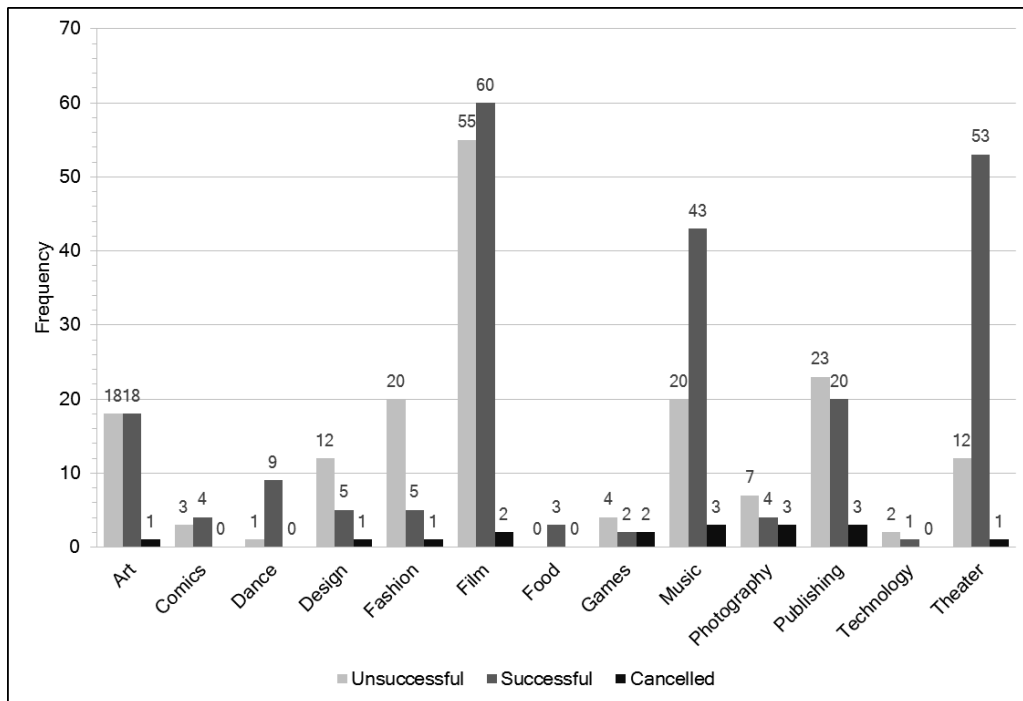


(Source: Author)

Figure 3.2 exemplifies the frequency of successful, unsuccessful and cancelled projects for each category group and demonstrates that projects from the music and theatre category expose by far more successful than unsuccessful crowdfunding efforts. The data reveals that most reward-based crowdfunding projects come from the film (117), music (66), theatre (66), publishing (46) and art (37) categories and demonstrate that reward-based CFPs such as Kickstarter are exploited by entrepreneurs that are aiming to explore “new ways to raise funds for creative

projects” (Kickstarter, 2014e). In fact, the total investment for projects from the two categories film (US\$1,425,480) and publishing (US\$492,010) account for 54.6% of the samples investment volume.

Figure 3.2 Histogram - Funding outcome per project categories



(Source: Author)

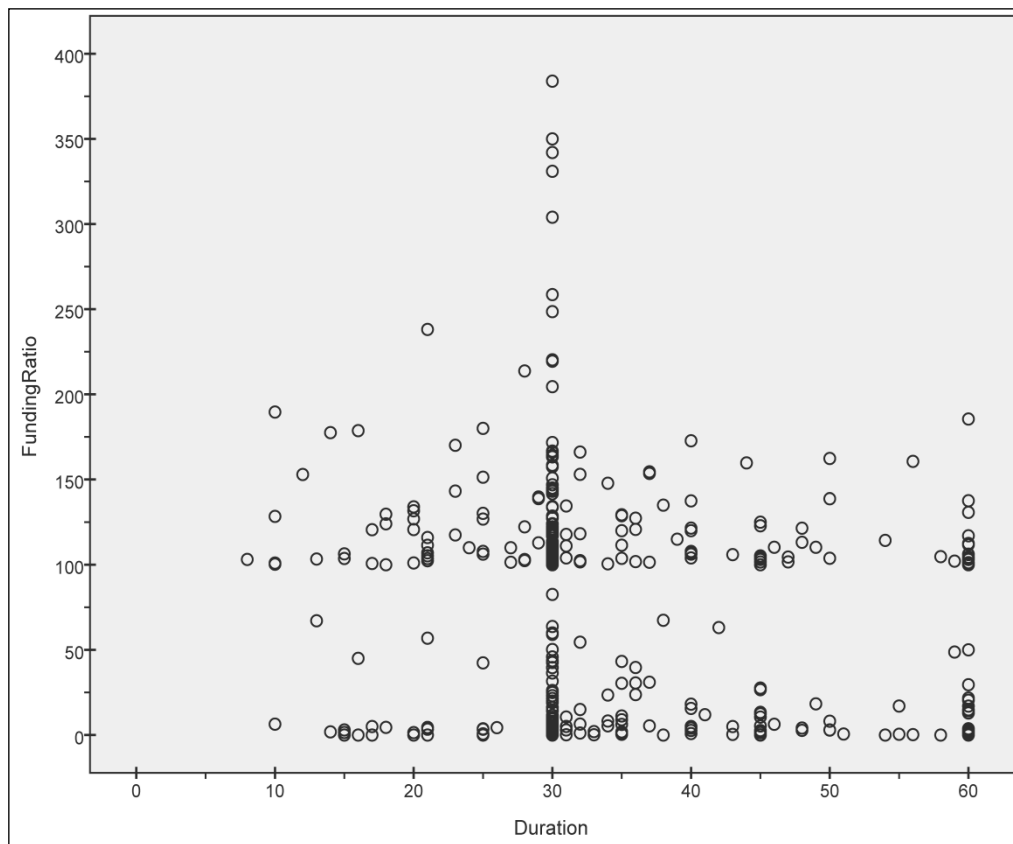
3.5.2 Funding period

Surprisingly, the data does not reveal significant difference between successful and unsuccessful crowdfunding projects’ fundraising duration (see Table 3.1) with average campaign days for unsuccessful projects at 37 and for successful projects 33 days.

It was expected that projects with a higher funding target have a higher chance to successfully assemble the required capital through a longer funding period. However, the data suggests that the combination of a high funding target and a long funding period (which is understood as any funding period above the mean value) are associated with less successful crowdfunding efforts. Vice versa, the explorative data shows that shorter campaign periods seem to be related to a higher success rate. Yet,

Figure 3.3 illustrates a low degree of correlation between the project duration and the funding ratio.

Figure 3.3 Scatter-plot for project duration and funding ratio



(Source: Author)

Kickstarter suggests campaign durations of 30 days: “Statistically, projects lasting 30 days or less have our highest success rate” (Kickstarter School, 2014). Comparing the project duration among the various categories, no significant differences can be observed among them (see Table 3.2). However, the mean values of the project duration are distributed around the suggested 30 days project period.

Table 3.2 Descriptive statistics on project categories

Variables	Total			Successful		Failed		Cancelled		
	Min	Mean	Max	N	Mean	N	Mean	N	Mean	
Art (N = 37)	FundingTarget (US\$)	57.00	40,799.65	1,000,000.00	18	6,485.00	18	77,186.50	1	3,500.00
	FinalFunding (US\$)	0.00	7,034.27	53,422.00	18	7,782.33	18	6,662.00	1	270.00
	FundingRatio (%)	0.00	67.83	171.70	18	122.58	18	16.42	1	7.71
	#Backers	0.00	69.32	317.00	18	102.11	18	40.28	1	2.00
	Funding/Backer (US\$)	0.00	89.43	250.00	18	78.89	18	97.44	1	135.00
	Duration	10.00	31.73	60.00	18	29.33	18	34.22	1	30.00
	#RewardLevels	2.00	9.41	30.00	18	9.17	18	9.61	1	10.00
	Video No				1		5		0	
	Yes				17		13		1	
Comics (N = 7)	FundingTarget (US\$)	3,000.00	10,142.86	27,000.00	4	6,125.00	3	15,500.00	0	-
	FinalFunding (US\$)	0.00	6,048.71	21,372.00	4	9,659.50	3	1,234.33	0	-
	FundingRatio (%)	0.00	84.06	213.72	4	143.42	3	4.92	0	-
	#Backers	0.00	207.14	962.00	4	351.75	3	14.33	0	-
	Funding/Backer (US\$)	0.00	37.46	90.08	4	34.71	3	41.14	0	-
	Duration	20.00	33.86	45.00	4	35.50	3	31.67	0	-
	#RewardLevels	6.00	13.86	32.00	4	16.25	3	10.67	0	-
	Video No				0		1		0	
	Yes				4		2		0	
Dance (N = 10)	FundingTarget (US\$)	2,000.00	6,750.00	16,700.00	9	7,166.67	1	3,000.00	0	-
	FinalFunding (US\$)	511.00	8,585.70	31,028.00	9	9,482.89	1	511.00	0	-
	FundingRatio (%)	17.03	111.14	258.57	9	121.59	1	17.03	0	-
	#Backers	9.00	63.70	153.00	9	69.78	1	9.00	0	-
	Funding/Backer (US\$)	40.69	121.84	294.12	9	129.07	1	56.78	0	-
	Duration	13.00	31.00	55.00	9	28.33	1	55.00	0	-
	#RewardLevels	5.00	6.90	9.00	9	7.00	1	6.00	0	-
	Video No				1		0		0	
	Yes				8		1		0	
Design (N = 18)	FundingTarget (US\$)	300.00	51,945.56	275,000.00	5	26,360.00	12	62,768.33	1	50,000.00
	FinalFunding (US\$)	375.00	18,432.78	135,002.00	5	35,346.40	12	12,843.58	1	935.00
	FundingRatio (%)	1.87	53.67	158.26	5	134.85	12	24.16	1	1.87
	#Backers	7.00	286.61	2,279.00	5	645.40	12	159.67	1	16.00
	Funding/Backer (US\$)	30.57	80.58	200.69	5	49.30	12	95.46	1	58.44
	Duration	30.00	37.00	60.00	5	39.40	12	36.17	1	35.00
	#RewardLevels	4.00	10.33	28.00	5	7.60	12	11.58	1	9.00
	Video No				1		2		0	
	Yes				4		10		1	
Fashion (N = 26)	FundingTarget (US\$)	1,000.00	10,365.38	100,000.00	5	6,600.00	20	11,325.00	1	10,000.00
	FinalFunding (US\$)	0.00	6,961.77	128,722.00	5	31,932.80	20	1,062.10	1	100.00
	FundingRatio (%)	0.00	69.36	953.50	5	332.12	20	7.09	1	1.00
	#Backers	0.00	93.46	1,181.00	5	419.20	20	16.65	1	1.00
	Funding/Backer (US\$)	0.00	76.17	500.00	5	63.54	20	78.13	1	100.00
	Duration	15.00	31.73	50.00	5	31.00	20	32.00	1	30.00
	#RewardLevels	3.00	9.19	33.00	5	10.20	20	9.20	1	4.00
	Video No				1		7		0	
	Yes				4		13		1	
Film (N = 117)	FundingTarget (US\$)	100.00	28,230.16	200,000.00	60	17,741.77	55	38,353.15	2	64,500.00
	FinalFunding (US\$)	0.00	12,183.59	124,114.00	60	20,577.03	55	3,461.24	2	245.00
	FundingRatio (%)	0.00	67.58	350.00	60	120.77	55	11.94	2	1.96
	#Backers	0.00	125.81	1,976.00	60	216.18	55	31.42	2	10.50
	Funding/Backer (US\$)	0.00	99.73	1,006.62	60	113.01	55	87.95	2	25.49
	Duration	10.00	37.36	60.00	60	34.60	55	40.25	2	40.50
	#RewardLevels	3.00	9.74	31.00	60	10.22	55	9.15	2	12.00
	Video No				2		2		0	
	Yes				58		53		2	
Food (N = 3)	FundingTarget (US\$)	5,000.00	10,666.67	20,000.00	3	10,666.67	0	-	0	-
	FinalFunding (US\$)	8,212.00	13,379.67	21,777.00	3	13,379.67	0	-	0	-
	FundingRatio (%)	108.89	139.38	164.24	3	139.38	0	-	0	-
	#Backers	75.00	193.67	272.00	3	193.67	0	-	0	-
	Funding/Backer (US\$)	30.19	86.19	135.33	3	86.19	0	-	0	-
	Duration	30.00	30.00	30.00	3	30.00	0	-	0	-
	#RewardLevels	8.00	12.00	19.00	3	12.00	0	-	0	-
	Video No				0		0		0	
	Yes				3		0		0	

(Table 3.2 Continued)

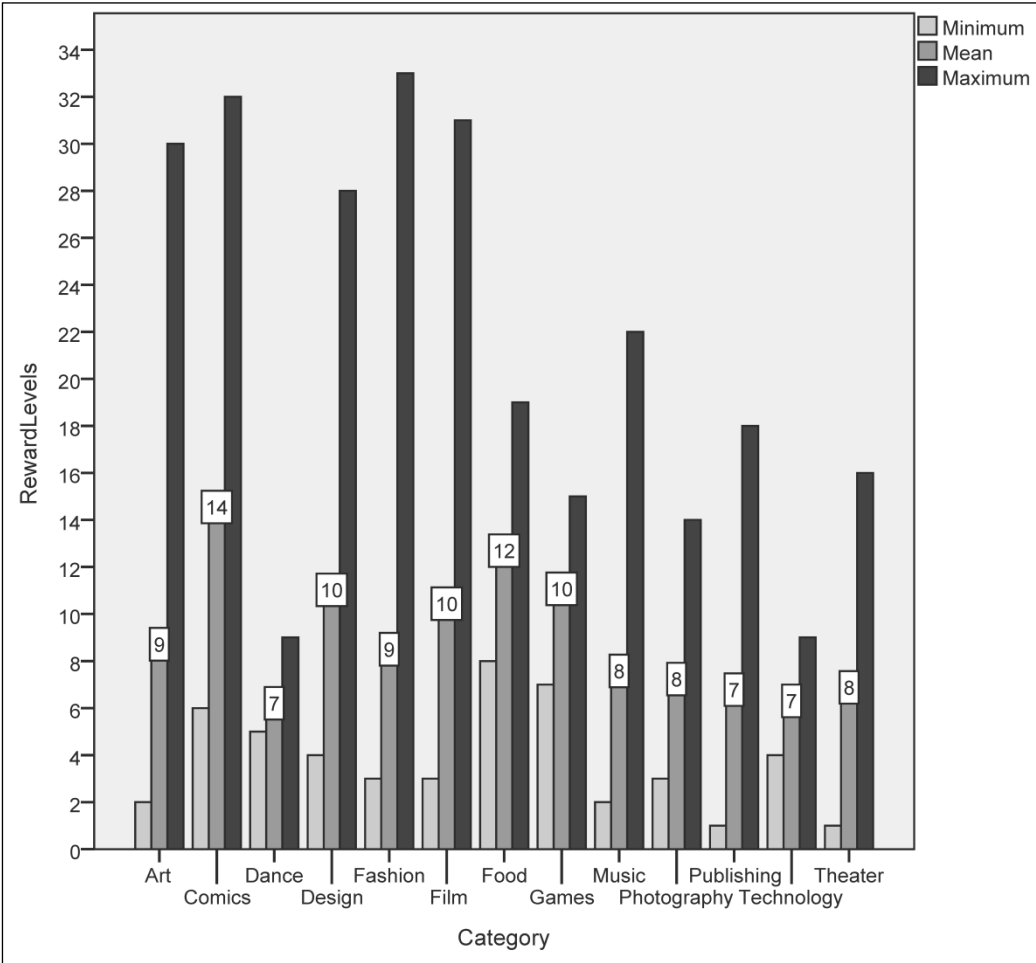
Variables	Total			Successful		Failed		Cancelled		
	Min	Mean	Max	N	Mean	N	Mean	N	Mean	
Games (N = 8)	FundingTarget (US\$)	600.00	30,889.00	100,000.00	2	14,750.00	4	50,653.00	2	7,500.00
	FinalFunding (US\$)	1.00	5,202.63	15,081.00	2	14,826.00	4	2,669.25	2	646.00
	FundingRatio (%)	0.16	28.84	100.54	2	100.52	4	3.94	2	6.95
	#Backers	1.00	102.88	435.00	2	286.00	4	52.50	2	20.50
	Funding/Backer (US\$)	1.00	39.70	106.36	2	70.52	4	30.00	2	28.28
	Duration	30.00	33.63	41.00	2	32.00	4	33.50	2	35.50
	#RewardLevels	7.00	10.38	15.00	2	10.00	4	10.25	2	11.00
	Video No Yes				0 2		0 4		0 2	
Music (N = 66)	FundingTarget (US\$)	500.00	7,552.95	100,000.00	43	4,652.19	20	13,147.55	3	11,833.33
	FinalFunding (US\$)	0.00	3,710.74	13,327.00	43	5,339.63	20	739.45	3	172.00
	FundingRatio (%)	0.00	83.69	342.00	43	123.61	20	10.06	3	2.34
	#Backers	0.00	48.68	221.00	43	70.33	20	8.70	3	5.00
	Funding/Backer (US\$)	0.00	71.40	270.27	43	84.43	20	48.69	3	36.17
	Duration	8.00	36.03	60.00	43	34.84	20	38.10	3	39.33
	#RewardLevels	2.00	8.27	22.00	43	8.23	20	8.10	3	10.00
	Video No Yes				5 38		9 11		0 3	
Photography (N = 14)	FundingTarget (US\$)	500.00	11,971.43	55,000.00	4	9,150.00	7	7,714.29	3	25,666.67
	FinalFunding (US\$)	0.00	3,665.21	16,935.00	4	10,784.50	7	1,062.14	3	246.67
	FundingRatio (%)	0.00	41.66	172.72	4	132.91	7	6.72	3	1.52
	#Backers	0.00	44.21	223.00	4	122.75	7	17.00	3	3.00
	Funding/Backer (US\$)	0.00	52.80	145.99	4	87.17	7	39.46	3	38.13
	Duration	25.00	36.57	60.00	4	40.00	7	32.43	3	41.67
	#RewardLevels	3.00	7.93	14.00	4	10.00	7	6.29	3	9.00
	Video No Yes				0 4		0 7		1 2	
Publishing (N = 46)	FundingTarget (US\$)	120.00	14,771.63	100,000.00	20	7,821.25	23	15,437.83	3	56,000.00
	FinalFunding (US\$)	0.00	10,695.87	287,342.00	20	22,721.50	23	1,355.74	3	2,132.67
	FundingRatio (%)	0.00	78.15	718.36	20	167.74	23	7.86	3	19.75
	#Backers	0.00	174.72	4,242.00	20	380.20	23	17.00	3	14.00
	Funding/Backer (US\$)	0.00	67.75	416.44	20	80.70	23	47.20	3	139.00
	Duration	10.00	33.33	60.00	20	33.20	23	34.26	3	27.00
	#RewardLevels	1.00	7.48	18.00	20	8.55	23	6.26	3	9.67
	Video No Yes				4 16		7 16		1 2	
Technology (N = 3)	FundingTarget (US\$)	2,000.00	7,333.33	10,000.00	1	9,999.99	2	6,000.00	0	-
	FinalFunding (US\$)	30.00	3,358.33	10,000.00	1	10,000.00	2	37.50	0	-
	FundingRatio (%)	0.45	33.98	100.00	1	100.00	2	0.98	0	-
	#Backers	1.00	78.67	233.00	1	233.00	2	1.50	0	-
	Funding/Backer (US\$)	22.50	31.81	42.92	1	42.92	2	26.25	0	-
	Duration	15.00	31.67	45.00	1	45.00	2	25.00	0	-
	#RewardLevels	4.00	7.00	9.00	1	9.00	2	6.00	0	-
	Video No Yes				0 1		0 2		0 0	
Theater (N = 66)	FundingTarget (US\$)	100.00	7,131.11	100,000.00	53	4,678.36	12	18,433.33	1	1,500.00
	FinalFunding (US\$)	0.00	4,656.30	40,903.00	53	5,416.72	12	1,685.83	1	0.00
	FundingRatio (%)	0.00	108.39	304.00	53	129.92	12	22.33	1	0.00
	#Backers	0.00	62.24	269.00	53	72.40	12	22.58	1	0.00
	Funding/Backer (US\$)	0.00	77.08	410.00	53	73.96	12	97.30	1	0.00
	Duration	12.00	33.29	60.00	53	31.06	12	41.42	1	54.00
	#RewardLevels	1.00	7.58	16.00	53	7.55	12	8.25	1	1.00
	Video No Yes				6 47		0 12		0 1	

(Source: Author)

3.5.3 Reward-level structure

It is not possible to draw clear conclusions causally linking reward-level to success. Whilst it can be observed that the average number of reward-levels seem to be relatively similar for successful and unsuccessful projects, the data illustrates that creatively-oriented projects (e.g. art, design and publishing) have a higher number of reward-levels (see Figure 3.4 and Table 3.2).

Figure 3.4 Histogram - reward-levels for project categories



(Source: Author)

3.5.4 Visual pitch

In addition to a textual presentation, often a business plan, CFPs allow project initiators to include visual presentation. Most CFPs facilitate the use of a video recorded pitch. In this study’s dataset, 365 projects, representing 86.7% of the

sample, incorporated a visual pitch in their crowdfunding campaign (see Table 3.1 and Table 3.2). 206 of these projects were successfully funded (56%). Kickstarter encourages the project initiator to use video pitches: “[...] a video is by far the best way to get a feel for the emotions, motivations, and character of a project. It’s a demonstration of effort and a good predictor of success” (Kickstarter School, 2014).

The data shows that a visual pitch is far from being a guarantee of success. Of the 227 successful projects, 206 projects (90.75%) had a visual pitch; 81.26% of failed projects also had a visual presentation (144 of 177 failed projects). A visual pitch has thus become standard, challenging the idea that using visual pitches predicts success.

3.5.5 Founding team composition

Table 3.3 reports data on the founding team composition of the crowdfunding projects team, showing that 320 projects (76%) were created by individual entrepreneurs and only 36 crowdfunding projects (8.55%) were managed by an entrepreneurial team, with established organisations creating 65 funding projects (15.44%).

Table 3.3 Summary statistics - founding team composition

Composition		All		Successful		Failed	
		#	%	#	%	#	%
Single	Female	93	22.1	64	68.8	29	31.2
	Male	227	53.9	104	45.8	123	54.2
Pair	Female	9	2.1	7	70.0	2	30.0
	Male	13	3.1	9	69.2	4	30.8
	Mix	10	2.4	5	50.0	5	50.0
Three	Female	1	0.2	1	100.0	0	0.0
	Male	-	-	-	-	-	-
	Mix	1	0.2	1	100.0	0	0.0
Four	Female	-	-	-	-	-	-
	Male	1	0.2	1	100.0	0	0.0
	Mix	1	0.2	1	100.0	0	0.0
Organisation		65	15.4	34	52.3	31	47.7
Total		421	100	227	53.9	194	46.1

(Source: Author)

The numbers are too small to draw firm conclusions, however, in traditional venture capital a balanced team (e.g. technical, financial, sales, operational expertise) is a clear predictor of success: none of the projects with teams failed (4 in number) and those with pairs of entrepreneurs (numbering 32) succeeded more than those with individuals (320). This suggests that in addition to evaluating the business idea, investors look at the capability of the entrepreneur(s) to deliver the plan.

3.6 Discussion

Crowdfunding is of increasing significance to policymakers and venturesome businesses caught in the funding gap facing many small and high-risk startups. How far the crowdfunding model will grow and internationalise is as yet unclear. Also unclear is the extent to which the model might disrupt traditional venture capital. Reward-based crowdfunding provides investors with the opportunity to invest relative small amounts in businesses to which they have subjective attachment in addition to gaining rewards; they also have the opportunity to participate in online communities, which may shape the nature of proposed business propositions. For entrepreneurs, crowdfunding is a new way of marshalling capital resources, learning from the ‘wisdom of crowds’ and/or creating a market for a nascent business.

This study has explored the reward-based crowdfunding mechanism from a cultural entrepreneurship perspective providing tentative explanations of how particular features of crowdfunding process influence organisational legitimacy and success and failure in reward-based crowdfunding. The data reveals findings linking project characteristics to legitimacy and outcomes.

Funding target and final funding

The data suggests that funding targets are associated with the creation of organisational legitimacy creation: a high funding target implies more effort is required by the project creator or entrepreneur to legitimate the requested funding. Accordingly, it seems important for project initiators to be transparent and persuasive

about the funding goal. The exploratory findings support Achleitner et al. (2013) and Sievers et al. (2013) conclusion that crowdfunding and traditional venture capital both require detailed, internally consistent and market-referencing business plans to achieve legitimacy, though high funding targets decrease organisational legitimacy without a convincing justification of source and use of funds.

The study's findings are in accordance with Reuber and Fischer's (2011) and Zhang and Liu's (2012) arguments that herding behaviour is influential in online community supported pitches, since the openness of interactivity on CFPs allows others note comments and feedback and to follow the herd. CFPs may reinforce this behaviour by introducing popularity data, short-listing of projects and staff-picks, all of which serve herding by narrowing choices. Ward and Ramachandran's (2010) findings reveal that a positive correlation between the listing on a 'popularity list' and successful achievement of the funding target exists. The funding ratio values in this study's data illustrate that crowdfunding projects succeed by relatively small margins but fail by large margin, suggesting a dynamic that success amplifies success analogous to Mollick's (2014) findings. Interestingly, this finding is quite different from traditional venture capital processes where successful entrepreneurial resource assembly is usually realised by large margins and profitable ventures or projects tend to be heavily over-funded. One reason for that is that sophisticated investors have the knowledge and managerial skills to exploit good investment opportunities. In contrast, potential investors in communities such as crowdfunding appear to rely more on group dynamics and interactive entrepreneurial narrative activities in terms of investment choices, which lead to narrowed choices.

However, Burtch et al. (2013, p. 510) highlight how community driven popularity indicators might negatively influence the overall funding outcome, as "higher contribution frequencies are associated with lower subsequent contribution amounts." Although, Brynjolfsson et al. (2011) illustrate that the long-tail hypotheses (Anderson, 2004) is valid in product sales through digital environments, it seems that the implemented popularity indicators on CFPs do diminish the effect of the long-tail phenomenon in online CFPs, distributing financial capital into more likely succeeding projects. As a result, successful projects tend to be over-funded as such

mechanism seem to influence the organisational legitimacy creation. Community behaviour, therefore, might be a stronger indicator for organisational legitimacy rather than narrative legitimacy factors such as the funding target variable.

Crowdfunding duration

This study illustrates that projects with higher funding targets tend to have longer funding durations. However, the data shows that longer fundraising periods lead to lower funding ratio values. Based from an organisational legitimacy perspective, it can be assumed that a longer fundraising period might expose an uncertain narrative for the project, resulting in decreasing support for the project.

An explanation for that result can be deduced from the importance of project momentum for organisational legitimacy creation within reward-based CFPs. As Ward and Ramachandran (2010) illustrate, projects have increased challenges to effectively build and maintain project momentum the longer their funding period is. In highly heterogeneous and dynamic communities such as CFPs, attention for specific projects seems to diminish with time. Apparently, it is more efficient to implement a shorter funding period as projects seem to go relatively quickly out of support with the crowdfunding community (Ward and Ramachandran, 2010). Kickstarter states that “shorter projects set a tone of confidence and help motivate your backers to join the party. Longer durations incite less urgency, encourage procrastination, and tend to fizzle out” (Kickstarter School, 2014).

Reward-level structure

While the data does not provide clear implications of the relationship of the reward-level structure and successful crowdfunding efforts, it is identified that creative projects tend to incorporate a higher number of reward-levels. Projects from creative categories seem to have a better ability to implement mixed intangible and tangible rewards. This allows project initiators to incorporate additional reward-levels in order to include supplementary social-psychological investment incentives. The possibility to create rewards in any kind of tangible or intangible form establishes a key feature of reward-based crowdfunding. Therefore, rewards create a key driver for

activities within the community and create strong narrative legitimacy factors. This study argues that the reward-levels demonstrate an important factor that makes a project compelling to the audience. Burtch et al. (2013) suggest that projects that are positioned with their product or service in trending and popular topics of the broader internet, are more likely to receive higher contribution from the community. Kickstarter (2014) highlights the influence of the right rewards for successful crowdfunding efforts and states that “the importance of creative, tangible, and fairly priced rewards cannot be overstated. Projects whose rewards are overpriced or uninspired struggle to find support.” Therefore, it seems those projects that are able to offer additional social-psychological reward-levels are more successful to motivate the community for financial support.

Visual pitch

The large majority of projects in the sample data included a visual pitch in their crowdfunding campaign. Unlike previous studies, which understand visual pitches in crowdfunding projects as quality signals, this study illustrates that visual elements in crowdfunding pitches appeared to developed into a crowdfunding standard and therefore weakened its controlling character to predict success in reward-based crowdfunding. While the measurement of visual pitches is not adequate to predict success, this study however understands visual pitches from the cultural entrepreneurship perspective as a powerful entrepreneurial narrative instrument.

Clarke (2011) highlights the importance of visual communication and the use of visual symbols to increase organisational legitimacy and develop support for nascent ventures. Visual pitches support entrepreneurs to attain support and funding for their projects and allow entrepreneurs to actively create and manage emotions of stakeholders (Clarke, 2011). As more projects utilise the power of visual pitches to persuade the community to financially support the project, the findings emphasise a more social-psychological rather than rational business oriented organisational legitimacy creation process in reward-based crowdfunding.

Founding' team composition

The composition and characteristics of the founding team in entrepreneurial ventures play an important role for organisational legitimacy and resource assembly processes (Kotha and George, 2012; Zhao et al., 2013). Shepherd and Zacharakis (2003) illustrate that organisational legitimacy can be built by providing additional information of the organisation and management team of the entrepreneurial venture. Research has illustrated that information about the founding team represent a critical factor of traditional venture capital investment-decision making processes (Zimmerman and Zeitz, 2002; Baum und Silverman, 2004). It appears that investors in reward-based crowdfunding look also at the team composition in evaluating the business idea. The data shows that the majority of the sample projects were created by individual entrepreneurs (76.0%), followed by organisations (15.4%), pairs (7.6%) and teams (0.5%). Projects with pairs and teams demonstrate much higher success rates than projects with individuals. Most interestingly, however, is that projects created by females experienced a higher success rate than projects managed by males.

3.7 Conclusion

This study has contributed to crowdfunding literature referencing the results of an empirical study that is explorative and descriptive in nature. This study illustrates that cultural entrepreneurship activities play a significant role in creating online organisational legitimacy and links specific features to successful crowdfunding efforts. While the findings offer additional understanding of some dynamics that take place in crowdfunding and can be associated with organisational legitimacy, research on crowdfunding is still limited and further investigations are required.

The possibilities for entrepreneurs to facilitate the collective development of a business idea establish an interesting research issue linked to co-creation. It appears that a distinctive feature of reward-based crowdfunding is the joint effort to develop and promote a business idea rather than primarily evaluating a business plan. It is important that future research focus on the co-creation possibilities and its impact on

the organisational legitimacy and resource assembly process. Furthermore, the utilised dataset revealed that females experience a higher success rate than males. This presents a fascinating area for future study; given the high male-to-female ratio generally present in both entrepreneur and investor populations.

Overall, further crowdfunding research is necessary as current studies are outcome oriented and utilise quantitative methods to explain specific patterns in crowdfunding. Current knowledge lacks understanding of the business processes that are associated with crowdfunding outcomes. It is important to move crowdfunding research into more qualitative research methods to provide deeper understanding of specific entrepreneurial activities and processes. Moreover, qualitative research would enable to capture a broader picture of the crowdfunding phenomena and allow to link offline activities with online processes. It is important to disclose offline activities to understand online crowdfunding processes and outcomes as current understanding is built on knowledge that originates from activities on online CPFs. While this study focuses on specific variables that are captured of crowdfunding projects, further research is required to analyse more qualitative features of crowdfunding project pitches such as textual and visual pitches. Such future studies will allow to extend knowledge about the organisational legitimacy creation of crowdfunding projects in terms of entrepreneurial narratives.

Chapter 4: The effects of network size and quality of network relationships on capital assembly in reward-based crowdfunding

4.1 Introduction

Crowdfunding has evolved into a structured and sometimes regulated risk-capital assembly mechanism within the entrepreneurial ecosystem (European Commission, 2013a, 2013b; Harrison, 2013). However, it diverges from traditional venture capital in several critical features, presenting an interesting laboratory to study entrepreneurial finance. Crowdfunding is an innovative, dis-intermediated venture capital assembly mechanism. It draws small amounts of capital from numerous investors by exploiting digital media (e.g. video pitches), online social media, and the networks of project creators. In contrast to traditional venture capital, the crowdfunding process enables entrepreneurs to boundary-hop their restricted offline social networks and enter heterogeneous online networks to assemble venture capital through specific online intermediary and networking platforms.

The success of online-mediated resource assembly implies that new drivers and behavioural mechanisms have developed around online social networking and communication. Research addressing the connection between entrepreneurs' social networks and venture capital finds positive relationships between social network variables, funding success, and firm performance (Shane and Cable, 2002; Slotte-Kock and Coviello, 2010). Crowdfunding studies have indicated that similar relationships between the entrepreneurs' social network and capital assembly persist in crowdfunding (Belleflamme et al., 2014; Mollick, 2014).

Despite these results, extant understanding of the meaning and influence of networking on capital assembly and fundraising outcome in crowdfunding is still emerging. Relatively few factors have been tested empirically at scale, and most studies do not directly address the elements of legitimacy formation and community

building that uniquely characterises crowdfunding projects. To provide additional insights into the role of social networking in crowdfunding, this study emphasises in addition to the role of online social network size on the investigation of how online network relationship quality effect crowdfunding outcomes. For simplicity, this study will refer to ‘online social network size’ and ‘online network relationship quality’ as ‘network size’ and ‘network relationship’. The study emphasises the importance of the quality of engagement within crowdfunding networks and the formation of closely-coupled, affinity-driven networks. In contrast to literature that has tended to focus on network size explanations of crowdfunding success, this study’s objective is to accentuate the relationship building mechanisms at work on crowdfunding platforms (CFPs). This extends findings beyond general interactions on CFPs, which are defined as loosely-coupled networks, towards more focused engagement amongst agents choosing to privilege and legitimise a particular crowdfunding pitch – creating project-syndicates.

This study analyses data, including social networking variables, related to 21,534 projects from the Kickstarter CFP. Building upon recent work (e.g. Mollick, 2014), additional variables are included in this empirical research designed to shed light on the importance of the quality of network relationships in reward-based crowdfunding activity. The study explores novel forms of communication and the significance of network relationship building to create project-syndicates during crowdfunding activities. It is shown that the inclusion of proxies for network relationship quality increases the explanatory power of the variation in the capital pledged and campaign outcome (the two dependent variables in this study) substantially. Of particular importance, the study contributes to the crowdfunding literature by underlining network relationship quality activities and its positive association to capital assembly and campaign outcome in crowdfunding through the examination of three specific variables that received less attention as compared to the issue of network size.

This study contributes to entrepreneurship research by examining key characteristics of social networks during venture financing. More specifically, the study extends theory on the relative importance of network dynamics in crowdfunding, highlighting the significant explanatory power of network relationship quality for capital

assembly. The investigation confirms a positive relationship between network size, network relationship and capital assembly as well as successful fundraising outcome. While the findings regarding network size are confirming prior research results, the study extends the perspective to the importance of network relationship quality. The investigation emphasises the novel context of resource assembly during crowdfunding, where entrepreneurs have reduced dependency on pre-existing social networks. The online-mediated platform allows entrepreneurs to create and leverage entirely new project-syndicates for capital assembly through the utilisation of relationship quality mechanisms.

4.2 Theory and hypotheses building

While crowdfunding has received research attention in marketing, information systems, innovation and finance (Giudici et al., 2012), it is perhaps most relevant to entrepreneurship research as a novel form of capital assembly. Entrepreneurs often lack capital or the expertise to access external capital; younger, less well-resourced firms suffer significant competitive handicaps (Stinchcombe, 1965; George, 2005; Seghers et al., 2012). Crowdfunding presents a mechanism for entrepreneurs to acquire capital from non-traditional sources via non-traditional channels. To explore this unique online-mediated context this study investigates how entrepreneurs' online social network and network relationship activities affect capital access and assembly in reward-based crowdfunding.

4.2.1 Crowdfunding outcome drivers

The primary focus of crowdfunding research has been the apparently static characteristics of the entrepreneur, project and online pitch content. For example, the use of digital media such as videos in the online business pitch indicates project quality and correlates with positive crowdfunding outcome (Greenberg et al., 2013; Mollick, 2014). Crowdfunding, however, is an evolving media. Some apparently distinctive outcome drivers may not be as unique as originally shown. For example, pitch videos have become increasingly standard, significantly reducing the predictive

link to performance (Frydrych et al., 2014). While the types of language used are important in pitch acceptance in crowdfunding (Mitra and Gilbert, 2014), numerous studies have shown that online persuasive psychology is similar to that in off-line business pitches (Fritchie and Johnson, 2003; Martens et al., 2007; Clarke, 2011; Überbacher, 2014). As with traditional venture capital, information asymmetry and perceived risk may be reduced during crowdfunding by active interaction with potential funders (Ley and Weaven, 2011; Mollick, 2013).

Some project characteristics and outcome drivers appear specific to crowdfunding. Entrepreneurial narrative and discourse are embedded into the communication medium, and are especially important; even minor flaws such as spelling mistakes detract from success (Mollick, 2014). Pitch duration and investment activities during different times of the crowdfunding campaign contribute to outcome (Rao et al., 2014). Initial investment activities influence subsequent capital assembly during the campaign, illustrating path dependency dynamics in crowdfunding.

4.2.2 Network effects in crowdfunding

Network effects are especially important, because the primary purpose of a CFP is to facilitate access to a previously unknown and inaccessible set of potential funders. The general importance of network effects on resource assembly is well-established (Jarillo, 1989; Casson and Giusta, 2007; Newbert et al., 2013; Sigmund et al., 2015). Venture creation and resource assembly is often investigated as a process of entrepreneurs building networks to access external resources: the entrepreneur's network drives venturing decisions (Shane and Cable, 2002; Greve and Salaff, 2003; Vissa, 2012) and facilitates access to external resources during company growth (Stuart and Sorenson, 2007; Sullivan and Ford, 2013). Networks enable entrepreneurial action via access to resources on relatively attractive terms (Adler and Kwon, 2002).

Network size, organisation, interaction, influences and behaviours determine venturing outcomes (Brass et al., 2004; Coviello, 2005). Network size has a positive relationship with the likelihood of resource assembly from external sources

(Davidsson and Honig, 2003; Sullivan and Ford, 2013). Large networks provide advantages for entrepreneurs as they eliminate network dependency of specific actors (Reagans and Zuckerman, 2008), but also increase the type and quality of accessible resources (Gulati and Sytch, 2007; Ozcan and Eisenhardt, 2009). Social network size and density are linked to funding success and venture performance (Shane and Cable, 2002; Ahuja et al., 2009; Slotee-Kock and Coviello, 2010).

Similarly, social network size positively correlates with crowdfunding performance (Greenberg and Mollick, 2014). Active participation of project founders within CFPs in supporting other projects increases the entrepreneurs' social capital within those communities, positively influencing funding assembly (Colombo et al., 2015). Transparent communication on CFPs drives peer group activities and herding behaviour (Burtch et al., 2013). These findings suggest a positive link between network size and project outcomes (Grossman et al., 2012; Belleflamme et al., 2014). While traditional venture capital networks rely on spatial proximity (Sorenson and Stuart, 2001; Presutti et al., 2011), CFPs may reduce dependency on geography in favour of distributed social connectivity, increasing the importance of network size (Agrawal et al., 2015). It is expected that the entrepreneur's online network size positively contribute to capital assembly in crowdfunding. Thus, based on the foregoing discussion the following hypothesis can be formulated:

H1: In crowdfunding, a positive relationship between capital assembly and the size of the entrepreneur's online social network exist.

4.2.3 Network relationship quality in crowdfunding

During start-up stages, pre-existing networks such as family, friends, and professional contacts serve as valuable resources for entrepreneurs (Elfring and Hulsink, 2003). However, as these may not satisfy the entrepreneur's capital requirement completely, entrepreneurs aim to develop new contacts through network relationship processes. Establishing new network connections outside the pre-existing network circle involves entrepreneurs to devote time and larger relationship developing efforts. Networks are more than just homogenous collections of resources

and knowledge. The quantity of network connections may be less important than the quality of network relationships – defined as the absolute frequency of interactions among network agents – for gaining access to resources (Kwon and Arenius, 2010; Zhang, 2010). Venture capital literature has shown that network relationship quality affects capital assembly processes (Stuart and Sorensen, 2007; Semrau and Werner, 2014).

The relative value of the entrepreneurs' network size and relationship quality is important and likely contingent on venture context (Elfring and Hulsink, 2007; Semrau and Werner, 2012; Newbert et al., 2013). Network formation often derives from homophily effects, interpersonal similarity or shared affinity (Byrne, 1971; McPherson et al., 2001). For new ventures, accessible networks likely centre on founding team members (Hallen, 2008). The value of these networks, however, derives from extended relationships rather than homogeneity of the network connections (Grossman et al., 2012). For new ventures, the development of network quantity and quality, including tie strength and node value, may have significant impact on the resource assembly process (Hoang and Antoncic, 2003; Newbert et al., 2013; O'Donnell, 2014). This relationship building process includes a “combination of the amount of time, the emotional intensity, the intimacy (mutual confiding), and the reciprocal service which characterize the tie” (Granovetter, 1973, p. 1361). This study specifically notes the importance of shared time with network agents, which is crucial to develop a relationship and to build mutual trust (Elfring and Hulsink, 2003). Network relationship quality is based on shared understanding and knowledge of the venture, reducing information asymmetry via frequent interaction and exchange.

Crowdfunding is a useful context to study network relationship activities, because the network agents such as entrepreneurs and funders know almost nothing about each other at the start. The communication mechanism is primarily a one-way flow from entrepreneur to funder. As Fischer and Reuber (2011) note, social media is an important conduit for interactivity and engagement in an online setting. Recent studies show that entrepreneurs' activities on social media (such as on Twitter) correlate positively with crowdfunding performance (Etter et al., 2013). These social

processes bear striking similarities to herding behaviour, achieved via distributed network effects of social media presence (Lehner, 2014; Lu et al., 2014).

An important challenge for entrepreneurs who are crowdfunding is creating and maintaining prominence among network agents on CFPs (Ward and Ramachandran, 2010; Rao et al., 2014). Proactive engagement strategies facilitate the role of participants as co-creators rather than passive investors. Active engagement appears to benefit project legitimacy (Frydrych et al., 2014). Frequent project updates and answers to queries correlate with success; positive community endorsements also support capital assembly (Burtch et al., 2013; Agrawal et al., 2014). Patterns of interactivity motivate investors to affiliate with the project evidenced in implemented filters and popularity tools on CFPs (Schwienbacher and Larralde, 2012; Xu et al., 2014).

It is expected that entrepreneurs who engage more frequently with potential funders through social media to be more likely to proactively build and manage positive relationship quality with network agents. Particular social media mechanisms that are available on CFPs create often the first and primary contact and engagement point between entrepreneurs and funders in the crowdfunding context. As such, prospective supporters use these mechanisms to ascertain the relationship quality. Social media provides a network agent relationship tool, helping entrepreneurs exploit synergistic effects from visible relationships. This study argues that increased efforts by the entrepreneur to build relationship quality, measured in the form of particular social media activities and network interactivity on CFPs contribute to capital assembly in crowdfunding. While there is related literature which has investigated the role of network relationship quality to access and assemble venture capital through more traditional capital sources (e.g. Semrau and Werner, 2014), the distinction here is the role of particular social media tools that are available on CFPs for network relationship building in the online context of crowdfunding. Thus, the following empirical prediction is postulated:

H2: In crowdfunding, a positive relationship between capital assembly and the quality of the entrepreneur's online social network relationship exist.

4.2.4 The formation of project-syndicates in crowdfunding

This study explicitly suggests that the reported effect of network size in crowdfunding is overstated and the effect of network relationship quality understated in understanding capital assembly and crowdfunding outcomes. The disintermediated nature of online crowdfunding and the relative transparency of online social network platforms suggest that inherited physical networks matter less. Unlike traditional venture capital assembly, entrepreneurs may profitably build entirely new network ties rather than focusing on managing and improving existing ties (Hui et al., 2014; Mollick, 2014).

The formation of entirely new project-specific networks in online crowdfunding has not been studied. This study defines the emergent, focused network of (potential) investors choosing to interact with a particular entrepreneurial project as a ‘project-syndicate’. The project-syndicate is comprised of network agents that promote the project for capital injection above alternative offers. A project-syndicate is therefore not the outcome of the entrepreneurs’ network size, but rather the result of building network relationships on CFPs. It is co-constructed by the entrepreneur and potential (and committed) funders through a meaning-generating series of communications and dynamic interactions. As such, social media activities and the application of communication mechanisms on CFPs are suitable indicators for whether a project-syndicate is formed.

Network agents that emphasise a particular project also signal quality and legitimacy to prospective investors or customers (Shane and Cable, 2002). Unaffiliated network agents will investigate whether a project-syndicate has formed or appears imminent. Capital commitments are a first order effect of network affiliation; project-syndicates represent a second order effect as the project benefits from legitimacy conferred via capital commitments and the perception of active conversation and an emerging narrative of success. Network size may drive syndicate formation by ensuring the ‘requisite variety’ of interests to meet the needs of uncommitted network agents. As in venture capital, involvement of network agents can be understood as positive ‘signals’ (Nagy et al., 2012): success breeds success. Entrepreneurs leverage further

external resources on the basis of earlier pledges (Kim and Viswanathan, 2013; Solomon et al., 2015).

This study proposes that the heterogeneous online nature of crowdfunding facilitates the formation of project-syndicates, special purpose virtual communities contained by the platform and affiliated to the project. High levels of syndicate engagement with the emerging project narrative indicate affinity and commitment, suggesting a greater likelihood of project success. This study therefore differentiates loosely-coupled networks such as the entrepreneurs' general crowdfunding and offline networks that rely on quantity (network size), from more closely-coupled project-syndicates, which engage on- and off-line participants in participatory community building around the project pitch (network relationship quality).

It is expected that the effects of network size may be substituted to some extent by the quality of network relationships stemming from the successful formation of a project-syndicate. The project supporters who co-create the project-syndicate have a stronger influence on capital assembly than the entrepreneur's prior online social network size. Network relationship activities initiated after the start of the project and realised throughout the crowdfunding campaign are important to transform an agent of the loosely-coupled crowdfunding network into a member of the project-syndicate. The self-organising and informal nature of emergent project-syndicates enables agents to self-select as project evangelists and increase social media activities. Thus, supplementary to network size, social media activities associated with the project are significant network relationship quality contributor, and create appropriate proxies for the formation of project-syndicates:

H3: In crowdfunding, a positive relationship between project-syndicate formation and capital assembly exist.

4.3 Methods

The postulated hypotheses are tested with data from Kickstarter. Project-specific variables of over 80,000 Kickstarter projects that have been posted on the CFP between April 2009 and October 2013 have been collected. The data was extracted as a cross-sectional dataset during November 2013. The dataset consists of failed, successful, cancelled and suspended projects from the Kickstarter website. All observations and variables, including the Facebook related information are available on Kickstarter and were aggregated from the CFP's website. Data reduction and data analysis for this study was completed through the statistical software package Stata.

4.3.1 Data

The study's empirical sample and variable selection is constructed to be consistent with prior crowdfunding research (e.g. Mollick, 2014). Correspondingly and with respect to the sample construction, all cancelled (3,687) and suspended (148) projects were excluded. This limits the sample to projects that are active through the full crowdfunding campaign duration, whether achieving the fundraising goal or not. Furthermore, non-U.S. projects were removed (6,943 projects representing 8.5 percent of all projects) and focus was given solely on U.S.-based projects (74,886 projects representing 91.5 percent) to reduce the potential impact of unobserved geographical or cultural effects and possible language issues. Prior research suggests that project complexity is unequally distributed (Mollick, 2014; Rossi, 2014). Thus, the sample was limited to projects with a funding goal of US\$5,000 or higher. By eliminating 38,590 'micro-finance' projects, the study focuses on projects that are more comparable with traditional financing activity (Mollick, 2014). Out of the remaining 36,296 projects, the study analyses 21,534 projects (59.3 percent) that have linked their crowdfunding project to Facebook, which is the online social network account used to measure the online network size of crowdfunding project founders.

4.3.2 Measures

An overview of the variables used in the analysis is reported in Table 4.1.

4.3.2.1 Dependent variables

This study seeks to investigate the influence of the crowdfunding project creators' network size and network relationship quality on capital assembly outcomes. Thus, two measures are used for crowdfunding outcome: the projects' pledged capital (US\$) and the funding status (1 for successful and 0 for failure). Due to the skewed distribution, pledged capital is used in natural logarithm form.

Table 4.1 Variables and definition

Variables	Definition
Dependent variables: Project outcome	
LnPledged	Natural logarithm of the financial capital that the project assembled at the official end of its online crowdfunding campaign [metric, in US\$].
Funding status	A dummy variable for the funding status of the crowdfunding campaign, representing whether the campaign reached the funding goal or not [= 1 when funding goal reached, 0 otherwise].
Independent variables: Measures of the entrepreneur's social network	
<i>Network size</i>	The quantity of contacts linked to the entrepreneurs' online social network account.
LnFBF	Natural logarithm of the number of contacts linked to the entrepreneurs' Facebook account [metric, numerical].
<i>Network relationship quality</i>	The frequency of interactions between entrepreneurs and network contacts through the crowdfunding platform.
LnFBS	Natural logarithm of the number of Facebook shares of the crowdfunding project. This variable depicts how often individuals shared the Kickstarter campaign over Facebook [metric, numerical].
LnUpdates	Natural logarithm of the number of published project updates by the entrepreneur on the crowdfunding platform. This variable measures how often the entrepreneur shared news and project updates to (potential) supporters over the campaign site [metric, numerical].
LnComments	Natural logarithm of the number of published comments at the project site. This variable depicts how often (potential) supporters are interacting with the entrepreneur [metric, numerical].

(Table 4.1 Continued)

Variables	Definition
Control variables: Crowdfunding campaign characteristics	
LnGoal	Natural logarithm of the funding amount the entrepreneur set as the crowdfunding campaign funding goal [metric, in US\$].
Duration	The duration of the crowdfunding campaign [metric, in days: between 1-60].
Video	Dummy variable to control whether a crowdfunding project has a video [0 = no video; 1 = video].
Reward-levels	The number of different reward-levels [metric, numerical].
Age	The time between the official crowdfunding campaign start date and the data collection date in October 2013 [metric, in days: between 5-1646].
Project category	Thirteen dummy variables for the Kickstarter categories for crowdfunding projects [0 = no; 1 = yes].
Year	Five dummy variables for the years 2009-2013 in which the projects' crowdfunding campaign was online and fundraising [0 = no; 1 = yes].

(Source: Author)

4.3.2.2 Independent variables

The independent variables measure the entrepreneurs' network size and relationship quality. To capture the entrepreneurs' network size the study uses data related to the project creators' Facebook account information. *LnFBF* represents the network size and is measured through the number of contacts of the entrepreneurs' linked Facebook account to the Kickstarter project. This variable is commonly used as network size measurements in prior studies in the crowdfunding context (e.g. Mollick, 2014). Correspondingly, this study follows the approach of Hansen (1995) and aims to integrate all individuals who might be somehow connected to the entrepreneurs' project. Facebook network contacts are mainly created via interpersonal relationships prior to the project. Thus, an entrepreneur's contact on Facebook is likely to either be a friend, relative or family member. As a result the entrepreneurs' Facebook network is less professional and rather more personal in nature (Lampe et al., 2006; Ellison et al., 2007).

In contrast to prior research, this study extends the set of network characteristic variables and includes three additional variables to proxy for network relationship quality. The argument is that depth rather than breadth of social networks drive

capital assembly in crowdfunding. Relationship quality is what drives potential supporters to financially contribute to the crowdfunding campaign. Surprisingly, variables that account for network relationship received less attention in crowdfunding literature to date (Bruton et al., 2015). This study's empirical analysis contributes to the literature by extending prior studies with regards to the relationship quality activities on CFPs between the entrepreneur and potential supporters. *LnFBS* measures how often the crowdfunding project website was shared by (potential) supporters over Facebook. Furthermore, the variable *LnUpdates* is used to measure the number of project updates an entrepreneur publishes throughout the crowdfunding campaign, and *LnComments* is used to measure the number of published commentaries from supporters. These variables reflect the depth of interaction among individuals interested in the project (Aldrich and Reese, 1993). Because these variables are highly skewed, each is used in log form. While the number of Facebook shares of the project and the posted comments on the projects' crowdfunding campaign website are driven by (potential) project supporters, project updates are a one-sided communication tool for the entrepreneur to connect with the supporter community. Thus, it is possible to measure the engagement activity from the entrepreneur and from the supporters.

4.3.2.3 Control variables

Control variables are selected following the prior literature (e.g. Mollick, 2014) to help isolate the effects of the variables of interest. Projects tend to succeed by small margins but fail by large margins (Frydrych et al., 2014). A variable for funding goal (in log form) is included to control for the skewed, bi-modal impact of project legitimacy. Furthermore, crowdfunding campaign duration has been shown to be an influential factor for the funding outcome (Mollick, 2014), thus the variable *Duration* is used to control for the campaign length.

Additional control variables were included for campaign characteristics. Kickstarter reports that a video "is a demonstration of efforts and a good predictor of success" (Kickstarter, 2014e). A *Video* dummy variable is included to control for a minimum

quality level associated with the perception of project legitimacy. Additionally, a control variable for *Reward-levels* is included as the projects' reward-levels influence interaction and project legitimacy (Frydrych et al., 2014). It is controlled for the time between the projects' official start date and the data collection date in November 2013. Funds cannot be collected through Kickstarter after the project campaign closes. However, the crowdfunding project itself continues with the production and delivery of the 'rewards' (Mollick and Kuppuswamy, 2014). Project creators may update their backers on the progress of their project or venture, despite the lack of incentive in relation to capital raising. An additional control variable for *Age* is included to avoid conflating community building associated with capital assembly to post-project delivery of rewards.

A set of dummy variables representing the *project category* is included because the nature of the project category influences the required funding and therefore reflects the complexity of the crowdfunding projects (Belleflamme et al., 2013). Furthermore, project types differ significantly in capital requirements, scope for online networking, and network relationship quality activities. Finally, to control for the evolving nature of crowdfunding and online social networks a set of dummy variables for *year* is included.

Table 4.2 reports descriptive statistics for the whole set of variables of the complete sample which comprises 21,534 observations (crowdfunding campaigns from Kickstarter) from 2009-2013. About 52% of campaigns in the sample successfully raised the required funding goal. Strong variations can be observed for network size (*LnFBF*) and relationship quality characteristics (*LnFBS*, *LnUpdates* and *LnComments*). In terms of campaign characteristics, the average campaign duration is 36 days, and about 93% of the campaigns incorporated a video pitch. On average a campaign offers 12 distinct reward-levels, however, large variations is conspicuous.

Table 4.2 Summary statistics

	Mean	S.D.	p25	p50	p75	Max
<i>Dependent variables: Project outcome</i>						
LnPledged	8.465	1.536	7.388	8.714	9.431	16.144
Funding status	0.525	0.499	0.000	1.000	1.000	1.000
<i>Independent variables: Measures of the entrepreneur's social network</i>						
LnFBF	6.307	1.275	5.730	6.433	7.059	8.704
LnFBS	5.265	1.549	4.407	5.407	6.273	11.669
LnUpdates	1.680	1.054	0.693	1.792	2.485	5.118
LnComments	1.391	1.479	0.000	1.099	2.197	10.890
<i>Control variables: Crowdfunding campaign characteristics</i>						
LnGoal	9.454	0.867	8.780	9.210	9.903	16.588
Duration	35.927	12.503	30.000	30.000	40.000	91.000
Video	0.935	0.247	1.000	1.000	1.000	1.000
Reward-levels	12.235	6.154	9.000	11.000	14.000	139.000
Age	429.469	285.992	197.000	401.000	583.000	1613.000

Notes: N = 21,534 (Kickstarter projects with Facebook connections).

A correlation matrix of the variables is available in Table 4.3, which also reports the Variance Inflation Factors (VIFs) for the independent variables. The maximum VIF is 1.71 (markedly below the conventional threshold of 10) (McDonald and Moffit, 1980; Wooldrige, 2009), and the average VIF is 1.33. The VIFs are below the reported values in prior studies (e.g. Colombo et al., 2015) and suggest that multicollinearity is not likely to be a concern in the estimates.

The study's sample provides a relatively comprehensive depiction of the Kickstarter population, as it represents approximately 26% of all crowdfunding campaigns that have been online on Kickstarter between April 2009 and October 2013. However, in order to better understand potential differences across the various crowdfunding project categories, Table 4.4 reports the mean and standard deviation for the set of variables used in this study categorised by the thirteen project categories. The table also provides information about the proportion of successful campaigns per category. The sample is dominated by projects from certain categories. Projects from the Film & Video category account for 26% of the sample. Projects from the Music and Publishing category follow with 19% and 10%, respectively. The highest proportion

of successful campaigns is reported for the Dance (76%), Music (66%) and Theatre (66%) category. Further, the Art, Comics and Film & Video categories have success ratios above 50%. Projects from the Technology and Games category report the lowest success ratios with 40% and 41%, respectively. To control for potential differences between categories that are unobservable, all results include category dummy variables.

Table 4.3 Correlation matrix of independent variables

Variables	1	2	3	4	5	6	7	8	9	10	11	VIF
1. LnPledged	1											
2. Funding status	0.717*	1										
3. LnFBF	0.182*	0.214*	1									1.13
4. LnFBS	0.610*	0.441*	0.265*	1								1.55
5. LnUpdates	0.637*	0.560*	0.101*	0.403*	1							1.71
6. LnComments	0.626*	0.438*	0.037*	0.386*	0.581*	1						1.65
7. LnGoal	0.208*	-0.234*	-0.082*	0.169*	0.024*	0.171*	1					1.13
8. Duration	-0.058*	-0.074*	-0.001	-0.075*	0.015	0.005	0.076*	1				1.20
9. Video	0.141*	0.089*	0.032*	0.146*	0.112*	0.069*	0.066*	-0.068*	1			1.04
10. Reward-levels	0.292*	0.155*	0.111*	0.282*	0.282*	0.260*	0.184*	-0.038*	0.094*	1		1.19
11. Age	-0.060*	0.019*	0.074*	-0.240*	0.085*	0.034*	-0.127*	0.381*	-0.090*	-0.137*	1	1.36

Notes: * $p < 0.01$, $N = 21,534$, Mean VIF = 1.33.

Table 4.4 Summary statistics by project category

	Art		Comics		Dance		Design		Fashion		Film & Video	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
LnPledged	8.246	1.380	8.458	1.614	8.604	1.060	8.843	1.804	8.404	1.604	8.532	1.493
Funding status	0.530	0.499	0.529	0.500	0.755	0.431	0.455	0.498	0.465	0.499	0.523	0.499
LnFBF	6.269	1.269	6.271	1.226	6.869	1.165	5.813	1.146	6.257	1.206	6.440	1.148
LnFBS	5.069	1.542	5.278	1.584	5.574	1.059	5.117	1.752	5.191	1.458	5.517	1.523
LnUpdates	1.528	0.981	2.177	1.084	1.413	0.946	1.816	1.047	1.522	0.995	1.699	1.050
LnComments	1.013	1.143	2.048	1.657	0.645	0.774	2.380	1.854	1.386	1.476	1.103	1.165
LnGoal	9.210	0.758	9.243	0.655	9.032	0.599	9.812	0.944	9.420	0.740	9.629	0.945
Duration	35.242	12.994	37.075	13.508	34.073	11.886	35.415	10.274	33.863	9.797	37.038	13.976
Video	0.922	0.269	0.929	0.257	0.957	0.203	0.957	0.203	0.929	0.257	0.955	0.206
Reward-levels	12.052	6.559	16.769	9.576	9.790	3.786	10.740	5.035	12.375	5.316	12.370	5.944
Age	442.852	293.236	414.621	299.499	385.777	277.599	376.628	243.688	339.123	227.483	479.253	313.772
n	1,287		663		233		1,536		862		5,678	
% of full sample	6%		3%		1%		7%		4%		26%	

(Table 4.4 Continued)

	Food		Games		Music		Photography		Publishing		Technology		Theatre	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
LnPledged	8.455	1.482	8.390	1.946	8.502	1.228	8.249	1.445	8.028	1.479	8.820	2.088	8.557	1.251
Funding status	0.486	0.500	0.407	0.491	0.662	0.473	0.475	0.500	0.446	0.497	0.396	0.489	0.655	0.476
LnFBF	5.862	1.127	5.593	1.264	6.964	1.141	6.312	1.355	6.107	1.360	5.572	1.350	6.501	1.152
LnFBS	5.296	1.377	4.753	1.724	5.472	1.366	5.092	1.601	4.941	1.522	4.922	1.918	5.237	1.422
LnUpdates	1.505	0.995	2.130	1.204	1.612	0.985	1.592	0.993	1.540	1.049	1.744	1.116	1.481	0.937
LnComments	1.260	1.200	2.728	2.181	1.176	1.123	1.031	1.107	1.003	1.139	2.268	1.925	0.821	0.966
LnGoal	9.586	0.749	9.707	1.018	9.104	0.587	9.302	0.700	9.238	0.690	10.087	1.068	9.277	0.859
Duration	34.542	11.242	35.152	10.348	36.543	12.812	35.725	12.668	34.984	11.542	35.908	11.699	35.662	13.351
Video	0.898	0.303	0.925	0.264	0.947	0.223	0.885	0.319	0.900	0.300	0.953	0.213	0.900	0.300
Reward-levels	11.824	5.707	13.554	7.164	12.974	5.898	11.181	4.973	11.096	6.024	10.803	4.571	10.436	5.726
Age	369.417	243.550	378.772	237.197	454.864	288.762	451.397	283.041	405.644	272.293	392.086	288.733	458.633	287.155
n	1,565		1,595		4,070		436		2,117		781		711	
% of full sample	7%		7%		19%		2%		10%		4%		3%	

4.4 Results

While the sample construction and variable selection generally followed Mollick's (2014) approach, this section analyses two sets of results in order to examine the association between the key independent variables and capital assembly as well as fundraising outcome. First, a hierarchical multivariate regression is conducted to test the hypothesised relationships between capital assembly and network size and network relationship. In addition to delineating the statistical and economic significance of the coefficient estimates, this analysis also compares the explanatory power of the network size and relationship quality variables. Second, another interesting question is whether network size and relationship quality also influence the probability of fundraising campaign success in crowdfunding. Thus, a probit regression analysis (for Funding status, as it represents a dichotomous variable) is applied to provide understanding about the association between network size and network relationship for the probability of success of crowdfunding projects.

Table 4.5 reports the results of the hierarchical multivariate regression and displays estimations for the different sets of models. Table 4.6 presents a summary representation of the change in adjusted R^2 for the different regression models when run through the thirteen project categories separately.

The first regression in Table 4.5 represents the base model and only includes variables that proxy for campaign characteristic (Model 1). Campaign characteristics received attention by researcher as drivers of capital assembly and outcome in crowdfunding (Mollick, 2014; Colombo et al. 2015). Consistent with previous studies, the negative coefficient of duration suggests that longer campaign duration do not result into higher amount of capital pledged. Also Model 1 indicates that the effect of incorporating a video pitch into a crowdfunding campaign on the capital pledged is positive. However, the results show that the campaign characteristic variables only explain 14% of the variation in the dependent variable (capital pledged).

With respect to the first hypothesis, Model 2 includes the network size variable to the base model and reflects the postulated relationship between network size and capital

assembly. The positive coefficient of *LnFBB* and its statistical significance support hypothesis 1. This result is in accordance with prior studies and less surprising (Mollick, 2014). However, it is worth noting that the addition of the network size variable only leads to a marginal increase in the adjusted R^2 from 14% to 17% in explaining the variance of capital assembly in crowdfunding.

Model 3, 4 and 5 reflect the argument of the second hypothesis of this study and demonstrate that network relationship variables have a positive relationship to capital assembly in crowdfunding. Model 3 includes *LnFBS* to the set of control variables, Model 4 includes *LnUpdates*, and Model 5 includes *LnComment*. For all three variables the results report a positive and significant coefficient, supporting hypothesis 2. Most importantly, the magnitude for the coefficients of *LnFBS*, *LnUpdates*, and *LnComments* are much higher compared to the coefficient of *LnFBB* in Model 2. Further, the results of Model 3, 4 and 5 suggest that network relationship effects explain more variance in capital assembly than network size effects, investigating them discretely. While network size (the focus of prior studies) only adds 3% extra explanatory power for the variation in capital assembly, network quality (measured through the three variables added in this study) substantially adds on average 30% additional explanatory power for the variance in the dependent variable (capital pledged). This is ten times more than network size and highlights a very important message: relationship quality matters more and network size less for capital assembly in reward-based crowdfunding.

In order to further analyse the interaction between network size and network relationship with capital assembly, Model 6, 7 and 8 uses the network size model as a base and adds the three network relationship variables discretely into the model. All three models report that when the network relationship variables are included the coefficient for *LnFBB* decreases substantially, whereas the coefficient for the *LnFBS*, *LnUpdates* and *LnComments* remain high. A similar pattern is reported for the adjusted R^2 , which remains at a comparable level to the adjusted R^2 values of Model 3, 4 and 5.

Model 9 in Table 4.5 represents the full specification of the multivariate regression and includes the complete set of independent and control variables. The result shows

that the coefficient for network size remains small whereas the magnitude and relevance of network relationship effects for capital assembly resides large. This supports hypotheses 3, and indicates that increased network relationship efforts of entrepreneurs facilitate the formation of a project-syndicate. Further, this illustrates the larger economic effect of network relationship activities for capital assembly in crowdfunding. For example, a one-standard deviation increase of *LnFBF* leads to a 5.8% increase in capital pledged whereas a one-standard deviation increase in the network relationship variables *LnFBS*, *LnUpdates* and *LnComments* results in a 44.6%, 51.3% and 51.6% increase in capital pledged, respectively. Interestingly, the coefficient of the video variable decreases its magnitude, suggesting that it decreases its effect on capital assembly when the estimation model includes network relationship variables. Comparing Model 1 (the base model specification) with Model 9 which includes the complete set of variables, the model increases the explanation of variance in capital pledged substantially by an additive 50%. As such, after controlling for network relationship, the adjusted R^2 increases to 64%. The results indicate that estimations that do not include network relationship variables are ineffective in explaining how entrepreneurial networking activities contribute to capital assembly in crowdfunding. Importantly, the results of Table 4.5 suggest that the inclusion of network relationship variables in addition to the network size variable overall improve the explanation of variance in capital assembly between 26% and 47%.

Table 4.5 Results of hierarchical multivariate regression analysis

Dependent variable =	LnPledged								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
LnFBF		0.214*** (0.008)				0.045*** (0.007)	0.138*** (0.006)	0.130*** (0.006)	0.046*** (0.005)
LnFBS			0.593*** (0.006)			0.583*** (0.006)			0.288*** (0.005)
LnUpdates				0.919*** (0.008)			0.902*** (0.008)		0.487*** (0.008)
LnComments					0.695*** (0.006)			0.681*** (0.006)	0.349*** (0.006)
LnGoal	0.273*** (0.012)	0.280*** (0.012)	0.144*** (0.010)	0.327*** (0.010)	0.182*** (0.010)	0.147*** (0.010)	0.331*** (0.009)	0.188*** (0.009)	0.195*** (0.008)
Duration	-0.009*** (0.001)	-0.008*** (0.001)	-0.008*** (0.001)	-0.007*** (0.001)	-0.006*** (0.001)	-0.008*** (0.001)	-0.007*** (0.001)	-0.006*** (0.001)	-0.006*** (0.001)
Video	0.620*** (0.034)	0.604*** (0.039)	0.284*** (0.033)	0.237*** (0.031)	0.420*** (0.031)	0.286*** (0.033)	0.233*** (0.031)	0.414*** (0.031)	0.149*** (0.026)
Reward-levels	0.067*** (0.002)	0.062*** (0.002)	0.033*** (0.001)	0.020*** (0.001)	0.024*** (0.001)	0.032*** (0.001)	0.018*** (0.001)	0.022*** (0.001)	0.003** (0.001)
Age	0.000 (0.000)	0.000 (0.000)	0.001*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	0.001*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	-0.000*** (0.000)
Project category dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	4.953*** (0.267)	3.682*** (0.267)	3.901*** (0.218)	4.208*** (0.207)	6.074*** (0.207)	3.652*** (0.221)	3.403*** (0.208)	5.282*** (0.208)	4.337*** (0.175)
N	21,534	21,534	21,534	21,534	21,534	21,534	21,534	21,534	21,534
R-sq	0.141	0.169	0.431	0.486	0.487	0.433	0.497	0.497	0.645
adj. R-sq	0.140	0.168	0.431	0.485	0.486	0.432	0.497	0.496	0.644

Notes: * p<0.05, ** p<0.01, *** p<0.001. Standard errors are reported in parentheses.

Table 4.6 Adjusted R^2 of hierarchical multivariate regression models

Dependent variable= LnPledged									
Panel A: Complete sample as shown in Table 4.5									
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Complete sample	0.140	0.168	0.431	0.485	0.486	0.432	0.497	0.496	0.644
Panel B: Project category specific samples									
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Art	0.100	0.131	0.366	0.410	0.350	0.367	0.429	0.368	0.554
Comics	0.191	0.229	0.488	0.594	0.621	0.487	0.602	0.624	0.740
Dance	0.055	0.058	0.305	0.295	0.144	0.302	0.295	0.147	0.413
Design	0.125	0.162	0.455	0.596	0.666	0.457	0.610	0.679	0.763
Fashion	0.164	0.188	0.456	0.548	0.547	0.455	0.560	0.557	0.704
Film & Video	0.164	0.188	0.456	0.548	0.547	0.455	0.560	0.557	0.704
Food	0.151	0.175	0.548	0.479	0.459	0.547	0.485	0.466	0.665
Games	0.154	0.184	0.477	0.629	0.716	0.477	0.638	0.724	0.790
Music	0.143	0.167	0.335	0.449	0.369	0.341	0.461	0.378	0.561
Photography	0.152	0.214	0.454	0.420	0.410	0.462	0.439	0.435	0.586
Publishing	0.091	0.140	0.413	0.435	0.376	0.414	0.454	0.398	0.596
Technology	0.185	0.199	0.584	0.578	0.703	0.587	0.591	0.707	0.793
Theatre	0.096	0.112	0.343	0.320	0.261	0.344	0.325	0.269	0.461

Notes: This table reports the adjusted R^2 values for the different model specifications (column 1-9) of the hierarchical multivariate regression analysis, which has been undertaken in similar fashion as in Table 4.5. Column 3-5 represent the regression specification which includes the network relationship quality variables ($LnFBS$, $LnUpdates$, and $LnComments$, respectively). Panel A provides the adjusted R^2 values for the complete sample ($N=21,534$). Rows 1-13 in Panel B show the adjusted R^2 results for each category discretely. Category specific summary statistics are provided in Table 4.4.

Panel B of Table 4.6 displays the adjusted R^2 values for the multivariate regression models when run for the project category sub-samples. This allows to distinctly identify the change of explanatory power of the set of independent variables for capital assembly when adding them in various combinations. The results in Table 4.6 show that Model 2 explains between 5.8% and 22.9% of the variation in the dependent variable (capital pledged). For Model 2, the average improvement in the adjusted R^2 is marginally across the project categories by an extra 3% above the base model. The results show that network relationship variables have the strongest increase in the adjusted R^2 . The average additive increase from the base model is 30% when including $LnFBS$, 35% when including $LnUpdates$, and 34% when including $LnComments$ across the thirteen project categories. Model 9 with the full

specification leads to an average 50% additive increase in the adjusted R^2 compared to the base model. Most importantly, even with the sample for each individual category, the overall results are consistent. In particular it shows that the findings in the full sample are not driven by any particular project category but demonstrate conformity in the general findings for the complete sample. In line with the argument of this study the results indicate that network size only marginally improves the explanatory power of the variance in capital pledged in the sample, while network relationship variables add substantially larger explanatory power of the variation in capital pledged in crowdfunding.

The second set of results which this study investigates is the association between network size and network relationship quality activities of entrepreneurs and crowdfunding campaign outcome. Crowdfunding campaign outcome is measured through the dependent variable Funding status, a dichotomous variable which takes the value 1 when the campaign successfully raised the funding goal and 0 when it failed to raise the funding goal. Although multivariate regression can be used for models with a dichotomous dependent variable, there are concerns that linear probability models are biased and inconsistent (Amemiya, 1977; Horace and Oaxaca, 2006). Therefore, in accordance with the dichotomous dependent variable, the probability to get successfully funded is modelled using a probit estimate. The probit regression is processed in a similar fashion as the multivariate analysis above and the independent variables and control variables comprise the same set of variables as described in Table 4.1.

Table 4.7 reports the probit estimates of the probability that a crowdfunding campaign reaches its funding goal and thus gets successfully funded. Model 1 represents the base model which tests the relationship between the control variables (crowdfunding campaign characteristic) and the probability of successfully raising the funding goal. The other models follow the same variable specification order as used in Table 4.5 to examine the effect of network relationship on crowdfunding campaign success.

The probit results confirm the results from the multivariate analysis. The results provide evidence that relationship quality is closely associated with the probability

that crowdfunding campaigns realise successful fundraising outcome. Note that the probit estimates for all three relationship quality variables have substantially higher magnitudes compared to the network size variable. With respect to the independent variables, network size is a positive predictor for successful fundraising ($LnFBB$ coefficient = 0.178). This is in accordance to prior findings (Mollick, 2014). However, the results of this study's investigation provide an important contribution. The results suggest that campaigns are more likely to successfully raise the funding goal when entrepreneurs increase their network relationship quality through frequent project updates and regular communication through commentary boards with potential supporters. The coefficients for $LnUpdates$ and $LnComments$ are considerable higher compared to $LnFBB$ with magnitudes of 1.014 and 0.800 respectively. Also, the large magnitude for project shares via Facebook ($LnFBS$ coefficient = 0.538) suggest that improved relationship quality increases the "word-of-mouth" effect and is positive associated with successful fundraising. The coefficients remain high for the network relationship variables in Model 6-8, while the magnitude of the network size coefficient decreases considerable. The specification of Model 9 provides the full set of independent variables (proxies for network size and network relationship) and control variables (proxies for campaign characteristics), and also confirms the results that the coefficients of the network relationship quality variables are larger in their magnitude compared to the network size variable.

Further, and in similar fashion to the findings of the multivariate analysis, the pseudo R^2 increases substantially when including the network relationship variables into the specifications. Model 2 in Table 4.7 adds the network size variable to the base model and shows that $LnFBB$ only adds 0.018 in the pseudo R^2 compared to Model 1. In contrast, the three variables that proxy for network relationship provide an additive increase of 0.181 ($LnFBS$), 0.279 ($LnUpdates$), and 0.259 ($LnComments$) in the pseudo R^2 (as reported in Model 3-5 in Table 4.7). Model 6-8 provide comparable results. The findings accentuate the importance of network relationship quality in explaining the probability of crowdfunding success. Overall, the inclusion of the network relationship quality variables leads to a substantial increase in the pseudo R^2 . Model 9 explains an extra 0.413 in the pseudo R^2 compared to the base model, and an

extra 0.395 compared to the specification of Model 2, which includes the network size variable. This is almost four times more and shows that estimation methods which do not account for network relationship quality are ineffective in showing how entrepreneurs can increase the probability of fundraising success in crowdfunding.

Table 4.7 Crowdfunding campaign success: Probit regressions

Dependent variable =	Pr(Funding status)								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
LnFBF		0.178*** (0.008)				0.069*** (0.009)	0.166*** (0.009)	0.149*** (0.009)	0.096*** (0.010)
LnFBS			0.538*** (0.008)			0.527*** (0.008)			0.314*** (0.010)
LnUpdates				1.014*** (0.013)			1.012*** (0.013)		0.708*** (0.015)
LnComments					0.800*** (0.011)			0.792*** (0.011)	0.505*** (0.013)
LnGoal	-0.430*** (0.012)	-0.434*** (0.012)	-0.683*** (0.015)	-0.567*** (0.015)	-0.753*** (0.016)	-0.681*** (0.015)	-0.575*** (0.015)	-0.757*** (0.017)	-0.926*** (0.020)
Duration	-0.008*** (0.001)	-0.007*** (0.001)	-0.009*** (0.001)	-0.009*** (0.001)	-0.006*** (0.001)	-0.009*** (0.001)	-0.009*** (0.001)	-0.006*** (0.001)	-0.008*** (0.001)
Video	0.455*** (0.037)	0.453*** (0.038)	0.289*** (0.042)	0.195*** (0.045)	0.365*** (0.043)	0.293*** (0.042)	0.193*** (0.045)	0.367*** (0.044)	0.107** (0.050)
Reward-levels	0.052*** (0.002)	0.048*** (0.002)	0.031*** (0.002)	0.014*** (0.002)	0.025*** (0.002)	0.031*** (0.002)	0.011*** (0.002)	0.022*** (0.002)	-0.004 (0.002)
Age	0.000*** (0.000)	0.000*** (0.000)	0.001*** (0.000)	0.000 (0.000)	0.000*** (0.000)	0.001*** (0.000)	0.000** (0.000)	0.000*** (0.000)	0.000 (0.000)
Project category dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	3.058*** (0.118)	2.061*** (0.127)	2.785*** (0.134)	3.585*** (0.143)	5.818*** (0.154)	2.416*** (0.142)	2.681*** (0.153)	4.994*** (0.162)	4.855*** (0.185)
pseudo R-sq	0.099	0.117	0.280	0.378	0.358	0.282	0.389	0.367	0.512
chi2	2964.8	3497.0	8349.7	11269.3	10668.9	8412.8	11599.4	10940.8	15241.4
p	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Notes: * p<0.10, ** p<0.05, *** p<0.01. N = 21,534. Standard errors in parentheses.

To understand the economic effect of network size and network relationship quality on the probability of success, the average marginal effect is calculated for all the independent variables. The average marginal effect takes the marginal effects estimated by the probit regression for each observation and computes the average across all observations for each explanatory variable (Verbeek, 2012). Table 4.8 provides the average marginal effects derived from the probit models shown in Table 4.7. With respect to the control variables, the results are in conformity with prior literature (Mollick, 2014) and show that higher funding goals and longer fundraising duration are associated with a decrease in the probability that the crowdfunding campaign is successful.

Table 4.8 shows that the economic effect of network relationship quality on the probability of success of a crowdfunding campaign is considerable throughout the different model specifications. With respect to project updates, a 100% additive increase of *LnUpdates* yields a 13.4% increase of the probability of successfully raising the required funding goal. Further, a 100% increase of *LnComments* is associated with a 9.6% increase of the probability of success on average. A 100% increase of *LnFBS* is, on average, associated with a 5.9% increase in the probability of successfully reaching the project's funding goal. With regards to the online network size linked to the entrepreneur, a 100% increase of *LnFBBF*, on average, only yields a 1.8% increase in the probability of crowdfunding campaign success.

The results confirm the proposed larger effect of network relationship quality, compared to the network size effect, for crowdfunding campaign success. Overall, the results show that network relationship quality activities during crowdfunding campaigning can substantially help to increase the probability of success in crowdfunding. This highlights the importance of active use of relationship quality mechanisms on CFPs to facilitate capital assembly and successful crowdfunding outcome.

Table 4.8 Crowdfunding campaign success: Probit regressions (average marginal effect)

Dependent variable =	Pr(Funding status)								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
LnFBF		0.062*** (0.003)				0.020*** (0.002)	0.040*** (0.002)	0.037*** (0.002)	0.018*** (0.002)
LnFBS			0.155*** (0.002)			0.151*** (0.002)			0.059*** (0.002)
LnUpdates				0.245*** (0.002)			0.240*** (0.002)		0.134*** (0.002)
LnComments					0.200*** (0.002)			0.195*** (0.002)	0.096*** (0.002)
LnGoal	-0.153*** (0.004)	-0.152*** (0.004)	-0.196*** (0.004)	-0.137*** (0.003)	-0.188*** (0.004)	-0.195*** (0.004)	-0.137*** (0.003)	-0.187*** (0.003)	-0.175*** (0.003)
Duration	-0.003*** (0.000)	-0.003*** (0.000)	-0.003*** (0.000)	-0.002*** (0.000)	-0.002*** (0.000)	-0.003*** (0.000)	-0.002*** (0.000)	-0.002*** (0.000)	-0.002*** (0.000)
Video	0.162*** (0.013)	0.158*** (0.013)	0.083*** (0.012)	0.047*** (0.011)	0.091*** (0.011)	0.084*** (0.012)	0.046*** (0.011)	0.091*** (0.011)	0.020** (0.009)
Reward-levels	0.019*** (0.001)	0.017*** (0.001)	0.009*** (0.001)	0.003*** (0.000)	0.006*** (0.001)	0.009*** (0.001)	0.003*** (0.000)	0.006*** (0.001)	0.000 (0.000)
Age	0.000*** (0.000)	0.000*** (0.000)	0.000*** (0.000)	0.000 (0.000)	0.000*** (0.000)	0.000*** (0.000)	0.000** (0.000)	0.000*** (0.000)	0.000 (0.000)
Project category dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	21,534	21,534	21,534	21,534	21,534	21,534	21,534	21,534	21,534

Notes: * p<0.10, ** p<0.05, *** p<0.01. Standard errors in parentheses.

4.5 Discussion

While relatively new, crowdfunding is an increasingly popular route for entrepreneurial capital assembly. Because it exploits online platforms, crowdfunding provides an attractive context for measuring and studying network effects. It is possible to observe real-time development of perceived relationship quality as entrepreneurs provide more information. Two-way communications are transparent to network and non-network participants. This study adds to the body of knowledge about entrepreneurial network processes in the crowdfunding context by emphasising on the role of network relationship quality on fundraising outcomes.

Accordingly, this study extends prior literature which largely emphasised on the network size dimension in the crowdfunding context, and addresses two network related characteristics: online network size and the quality of online network relationships. Based on prior literature this study developed and tested hypotheses suggesting that increasing network size, and network relationship quality positively affects capital assembly in crowdfunding. While the role of network size has been subject in prior studies in the crowdfunding literature (e.g. Mollick, 2014; Colombo et al., 2015), less attention has been given to some of the evident network relationship mechanisms that are available on crowdfunding platforms. As such, the results from this study substantially contribute to the crowdfunding literature, illustrating that network depth is considerably more important than network breadth. The findings show that network relationship activities throughout the crowdfunding campaign provide strong explanatory power to explain variance in capital assembly and campaign outcome. More specifically, and in line with the argument of this study, the significance of network relationship quality processes during campaigning further provide evidence of the formation of project-syndicates.

4.5.1 Network size and relationship quality in crowdfunding

This study contributes to research on entrepreneurship and crowdfunding by investigating how online social networking characteristics of entrepreneurs influence

capital assembly and successful funding outcome in reward-based crowdfunding. As such, this study looks at the associations in two distinct ways: First, the effect of the independent variables on capital assembly is examined, and second the study investigates the effect on the probability of a crowdfunding campaign to get successfully funded. The two applied models provide complementary understanding and coherent insights into the role of networking and network relationship quality in crowdfunding.

The results show that a stronger relationship between network relationship quality and capital assembly, as well as successful campaign outcome, compared to network size exists. The set of variables that measure network relationship quality and establish the key interest in this study show a positive relationship with the amount of capital raised and the probability to successfully reach the funding goal set. The addition of these variables substantially improves the overall explanatory power of the variation in capital assembly by ten times, and lead to an increase by almost four times in the explanatory power of the variation in the probability of fundraising success.

The results extend prior research on the complexity of network dynamics in crowdfunding. More specifically, the study shows that relationship quality activities during campaigning have a positive effect on capital assembly and on successful campaign outcome. The findings suggest that the use of temporal variables that capture activity during the crowdfunding campaign rather than prior to the campaign (such as the entrepreneurs network size) provide stronger explanatory power for the variance in capital assembly and campaign outcome.

Prior studies show that early-stages network ties provide a more effective capital source than market-driven risk capital institutions (Starr and MacMillan, 1990; Shane and Cable, 2002). Crowdfunding enables capital assembly from direct and indirect network ties, reinforcing the argument that the entrepreneurs' network size plays a significant role in crowdfunding. The study's results show, however, that quality of network relationship provides a more significant factor for successful crowdfunding projects. This suggests that investments in network quality activities

during crowdfunding campaigning play a critical role and outweigh the reliance on prior social networks.

Networks and network resources depend on and evolve around the venture type and objective (Tolstoy and Agndal, 2010; Chollet et al., 2014). Entrepreneurs may exploit different types of networks during different development stages. Informal networks are commonly exploited in early-stages while formal relationships are formed and exploited during later phases (Lee et al., 2001). Crowdfunding enables entrepreneurs to leapfrog this general sequence and establish project-syndicates through engagement activities to create strong network relationships with distributed network agents.

This study clarifies network relationship processes in reward-based crowdfunding and reinforces the role of narrative during early stage venturing activity (George and Bock, 2012). The term ‘*crowdfunding*’ unintentionally reinforces the importance of the large pool of potential investors. In contrast with prior research, this study finds that quality of network relationship provides a better explanatory variable for successful capital assembly.

4.5.2 Project-syndicates and capital assembly in crowdfunding

Successful crowdfunding entrepreneurs form temporary project-syndicates, leveraging and building network relationship quality within the constraints of the platform. While the entrepreneur’s prior network provides a base for launching the project, success depends more on the co-creation of an ad hoc community and shared meaning making. Prior research likely overstates the importance of both the prior network and the quality-independent growth of the network during reward-based crowdfunding. The study’s results suggest that entrepreneurs benefit more by nurturing high-affinity syndicates, representing entirely new project-related networks embodied within the CFP.

The formation and impact of these syndicates warrants more discussion and study. Relationship quality-building activities, such as providing regular project updates, have a positive and significant relationship to the amount of capital assembled in crowdfunding. Proactive relationship building activities create a narrative scaffold for syndicate participants to explore interpretations of project value and impact. Frequent updates likely engender perceptions of trust and continuity, increasing syndicate enthusiasm. Proactive communication triggers network actors to join project-syndicates and contribute to its development. Project comments are one way for project-syndicate members to actively contribute to the crowdfunding campaign. The projects commentary mechanism offers the community of project supporters a channel to communicate with the entrepreneur about project related issues and to interact with other supporters. The number of comments thus is driven by an active project-syndicate and creates a signal that a project-syndicate is formed.

Syndicate members serve as project evangelists, promoting the project through social network sites. The findings show that project shares have a large and positive relationship with capital assembly. Active social media sharing via Facebook appears to overcome moderate deficiencies in prior or active project network size. In effect, key network participants are co-opted into the syndicate-building process. Small platform-specific networks may disproportionately affect project outcomes via network engagement outside the CFP. The semi-transparent nature of social media systems and relatively simple interoperability via ‘share’ functionality represent an entirely different network context from traditional private investment network mechanisms. The results show that the initial network size that the entrepreneur links to the crowdfunding campaign is not as important as whether network relationship quality activities take place, which eventually develop syndicate members who share within their social networks: the issue is not network size but rather network relationship quality to stimulate project-syndicate member enthusiasm, which in turn influences capital assembly and campaign outcome.

This study, furthermore, does not find support for the findings of previous literature that suggest that the entrepreneurs’ online network size is more significant for capital assembly of social projects than for knowledge-intensive and commercial projects

(e.g. Lehner, 2013). The results show that network relationship quality overweighs network size across all thirteen crowdfunding campaign categories which are included in the study's sample. Network size and project syndicate effects reduce distinctions between project types. Network quantity may be indicated for social projects *pari passu*. A narrative interpretation, however, suggests that the coherence and compelling nature of a social project story in reward-based crowdfunding is just as effective as for more business-oriented projects. Normative and emotional motivation may be just as powerful as utilitarian or bounded-rationality decision models for the decision to back a project (Austin et al., 2006).

A network quality theory of crowdfunding effectively incorporates project-syndicates of agents that privilege processes and outcomes. This diverges from prior literature that interprets the same process as one of marshalling external and internal social capital (Lehner, 2014; Zheng et al., 2014; Colombo et al., 2015); focusing on social relations rather than as this study does, the processes of community-building. The project syndicate is a natural extension of the 'business-matching' network described in some prior studies (Belleflamme et al., 2014; Mollick, 2014). The loosely-coupled business-matching network is a necessary, but not sufficient precursor to the closely-coupled syndicate that drives funding success. The pre-existing, loosely-coupled interpersonal relationships, along with common interests and shared values, of the business-matching network are helpful but not required. The pitch and engagement of the entrepreneur and core syndicate members construct the project-based syndicate. This is closely related to findings that illustrate that initial network ties of nascent entrepreneurs tend to originate around the founder team (Grossman et al., 2012).

Findings from this study support prior studies that focus on dynamic engagement as characterising crowdfunding (Zhang and Liu, 2012; Burtch et al., 2013; Agrawal et al., 2014). In this respect, crowdfunding is similar to traditional venture capital processes: potential investors seek clarifications or make suggested amendments to a business plan or pitch, as conditions for investment. The entrepreneur accepts or rejects these proposals and in doing so reshape the business plan or pitch in order to construct the investment syndicate: these are the co-creation

processes that the project enacts. The findings from this study highlight that proactive engagement from entrepreneurs through network relationship building processes such as providing project updates motivate community members to allocate financial capital and increases the probability of campaign success. Active engagement motivates individuals to become project backers; evangelists who share the project over their online social networking channels, and are members of the project-syndicate. Crowdfunding facilitates a collective value creation process by leveraging mutual interests, whether intangible or tangible, to achieve the entrepreneur's anticipated outcome.

4.5.3 Cross-level effects and capital assembly in crowdfunding

The quantity of network agents that are associated to the project can be perceived by prospective backers as a moderating variable for trust (Larson, 1992; Smith and Lohrke, 2008) and thus facilitates the perception of prolonged firm performance (Baum et al., 2000; Mollick, 2014). In fact, prior literature demonstrates that the time-series of funding raised and early relationship quality activities such as project updates in the early stages of the crowdfunding campaign have high prediction accuracy for projects outcome (Etter et al., 2013; Colombo et al., 2015; Solomon et al., 2015). This illustrates that crowdfunding network agents are using earlier pledges and network relationship activities as performance and trust measurements for their investment-decisions. Project-syndicates also confer trust and project legitimacy to the venture and entrepreneur from which capital flows (Sullivan and Ford, 2013).

However, project-syndicates are not more likely to be formed when an entrepreneur links her online social network to the crowdfunding campaign site. The entrepreneurs' primary network appears to be less relevant than the engagement and network relationship quality activities with close supporters. In contrast to more traditional capital assembly routes, this study argues that entrepreneurs are more

limited in their ability to choose relationships during crowdfunding, yet more dependent on those relationships. Thus, network relationship activities are important.

Crowdfunding projects start as a business network; successful projects develop purposive investment syndicates similar to angel investors or venture capital syndicates (Hochberg et al., 2007). Whereas sophisticated traditional investors rely on standardised processes, such as due diligence, and investment-type homogeneity, crowdfunding participants demonstrate heterogeneity in interests and processes. Success in crowdfunding depends less on ‘who you know’ and more on ‘who and what your network knows’.

4.5.4 Implications for practice

The results of this study provide some guidance to crowdfunding entrepreneurs. Previous studies suggested that success was partly or entirely predetermined by the size of the entrepreneurs’ prior network. This study shows a much more hopeful and positive perspective in which entrepreneurs may take clear and specific action to improve the likelihood of successful reward-based crowdfunding outcomes.

Project entrepreneurs must capitalise on engagement with community members rather than expand ex-platform social networks. The results demonstrate that entrepreneurs should not rely on extant strong network ties. Instead, they should engage with network agents from CFPs to initiate syndicate building. Successful projects create a novel, temporally-situated project-syndicate within the broader crowdfunding network. The size of that network is less critical than the level of trust and enthusiasm engendered by interactions between the entrepreneur and the emerging syndicate.

The study’s findings also have implications for CFP operators. The results highlight the importance of networking features on platforms to facilitate relationship quality among network agents. Thus, additional integration of social media channels or management tools for entrepreneurs and projects provide attractive market differentiation factors among different CFP operators, and might create important

decision criteria for entrepreneurs to select CFPs. For example, entrepreneurs are limited to interact with the community for their projects during and after their crowdfunding campaign online. However, platform operators might investigate the opportunities to offer entrepreneurs the possibility to pre-network and interact with platform users before their campaign goes officially online on the platform by pre-listing their crowdfunding projects. This would support entrepreneurs to build a relationship with potential supporters and facilitate the creation of project-syndicates. Recently, in March 2015, Kickstarter introduced a new feature called ‘Spotlight’ that allows successful projects to create custom websites on Kickstarter with the goal to support entrepreneurs to engage in a more customised approach with existing supporters and potential new interested parties²⁷.

Policymakers should note yet another potential impact of social media networks on the formal economy. The impact of social media on entrepreneurial actions and outcomes is growing rapidly. Social media platforms have significant potential to influence, drive, and promote economic activity, with no direct connection to geography or the specific CFP. Crowdfunding remains a relatively small component of total venture financing. However, there is every reason to believe that as it grows, fuelled by the strength of highly heterogeneous online social media networks, it will become a standard component in venture finance.

4.5.5 Directions for future research

This study has limitations, which provide direction for future research. The applied methods in this study relied on data collection and data analysis techniques that are used in prior literature to include all individuals in the entrepreneurs’ network that might contribute to the entrepreneur’s project (Hansen, 1995; Mollick, 2014; Semrau and Werner, 2014; Colombo et al., 2015). However, the variables used to measure the entrepreneurs’ network size and relationship quality in the crowdfunding context are imperfect due to the data availability on the selected CFP Kickstarter.

²⁷ More information about the functionality of ‘Spotlight’ can be found here: <https://www.kickstarter.com/spotlight>

The specific data on prior Facebook network size requires further consideration. Facebook network size was used as the study's independent variable to measure the entrepreneurs' network size. The entrepreneur can decide to link her Facebook account to the Kickstarter project. When it is linked, the Facebook connection and information about the number of Facebook contacts are immediately available on Kickstarter. This allows recording the number of connections. The size of the Facebook network appears to be an appropriate measurement for the entrepreneurs' social network size and has been used in prior crowdfunding studies (Mollick, 2014). However, the inclusion of additional social network variables such as professional contacts on LinkedIn might provide a more complete understanding of how personal and professional contacts assist capital assembly in crowdfunding.

At least two aspects of syndicate effects remain unstudied. Firstly, entrepreneurs have the option to limit access to committed funders to certain online content. This may include updates, video and audio clips or other online media. The element of selectivity likely influences the syndicate-building behaviour of potential and committed backers. Secondly, although the number of comments is positively associated with project outcome, it is likely that further analysis of posted comments could lead to a more nuanced understanding of syndicate formation. A network quality theory of crowdfunding assembly would suggest that comment type and origin would also be associated with outcomes. For example, exposures to positive postings have been shown to increase positive responses (Kramer et al., 2014). Affect-aligning response might be heightened by familiarity or knowledge of specific commentators. Analysis with tools such as Linguistic Inquiry and Word Count (LIWC) software to assess affect and cognitive process, or network density measures could be directly applied to these questions.

The quality of online network relationships was measured in this study through three independent variables accounting for project shares, project updates, and comments. These are adequate measurements for interaction within the platform context, but are not able to measure for ex-platform network relationship activities such as email or alternative social media channels. Future research that incorporates multi-channel communication is warranted.

The utilised data in this study was not able to account for the entrepreneurs' position within their networks, and did not explicitly measure tie strength, a key determinant in resource assembly processes (Shane and Cable, 2002; Sullivan and Ford, 2013). While it is argued that Facebook friends create predominantly personal network ties, it is not possible to explain the definite relationship between members of the project-syndicates and the entrepreneur.

Finally, the cross-sectional design of the study limits causal interpretations. It is reasonable to suppose that an entrepreneurs' social network size and network relationship quality may be influenced by other variables including the project state or the amount of funding pledged (Etter et al., 2013). The funding progress is publicly observable, thus, project related variables may be interpreted by agents as popularity indicators which trigger herding investment behaviour (Frydrych et al., 2014). Although it was controlled for several aspects that might function as popularity features and drive additional resource assembly, time series data is needed to confirm causality.

4.6 Conclusion

Many entrepreneurs recognise crowdfunding as an alternative venture finance mechanism. Although the number of crowdfunding campaigns increases rapidly, the entrepreneurial crowdfunding literature provides only limited and sometimes opposing evidence regarding the role of network size and network relationship on capital assembly through crowdfunding. Utilising data that captures four years of crowdfunding activities from a leading reward-based crowdfunding platform, and drawing on 21,534 observations, this study contributes to the crowdfunding literature by investigating the role of network size and more specifically emphasising the importance of network relationship quality for capital assembly and funding outcome in crowdfunding. The results show that capital assembly and funding outcome are substantially driven by the entrepreneurs' network relationship quality activities on CFPs. Active engagement between entrepreneurs and (potential) funders during the

crowdfunding campaign is economically more significant than the entrepreneurs' network size for capital assembly in reward-based crowdfunding.

While the role of networks for venture finance create a relatively well-developed body of literature in entrepreneurship, the issues of networks and particularly network relationship activities create a less studied area in entrepreneurial crowdfunding to date. The study's results advance understanding about how particular CFP features associated with improving and building network relationship quality are linked to capital assembly and funding outcome in the crowdfunding context.

The key conclusion is that entrepreneurs who invest more effort into relationship quality activities such as providing regular project updates have a higher probability in achieving their funding goal in reward-based crowdfunding. These findings are consistent with results from the venture capital literature which illustrate that network relationship quality in more traditional entrepreneurial finance settings (e.g. venture capital and business angel finance) positively affects capital assembly. However, crowdfunding literature has tended to stress on the role of network size for fundraising success, and relative less focus is given to the role of relationship quality which this study addresses in more depth. The results illustrate that network relationship variables substantially increase the variance explanation of capital assembly. Thus, the study implies that any attempt to understand differences in capital assembly and crowdfunding outcome has to account for network relationship effects. Network relationship mechanisms on CFPs are key drivers for capital assembly in crowdfunding.

More specifically, the study reveals how entrepreneurs utilise specific interaction instruments to develop 'project-syndicates', a concept that is introduced in this study. These syndicates are formed through the entrepreneur's application of relationship quality instruments on crowdfunding platforms and do not exclusively derive from the entrepreneur's initial network size. As such, these syndicates appear to be a necessary structural and affect-based mechanism to motivate capital injection during reward-based crowdfunding.

Chapter 5: Entrepreneurial role identity and crowdfunding outcomes

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5.1 Introduction

*“Most of the things that have succeeded in life are just because you are too stupid to realize that you have already lost the game and you show up anyways.”
(Cory Cullinan – aka ‘Doctor Noize’)*

Crowdfunding is changing certain entrepreneurial access to venture capital (Bruton et al., 2015). Innovative online platforms facilitate connections between non-traditional entrepreneurs and investors (Baeck et al., 2014). Crowdfunding accounted for US\$16.2 billion of financing across 1,200 platforms in 2014 (Massolution, 2015), generating a variety of research questions about entrepreneurial finance and venture capital (Harrison, 2013; Gregson, 2014; Moritz and Block, 2014).

Crowdfunding also raises interesting questions for theories of entrepreneurial behaviour and outcomes. As expected, prior experience and team composition affect campaign outcomes (Mollick, 2013, Ahlers et al., 2015; Burtch et al., 2015). Online campaign content, including the ‘pitch’ create signals of campaign quality for potential funders (Frydrych et al., 2014; Mitra and Gilbert, 2014). The unique time constraint of crowdfunding campaigns highlight self-reinforcing effects of entrepreneurs’ actions and early campaign funding activity (Etter et al., 2013; Rao et al., 2014; Colombo et al., 2015).

Quantitative studies focus on crowdfunding outcomes, which have been facilitated by access to online crowdfunding data. Unfortunately, very few observations and

explanations of entrepreneurial activities during campaigns are available. The crowdfunding campaign has become a 'black box'. Entrepreneurs launch campaigns with a set of characteristics measured via online variables; investors respond accordingly. Given that many campaigns emphasise the non-financial outcomes, and offer 'rewards' rather than financial returns, the linearity of these relationships requires a careful review.

This study utilises an in-depth longitudinal case study over a period of 24-months in order to explore entrepreneurial behaviour and to develop new theory about campaign outcomes that complement quantitative findings (Perren and Ram, 2004; Rauch et al., 2014). The study focuses specifically on the entrepreneur's experience to provide deeper context and vivid explanations of underlying processes and causes that are difficult to reveal with large-scale empirical studies (Siggelkow, 2007; Marion et al., 2015). In this study, the effort of one musician to crowdfund a novel opera for children starring world-renowned opera stars is investigated. A variety of data source including interviews, extensive emails, campaign documents, and on-site observations were used for this study.

In this case study, the entrepreneur's role identity trumps campaign performance indicators. Based on prior quantitative studies and the empirical evidence of the self-fulfilling cycle²⁸ (e.g. Colombo et al., 2015) the campaign should have failed. However, the success of the campaign, and the change in the entrepreneur's role identity, emphasise the need for further investigations into crowdfunding processes. Understanding in more detail how fundraising performance can be actively managed through entrepreneurial activities present critical components in theories of entrepreneurial crowdfunding finance and capital assembly. Furthermore, more in-depth findings can reveal explanations for the reward-based crowdfunding bimodal funding distribution characteristics.

²⁸ Self-fulfilling cycle means that 'success breeds success', e.g. early funding stimulates subsequent funding activity.

5.2 Entrepreneurial crowdfunding

Crowdfunding has developed into an attractive route for creative entrepreneurs to assemble venture capital (European Commission, 2013a; Lehner, 2013). Over 1,200 online crowdfunding platforms (CFPs) operate worldwide (Massolution, 2015) providing capital access across traditional and non-traditional sectors, including some high-growth entrepreneurs (Harrison, 2013). While policymaking has focused on securities regulation for equity-based crowdfunding, more than 90% of crowdfunding activities is non-equity (Massolution, 2015). Campaigns that offer tangible and intangible rewards, rather than cash returns, suggest a critical role for the entrepreneur before and during the campaign. High failure rates (more than 60% on Kickstarter²⁹) further emphasise the need for theories of campaign outcomes.

Crowdfunding has been categorised as a subset of the crowdsourcing phenomenon (Brabham, 2008; Belleflamme et al., 2014); however, rather than solicit ideas from the crowd, the entrepreneur seeks financial assistance. Crowdfunding disintermediates the traditional principle-agent relationship between entrepreneurs and venture capitalists (Belleflamme et al., 2014). By crowdsourcing capital assembly, entrepreneurs ameliorate resource scarcity and venture capital price premiums to reduce the ‘liability of newness’ (Stinchcombe, 1965). Crowdfunding formalises and extends network-based entrepreneurial funding options.

As with traditional venture financing, crowdfunding success appears to correlate with characteristics of the entrepreneur, team, and pitch. For example, the fundraising campaign pitch quality communicates information to reduce the appearance of uncertainty (Agrawal et al., 2014; Colombo et al., 2015). Campaigns with audio-visual elements and regular project updates signal entrepreneurs’ preparedness to potential funders (Chen et al., 2009). Perceived pitch quality may be influenced by language choice and minor pitch faults, such as spelling mistakes (Mitra and Gilbert, 2014; Mollick, 2014). Even apparent judgment neutral characteristics such as campaign duration and funding goal convey information that appear to impact investor decision making factors (Frydrych et al., 2014). These findings match

²⁹ Kickstarter publishes updated descriptive statistics about the number of launched projects, funding performance and their outcomes on daily basis (Kickstarter, 2015b).

conclusions from research on traditional venture capital (e.g. Hall, 2002; Mason and Stark, 2004).

Prior studies have shown a correlation between continuous audience engagement, such as number of project updates, and campaign outcome (Frydrych et al., 2014; Moritz et al., 2015). The CFP enables transparent communication modes, including audio-visual pitch elements and a campaign project blog, as well as direct, privileged communication modes linking the entrepreneur and potential funders. The use of online social network tools, such as Twitter and Facebook, drive performance and facilitate building social capital in crowdfunding (Etter et al., 2013; Lu et al., 2014; Mollick, 2014). Unlike traditional venture capital assembly, crowdfunding requires entrepreneurs to become members of CFP communities to build the social relationships (Lehner, 2014; Colombo et al., 2015). Little is known, whether engagement affects outcome by signalling entrepreneurial commitment, generating a narrative of legitimacy (Lounsbury and Glynn, 2001), or testing and implementing effective metaphors for explaining the unfamiliar (Van Werven et al., 2015).

Prior analyses effectively treat crowdfunding as a controlled, mostly static environment with two data collection points: the start (input) and end (output) of the online crowdfunding campaign. This statistically driven “picture of the entrepreneurial process [in crowdfunding] is more linear, coarse grained, and detached from everyday life, providing little insight into the practice of entrepreneurship” (Shepherd, 2015, p. 494). To date, there have been no in-depth process studies, which consider pre-campaign history, the dynamic entrepreneur-driven choices during the campaign, and post-campaign implementation. This study, therefore, addresses recent calls to build theory on the micro-foundations of entrepreneurship by emphasising on entrepreneurial crowdfunding (Zahra and Wright, 2011; Sarasvathy and Venkataraman, 2011; Shepherd, 2015). More specifically, focusing on the drivers of campaign choices and if the entrepreneur changes throughout the crowdfunding process.

Of particular interest is the bimodal funding distribution of reward-based crowdfunding outcomes (Mollick, 2014). Given a population of static campaigns with reasonable variation in entrepreneur, team, and campaign characteristics (such

as network quantity and pitch quality), a relatively normal distribution of outcomes as a percentage of the campaign goal would be expected. The vast majority of Kickstarter campaigns, however, either succeed by a small margin or fail by a large margin (Frydrych et al., 2014; Mollick, 2014). This suggests a more dynamic process of interaction between the entrepreneur and the crowdfunding community. It appears that ‘poor’ projects fail quickly and are effectively abandoned while ‘good’ projects achieve sufficient legitimacy and are allocated capital efficiently by the crowd. Given the limited knowledge about this issue, more research is necessary to understand the selection process and the role of the entrepreneur in the bimodal outcome, if any.

To explore these issues from a micro-foundations perspective, this study employs the entrepreneurial journey framework (George and Bock, 2009; McMullen and Dimov, 2013; Selden and Fletcher, 2014). The journey model provides an experiential and explorative approach to entrepreneurial behaviour. Crowdfunding provides a unique context for employing the journey model with regards to the creative entrepreneur, in contrast to, for example, the academic entrepreneur (e.g. George and Bock, 2009; Jain et al., 2009). This study sets out to consider how crowdfunding changes the entrepreneur, and how the entrepreneur can leverage this change for capital assembly.

Identity is often characterised as a critical resource for entrepreneurs and new organisations (Glynn, 2000), as it represents a ‘web of meaning’ for the external sense-making processes (Weick, 1995; Rindova et al., 2009). As resource holders evaluate entrepreneurial identity (Navis and Glynn, 2011), a complete understanding of crowdfunding outcomes requires a dynamic approach to entrepreneurial role identity creation and transition during the campaign (Jain et al., 2009). Nascent entrepreneurs often have little more than a vision and a hypothetical plan to co-opt external resource holders. Formation and change of the entrepreneur’s role identity represents a claim-making process about the project’s distinctiveness. The question of role identity is especially relevant in reward-based crowdfunding, as the entrepreneur does not have to give up control of the project as part of capital assembly, which is the case with venture capital.

5.3 Empirical setting and methods

Entrepreneurial activity operates at the juncture of individual, organisational, and economic phenomena. Comprehensive models for such activity require variety in research methods and data (Perren and Ram, 2004; Pittaway and Cope, 2007; Rousseau et al., 2008; Shepherd, 2015). This study employs a qualitative in-depth, single case study of an entrepreneur and his crowdfunding campaign. The aim is to generate new insights and knowledge on a specific phenomenon through an example that offers a particular suitable context for shedding light on certain relationships (Eisenhardt and Graebner, 2007). In this case, the links between the project founder, the campaign, supporters and fundraising outcomes.

The ideal case study of entrepreneurial crowdfunding would facilitate investigation of the entrepreneur's actions prior to the campaign, including both detailed background information as well as campaign planning and decision-making, the campaign process itself, and post-campaign implementation. Thus, data access is critical to case selection (Siggelkow, 2007). The researcher's Ph.D. advisor had previously collected data from Cory Cullinan (aka 'Doctor Noize') as part of a larger study of entrepreneurial journeys³⁰. In 2013, Cullinan informed the advisor of his intention to launch a crowdfunding campaign and agreed to provide complete transparency to the researcher for studying his crowdfunding process³¹. This included prior organisational documentation and information related to the campaign, access to in-campaign activity and information, and post-campaign implementation (see section 5.3.2). This made possible a more detailed longitudinal investigation than would have been possible via *de novo* identification of potential crowdfunding activity. In effect, a uniquely 'living case' was presented for this study (Yin, 2013), enabling to capture the entire crowdfunding process. This includes the development phase of the campaign strategy, the campaign period itself, and the post-campaign period including the delivery phase of the final rewards to project supporters.

³⁰ The researcher's Ph.D. advisor has provided extensive 'pro bono' business advice to Cullinan since the inception of the Doctor Noize venture. Once the crowdfunding study was initiated, the advisor significantly reduced his interaction with Cullinan, and did not participate in any of the data collection or first-level analysis. Reasonable efforts were made to avoid contaminating either the data or analysis with *a posteriori* observations and conclusions.

³¹ Refer to Appendix B for the 'participant information letter' and to Appendix C for the 'participant's consent form'.

5.3.1 Platform and campaign context

Crowdfunding usually takes place online, where specialised online-based CFPs create important intermediates that thrive entrepreneurial venture capital assembly through this approach (Ingram et al., 2014). These CFPs create a controlled environment with artificial viewing options, which formalise and distil the entrepreneur-investor relationship into a standard and easily digested template, evidenced in the similarities among different CFPs. One leading reward-based CFP is the U.S.-based Kickstarter, which defines itself as a “new way to fund creative projects” (Kickstarter, 2015c). Nearly half of all Kickstarter projects seek capital to complete music (approx. 20%), film and video (approx. 24%) and theatre (approx. 4%) projects. Thus, a creative entrepreneur campaign provides a suitable context to investigate a ‘common’ case (Yin, 2013) in order to facilitate generalisability of findings and understanding of entrepreneurial activities.

5.3.2 Data collection

This study applies a prospective case study design for studying the case entrepreneur’s activities in crowdfunding (see chapter 2, section 2.5.2). Process data was collected through a prospective case study design enabling to understand ‘how’ and ‘why’ questions (Van de Ven and Huber, 1990). In this study, the aim is to understand the entrepreneur’s decisions and activities that evolve over time and ‘why’ they change and adapt during capital assembly through crowdfunding. Prior large-scale empirical research lacks narrative description about the full context (Pettigrew, 1992, Yin, 2013).

This study investigates the pre- and post-crowdfunding period with a focus on the crowdfunding campaign outcome. This creates precarious understanding and conclusions about the complexity of entrepreneurial crowdfunding processes, which this research sets out to comprehend. Entrepreneurial processes associated with crowdfunding lacks adequate and careful investigation. The unique research context, and the study’s emphasis on the entrepreneur as the unit of analysis, make the application of quantitative methods in current studies impractical, unsatisfactory, and

limited meaningful to better explain and improve the understanding of theoretical explanations. Thus, exerting a prospective ‘living’ case study design enables to use rich data to construct important insights into the explanatory power of theories and provide an important complement to existing quantitative studies. By doing so, this study aims to reduce the ‘leaps of faith’ (Yin, 2013) that is based on quantitative evidence and extend current understanding of crowdfunding to an entrepreneur’s social processes. As this research delves into a new research phenomenon, a prospective longitudinal case study is a viable research method to unveil the entrepreneur’s experience and role within a natural setting (Given, 2008).

Data was collected from four primary sources throughout the study of the case between April 2013 and May 2015 (and included archival interview data from 2011). Table 5.1 provides an overview of data collected and illustrates the richness of the data applied in this study. Table 5.2 provides a summary of the data collection process. The research strategy involved collecting (1) interview data (including utilisation of archival interview data), (2) documents (including archival firm data), (3) Kickstarter campaign data, and (4) observational field data. Data gathered from different sources enable the support of analysis by triangulating evidence from different sources (Jick, 1979; Patton, 2002; Ghauri, 2004).

Firstly, the archival interviews and more general media associated with the entrepreneur and prior venture activity (e.g. the company’s website) were examined. Furthermore, multiple interviews with the entrepreneur over a period of 24-months were conducted. The interviews took place pre- and post- the entrepreneur’s Kickstarter campaign using primarily a narrative approach (Johansson, 2004; Fletcher, 2007b). Interviews started with open questions about ‘the story of the venture’ and ‘recent venture developments’. This approach enabled the researcher to understand the sequence of events and the rational decisions to provide a chronological order of the entrepreneurial processes associated with crowdfunding. In addition, it allowed exploring processes and events as they unfolded. Interviews were recorded and transcribed into 120 single-spaced pages (59,486 words). The average interview length was 45 minutes, with a range of 40 to 70 minutes.

Secondly, the case entrepreneur permitted full access to documents associated to the Kickstarter campaign. This enabled the collection of various data material relating to the crowdfunding campaign, including email correspondence between the entrepreneur and his business advisors and close supporters (16,760 words), audio-visual pitch data, and textual campaign and business plan data (resulting in 1,168 files, approximately 7.80 Gigabyte of data). Most data was collected in close to real-time, including access to a shared online folder of active venture and campaign documents as well as email ‘dumps’ provided by the case entrepreneur on a regular basis. This allowed producing valuable data in the form of “substantial archival residue” (Gephart, 1993, p. 1469) to track changes in the production of the final campaign and pitch documents.

Thirdly, the online crowdfunding campaign on Kickstarter was observed on a real-time basis for the duration of the campaign, and data was collected on a day-to-day basis producing 480 data points. Finally, the data was supplemented with field observations during recording sessions for the music album. Over 72 hours of unique on-site observations of the case entrepreneur was completed in October 2014. This included 18 hours of recording sessions during the realisation of the crowdfunding project. It was a unique opportunity to interact with the entrepreneur and with the project’s key individuals, including conductor Kyle Wiley Pickett³², and two important financial supporters from the U.S.. Detailed notes of the processes and events were observed, providing rich field records (Bernard, 2006).

³² Individual’s background information can be obtained here: <http://www.kylewileypickett.com/>

Table 5.1 Case data

Data source	Quantity	Additional information
Interviews	11 (120 pages: 59,486 words / 455 min)	14.02.2011 (archival) 18.04.2013 (phone) 09.07.2013 (phone) 23.08.2013 (phone) 15.01.2014 (phone) 17-20.10.2014 (face-to-face)
Documents		
Emails	65 (16,760 words)	
Kickstarter project related documents	1,168 files (7.80 GB data), resulting in more than 200 pages, 160 audio and 30 video files.	Business plan presentations, sales presentations, keynote presentations, Kickstarter budget plans, project budget plans, Kickstarter video scripts, reward-levels, campaign related emails.
Kickstarter campaign		
Kickstarter campaign	30 days real-time observation	16 variables were collected from the Kickstarter campaign site on a daily basis, resulting in 480 data points.
Textual pitch	1 (1,082 words) 1 ('10 Step Plan' keynote presentation)	10 different development versions.
Visual pitch	2 (4:00 min / 5:28 min)	6 different development versions.
Project updates	30 (12,085 words)	24.10.2013 (first) 12.05.2015 (last)
Project comments	19	Comments were posted by campaign supporters during the campaign.
Observations		
Field study	72 hours (18 hours orchestra recording)	16.-20.10.2014 18 hours at the City of Prague Philharmonic Orchestra. 16 hours audio recording, capturing the interactions between the case entrepreneur and the record-production team. 50 pages of hand-written field notes.

(Source: Author)

Table 5.2 Data collection process chronology

Year	2013												2014												2015				
Months	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5			
Doctor Noize crowdfunding campaign ^{a)}	Pre-Kickstarter												Post-Kickstarter																
Data source																													
Interviews	X			X	X					X									X										
Documents ^{b)}	X		X	X	X	X	X	X	X	X								X	X										
Observation ^{c)}							X												X										
Fundraising campaign ^{d)}	X				X	X	X						X																
Project updates ^{e)}							X	X	X	X		X	X	X	X		X	X	X	X	X		X	X	X				

(Source: Author)

Notes: Archival interview with Cullinan from 2011 is not presented in this table.

^{a)} This study initially focused on the Doctor Noize Kickstarter campaign, however, throughout the investigation started to incorporate other activities linked to the Kickstarter campaign (e.g. tax-deductible fundraising through the Colorado Symphony Orchestra (CSO) and the Square online shop). The pre-Kickstarter period includes Kickstarter campaign preparation activities and setting up as well as receiving initial funds through the CSO funding channel. The post-Kickstarter period includes additional capital assembly processes through the CSO funding channel and the Square online store. In December 2014, Cullinan stopped raising funds through any other channels except the Doctor Noize Square online store.

^{b)} Documents include data received by the entrepreneur associated with the crowdfunding strategy and Kickstarter campaign. Data forms include emails and documents such as business plans, video and music files collected through shared personal cloud storage. Early write-ups, final document versions, and the campaign video and textual pitch were collected.

^{c)} Observations include online monitoring of the online Kickstarter campaign, social media activities of the entrepreneur, and the field observations during the symphony recording sessions.

^{d)} Fundraising related data from the traditional tax-deductible funding channel (CSO) and from Kickstarter was collected. Campaign data from Kickstarter was collected on a daily basis during the campaigns duration from 2nd October until 1st November 2013. In May 2014, Cullinan opened a Square online store.

^{e)} Crowdfunding project updates combine textual and audio-visual news about the development and process of the music album production from the entrepreneur to supporters. Some project updates are publicly available, and some are only accessible for supporters.

5.3.3 Case narrative

5.3.3.1 Background, vision, and pre-crowdfunding activities

The case study describes the development of an independent creative musician and his process to realise his personal and professional ‘dream project’ to produce symphony orchestral music to educate and inspire children. The professional history and relevant output of the case entrepreneur, Cullinan, is summarised in Table 5.3.

Table 5.3 Case entrepreneur background

Time period	Description
1988 - 1992	- Graduated from Stanford University with distinction and honours in music and political science (double major).
1992 - 1998	- First entrepreneurial experience as an independent musician. - First independent music album release in 1996.
1998 - 2006	- High school teacher for music.
2006 - 2010	- Independent musician and author. - Produced independent music productions (e.g. for television documentaries). - Preparations to launch the Doctor Noize venture. - Release of “The Ballad of Phineas McBoof” (first Doctor Noize music album) in 2007.
2010 - 2013	- Launch of Doctor Noize Inc. as an outcome of the business partnership with an international multimedia company (terminated in August 2013). - Release of “The Return of Phineas McBoof” (second Doctor Noize music album) in 2010.
2013	- Crowdfunding campaign to produce “Phineas McBoof Crashes the Symphony” (third Doctor Noize music album).
2014 - 2015	- Business concentration remains on live performances while working on the production of the third album (with the City of Prague Philharmonic Orchestra).

(Source: Author)

Cullinan was connected to music from an early age. He describes classic composers such as Mozart and Beethoven as his favourite ‘rock stars’. Having graduated from Stanford University in 1992, his aspiration was to produce classical music in an approachable method for children and high school students to promote and inspire education. His journey began in 1992 as an independent musician with limited success, through which he took a position as a high school music teacher in 1998. Building upon his experience from his independent music releases and teaching time, Cullinan left his teaching job in 2006 to produce commercial music for niche

applications such as documentary soundtracks. During this time, he began to develop the idea of an alter ego, Doctor Noize, to realise the vision of inspiring orchestral music recorded for “the most important people in the world – children” (Cullinan, Interview 2).

His vision for Doctor Noize was to create a multimedia business that produces music products (e.g. music albums, animated electronic books, and mobile apps) and services (e.g. live performances and music workshops) for children and families. Cullinan’s approach to educate children with classical symphony orchestral music is based on a character-based teaching philosophy. Cullinan brainstormed fantasy characters that form the ‘international band of misunderstood geniuses’ and uses the characters to narrate educational stories through his songs³³. His first album “The Ballad of Phineas McBoof” generated a number one hit on Sirius XM Kids satellite radio station in the U.S. and received positive reviews. Cullinan, however, believed that external capital is needed to turn Doctor Noize into the multimedia business he envisioned.

In 2010, Cullinan signed a three-year business partnership with an international media firm to form Doctor Noize Inc (DNI). Through this financial injection, Cullinan tried to generate a portfolio of branded products and educational services. A second music album, an interactive animated book, and a mobile app were released, which leveraged Doctor Noize’s character-based learning approach. The partnership did not, however, generate the financial returns sought by the media firm, and was not renewed after August 2013. DNI had limited sales and could not fund Cullinan as a full-time employee. By this time, Cullinan had begun development on a full-length opera for children. Funding it, however, would require another capital injection.

5.3.3.2 Crowdfunding

Cullinan believed he could generate income from live shows, but this would effectively prevent large product development, including the production of the third Doctor Noize music album. As the partnership activities ended and in search for

³³ Music Band’s information can be obtained here: <http://www.doctornoize.com/bandhome/>

alternative financing options, Cullinan came across the CFP Kickstarter. The reward-based CFP appeared to provide a feasible mechanism to receive a one-off capital injection for a particular project without negotiating a long-term involvement of investors. Following the end of the partnership with the international media firm, Cullinan was determined not to give up control of the DNI venture or the creative process. Reward-based crowdfunding could meet all of his requirements.

Once Cullinan decided to utilise crowdfunding as a capital mechanism for his new music album production, he started to familiarise himself with crowdfunding through desk research. He quickly developed a positive view and perspective about crowdfunding as an inspiring community supporting creative artists. Cullinan described the opera as his dream project, a two-act double CD album and a full-length live show for children featuring a full orchestra. He estimated the project would require 12-months of full-time work and US\$125,000.

In February 2013, Cullinan started to prepare and develop his crowdfunding campaign. The initial plan was to launch the campaign by September 2013. The first tasks in the crowdfunding campaign preparations were establishing his music production team, including his conductor and opera singers. Cullinan had worked with conductor Pickett on previous projects. Through personal and third party connections, he confirmed collegial participation of the world-class opera stars Isabel Leonard³⁴ and Nathan Gunn³⁵. He secured his full cast in February 2013 and scheduled to record the crowdfunding campaign video in May 2013. As such, most of the crowdfunding campaign preparation work was allocated to the video pitch production between February and May 2013.

Cullinan understood the importance of the campaign video for crowdfunding outcome. During the video pitch preparation and production, Cullinan continuously communicated with his business advisors, a mixed group of three experienced individuals and close friends. He also communicated drafts and ideas of the campaign to his close network of musicians, music industry professionals and experts to receive early feedback on the development of his campaign. He quickly

³⁴ Individual's background information can be obtained here: <http://isabelleonard.com/>

³⁵ Individual's background information can be obtained here: <http://www.nathangunn.com/>

realised he needed funds to record the crowdfunding video pitch he wanted to produce, which would include sample opera content and testimonials from the opera stars. Therefore, Cullinan contacted his network and Doctor Noize community via email asking for financial support, offering supporters the reward to be credited as a campaign video producer. Cullinan collected US\$7,500 from his network, which was just enough to cover the video production costs.

Although Cullinan was resource constrained and focused on preparations for the Kickstarter campaign, he tried to continue performing live music shows nationwide between February and August 2013. Cullinan developed the campaign pitch and documentation stepwise. Simultaneously he aimed to complete the required preparations for the post-campaign implementation such as negotiating with various symphony orchestras to budget the music recordings.

The recorded campaign video created a small ‘buzz’ in the local community and Cullinan’s online network opened doors to potential donors prior to the launch of the campaign. A few donations were made, and Cullinan became aware that some donors were specifically interested in tax-deductible donations. As neither Kickstarter nor DNI were non-profits, Cullinan sought an alternative. The Colorado Symphony Orchestra (CSO) was Cullinan’s first choice to record and produce the album, and could accept tax-deductible donations. This appeared to offer a viable alternative for larger donations.

Day to day operations at DNI delayed the crowdfunding launch until October. However, Cullinan used the time to initiate an alternative fundraising campaign to the planned Kickstarter campaign in order to raise tax-deductible donations via the CSO. Although he had hoped it might obviate the Kickstarter campaign, the effort raised less than US\$10,000. Therefore, Cullinan continued to refine and develop the Kickstarter pitch, completed additional research on performance indicators for campaign success, and tried to line up a network of supporters via email and ‘newsblasts’ from the DNI website.

Cullinan launched the DNI Kickstarter campaign with a target goal of US\$50,000 on the 2nd of October 2013. The Kickstarter goal was set to US\$50,000, as Cullinan

anticipated receiving the balance of the required US\$125,000 through the CSO tax-deductible fundraising channel, which was simultaneously open to receive additional capital contributions. Figure 5.1 provides an overview of the daily Kickstarter campaign development. The Kickstarter campaign received 10% of the required funding on the first day of the campaign launch, which seemed extremely promising. As a result, the campaign was listed on Kickstarter's front page under the 'What's popular' section, where trending campaigns are registered³⁶. However, in the first week following the launch, Cullinan's time was consumed with a live concert and a family vacation planned far in advance. He did not initiate recommended activities such as project updates, networking, and press kit mailings. The Kickstarter campaign stalled. Cullinan knew the problem was serious because successful campaigns receive most funding at the start and near the end of the campaign. Meanwhile, the CSO tax-deductible donation campaign also stalled well below target. With two weeks remaining, the Kickstarter campaign was more than US\$40,000 below target. At this point, empirical analysis suggests that the project had a much higher probability of failure than success. Cullinan considered cancelling the Kickstarter campaign as his business advisors suggested to move on and seek alternative funding options.

Nevertheless, Cullinan reached out to close friends and family; some increased their contributions to attempt to help increase the project's visibility and appearance of potential success. Seven days before the campaign ended, the campaign had raised US\$13,201 out of the US\$50,000 funding goal. At this late stage, Cullinan published a campaign update and began sending out personalised emails to individuals who contacted Cullinan via Kickstarter. A significant turning point appeared to have been his decision, at the suggestion of his advisors, to send out a personalised video message to his contacts. Cullinan recorded a simple video monologue telling his personal story and inspiration for the project. The video generated email responses, which Cullinan was able to begin converting into contributions.

³⁶ Kickstarter does not officially reveal information about the applied algorithm that selects the campaign projects that are listed in the 'what's popular' (also known as 'most popular') section. However, several Kickstarter communities provide information on the key variables used by Kickstarter to select popular campaigns. Accordingly, the key drivers for Kickstarter are 1) number of backers per day, 2) the funding ratio (funding goal/funding received), and 3) the total amount of funding raised (Prefundia, 2013).

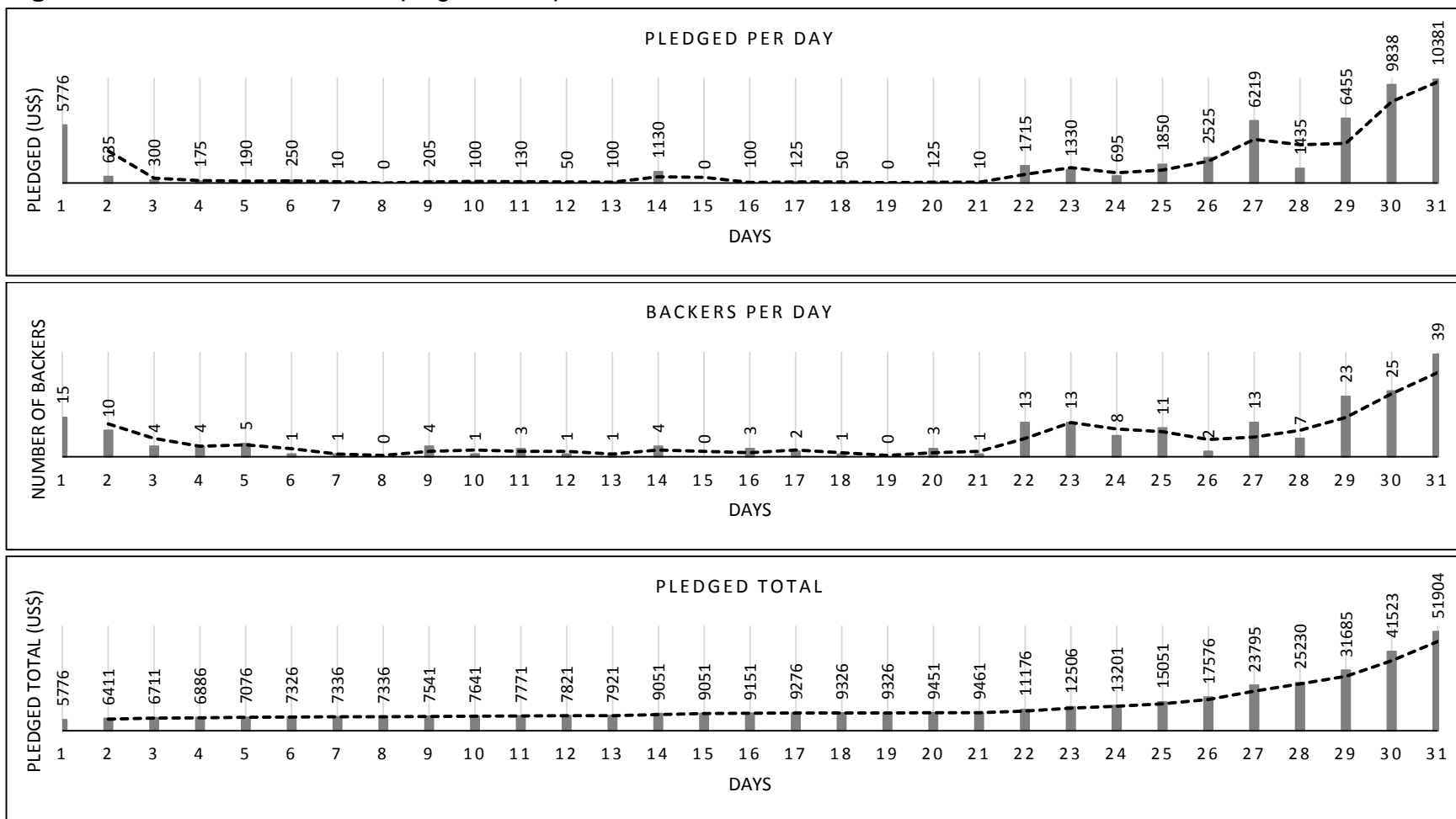
In the final week of the Kickstarter campaign, Cullinan used a completely different strategy. He relied on Kickstarter as an enabling communication mechanism and operational base, but took personal control of the fundraising. He posted more updates, provided online content and commentary, and engaged with each individual that reached out to him. He dropped all other DNI commitments, and responded to emails within 30 minutes, 24 hours a day. Three days before campaign closure, however, he was still US\$20,000 short of his funding goal.

The success of the campaign ultimately hinged on Cullinan's effort. In the final 72 hours, he convinced an initial US\$1,000 backer to commit US\$9,000 more. This backer brought in another contributor who pledged US\$7,000. Both backers were previously familiar with DNI, and brought in another backer that contributed US\$5,000 through the tax-deductible CSO arrangement. All at once the campaign was within reaching distance of the funding goal. Based on the personal conversations with potential funders, Cullinan suspected that numerous potential supporters were following the campaign to see how close it would get. As prior research has shown, contributors want to participate in project with established legitimacy. On the final day, just enough small donations arrived to reach the final goal. The DNI Kickstarter campaign officially ended on the 1st of November 2013 with US\$51,904 in funding raised from 218 supporters from around the world³⁷.

Publicly, Cullinan celebrated the Kickstarter campaign success. Privately, the situation was not nearly as positive. The CSO campaign was US\$40,000 short of its target, and that did not take into account US\$25,000 that Cullinan has anticipated raising in 2014 to complete production and launch of the CD. Following his experience with Kickstarter, Cullinan secured the US\$40,000 through donations made to the CSO and the offered music album pre-purchases through a 'Square' online store. Most of these donations came from his own network; they were connections that had not contributed to the Kickstarter campaign.

³⁷ The Kickstarter campaign reached a funding ratio of 103.81%. The composition of the 218 supporters is: 110 female supporters (50.5%), 105 male supporters (48.2%), one organisation (0.5%), and two music bands (0.8%).

Figure 5.1 DNI's Kickstarter campaign development



(Source: Author. Data is based on DNI's Kickstarter campaign)

5.3.3.3 Post-crowdfunding campaign

The Kickstarter campaign, CSO campaign and pre-sales effort on Square generated US\$90,000. Despite significant delays, including replacing the CSO³⁸ with the City of Prague Philharmonic Orchestra³⁹ and relocating recording to Prague, Czech Republic, Cullinan successfully recorded the orchestral music in fall 2014 and the opera vocals in New York in early 2015. The full release is now scheduled for late 2015. In the meantime, Cullinan has continued to perform live shows, some of which included music from the new release.

Throughout the crowdfunding process, Cullinan took control of the campaign and radically transformed the emphasis from the project (output) itself to his personal motivation and vision. That enabled him to advance fundraising activities even in the face of failure, leveraging on his role and identity to connect with potential investors. The narrative overview of the case illustrates that DNI offers an exciting case in the crowdfunding context to explore the dynamic aspects throughout the campaign that are partially revealed in large-scale empirical investigations. More details on the narrative of the case entrepreneur's journey, including the Kickstarter campaign is provided in Appendix E.

5.3.4 Data analysis

The case analysis included (a) generation of a preliminary case narrative (Eisenhardt, 1989), (b) detailed review of the various data types, (c) data coding, and (d) 'peer debriefing' and confirmation with the entrepreneur (e.g. Corley and Gioia, 2004). The analytical procedure is structured in accordance with established qualitative analysis strategies from process data (Langley, 1999; Bitektine, 2008) to examine "the process by which actors construct meaning out of their intersubjective experiences" (Khavul et al., 2013, p. 34).

³⁸ The initial donation that were made through the CSO had to be refunded. However, most of the individuals wanted to continue supporting Cullinan and sent replacement checks directly to DNI.

³⁹ Background information about the City of Prague Philharmonic Orchestra can be obtained here: <http://www.cityofpraguephilharmonicorchestra.co.uk/>

The study's data analysis is structured in three stages. Before data analysis started, the different data forms were brought together into a single data file to manage and link documents, interviews, and audio-visual data. The data was processed and analysed using the computer-assisted qualitative data analysis software package NVivo. Firstly, an explorative in-depth reading of the data was completed to familiarise with the sequences of the entrepreneurs processes, and with the multiple levels of data types. While this stage primarily supported the development of a case narrative, it also enabled starting coding the data to familiarise with the context (Miles et al., 2013). Initial themes were identified from the case evidence⁴⁰ and used to create a list of first-order codes. While the study's research focus lies on the entrepreneurial role identity modification and its influence on crowdfunding performance, the study also adopted a broader perspective, where appropriate, to comprise issues associated to 'narrative' and 'legitimacy' as these are the apparent mechanisms for conveying role identity. As such, it is accepted that the study's accounts are one of many potential interpretations (Van Maanen, 1998). However, although the study uses deductive reasoning by linking the inductive evidence to prior adopted theoretical lenses (Walsh and Bartunek, 2001), the study attempts to facilitate an iterative workflow between the data and theories to minimise the potential of altering the evidence from the data to comply with the study's theories (Wodak, 2004).

Secondly, the list of first-order codes was used to seek to consolidate emerging themes from the evidence in the data to concepts and theories from the role identity, narrative and legitimacy literature, to structure the data into second-order concepts and aggregated theoretical dimensions (e.g. Gioia et al., 2013). The resulting data structure is illustrated in Table 5.4. Empirical evidence was triangulated between the different data types (Ghauri, 2004). As only one of the researchers was involved in data collection, two additional researcher were able to interrogate their knowledge

⁴⁰ The data was coded in themes that are based on recurrent issues and actions of the case entrepreneur (e.g. Dutton and Dukerich, 1991). In undertaking theme-based coding of the data, it was possible to capture central ideas and identify relationships between topics (Miles et al., 2013), which included themes related to narrative, legitimacy, network, vision, and entrepreneurial behaviour.

and interpretation of the themes by adopting intra-coder reliability (Van den Hoonaard, 2008)⁴¹.

Throughout the longitudinal study, the ‘historical’ data of the case was continuously combined with the ‘new’ emerging data from different sources, often increasing the complexity of linking and analysing the data ‘on the go’ due to the mass and dynamic changes of data (Pettigrew, 1990). While different types of data were collected along the longitudinal study, the core of the study are the interviews together with secondary documents such as email correspondences between the entrepreneur and key individuals. Together they provided the retrospective and ‘live’ explanations by key individuals strengthening the study’s insights (Morgan, 1983).

In the final step of the data analysis, the evidence was processed back and forth with the established aggregated dimensions and theories. A key process in the last stage was to construct links among the various process data forms (e.g. retrospectively reflect how data from interviews can be linked to audio-visual and business plan documents) to establish a broader picture to advance the understanding and validate the study’s interpretations.

⁴¹ The researcher’s Ph.D. advisor who had a prior relationship with the case entrepreneur was excluded from the ‘peer debriefing’ process.

Table 5.4 Data structure

First-order themes (Examples from the case)	Second-order themes (Identity tactics)	Aggregate dimensions (Identity strategies)
<ul style="list-style-type: none"> - Exposing DNI branding to connect with the audience. - Using individuals branding (e.g. opera stars) to change external perception. - Communicate the desired future of DNI to 'do the right thing' (inspire children through music). 	<p>Conveying self-identity to potential funders collective identity</p>	<p>(1) Identity adaptation to funding source</p>
<ul style="list-style-type: none"> - Become acquainted with the collective identity. - Adjusting to the CFPs template (e.g. adopting campaign strategies from other campaigns). - Promoting the creative core of DNI in the campaign pitch (audio-visual and textual). - Selectively revealing personal information to reflect on who the person behind DNI is. 	<p>Adopting the collective identity of potential funders to the self-identity</p>	
<ul style="list-style-type: none"> - Realise creative project (produce a classical orchestra music album for children). - Staying independent and in full control over the project. - Projecting DNI's mission to inspire children's creativity through music. - Demonstrating the creative perfectionist (e.g. campaign video and recording sessions). - Shadowing the 'behind the scenes' business struggles, and emphasising on the creative part. 	<p>Displaying and leveraging a creative identity</p>	<p>(2) Parallel role identity (‘on-stage’ and ‘off-stage’)</p>
<ul style="list-style-type: none"> - Engaging in various funding opportunities before (e.g. CSO tax-deductible donations) and after the Kickstarter campaign (e.g. Square online store). - Promoting the ambition to realise the project in the best commercial approach without control loss (e.g. shift from CSO to the City of Prague Philharmonic Orchestra). - Following the ambition to develop DNI into a multimedia firm for children music (increase profitability). - Developing a risk-taking attitude to secure funding for the project. - Cultivating project momentum by referring to past success and highlighting that the album will be produced with whatever outcome to facilitate progress and success. 	<p>Displaying and leveraging an entrepreneurial identity</p>	
<ul style="list-style-type: none"> - Stories about the personal motivation and vision behind the project. - Adapt identity to role context of campaign status. - Providing more insights that are private in order to reflect on who the person behind DNI is. - Shared power relationship. 	<p>Absorbing collective identity and embedding within self-identity</p>	<p>(3) Co-creation of role identity</p>
<ul style="list-style-type: none"> - Engaging in personal communication with potential funders. - Revealing the 'behind the scenes' activities. - Creating 'rewards' to increase active participation. - Using DNI branding to connect with the audience. - Leveraging on participants brands and identities (e.g. opera stars). 	<p>Reciprocal identity formation</p>	

(Source: Author)

5.4 Findings

This study's investigation of DNI's crowdfunding campaign process reveals that Cullinan utilised three role identity strategies to construct a compelling project narrative and confer legitimacy for advancing fundraising performance and outcome: (1) Identity adaptation to funding source, (2) parallel role identity, and (3) co-creation of role identity. These strategies facilitate the formation of a 'syndicate-based identity', a required process to facilitate crowdfunding performance. In Table 5.5, a summary description of the identified strategies and their rational grounding is provided.

Table 5.5 Adopted identity strategies in crowdfunding

Identity strategies	Identity adaptation to funding source	Parallel role identity	Co-creation of role identity
Definition	Active adaptation of the individual identity to the collective identity.	Protect the individual role identity (off-stage), but convey the impression to connect with the collective identity (on-stage).	The collaborative formation of a role identity as the outcome of absorbing the collective identity to embed the self-identity.
Tactics	(1) Conveying self-identity to potential funders collective identity, (2) Adopting the collective identity of potential funders to the self-identity.	(1) Displaying and leveraging a creative identity, (2) Displaying and leveraging an entrepreneurial identity.	(1) Absorbing collective identity and embedding within self-identity, (2) Reciprocal identity formation.
Occurrence	Tapping into the 'crowd' to gain credence through contribution of funds. The reference to prior successes reinforces the founder's identity. This strategy allows the individual either to keep their identity or to accept an identity modification towards the collective identity.	Leveraging on the creative parts of the project and secured resources to cultivate a spirit of success. No reference is made to prior financial activities and struggles (e.g. CSO donations) 'on-stage'. This strategy builds on maintaining the individuals' identity 'off-stage', but actively aiming to adopt and convey a modified identity 'on-stage' to potential funders.	Promoting personal motivation and vision, but simultaneously conceiving the collective identity for reciprocal creation of a project-syndicate based identity. The direct engagement with potential funders led to a power relationship shift, enabling to co-create a project identity. This strategy enables the project founder to recognise the 'crowd' as a certified source for identity formation, and as such the entrepreneur gives away some identity power to actively allow external individuals to co-create the projects identity.

(Source: Author)

5.4.1 Identity adaptation to funding source

The first identity strategy, which is recognised, is the adaptation of the founders' identity to the funding source's collective identity. This involves the active exposure of the founders' identity to the funding source in order to convey the individuals and project identity⁴² to potential funders, so that they can connect themselves with the project's identity. The alternative adaptation strategy is that project founders adopt the collective identity of potential funders to the project. This involves the active identity modification towards the funder's preferences in order to make the individual and project comply with the existing norms, standards and beliefs of the funders. In the following two sections, each strategy is discussed in turn by providing case evidence.

5.4.1.1 Conveying self-identity to potential funders collective identity

The crowdfunding setting creates a controlled environment that enables the development of a community, which is built around the CFP's values. Kickstarter's mission is "to help bring creative projects to life" (Kickstarter, 2015c), which promotes a unique 'community identity'. Kickstarter highlights in the 'What is Kickstarter?' section on their platform key elements with which independent creative project founders and entrepreneurs can easily identify themselves with (e.g. collaboration between creators and funders and keeping 100% ownership of projects) (Kickstarter, 2015c). As such, Kickstarter confers a particular collective identity.

With regards to this study's case, it is identified that Cullinan related himself with Kickstarter's collective identity, which is one explanation of how his actions and decisions are rooted in those of the collective community. For example, Cullinan highlights the advantage to assemble capital through Kickstarter as there is no

⁴² The terms 'individual identity' and 'project identity' are used interchangeably in this study, because it is argued that the case entrepreneur's identity is corresponding to the case entrepreneur's DNI venture identity.

change or alteration required in communicating the personal and venture's creative project's identity:

"I bet we use Kickstarter as everybody else and our project seems to be something that might have a shot on Kickstarter, because it has this sort of a clear pitch, which is like: 'it would be nice if there would be orchestra music that was written directly for children so that it appeals to them'." (Cullinan, Interview 1)

Similarly, Cullinan communicates his values and believes without traditional 'business pitch' adjustments, allowing him to portray his self-identity to potential funders. The DNI Kickstarter campaign website refers to children as the "most important audience in the world", and to classical music as "most sophisticated and colourful music" (DNI Kickstarter campaign, 2013)⁴³, allowing Cullinan to characterise and constitute himself as the 'parent' and 'creative' role identity.

Another example is the confidence of Cullinan in Kickstarter (and as such crowdfunding in general), which provides a platform for like-minded creative individuals that can be reached out to through a standardised platform mechanism. Cullinan comments on this as follows:

"I chose Kickstarter because it is kind of a hit fundraising thing at the moment and I thought that we may have a pitch that will appeal to Kickstarter people. I'm checking Kickstarter instead of going around and trying to find some traditional donation channels. I have heard that you need to be a non-profit organisation to get donations and there are all these complicated legal things that Kickstarter doesn't have. Kickstarter is just 'boom', it is about 'here is what I'm doing and here is what I need to get money for.' So that's the reason we decided to do a Kickstarter campaign." (Cullinan, Interview 1)

Cullinan refers to individuals of the Kickstarter community as 'Kickstarter people', highlighting that a collective identity is present upon which campaign founders (including Cullinan) define and describe themselves. Furthermore, he emphasises that for 'traditional donation channels' the boundaries are higher for assembling capital, and require potential identity modification to attract and alternate the campaign for capital access (e.g. requirement of a traditional business pitch with a

⁴³ Refer to Appendix F for a screen capture of the DNI's Kickstarter campaign website.

future financial outlook). In contrast, Cullinan notices that there is minimal identity modification required for designing and running a Kickstarter campaign. This is evidenced in the case as Cullinan emphasises on his creative identity in the campaign website. For example, the pitch includes several anecdotes, including the following suggestion for the audience to spread the word for the project:

“Share the news! Take a minute to forward this page to anyone who might be interested in bringing the world of the orchestra to kids. Post it on Facebook. Hire an airplane to drag a banner over stadiums during NFL games (make sure it’s not a dome). Get creative for creativity!” (DNI Kickstarter campaign, 2013)

A second example for an anecdote from Cullinan is exhibited in his ‘Thank You’ campaign update after the campaign officially ended:

“By the way -- does anybody know how to write a symphony or an opera? Cause I gotta learn to write one, and quick... (That’s a joke. I mean, sort of.)” (Cullinan, campaign update 6)

Crowdfunding, therefore, allows creative project founders to assemble capital without neglecting their creative identity and no requirement to modify the campaign pitch into a ‘traditional’ business plan pitch. Crowdfunding enables individuals to leverage upon their self-identity to improve authenticity. Kickstarter offers fifteen different campaign categories⁴⁴, which creates associated identities for each of the categories to which project founders can classify themselves and their projects. This allows retaining the authentic role identity and positioning the project within the most appropriate campaign category.

Another example for conveying the self-identity to the audience is the comparison of the project’s Kickstarter campaign to other projects. Cullinan self-referenced the DNI campaign as a “Peter and the Wolf” of the 21st century, and makes it simpler to convey similar attributes of the referred project to potential supporters:

⁴⁴ Kickstarter offered thirteen categories between 2009 and 2014. In 2014, Kickstarter introduced two additional categories (journalism and crafts) to their platform. Background information can be obtained here: <https://www.kickstarter.com/blog/introducing-two-new-categories-journalism-and-crafts>

“Peter & The Wolf is great -- but old fashioned. We need a 21st Century approach to inspire kids to explore classical music. Phineas McBoof Crashes The Symphony -- a recording of lasting value to support our hit live interactive shows -- is the answer.” (DNI Kickstarter campaign website, 2013)

The first identity tactic is to recognise the most suitable collective identity and communicate the self-identity in the campaign without alterations. Cullinan identifies himself as a creative musician with the mission to inspire creativity and education through his music project. Therefore, he recognised Kickstarter’s ‘music’ category as the most suitable one for his campaign. Positioning the DNI campaign within this category allowed Cullinan to neglect campaign alterations and enabled creativity through the textual and visual pitch in the DNI Kickstarter campaign.

5.4.1.2 Adopting the collective identity of potential funders to the self-identity

The second tactic that supports campaign founders to form a syndicate-based identity is the (partial) adoption of the collective identity from potential funders. This tactic is evidenced in various activities of Cullinan throughout the crowdfunding process. For example, while the initial sections of the campaign website emphasised mainly on the creative and artistic aspects of the project, Cullinan incorporated additional background information about DNI and the involved cast. Cullinan increased efforts to highlight prior success of DNI to serve as sense-giving facts for potential funders. Additionally, the DNI brand and the individuals cast member’s project affiliation and reputation were utilised to leverage signals for feasibility and overall project quality.

Thus, while conveying the self-identity in the first part of the DNI campaign website, the second part of the campaign content is provided for funders, who are less creative, and more ‘traditional’ focused regarding project evaluation and decision-making processes⁴⁵. Tactics such as references to relationships to prior and existing partners, projects, and philanthropic foundations are active adaptations toward a broader supporter community.

⁴⁵ See Appendix F for the capture of the final DNI Kickstarter campaign website.

Overall, the strategy of conveying the sense of active adaptation to the collective identity, activities, and behaviours of the Kickstarter community, Cullinan highlights DNI's association to the Kickstarter community ethos. For example, the Kickstarter website template for campaigns create a first adaptation mechanism for the individuals' identity modification. Cullinan reflects on this as follows:

“I wouldn't do these things if I wasn't in need of money. I wouldn't do the Kickstarter campaign and I wouldn't do the mini musical video. Not because I don't want to, just because I don't have a lot of money for Doctor Noize right now and we don't have a lot of time and luxury to budget things in order to get the word out. However, in order for anybody to ever be interested in the recording, the life shows and this Kickstarter video, these things have to occur to engage them [funders] to do it.” (Cullinan, Interview 1)

It is important to adjust a campaign to Kickstarter's general community ethos, which is communicated to campaign founders through their own 'Creator Handbook' (Kickstarter, 2015d), and highlights the importance of telling the campaign story through audio-visual means and campaign updates. As such, for Cullinan the audio-visual element was critical as he could present his skills and vision for the opera in an approachable format to potential financial supporters. Following Kickstarter's 'guidelines', Cullinan developed his campaign narrative that attracts the wider heterogeneous community of potential supporters. However, Cullinan also experienced that the audio-visual portion of the campaign did not drive online campaign performance, which was evidenced through the low campaign performance in the first three weeks. Thus, to drive campaign performance, Cullinan started to engage with the audience in a more personal approach via direct emails, rather than to address the general Kickstarter community:

“People are interested about the project but they were excited to be involved in it with me. As soon as I started emailing back and forth with anybody who emailed about it, they sort of felt that they are totally involved with me and their interest picked up a lot. It is like in politics. You can put out all the ads in the world, but what really makes the difference is when you go out on the campaign trail and you shake a bunch of people's hands. And they say: 'Oh I shook Barack Obamas hand' and then all the sudden they are personally more connected to it. The video was important too, but in addition of having the video where it is 'oh look this impressive and fun stuff

we are doing', when I engaged with people, they were more involved in it and it seemed to go further. Then what is interesting is that everybody saw that this is a great success." (Cullinan, Interview 4)

In summary, while Cullinan thought he understood the success drivers for crowdfunding (e.g. the audio-visual pitch and creative and authentic campaign narrative), the Kickstarter campaign stand still in the first three weeks. Only at that time, Cullinan started to adjust his identity and activities to the Kickstarter's collective identity. This enhanced the perception of the campaign's and founder's compliance with the Kickstarter community (collective identity) and as a result stimulated campaign performance.

5.4.2 Parallel role identity

The second strategy that is identified for forming a syndicate-based identity and facilitating supporters association with the campaign is the utilisation of two parallel identities in crowdfunding. Parallel role identities refer to the simultaneous adoption of two identities from which one is communicated 'on-stage' and the other is used for 'off-stage' activities (Goffman, 1959). The separation between 'on-stage' (visible) and 'off-stage' (invisible) identity conveying and activities allows the entrepreneur to leverage each distinct identity to the maximum without forcing the entrepreneur to give up his identity characteristics to the collective identity (Bartunek et al., 2007; Bullingham and Vasconcelos, 2013). The two tactics within the parallel role identity strategy include 1) displaying and leveraging a creative identity, and 2) displaying and leveraging an entrepreneurial identity. Both tactics are discussed in the following two sections in turn and case evidence is presented.

5.4.2.1 Displaying and leveraging a creative identity

The first tactic of the parallel role identity strategy focuses on activity and identity exposition that the Kickstarter community considers ‘central’ to the collective identity of its supporters. Cullinan, for example, aimed to shadow the business proposition of DNI and rather focused on highlighting the creative and social objective of the project. This is evidenced in the Kickstarter campaign website, where only one single reference was made to Cullinan’s long-term plan of DNI and the music album:

*“Looking to the future...This album is only the beginning of Doctor Noize’s long-term plan to inspire kids to explore ambitious music and gain the confidence to master Big Things. For details of everything in our larger **10 Step Plan**, review our Symphony Keynote Presentation, and contact Doctor Noize with questions or comments!”* (DNI Kickstarter campaign website, 2013 [emphasis in original]).

The ‘10 step plan’ provides a 36 pages long keynote presentation document, similar to a traditional business pitch presentation, which was created to address the potential different audiences. This demonstrates the adapted parallel role identity that is exemplified on the DNI campaign website. Cullinan comments on this as follows:

“So I think I learnt a couple of lessons from this. No 1: I think I have done the Kickstarter pitch right, where the supporter can choose their level. So there are three levels available for prospective backers. There is an almost no detail, a medium detail and there is a ‘crazy involved’ detail if you go to the Pdf. The second thing is that if I am making a pitch to somebody who is possibly a big money person I show the pitch in 10 minutes and then I go to dinner and have time to talk about it. Supporters do get more interested about it when you start talking about it, but they do not want to sit with you forever and listen to a presentation that is half an hour or 60 minutes.” (Cullinan, Interview 3)

“The campaign pitch has a video right at the start. You can watch it and ‘boom’ that is it. Then if you want more information, you can spend 10 or 15 more minutes on the Kickstarter campaign and read the whole write up, where you can watch a second video too. That is the longer video, the mini musical video. Then, for the ‘die hards’ and if you’re really, really interested, like ‘wow this sounds great’ interested, you can click on that Pdf [10 step plan]. That is like a keynote presentation that really talks about everything in

great detail and would take about 20 minutes of your time to read. The reason why I did incorporated this is that I tried really hard to make a page where you can spend 4 minutes or you can spent an hour, whatever you want. There is only three or maybe five people who will spend this hour, but those people might be really important. If somebody is really interested like 'oh wow, I want to give US\$100,000 to this', all the information is right there." (Cullinan, Interview 3)

Cullinan, therefore, illustrates that although the campaign characteristic is for the most part focusing on DNI's creative character, adjustment was undertaken to attract a broader investor audience.

Another example is offered by Cullinan's non-disclosure of the pre-fundraising activities on the Kickstarter campaign website. As such, the audience on Kickstarter was unaware about DNI's active engagement with the CSO to enable collecting tax-deductible donations. Only after the Kickstarter campaign finished, Cullinan informed the audience (DNI Kickstarter project update 7) that additional funding can be collected post-Kickstarter through tax-deductible charitable donations directed to the CSO. This information was withheld during the Kickstarter campaign, as it did not fit with the collective identity and ethos of the Kickstarter community.

In summary, Cullinan aimed to emphasise the creative identity and designed the crowdfunding campaign on Kickstarter accordingly to portray the project in such a way that it fits with the collective identity of the 'music' category on Kickstarter. This was done 'on-stage'. However, 'off-stage', Cullinan exploited different avenues in addition to the Kickstarter campaign and employed a parallel entrepreneurial identity to maximise his fundraising performance. This parallel identity was not publicly communicated through DNI's campaign website, however, actively utilised in other fundraising activities. Cullinan exemplifies the parallel identity adaptation in the following statement:

"I just want to get the project funded and get it done, so we can bring it to kids. That is all I care about. So if it's funded by Kickstarter and 'the orcs', that is great. If it's funded by investors it's great. If it is 50% the one and 50% the other that's awesome. I don't really care." (Cullinan, Interview 2)

5.4.2.2 Displaying and leveraging an entrepreneurial identity

The second tactic of the parallel role identity strategy places emphasis on the project founders self-presentation to the community based on an entrepreneurial identity, to illustrate that the project is feasible and realisable with the team and resources in place. Cullinan has developed business experience during his past partnership with an international multimedia firm. He repeatedly expressed, during his partnership and the crowdfunding campaign period, that it was necessary to move from having a ‘creative project’ to a successful firm and career. During the business partnership, Cullinan emphasised his adherence to adopt a more entrepreneurial identity:

“If it doesn’t work it’s because I wasn’t smart. Seriously, it’s that simple. It’s not because I wasn’t creative, it’s because I wasn’t smart and I hope that I’m smart, especially when I’m playing with other people’s money. I would rather lose my own money than somebody else’s money, I really would.” (Cullinan, Interview 2, 2011)

“This isn’t playtime anymore, it’s like you know what you have to do, you’ve told me you can do this and now you have to do it, and I don’t really care if your dog died or whatever.” (Cullinan, Interview 2, 2011)

Additionally, Cullinan included several references to his prior experience with large music productions in order to communicate his professional expertise to realise this project. For example, his Kickstarter creator profile reads the following:

“Chart-topping Children’s Musician, Author & App Designer. Stanford grad with Distinction & Honors in Music. Former award winning School Teacher, Choir Director & Arts Department Head. CEO of Doctor Noize Inc.” (DNI Kickstarter campaign website, 2013)

Other examples are offered in the textual campaign website, where continuous links are provided to the confirmed cast members (see Appendix F). Additionally, Cullinan engaged in the exploitation of different funding opportunities in order to leverage on the pre-Kickstarter campaign activities. While those activities were not communicated through the Kickstarter pitch, he adopted a strong entrepreneurial identity, as evidenced in the following email to his business advisors:

“My gut says to explore as many local avenues as possible with [local supporter] and continue moving on trying to get Nathan and Kyle locked in for the Kickstarter campaign. We see how much non-Kickstarter money we can get pledged before the campaign launches, and then reduce how much we’re asking for on Kickstarter by the amount we’ve already got.” (Cullinan, Email 24)

Cullinan was keen to identify different fundraising channels, which might create routes that are more attractive for large contributors. Cullinan was able to secure support from the CSO and use their charitable status to receive tax-deductible donations. This was critical for the DNI campaign as it allowed to minimise the actual funding target for the Kickstarter campaign. The pre-Kickstarter fundraising activity through the CSO enabled the receipt of further financial support during and post-Kickstarter. Cullinan saw this opportunity just after speaking to several business people, exemplified by the email to his business advisors:

“The interesting twist that I figured out after talking to a few people is that people who have a fair amount of money like to give money to things that are good for both the thing and them. That is, they would like a charitable tax-deductible donation.” (Cullinan, Email 3)

5.4.3 Co-creation of role identity

The third identity strategy that is identified is the collaborative formation of a collective campaign identity. This strategy emphasises the requirement for campaign founders to crowdsource some of the project’s identity formation process by facilitating the potential funders participation. This strategy is comprised of two tactics: 1) absorbing collective identity and embedding within self-identity, and 2) reciprocal identity formation. Each tactic is discussed in turn with case evidence in the following sections.

5.4.3.1 Absorbing collective identity and embedding within self-identity

In this tactic, project founders aim to identify and recognise the collective identity of potential supporters in Kickstarter to understand how the audience wants to perceive projects and founders as early as possible. In this case study, Cullinan conducted initial research about Kickstarter to become accustomed with the platforms' campaign features and potential success drivers that characterise the collective identity of the community. For example, Cullinan studied successful Kickstarter campaign websites and recognised different campaign video strategies, which mostly were targeted to engage with the audience rather than focusing on providing information about the 'why's' and 'how's' of the project. Cullinan absorbed the collective identity and aimed to adopt the DNI campaign and project identity accordingly, as exemplified in the various adjustments made to the campaign video and textual content:

"I had actually written three different versions of the Kickstarter video for my Kickstarter campaign because I didn't like the first couple. The first version was just sort of like: 'here is why this is important and why I want to do it and why it is important for the world'. There would probably be a few people who do not care about that approach. So I realised that this was not probably the way to engage people. What I needed to do was to write a 5 to 6 minute mini-musical about what I am doing. And I am 99% sure after writing it that this is the thing that will give us enough money. Because if you watch the video, it's really like the musical that we are going to do. So either it engages people and people will support it or the project should not get the money and support because nobody wants it anyway." (Cullinan, Interview 1)

However, although Cullinan made best effort to adjust the DNI campaign to the collective identity and recognised the right community and market for his campaign, fundraising activities did not take off as expected. Consequently, Cullinan initiated a shift in his tactic to connect to the audience and potential supporters. His overall campaign activities became more personal, where Cullinan portrayed passion for the project through a more private storytelling approach. Moreover, Cullinan became very personal a week before the campaign ended:

“I had a few people telling me to send a video out telling people my life story and why this project is important to me. I resisted this, because frankly I don’t think it has a whole lot to do with making an orchestra album. If the music album can’t raise the money based on what it is then it shouldn’t raise the money. I talked to some other friends about this and they said: ‘yes I agree with you Cory, but that doesn’t mean you can’t have a little bit of your life story and you know a little bit about what has inspired you to be that ‘crazy salad’ about bringing music to kids and all this stuff’. So I did this [private] video and sent it out, which turned out to be right. I got a lot of response from that video. From people saying that they were really moved by the story and that they really want to contribute. And they actually started contributing.” (Cullinan, Interview 4)

One of Cullinan’s business advisors described the necessity to redesign the campaign’s narrative towards a more founder centred narrative in the following way:

“I know you want people to be giving to orchestral music for children. I know you want that. But that is actually the second thing people like to give to. The main thing people like to be giving to is you. Are you the guy that they trust and are you a guy whose purpose is valuable. And all the other stuff is secondary.” (Advisor rephrased by Cullinan, Interview 4)

The initiated engagement and passionate representation of the founder’s motivation, vision and story to the community exemplifies that Cullinan embedded his identity into the Kickstarter’s collective identity. Furthermore, it illustrates the requirement of preparedness to convey some power to the community for the campaign and project’s identity formation. Cullinan experienced this development throughout the Kickstarter campaign, and was able to adjust in time to successfully connect and stimulate fundraising activities.

5.4.3.2 Reciprocal identity formation

The second tactic of the third role identity strategy involves the project founder to highlight the individual attributes through the personal connection with the community. The communicated willingness to connect with potential supporters serve as an influential tactic to stimulate engagement and financial support. For

example, Cullinan reflects on his shift towards a personal identity narrative creation as follows:

“I don’t do it in a manipulative way but I have found more and more that being good, fun friends and close to co-workers with 10 important people is much more useful than 500 cold calls.”
(Cullinan, Interview 2)

Another example in crowdfunding to mutually create an identity formation is provided by the offered ‘rewards’ (refer to Appendix F). While Cullinan offers the finished product in various forms (e.g. digital album download and the CD Album) and with different extras (e.g. signed and personal dedication), the campaign’s ‘rewards’ offers more active engagement with the project. For instance, supporters can become different Orchestra protagonists for DNI, and can receive active parts in the live performances, as evidenced by the following reward-level description:

“THE CONCERT MASTER. All of the above, plus credit as a Concert Master Benefactor in album liner notes. And the child of your choice gets to perform a role in a future Doctor Noize Live! or Symphony Show on tour.” (DNI Kickstarter campaign website, 2013)

Another example is provided through the published project updates in the post-Kickstarter campaign time, where Cullinan invites supporters to join recording sessions and dinner gatherings (Kickstarter project update 13, 27). Additional updates are provided to give ‘behind the scenes’ insights through audio-visual recordings (e.g. project update 15, 16, 22), which are targeted to the campaign’s supporters and as such reflect the adopted co-created identity.

This tactics facilitate engagement from potential supporters through offering privileged access to DNI and the project. However, the active engagement from the audience with the campaign results in a reciprocal identity formation, where Cullinan acknowledges the importance to offer the opportunity for potential supporters to actively co-create the identity formation for the project:

“I don’t think people look at Kickstarter as an investment. People look at Kickstarter as something that is fun and emotional thing that they are involved in. I don’t think they are going to Kickstarter

to look for something so that their money is well-invested.”
(Cullinan, Interview 1)

In summary, the private engagement with potential supporters provided Cullinan a unique insight and understanding into their collective identity and the Kickstarter’s community perception of the campaign and project. These insights could be utilised by Cullinan to actively form a mutual identity that enables a more efficient connection between himself, the campaign, and the audience. As such, it facilitated the potential to portray the campaign and project based on how the audience perceive the project. While Cullinan started to engage in this tactic just one week before the Kickstarter campaign ended, he still was able to reap benefits and procure investments to turn a stagnating fundraising campaign into a successful crowdfunding effort.

5.5 Discussion

The objective for this investigation was to emphasise the case entrepreneur’s experience to generate theories about how crowdfunding works at the micro- and meso-level, and what entrepreneurs do during crowdfunding that improves capital assembly performance. The following sections further explore how identity work strategies influence crowdfunding performance and outcome, and discuss how founders are able to strategically use co-creation identity work to manage crowdfunding processes. This section concludes by discussing opportunities for future research.

5.5.1 Identity modification as a fundraising strategy in crowdfunding

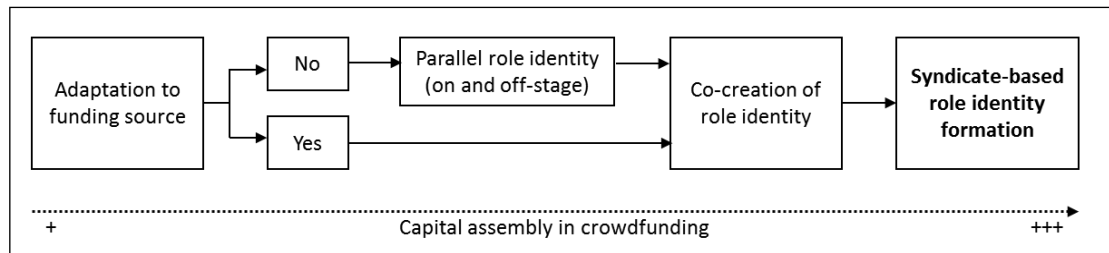
Prior studies exemplify that investment decision-making processes vary between traditional venture capital investors and crowdfunders, which is particularly true for reward-based crowdfunding (e.g. Gerber and Hui, 2013; Cholakova and Clarysse, 2015). The initial expectation was that crowdfunding avoids the ‘traditional’ identity

jump of individuals to an entrepreneur and allows project founders to retain their authentic role identity in their fundraising activity. However, the study's findings show that crowdfunding does not reduce or avoid this identity modification, and project founders still have to experience identity alterations in order to stimulate capital assembly.

CFPs play a significant part for the founder's identity modification, as they develop a community with a unique collective identity. Bouaïss et al. (2015), for example, argue that crowdfunding is an ideology, embodying the 'crowd's' collective beliefs and norms. The collective identity is entirely subjectively interpreted from the individual or organisation (Berger and Heath, 2008; Wry et al., 2011). In crowdfunding, the collective identity is interpretive from the project founder's part. Campaign founders are attempting to interpret signals from the crowd that are likely to be much less clear. Although, CFPs aim to form a homogenous community, potential supporters in crowdfunding create semi-heterogeneous groups. This challenges campaign founders to identify and target a particular collective identity for their campaign. Whilst CFPs support the identification process by offering different campaign categories (and tied collective identities) towards which founders can position their campaigns, founders struggle to focus their campaign processes towards one particular group of supporters. As such, founders attempt to leverage the 'crowd' and aim to design and manage a campaign that addresses a broad group of potential supporters.

It is up to the entrepreneur to decide which campaign and identity alterations to make and whether they are willing to adapt to the collective identity. This study demonstrates that founders of successful campaigns undergo role identity modifications. Figure 5.2 illustrates the relationship between the three identity modification strategies for crowdfunding, which emerged from this study. Successful capital assembly through crowdfunding signifies that the founder applied at least one of the identity strategies uncovered to advance fundraising performance as a result of the formation of a syndicate-based identity.

Figure 5.2 Role identity modification process during crowdfunding



(Source: Author)

As exemplified in this study, the first strategy that campaign founders attempt to utilise is to adapt their identity to the community. This appears to be the first apparent step and is predominantly implemented during the pre-crowdfunding period while preparing and designing the campaign content and strategy. When the adaptation has no effect for triggering supporters' commitment, founders can strategically alternate their campaign and activities during the crowdfunding campaign, as evidenced in this case (e.g. DNI's last campaign week). The second strategy enables founders to facilitate funding performance using parallel identities. Whilst portraying the willingness and effort to adjust the campaign to the collective identity 'on-stage', the founder retains full control of the self-identity 'off-stage'. The third strategy that enables to motivate supporters engagement points out to the importance of how the role identity is co-created with the audience in order to communicate a positive value base. The accounts of the case entrepreneur illustrate that entrepreneurial activities are influenced by the CFPs collective community identity and the 'crowds' heterogeneous identities. These findings add to the organisational identity literature (Alvesson et al., 2008; Watson, 2009), highlighting that the project founder's role identity modification in crowdfunding is influenced by the interaction between the CFPs environment and the community composition.

Campaign founders attempt to portray or conceal particular parts of their identity according to the common identity that dominates within specific settings of the CFP. This point of concealing particular identity features to a collective or mutual identity is shown in management literature (Pratt and Foreman, 2000; Kreiner et al., 2006). The founder's identity is reflected in the campaign components (e.g. textual and visual pitch) and as such represents important sense-making features for potential supporters (Gioia and Thomas, 1996). Thus, the common identity dictates the

approaches in sense-making narratives and how project legitimacy is formed. This might create identity tensions between supporters and the project creator, as the established identity, narrative and legitimacy in crowdfunding is used as a reference point for supporters, which might cause inconsistent perceptions in the course of the projects development (Glynn, 2000).

5.5.2 Syndicate-based role identity formation

Studies on organisational behaviour acknowledge that ventures may adopt multiple identities (Allen et al., 1983; Albert and Whetten, 1985; Fombelle et al., 2012; Ramarajan, 2014). This study illustrates the process of campaign founders to adapt or embed their self-identity and project identity (organisational identity) to the existing collective identity in CFPs. However, due to the heterogeneous group of individuals with different identities, the adaptation and embedding process of the founder's identity might result into potential identity conflicts. The adaptation process forces the founder to match and adjust to different types that normally would not be expected to go together (Albert and Whetten, 1985). As such, this study illustrates that although identity adaptation activities take place, campaign founders eventually have to cede some of the identify formation process to supporters. Thus, the co-creation of the project's identity with supporters is imperative (e.g. Phillips et al., 2013).

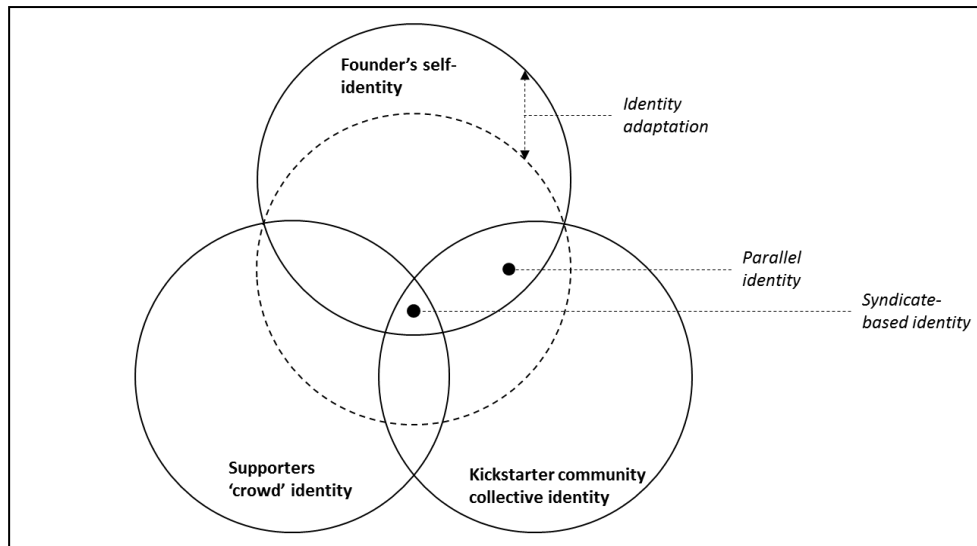
This study defines this co-creation practise of a project identity in crowdfunding as the 'syndicate-based identity formation process'. While some power for the identity formation is actively transferred to project supporters, the founder can manage the identity co-creation process. Project founders reflect themselves through their narrative and action specific characteristics that shape beliefs and expectations of the project and its supporters. Thus, they are able to influence the formation of the syndicate-based identity significantly (Cheney, 1991; Garud et al., 2014). As such, this study argues that crowdfunding performance and outcome, and the bimodal funding distribution in crowdfunding is effected by the founders' identity modification during the fundraising campaign. Fundraising efforts in crowdfunding

benefits from the strategic entrepreneurial behaviour of the founder to co-create and form a syndicate-based identity (see Figure 5.3).

This study shows that it is more efficient to focus and address a particular group upon which the project creator can leverage on their identity to connect and engage with the audience through co-creation permission. It is less efficient to simply adapt some identity elements to the broader crowdfunding community. The study's findings suggest that the identity transition towards adapting an entrepreneurial identity failed in crowdfunding, as the project founder had to reshape and focus more on his creative identity. Evidenced in the study's case, Cullinan initially aimed to highlight the business proposition of his project (e.g. highlighting prior success and references to partnerships), but had to go back and communicate that the project is not a business proposition, but a purely creative and personal project.

This finding contrasts prior identity transition studies in the entrepreneurship literature, which commonly argues that the commercialisation process of a product eventually requires the transition to an entrepreneurial identity (e.g. Jain et al., 2009). This assumption does not appear to hold true in crowdfunding. This study demonstrates that crowdfunding provides a mechanism for venture capital assembly, which can allow project founders to bypass this typical identity transition. The community realises that even with the absence of a 'good' business proposition in the campaign, the project is important that it receives the funding. The case entrepreneur's experience reveals that sometimes 1) the 'crowd' might be mistaken, and 2) the crowdfunding campaign can switch from one peak of the bimodal distribution (largely underfunded) to the other peak (marginally overfunded), but to do this the project founder has to go through an identity modification.

Figure 5.3 Syndicate-based identity formation



(Source: Author)

Notes: Campaign founders are not able to change the supporters' or CFP's collective identities. However, they have the potential to adapt their identity, convey the impression to adapt by utilising parallel identities, and to co-create an identity with the 'crowd'. As such, the campaign founder is most capable to move dynamically (illustrated by the dashed circle) towards the supporters' identities and the CFP's collective identity, which results into the formation of a project syndicate-based identity. The larger the overlapping areas the more effective are the founder's capital assembly performances.

5.5.3 Syndicate-based role identity and the 'wisdom of the crowd'

Crowdfunding democratises the privilege of supporting innovations and social projects, by shifting venture capital provision from specialised institutions (e.g. venture capital firms and business angel networks) to the 'crowd'. Studies have proven that the crowd utilises similar project proposition measurements as traditional venture capital investors in order to judge projects' quality and feasibility (Mollick and Nanda, *forthcoming*). The project founder's role identity as a particular evaluation and sense-making element for potential supporters is evidenced in this study. The findings, thus, contribute to identity literature (Navis and Glynn, 2011; Garud et al., 2014), by illustrating how project founders can adjust to the multiple identities within CFPs. This extends the understanding of identity modification processes to the context of crowdfunding.

More specifically, this case study sheds light on another dichotomy of reward-based crowdfunding that has been difficult to address, but challenges the understanding

about the ‘wisdom of the crowd’⁴⁶ in crowdfunding. Various types of projects (e.g. for-profit and non-profit projects) utilise crowdfunding and aim to exploit the ‘crowd’ through CFPs. As such, numerous variations of project campaigns exist. For example, high-profile Kickstarter projects such as Pebble Time⁴⁷, which raised more than US\$20 million, utilise crowdfunding as a mechanism for pre-funding sales. This project, and similar ones, re-engineer the traditional research-production-sales process by collecting revenues upfront initiating production⁴⁸. Many creative projects on Kickstarter, including this study’s Kickstarter campaign of DNI, offer the ‘product’ as part of the reward package, but appear to be fundamentally different from pre-funding product campaigns. Some pre-sales campaigns may incorporate feedback from high-probability early adopters, helping the project pivot towards a product with wider appeal or minimum functionality.

By contrast, most of the creative-driven projects appear to be more fully formed based on the artistic vision of the creative entrepreneur. It seems reasonable that key performance indicators would vary across these types of projects. This means, that entrepreneurs might experience different role identity modification processes based on the nature of the project. Furthermore, the ‘wisdom of the crowd’ would seem to have different relevance based on the underlying purpose of the project. Taking the Pebble Time project, as an example, it appears to create only the first step in a much larger-scale venture with an emerging pipeline of products (e.g. smartwatches). By contrast, while Cullinan envisions additional releases to follow this particular DNI opera music album, there are no organisational prerogatives or scale-up economics associated with such an effort. The decision to generate another work would appear to be primarily artistic, rather than economic in nature.

⁴⁶ The ‘wisdom of the crowd’ is characterised as the pooled resources, skills and experiences that influence and corroborate the individual’s funding decision within crowdfunding. From a project founder perspective, the ‘wisdom of the crowd’ can be exploited for (non-) financial benefits (Macht and Weatherston, 2014; Lehner et al., 2015).

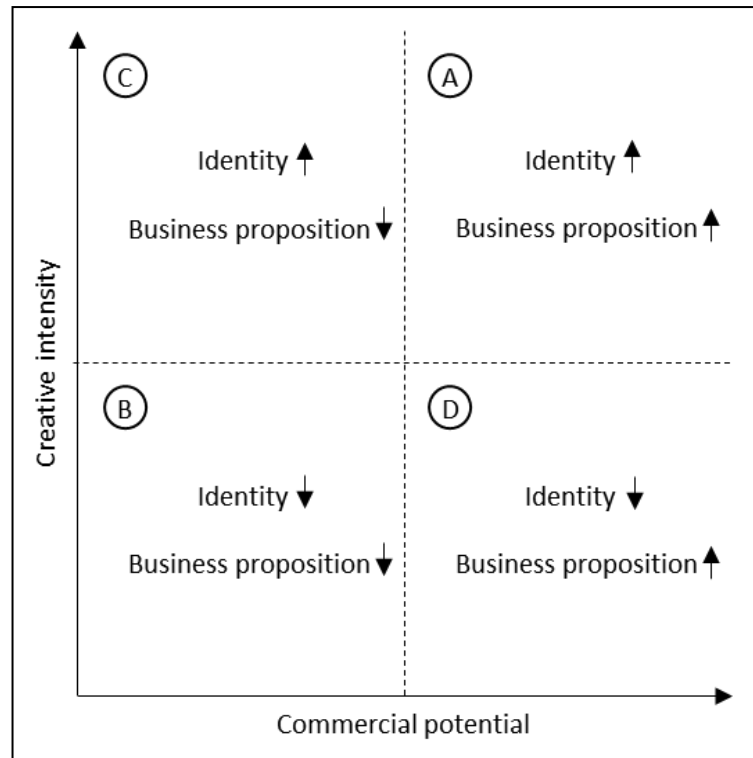
⁴⁷ The team behind Pebble Technology, a company from Silicon Valley, that produces the smartwatch ‘Pebble’, used Kickstarter for the second time and three years since their first campaign, as the only channel for pre-ordering their second smartwatch ‘Pebble Time’. The campaign is the highest funded project on Kickstarter and was supported through 78,741 backers. The campaign website can be accessed through the following link: https://www.kickstarter.com/projects/597507018/pebble-time-awesome-smartwatch-no-compromises?ref=nav_search

⁴⁸ Kickstarter states that it is ‘not a store’ and should not be used as a pre-sales platform, and has implemented policies that limit some, but not all, circumstances in which it may be used as such. <https://www.kickstarter.com/blog/kickstarter-is-not-a-store?page=5>

Therefore, this study calls for more careful differentiation among the widely diverse types of crowdfunding projects. Numerous projects are primarily commercial driven and other are principally communitarian, social or creative in nature. As such, the level of ‘business’ and ‘creative’ intensity⁴⁹ associated with projects diverges extensively. For example, projects might be commercially oriented but also have high level of creative intensity linked to its development and execution (e.g. software applications and games). These projects can leverage value provided by the crowd. While projects provide modular updates about the development of the product, the ‘crowd’ can provide feedback in order to enable the founder to adapt the development processes accordingly (Position A in Figure 5.4). The other extreme of the spectrum is formed by projects with low commercial and low creative intensity. Such projects could be, for example, personal one-off projects like wedding celebrations. These campaigns utilise CFPs as a fundraising instrument to enable close networks to collectively support a personal project (Position B in Figure 5.4). Project such as the one studied in this research, form projects with relatively low commercial intensity, but very high creative intensity (Position C in Figure 5.4). Taking the Pebble Time project as an example, projects exist that are high in commercial intensity level, but low in creative intensity (Position D in Figure 5.4).

⁴⁹ This study defines ‘business’ or ‘commercial’ intensity as the crowdfunding project’s focus to create a sustainable business based on the project or service that generates a prospective and long-term oriented revenue stream. ‘Creative’ intensity is defined in this study as the crowdfunding project’s scope to engage and permit co-creation processes from the community, and the more social and creative oriented business model associated with such projects.

Figure 5.4 Identity formation and the wisdom of the crowd



(Source: Author)

Notes: The direction of the arrows in the figure illustrate the importance of the respective element (identity or business proposition) for the formation of a syndicate-identity. An upward pointing arrow signifies high importance; a downward pointing arrow indicates low importance.

Figure 5.4 shows in what context the identity of the project founder is critical to the formation of the project syndicate and the syndicate based identity. As such, in the case of the Pebble Time Kickstarter project, the founder's identity is not a critical element for potential financial supporters, but rather the business proposition and whether people like the product or service is critical. On the contrary, the founder's identity creates a critical element for projects with high creative intensity such as the studied DNI Kickstarter project.

While it is difficult to generalise from one study, the findings of this study illustrate the important factor of the identified identity strategies for fundraising performance and outcomes. As such, this study contributes to theory on entrepreneurial crowdfunding by introducing the notion of 'syndicate-based identity' and shedding light on the influence of the role identity modification during the crowdfunding process. While the empirical data is not able to test this concept, Figure 5.4 is one

way of applying the new theory to understand what is happening during crowdfunding campaigning. Furthermore, Figure 5.4 shows that it is possible to make some predictions about when the role identity modification is important.

Linking these findings to the ‘wisdom of the crowd’ debate within the crowdfunding literature (Bruton et al., 2015; Mollick and Nanda, *forthcoming*), this study shows that in some ways the crowd is smarter, but this is not always the case. This means, that the crowd fails sometimes to identify the authenticity of the campaign and project, thus the crowdsourced evaluation process is inaccurate. The study of the DNI project illustrated that the initial attempt to adapt a ‘business proposition’ failed to form a syndicate. This led Cullinan to go back to adapt a creative identity, which was more authentic and the crowd rewarded this transition with funding injections. This study reveals how the ‘wisdom of the crowd’ can be actively manipulated or controlled through role identity modifications. As such, the study contributes to theory on identity work and management in the entrepreneurship literature (Glynn, 2000; Shepherd and Haynie, 2009; Ibarra and Barbulescu, 2010; Anderson and Warren, 2011; Navis and Glynn, 2011).

5.5.4 Limitations and future research

The longitudinal case study approach offers thick descriptions of crowdfunding campaign founders and their activities during their fundraising process. Findings have provided a foundation upon which to develop a more comprehensive theory of crowdfunding. As such, this study presents a valuable contribution to crowdfunding research, especially as so little qualitative research has been published to date. Longitudinal case studies will be even more important as crowdfunding develops and entrepreneurs and investors become more sophisticated users of online CFPs.

This type of focused case study, however, has limitations, which offer opportunities for further research. Consideration must be given to the potential outlier nature of the case. This study focuses on a crowdfunding project of a creative entrepreneur. As such projects account for approximately half of Kickstarter’s project population, the findings are illustrative for entrepreneurial activities in crowdfunding. This study

found that the theme of identity formation strategies is compelling for creative projects, because they are often positioned in the juncture of for-profit and not-for-profit ventures. The study shows how a creative entrepreneur utilised identity work that provides detailed accounts of the reciprocal connection between identity formation and fundraising activities.

Future research could investigate whether the identified identity strategies are applicable for different crowdfunding campaign categories (e.g. technology and design projects, which both are much more ‘commercial’ oriented and have much lower fundraising success rates on CFPs). To this end, an important direction for future crowdfunding research is to distinguish between broad types of campaigns and to investigate their potential distinctions in relation to the link between role identity modification and fundraising performance.

Furthermore, future research could delve in the ‘wisdom of the crowd’ phenomenon. Traditional financial market theory suggests that unfunded ventures are, overall, less valuable or offer lower returns. This means that they remain unfunded for statistically valid economic reasons. It is not clear if this holds true for crowdfunding, especially given the challenge of metric identification. By default, a funded campaign appears to meet a market need, facilitated by the availability of the CFP and its collective identity, and the founder’s successful effort to form a syndicate-based identity. This raises the economic assumption that the value of an artistic project may be appropriately spread over a larger population, regardless of whether that population obtains a demonstrable benefit from the output or not. So far, crowdfunding research has not attempted to address this question, which offers a fruitful direction for future research.

This study sheds light into an interesting population of entrepreneurship, and exposes valuable theoretical and practical insights for a rapidly growing group of prospective venture capital seeking individuals. Thus, an interesting line of research could be to study identity formation as a fundraising strategy in more ‘traditional’ venture capital contexts such as venture capital investors and business angel networks compared to crowdfunding. In doing so, a deeper understanding would uncover the unique differences between crowdfunding and other venture capital approaches, facilitating

understanding of the entrepreneurs' challenges and activities during crowdfunding processes.

Furthermore, while the qualitative research approach uncovered three important identity strategies for facilitating fundraising performance and outcome, the findings from a single case require caution for generalisability. As such, this study acknowledges the requirement of future research to more broadly understand how founder's identity work influences capital assembly performance and outcomes in crowdfunding. Therefore, future research could study the uncovered identity strategies and tactics through large-scale empirical testing. For instance, in accordance with prior studies in this field, campaign content data from CFPs could be operationalised to examine and measure the use of these strategies and tactics for different campaign categories.

Aside these limitations, this study provides to the best of the researcher's knowledge the first longitudinal study in the crowdfunding field. The 24-month investigation of the case entrepreneur allowed to collect in-depth data from four different sources to capture the multiple dimensions of entrepreneurial crowdfunding activities. The iteration between different data types, time points and literature provides a robust condition for theorising the relationships between identity work and fundraising processes in crowdfunding.

5.6 Conclusion

Crowdfunding is, like much entrepreneurial behaviour, a dynamic process in which opportunities are brought to life through a variety of interactions. This study contributes to the emerging crowdfunding literature and to the broader entrepreneurship field by drawing on findings of a longitudinal qualitative case study. This study 'pulls back the curtain' on prior statistical studies to uncover the unique activities and choices idiosyncratic to any given campaign. In this study, empirical evidence shows that the reality of crowdfunding is far more complex than suggested by correlations between certain performance indicators and campaign outcomes.

This empirical study introduced syndicate-based identity formation as an alternative way of conceptualising important aspects of the entrepreneurial fundraising process in crowdfunding. From this perspective, campaign founders can utilise three identity formation strategies to co-construct a project narrative and confer project legitimacy. Importantly, this finding offers an alternative explanation of crowdfunding performance and outcomes. Particularly, this study acknowledges the dynamic fundraising process during campaigning and shows that entrepreneurial activities, which are linked to the identity co-creation processes during the campaign, make it possible for projects to ‘jump’ from the lower end of the projects’ funding goal to a successful fundraising outcome, even at the campaign’s late stages.

This study, furthermore, demonstrates the significance that the campaign founder is capable of identifying the collective identity of the CFP community in order to understand how the audience wants to perceive the campaign as early as possible. Crowdfunding campaign founders can adapt, portray and co-create this identity accordingly in order to save resources, reap benefits, and procure investments. As such, this study creates an important step forward in crowdfunding research. The findings illustrate that crowdfunding has entrepreneurial elements, but also requires strategic acumen. Thus, the integration of strategic thinking is important for venture capital assembly in crowdfunding, which often is characterised as predominantly embodying an entrepreneurial ethos.

The findings have a number of contributions for entrepreneurship theory and implications for crowdfunding practice. Firstly, the study adapts the ‘entrepreneurial journey’ framework to the new context of crowdfunding. In doing so, this study takes the scholarly discussion on entrepreneurial identity modification to the unique venture capital assembly setting that crowdfunding offers. Entrepreneurship and organisational research has shown increased interest in the identity transition process (e.g. Jain et al., 2009; Shepherd and Haynie, 2009; Anderson and Warren, 2011), and this study extends the examinations of identity formation, work and transition to crowdfunding. Secondly, the study sheds light on the strategic perspective of management processes that crowdfunding campaign founders require to exploit for stimulating fundraising. This shifts the single-sided view from static performance

drivers such as campaign content features to a more multifaceted perspective, where the examination of shared interactions enables to provide a more comprehensive understanding of the funding distribution in crowdfunding.

Finally, this study has implications for crowdfunding campaign founders, entrepreneurs and investors. Findings suggest that campaign founders are able to increase their fundraising performance, at any time within the campaign, by conveying some identity co-creation power to potential supporters. This enables supporters to identify themselves with the project and triggers active integration into the project through financial support. Depending on the identified collective identity the founder aims to adapt or co-create towards to, the identity formation can undergo different sequences. For instance, overstressing the creative or the business proposition of the crowdfunding project may produce counterproductive fundraising results. As such, it is important for campaign founders to comprehend the most suitable collective identity early on in the crowdfunding process, suggesting that campaign founders and entrepreneurs have to be entrepreneurial and strategic.

This study offers new perspectives about entrepreneurial crowdfunding, a phenomenon where much remains unexplored. The investigation provides a novel view at crowdfunding performance and outcomes, viewing identity work and strategies as the dynamic drivers for crowdsourced capital assembly. This research details tactics that can facilitate supporters' engagement and capital injections. In addition to this, it offers a clearer explanation for the bimodal funding distribution in crowdfunding, arguing that in order to succeed in the fundraising campaign, crowdfunding founders need to identify the collective identity and form a syndicate-based identity.

Chapter 6: Conclusion: Integration of findings and contributions

This concluding chapter of the thesis accomplishes five tasks. First, it summarises the key findings of the three studies that form the portfolio of this research project. Second, it highlights the theoretical and methodological contributions. Third, it discusses implications for policy, practice and education. It then outlines the limitations of the research and finally, it offers recommendations for future research opportunities.

6.1 Summary of findings

This thesis was guided by the following comprehensive research question, with the purpose of exploring, describing and explaining the entrepreneurial activities associated with crowdfunding:

How do entrepreneurs exploit crowdfunding to assemble resources?

In undertaking three independent, yet interlinked studies, this thesis provides valuable insight from three different theoretical perspectives that advance current understandings about crowdfunding processes. Each of the three studies addressed specific entrepreneurial activities and described their relationship to crowdfunding performance and outcomes. In this section, the key findings for each study are highlighted. A summary of the findings is provided in Tables 6.1, 6.2 and 6.3.

The first study explored various crowdfunding campaign characteristics to uncover how they are associated with crowdfunding performance and outcomes. Additionally, it described the roles of specific campaign characteristics, which facilitate project legitimacy conferral and project narrative construction. Nine variables were collected for each of the 421 crowdfunding campaigns from Kickstarter, which resulted in a dataset with 3,789 data points. The findings provide initial evidence that campaign characteristics create legitimacy and narrative tools for

campaign founders. As such, this study explored campaign characteristics from a cultural entrepreneurship perspective and demonstrated that entrepreneurs can use particular campaign characteristics for narrative formation and legitimacy conferral. These characteristics include static variables, such as reward-levels structure, video pitches and the composition of the founding team, and dynamic variables, including project updates and comments all of which influence crowdfunding outcomes, one way or another. Furthermore, this study points out that funding distribution follows a bimodal distribution in crowdfunding. Successful campaigns are marginally overfunded with an average of 32.60% over the initial funding goal, whereas unsuccessful campaigns fail to meet their funding targets by a long shot, raising on average approximately 12.04%. Notably, successful campaigns tend to set lower funding goals and are typically overfunded by only a small margin. As such, in contrast to a flat or normal funding distribution ('Gaussian curve'), characteristic of traditional venture capital models, the data shows that because project legitimacy in crowdfunding is widely transparent, projects with low legitimacy are quickly identified and thus generate little support while projects with high legitimacy reap the required support to reach the minimum funding goal; this ultimately results in a bimodal distribution.

The objective of the second study was to advance explanations and understanding about the role of networks for capital assembly in crowdfunding. Accordingly, the networking activities of the campaign founders were studied to illuminate how such activities are linked to crowdfunding performance and outcomes. In contrast to prior literature, which primarily emphasised network size, this study found that both the size and the quality of the entrepreneur's network are important measurements for determining crowdfunding outcomes.

The second study utilised a dataset derived from 21,534 crowdfunding campaigns from Kickstarter, from which 21 variables were collected per campaign, resulting in 452,214 data points that captured around 26% of all campaign content posted between April 2009 and October 2013. The second study postulated three hypotheses regarding the entrepreneur's network size and network relationship quality, which were tested through multivariate and probit regression analysis. As opposed to prior

studies that emphasise on the relationship between the entrepreneurs' network size and crowdfunding performance, this study's investigation emphasises on the role of network relationship quality for crowdfunding performance and outcomes. The results confirm that the quality of a network relationship is the primary determinant of crowdfunding outcomes, second to the size of a network. Thus, this study advances understanding about the role of networking activities for fundraising outcomes in crowdfunding by incorporating additional variables into the analysis. The study concludes that crowdfunding campaign founders benefit more from improving the quality of network relationships than from increasing the size of networks. Based on these findings, this study argues that improving the quality of network relationships enables campaign founders to co-create a 'project-syndicate', that is, a closely-coupled network of project supporters who facilitate the achievement of meeting the crowdfunding campaign funding goal. The results advance understanding about the complexity of network dynamics in crowdfunding and delineate the relationship between network size and quality with capital assembly in crowdfunding.

The third study provides deeper insight into the entrepreneurial activities in crowdfunding, which complements the findings from the first and second studies in this thesis. As such, the emphasis of the third study was on the role of the entrepreneur in the crowdfunding process, to understand the rationale behind entrepreneurial activities and to examine their relation to crowdfunding performance and outcomes.

This investigation adopted a qualitative research approach, implementing a prospective longitudinal single case study method. Findings revealed that entrepreneurs have the ability to turn a seemingly unsuccessful crowdfunding campaign into a successful one. In order to do this, entrepreneurs use three different identity strategies, which form a project-syndicate identity that eventually facilitates funding activity. The creation of a project-syndicate identity allows entrepreneurs to construct a convincing narrative that confers legitimacy to the campaign and the project. This is done by actively adapting the campaign founder's identity to the supporters' collective identity, by re-focusing the creative and/or business

propositions of the campaign and project (parallel role identity), or through co-creating narratives. The third study provides valuable insight into activities and processes that quantitative studies are not equipped to reveal. Therefore, through a combination of different data sources, this study delves into the workings of entrepreneurial behaviour throughout a complete crowdfunding campaign process, spanning from the pre- to the post-crowdfunding period. The main findings of the study demonstrate that campaign founders can strategically manage their fundraising performance. In this way, this study bypasses previous research that often considers the crowdfunding process as static and tends to focus solely on input and output variables; this results in a fragmented understanding of entrepreneurial activities in crowdfunding, creating a 'black box' that limits researchers' understanding of what is happening.

Amassing the findings of the three studies, this thesis provides a comprehensive account of crowdfunding that advances current understandings of entrepreneurial activities and their relationship to crowdfunding performance and outcomes. Considering three different perspectives and the corresponding aspects of entrepreneurial activities in crowdfunding, the findings of this research provide explanations for the bimodal funding distribution in crowdfunding. More specifically, this research provides insight on why some campaigns succeed and others fail in assembling the required capital.

Together, the studies illustrate that some campaign characteristics serve as important narrative tools and facilitate the conferral of project legitimacy. This thesis shows that failure to assemble capital through crowdfunding is closely linked to the failure of the campaign founders to create a convincing narrative. The absence of a coherent narrative reduces the number of supporters who demonstrate a general interest to go one-step further in actively engaging and funding the campaign. This research thus highlights the importance of narratives in generating an overall feel of the campaign and project, which ultimately encourages interest and participation. Although the three studies adopt different theoretical perspectives, namely narrative and legitimacy, networking and identity perspectives, the findings together complement each other and extend research concerning entrepreneurial activities in

crowdfunding. The second study introduces the concept of ‘project-syndicates’, that is, a closely-coupled project community that enables the co-creation of a narrative and, as a result, confers legitimacy to the venture and entrepreneur. The third study focuses on identity formation and transformation; the findings demonstrate that the syndicate-based identity of a crowdfunding project is co-created in conjunction with its supporters. Altogether, this facilitates the construction of a compelling campaign and project narrative that stimulates fundraising performance in crowdfunding. The following three Tables, 6.1, 6.2 and 6.3, summarise the key findings of each study.

Table 6.1 Summary of key findings for study one

Study one: Exploring entrepreneurial legitimacy in reward-based crowdfunding	
Research questions	RQ1: How do entrepreneurs create and confer project legitimacy for crowdfunding projects? RQ2: How do entrepreneurs create a project narrative for crowdfunding projects?
Theory	<ul style="list-style-type: none"> - Legitimacy (Zimmerman and Zeitz, 2002) - Entrepreneurial narratives (Martens et al., 2007) - Cultural entrepreneurship (Lounsbury and Glynn, 2001)
Methodology	<ul style="list-style-type: none"> - Exploratory - Quantitative - Identification of patterns in the data to discover and identify similarities and differences across crowdfunding campaigns
Key findings	<ul style="list-style-type: none"> - Illustrates importance of narrative and legitimacy in crowdfunding, which is consistent with the cultural entrepreneurship theory. - Crowdfunding campaign characteristics act as narrative tools, which (potential) supporters use to confer legitimacy to the campaign and project through their participation. - Narrative and legitimacy is co-created during the crowdfunding process in conjunction with supporters. - Crowdfunding outcomes are dependent on campaign (and project) legitimacy. Legitimacy is easily identifiable and measurable through crowdfunding campaign characteristics, explaining the bimodal funding distribution in crowdfunding: highly legitimate campaigns are quickly identified and receive required support, whereas less legitimate campaigns fail to generate support quickly. - Particular crowdfunding campaign features, such as video pitches, have developed into standard narrative and legitimacy tools, minimising their ability to determine campaign quality. - The project’s founding team composition influences narrative and legitimacy creation. The majority of the projects considered in this study were created by individuals (76.0%), organisations (15.4%), pairs (7.6%), and teams (0.5%). Projects managed by pairs and teams demonstrate much higher success rates than campaigns managed by individuals. Furthermore, projects led by females experienced a higher success rate than males.

(Source: Author)

Table 6.2 Summary of key findings for study two

Study two: The effects of network size and quality of network relationships on capital assembly in reward-based crowdfunding	
Research questions	RQ3: How do entrepreneurs' social network and networking activities influence capital access and assembly in crowdfunding?
Theory	<ul style="list-style-type: none">- Entrepreneurial networks (Shane and Cable, 2002; Stuart and Sorenson, 2007; Semrau and Werner, 2012, 2014; Sullivan and Ford, 2013)
Methodology	<ul style="list-style-type: none">- Explanatory- Quantitative- Tested postulated hypotheses through hierarchical multivariate analysis and probit regression. Compared the explanatory power of the key independent variables (network size and relationship quality variables) for capital assembled and probability of success.
Key findings	<ul style="list-style-type: none">- The quality of a network relationship is important in addition to the size of a network in order to achieve the minimum funding target.- The network size related hypothesis was confirmed in the study, highlighting that a positive relationship exists between the size of the network and crowdfunding performance.- H1: In crowdfunding, a positive relationship between capital assembly and the size of the entrepreneur's online social network exist. (Confirmed).- This study provides insight into networks and networking dynamics in crowdfunding and highlights the importance of quality in network relationships for capital assembly in crowdfunding.- The network relationship quality related hypothesis was confirmed in the study, demonstrating that a positive relationship exists between network relationship activities and crowdfunding performance.- H2: In crowdfunding, a positive relationship between capital assembly and the quality of the entrepreneur's online social network relationship exist. (Confirmed).- This study introduces the concept of 'project-syndicates', a result of activities that increase the quality of network relationships, which ultimately impacts crowdfunding performance.- The postulated hypothesis for project-syndicates was tested and confirmed.- H3: In crowdfunding, a positive relationship between project-syndicate formation and capital assembly exist. (Confirmed).

(Source: Author)

Table 6.3 Summary of key findings for study three

Study three: Entrepreneurial role identity and crowdfunding outcomes	
Research questions	RQ4: How are project founders changed by the crowdfunding process? RQ5: How does an individual's role identity influence campaign activity?
Theory	<ul style="list-style-type: none">- Entrepreneurial journey (George and Bock, 2009)- Role identity transformation (Jain et al., 2009; Shepherd and Haynie, 2009; Anderson and Warren, 2011)
Methodology	<ul style="list-style-type: none">- Exploratory and explanatory- Qualitative- Prospective longitudinal single case study
Key findings	<ul style="list-style-type: none">- Entrepreneurs can utilise three role identity strategies to facilitate the construction of a compelling narrative, which works to confer legitimacy towards the campaign, project and entrepreneur.- The application of the three identity strategies influences entrepreneurial activities and therefore the campaigns' (projects') narrative and legitimacy formation.- The three identity strategies are:<ol style="list-style-type: none">1) Identity adaptation to funding source2) Parallel role identity3) Co-creation of role identity- The use of these identity strategies illustrates that the crowdfunding campaign can be strategically managed by the campaign founder. The founder's identity is communicated and reflected through the campaigns' characteristics, which acts as an important sense-making element for potential supporters.- Contrary to initial expectations, the campaign founder must go through a role identity transition in order to assemble the required funding in crowdfunding. Through this process, the campaign founder forms a 'syndicate-identity', a collective-identity that influences narrative and legitimacy creation.- Campaign founders must quickly identify the supporters' collective identity, so that the identity and narrative can be portrayed in such a way that effectively confers legitimacy early in the process, so as to maximise fundraising performance.- The notion of a 'syndicate-identity' is linked to the concept of 'project-syndicate'.

(Source: Author)

6.2 Contributions

The three studies that constitute this thesis provide several perspectives on different dimensions by integrating different units of analysis (crowdfunding campaign characteristics, entrepreneur's social relations and the entrepreneur); accordingly, this research offers a number of theoretical and methodological contributions.

6.2.1 Theoretical contributions

The research provides a rich picture of crowdfunding complexity, offering three different perspectives on entrepreneurial activities in crowdfunding. This thesis explicates the relationships between entrepreneurial narratives, legitimacy, networks and role identity that affect fundraising performance and outcomes in the crowdfunding context. Each separate theoretical contribution is discussed in the following sections. The combined theoretical contributions are subsequently presented as they relate to entrepreneurial crowdfunding.

6.2.1.1 Entrepreneurial legitimacy and narratives

Previous research has indicated the importance of entrepreneurial narratives in the capital assembly processes (Lounsbury and Glynn, 2001; Cornelissen and Clarke, 2010; George and Bock, 2012). However, the majority of studies examined the use and role of narratives for capital assembly in the ‘traditional’ venture capital context, utilising data from a business angel or venture capital setting (e.g. Martens et al., 2007; Pollack et al., 2012; Becker-Blease and Sohl, 2015). The concentration of literature on these particular capital sources highlights the critical limitations to theory building on the role of narratives in entrepreneurial capital assembly. Although these remain important capital sources, entrepreneurs have recently begun utilising alternative finance mechanisms for capital assembly, including crowdfunding, which warrant further research. These new mechanisms enable entirely different modes of capital assembly, where communication and storytelling are less systematic and synchronised, thus requiring careful investigation of the role of narrative and legitimacy in online capital assembly processes. Thus, the implementation of online CFPs and the increased use of social media by entrepreneurs (Fischer and Reuber, 2014) indicates potential shifts in entrepreneurial narrative use and legitimacy conferral.

Little attention has been given to understand crowdfunding solely from a narrative and legitimacy perspective. The first study of this thesis contributes to this literature by providing new insight into narratives and legitimacy within a crowdfunding

context. Entrepreneurs attempt to exploit technological features, such as real-time interactive blogs and video communication, to convey a compelling narrative. This digital context allows entrepreneurs to personally and publically interact with often anonymous supporters through a CFP digital website. Thus, narrative construction is an ongoing process and is co-created in conjunction with supporters. As a result, entrepreneurs, in the context of crowdfunding, are less concerned with constructing a narrative that validates their prior achievements and are more focused on creating and fostering an inspirational and emotional story (Smith and Anderson, 2004; Garud et al., 2014). Entrepreneurs can utilise specific crowdfunding features as strategic tools to facilitate and influence sense-making amongst potential campaign supporters. Given the online framework of crowdfunding and the elimination of ‘traditional’ investment return variables, supporters utilise different decision making criterion.

The three studies together identified three critical criteria with respect to crowdfunding performance and outcomes. These involve narrative and legitimacy, that is constructed and conferred through the crowdfunding campaign pitch; the transfer of co-created opportunities by enabling supporters to join a project-syndicate; and the alignment of a project’s syndicate-based identity to form a coherent campaign narrative. This thesis, therefore, demonstrates that crowdfunding campaign elements can be exploited as critical instruments for sense-making purposes (Lounsbury and Glynn, 2001). More specifically, narratives can be modified and reframed over time (Gartner, 2007).

In aggregate, this research contributes to the entrepreneurial narrative and legitimacy literature by applying a narrative and legitimacy perspective to theories of entrepreneurial finance and capital assembly in the context of crowdfunding. As such, this research re-conceptualises crowdfunding as an embodiment of co-created narratives and legitimacy. In this way, the investigations address how entrepreneurs use specific crowdfunding features and campaign tools as instruments for the strategic creation of narratives and legitimacy that facilitate capital assembly.

6.2.1.2 Entrepreneurial networks

This thesis, furthermore, contributes to the entrepreneurial networking literature (Davidsson and Honig, 2003; Hoang and Antoncic, 2003; Jack, 2005; Stuart and Sorenson, 2007), by extending the work on network dynamics to the context of crowdfunding. In this way, this research provides a more detailed picture about the role of networks and the relationships between networking activities of entrepreneurs and capital assembly in online crowdfunding processes (Agrawal et al., 2015; Bruton et al., 2015; Colombo et al., 2015). This research, more specifically, deviates from prior literature's predominant emphasis on the entrepreneurs' network size (Adler and Kwon, 2002; Witt 2004) and focuses on the quality of network relationships between the entrepreneur and potential supporters (Semrau and Werner, 2012, 2014).

The findings of this research introduce a theoretical model of crowdfunding 'project-syndicates', which explains the co-creation of temporary project related communities. These are formed by way of the activities that help increase the quality of network relationships and ultimately work to facilitate crowdfunding performance and outcomes. This research illustrates that activities that improve the quality of network relationships, such as providing regular project updates, enables project founders to create an affinity-based syndicate. This syndicate consists of supporters and increases project enthusiasm, which ultimately leads to increased social media shares of the project amongst members of the project-syndicate. As such, project-syndicate members may act as project evangelists and often prove more effective in promoting the crowdfunding campaign and project than entrepreneurs' initial social networks.

Project narratives and legitimacy are actively co-created by project-syndicate members, illustrating that entrepreneurial networks act as critical legitimacy factors (Shane and Cable, 2002; Zimmerman and Zeitz, 2002; Sullivan and Ford, 2013). Thus, this research highlights other factors, aside from the size of a network, that influence fundraising performance and outcomes in the context of crowdfunding (Mollick, 2014). It is important for entrepreneurs to form a closely-coupled network within the CFP setting in order to convert potential supporters into project-syndicate members. Project-syndicate members play an important role in co-creating a

persuasive and coherent narrative that confers trust and legitimacy to the project and entrepreneur, facilitating fundraising performance (Newbert et al., 2013).

6.2.1.3 Entrepreneurial role identity

This thesis provides a third theoretical contribution to entrepreneurial role identity literature (Alvesson et al., 2008; Watson, 2008, 2009; Jain et al., 2009; Philips et al., 2013). As was highlighted in the third study, the modification of a campaign founder's role identity can stimulate capital assembly in crowdfunding. Thus, this research expands on the entrepreneurial role identity literature to develop new theory about fundraising activities and outcomes in the crowdfunding context.

The findings show that fundraising performance and outcomes can be strategically managed through the campaign founder's identity work during the crowdfunding campaign. In order to facilitate capital assembly in crowdfunding, campaign founders have to undergo a role identity modification. Accordingly, this thesis introduces the 'syndicate-based role identity' concept that provides a theoretical model from which to comprehend the role identity modification of campaign founders in crowdfunding. The findings show that the campaign founders have to go through identity modifications in order to facilitate the co-creation of a collective identity with their supporters, which eventually stimulates fundraising activities and ultimately influences crowdfunding performance. As such, this research adds to the literature about collective identity creation (Ramarajan, 2014) and its influence on participation in online communities (Ren et al., 2007).

Moreover, this research extends understanding about the interplay amongst different stakeholder's identities within the crowdfunding context. The findings illustrate that, on the one hand, an environment, which consists of a large heterogeneous distributed group of individuals, creates a unique collective identity that campaign founders aim to leverage. On the other hand, the existence of multiple groups of individuals creates challenges for project founders, insofar as they attempt to accommodate and adapt to a multiplicity of identities and groups of individuals (Fombelle et al., 2012; Ramarajan, 2014). This research illustrates how project founders can manage identity

modifications in crowdfunding to minimise potential identity conflicts and reap opportunities and benefits.

Furthermore, this research adds to the literature that investigates entrepreneurial role identity as an evaluative criterion of investors and supporters (Weick, 1995; Navis and Glynn, 2011). This thesis illustrates how crowdfunding campaign elements reflect the founder's role identity in the online mediated environment of crowdfunding and demonstrates the suitability of the role identity perspective in studying entrepreneurial activities in crowdfunding. Accordingly, the adaptation of a static perspective of narrative and legitimacy creation in chapter three is complemented by the dynamic exploration of entrepreneurial processes from a role identity perspective adopted in chapter five. The findings, in combination, explain how static crowdfunding pitch elements are influenced by the entrepreneurs' identity and preparedness to co-create a syndicate-based role identity. The identified dynamic identity modification process throughout the fundraising campaign affects the pitch content. As such, the investigated evaluative pitch features on the crowdfunding platform provide sense-making attributes that are interlinked with the entrepreneurs' role identity. As the thesis follows a mixed-method approach, theoretical triangulation (Denzin, 2009) is applied in order to facilitate the interpretation of the relationship between narrative and legitimacy creation and the entrepreneur's identity modification processes. The combined insights from chapter three and five enrich the understanding about the links between the crowdfunding pitch, entrepreneurial activities and fundraising outcomes.

Taken together, the findings demonstrate why fundraising in crowdfunding follows a bimodal funding distribution. This thesis offers a theoretical explanation with regard to how entrepreneurs exploit crowdfunding for capital assembly. In this way, fundraising performance and outcomes can be explained by three theoretical perspectives, namely entrepreneurial narrative and legitimacy, networks and role identity. Fundraising in the context of crowdfunding is the output of an entrepreneurial strategy, which utilises crowdfunding campaign features to construct

a coherent narrative, facilitated via co-creation⁵⁰ with project-syndicate members. The syndicate members eventually form a project-based identity that comprises a collective narrative and create a structural and affect-based group of supporters, which are necessary components to stimulate capital assembly in crowdfunding. The findings demonstrate that when these components are not in place, fundraising activities, in the context of crowdfunding, fail, thus resulting in large discrepancies between funding targets and the assembled capital. On the contrary, if entrepreneurs can effectively manage and implement these elements successfully, the crowdfunding campaign and project benefits, often ending up with a marginal surplus in capital.

This thesis conceptualises capital assembly in crowdfunding through narratives and legitimacy, networking and role identity perspectives. The research draws on three dominant literature strands within the entrepreneurship domain, thus contributing to literature that examines entrepreneurial capital assembly and crowdfunding in order to facilitate understanding about entrepreneurship and entrepreneurial activities. The following section highlights the methodological contributions.

6.2.2 Methodological contributions

This thesis and its portfolio of three studies contribute to methodology in three significant ways. Firstly, the combination of large-scale quantitative and in-depth qualitative investigations of entrepreneurial activities in the context of crowdfunding comprises a mixed-method research design, which has not been readily applied in the crowdfunding field. As such, this research addresses recent calls from the entrepreneurship domain that request the application of different methodological perspectives for the investigation of entrepreneurship topics (Jennings et al., 2005; Shepherd, 2015). This mixed-method research design enabled the study of multifaceted processes and activities, exemplifying the complexity of crowdfunding.

⁵⁰ Co-creation was a prominent theme found in this research. This is not surprising, however, as other contexts relating to finance, such as microfinance (Ashta, 2012) and literature on the ‘bottom of the pyramid’ also stress the importance of co-creation (London and Hart, 2010).

A second methodological contribution is evident in the third study. This study is one of the first investigations in the crowdfunding research domain that adopted a qualitative research approach, which applies a 24-month prospective longitudinal single case study for examining entrepreneurial activities. The use of multiple qualitative data sources, such as evidence from interviews, documents and (online and offline) observations, provide significant contributions to the literature, which remains predominantly quantitative. Qualitative methods allow for a more in-depth exploration of evidence from the CFPs and significantly advance knowledge about entrepreneurial crowdfunding. Accordingly, the third study illustrates how entrepreneurial processes as well as entrepreneurs' experiences of preparing, managing and assessing crowdfunding campaigns can be investigated through multiple qualitative methods and analysis techniques.

The third methodological contribution applies well-established concepts from the entrepreneurship field as frameworks from which to study the phenomenon of crowdfunding. This application facilitates a comprehensive account of crowdfunding campaigns' legitimacy and shows how legitimacy can be operationalised through specific crowdfunding campaign characteristics. This thesis offers methodological advancements with regard to explicating how campaign and project narratives and legitimacy, networks, and role identity can be measured in the crowdfunding context. This research demonstrates the importance of adopting broader entrepreneurial perspectives in order to clearly describe and understand crowdfunding activities, which ultimately bridges the two fields of crowdfunding and entrepreneurship.

6.3 Implications

Entrepreneurs are increasingly exploiting crowdfunding. Hence, it is important to advance academic research in the crowdfunding field in order to inform policy, the industry and education (Sharma et al., 2012).

6.3.1 Policy implications

Crowdfunding exists in different forms and is exploited by entrepreneurs for various purposes. The diversity in crowdfunding modalities increases the difficulty for policymakers to implement one regulatory framework, which fits all forms of crowdfunding. The particular focus of policymakers lies on equity-based crowdfunding and issues related to selling equity-shares to accredited and unaccredited investors over online CFPs. However, entrepreneurial activities in non-equity crowdfunding, such as reward-based crowdfunding, which has been the focus of this thesis, accounts for around 93% of today's international crowdfunding market (Massolution, 2015). The reward-based crowdfunding market remains a 'grey area' within the entrepreneurial finance market. As such, reward-based crowdfunding has developed in different ways, which has increased the commercial focus of reward-based crowdfunding as a mechanism to pre-sell or sell products and/or services, similar to e-commerce platforms, such as Etsy or Squareup. The unregulated state of reward-based crowdfunding makes it difficult to delineate the boundaries of crowdfunding, which adds to the confusion regarding its definition and business model. For example, whether reward-based crowdfunding is built upon relational engagement or contractual relationships is not well understood. It is important that clear boundaries be set in place from a policy level in order to educate stakeholders about how reward-based crowdfunding is positioned within the entrepreneurial finance landscape (European Commission, 2014, 2015c).

Therefore, policy geared towards education work that deals with legal regulations for the crowdfunding markets is needed. Policies should not only focus on practitioners, such as project founders and project supporters (investors), but should also address the CFP operators. The findings from this thesis may support policymakers in understanding the role of CFPs as intermediates, which incite traditional industry standards and norms upon which regulatory bodies can standardise the market. CFPs serve as the interaction point between campaign founders and supporters, thus establishing a critical investor relationship mechanism. As the research findings illustrate, communication and relationship building through CFPs are important entrepreneurial activities. However, the use of multiple online channels by

entrepreneurs for interacting with the ‘crowd’ increases the financial and marketing communication complexity and creates new types of interaction and new relationships among stakeholders. It is important that policymakers enforce guidelines which regulate online interactions and communication in order to facilitate trust and ensure quality standards in online investments.

Furthermore, the findings provide insight on how entrepreneurs can use crowdfunding as one, amongst many, strategies to broaden their fundraising efforts. Previous research has investigated crowdfunding as a ‘singular’ or independent approach for entrepreneurial capital assembly, regarding it as disconnected from other entrepreneurial finance mechanisms. However, this research illustrates that entrepreneurs may use crowdfunding as a leveraging mechanism as part of a more comprehensive fundraising strategy. As such, it is important that policymakers leverage these findings to investigate the interplay and connections between crowdfunding and other ‘traditional’ entrepreneurial finance mechanisms. Governments should foster the positioning of crowdfunding as a complementary link amongst ‘traditional’ finance mechanisms to build a more comprehensive system that stimulates entrepreneurial activities.

Currently, reward-based crowdfunding stakeholders are obliged to follow the CFPs terms and conditions, which in the case of Kickstarter, for example, state that the CFP is not responsible for non-delivery of the rewards. Therefore, policymakers should consider implementing a government assured ‘code of conduct’ for CFPs to guarantee quality and professional fulfilment of the CFPs intermediary roles, such as managing due diligence and transaction processes. To foster entrepreneurial activity, reward-based crowdfunding should be established as an additional entrepreneurial finance mechanism. Policymakers should increase security measurements without damaging the ethos of crowdfunding. The challenge is to regulate flexible crowdfunding activities, while ensuring that regulation is not as stringent as it is with venture capital.

6.3.2 Practice implications

This thesis has implications for entrepreneurs that seek to assemble capital for business opportunity exploitation and innovation creation through crowdfunding. In addition, the findings offer implications for potential investors, supporters and CFP operators.

The findings demonstrate the importance for entrepreneurs to familiarise themselves with crowdfunding campaign strategies. This includes understanding the importance of co-creation, with regard to project narratives and legitimacy, building a project-syndicate through activities that strengthen the quality of network relationships and co-creating a syndicate-identity. By focusing on the entrepreneurial crowdfunding process, this research reveals some potential challenges and provides suggestions about how to overcome them through specific activities, before and during the campaign. The findings suggest that entrepreneurs must form new 'project-syndicates' that are comprised of project supporters, which come together via network quality processes, such as regular interactions with the audience. Thus, this investigation helps entrepreneurs realise the importance of regular interaction with their audiences in order to successfully assemble capital. In this way, campaign founders can strategically exploit particular CFP features to create a narrative that connects with potential supporters and confers project legitimacy. In addition, the findings illustrate how these features can be exploited throughout the crowdfunding campaign to steer and manage fundraising performance and outcomes. This research highlights that a 'traditional' business plan will not suffice in the dynamic crowdfunding context. Entrepreneurs must be sensitive to the early creation of campaign legitimacy. The findings also assist entrepreneurs in revising their campaigns to reduce complexity and create a compelling narrative that facilitates legitimacy creation and ultimately improves crowdfunding performance and outcomes.

This research has implications for potential investors or supporters, for whom crowdfunding creates new investment opportunities. The thesis shows how entrepreneurs are able to actively manipulate the evaluative judgement of investors or supporters through the strategic use of CFP features, which involves the

adaptation of campaign characteristics. Therefore, the investigation highlights that investors or supporters need to adjust their due diligence processes in order to recognise and seize investment and funding opportunities.

Finally, this research offers implications for CFP operators. Crowdfunding campaign variables, such as funding goals, campaign duration, project updates, campaign videos and reward-levels serve as important narrative tools. These tools are integrated by CFPs to offer entrepreneurs and potential supporters better service. As such, CFP operators play an important role in structuring and influencing behaviour and activities in crowdfunding. For that reason, CFP operators strategically select and implement specific features, such as video pitches and project updates, on their platforms, which influences the funding distribution. Features such as video pitches and project updates function as self-fulfilling mechanisms for CFPs. As a result, entrepreneurs face significant challenges with regard to establishing legitimacy on the CFPs through their own means. Entrepreneurs need to be aware of the influence CFPs have to manipulate the evaluation process, which may unfairly promote certain campaigns over others. This suggests that smaller, but potentially highly lucrative campaigns may be shadowed from investors.

6.3.3 Education implications

Stories about entrepreneurs who successfully exploited crowdfunding to finance innovation creation, product and service development, or to kick-start a one-off social project or nascent venture are routinely reported in the media. Crowdfunding is typically mentioned in association with venture capital and business angel investments. As such, academics should consider the contribution of scholarly research on crowdfunding and alternative entrepreneurial finance given the potential of its impact on (international) entrepreneurship and management programmes. While the traditional ‘business planning’ approach predominates the entrepreneurship curriculum of universities worldwide, courses should consider implementing new forms of ‘business pitching’ (e.g. campaign video pitch) and fundraising approaches, including the different modalities of crowdfunding. Students

will likely be encouraged to learn more about alternative entrepreneurial finance mechanisms and put their acquired knowledge into practice, through, for example, planning, creating and managing their own crowdfunding campaign. This could result in greater learning outcomes about entrepreneurship through a ‘learning by doing’ teaching philosophy. In a similar vein, such an implementation could improve universities’ teaching objectives, by opening the door to innovative teaching methods, while maintaining a strong commitment to theory and research.

Another important aspect relates to advancing the understanding of crowdfunding complexity as a venture capital assembly process. In this context, educating students and potentially interested parties about the challenges and risks associated with crowdfunding is pivotal in order to provide a more comprehensive perspective of entrepreneurial crowdfunding that is theoretically based and practically driven. Furthermore, it is important to investigate failed and revoked crowdfunding campaigns, in order to learn ‘what not to do’.

6.4 Research limitations

This thesis and its portfolio of three studies is subject to limitations that require acknowledgment in order to stimulate further investigations in this field. While the specific limitations for each separate study have been discussed in their respective chapters, this section provides a summary of the limitations in Table 6.4.

Table 6.4 Summary of research limitations for each study

	Research limitations
Study one	<ul style="list-style-type: none"> - Quantitative data does not attend to the textual content in crowdfunding campaigns (e.g. business propositions, reward-level descriptions or video pitch content). - Data on narratives and legitimacy was gathered solely from the available content from the crowdfunding campaign website. - The study’s sample size was constrained geographically, thus urging vigilance for generalisability.

(Table 6.4 Continued)

Study two	<ul style="list-style-type: none">- Data reduction followed methods adopted in prior studies (e.g. U.S.-based campaigns with funding goals of US\$5,000 or above that came to fruition), however this may confine the generalisability of findings to other types of campaigns.- The variables used to measure network size and relationship quality are imperfect, due to the focus on data derived from the CFP. Additional variables (including variables that originate from outside the CFP) should be included to provide more conclusive findings.- Measurements focus on a CFP context, excluding ex-platform networks and associated networking activities.- The implementation of a cross-sectional research design limits causal interpretations.
Study three	<ul style="list-style-type: none">- Data reduction, interpretation and analysis procedures may vary across researchers.- The data collection and analysis procedure must be balanced against the researcher-participant relationship (particularly due to the duration of longitudinal research, where personal contacts were established over time).- Empirical evidence is based on a single case. As such, interpretations and findings require empirical testing in order to be considered generalisable.- The single case represented a creative entrepreneurial venture, which enabled an in-depth investigation of a venture that is situated in a sector that has enjoyed prior exploration. However, the applicability of findings to different types of entrepreneurial ventures requires caution.

(Source: Author)

Some research limitations were common across all three studies. Firstly, this research was undertaken in the context of reward-based crowdfunding, which allowed for the benchmarking of the findings to prior literature. Careful interpretation is required in order to generalise the findings to other crowdfunding modalities (e.g. equity-based crowdfunding). For example, while creative projects predominate the reward-based crowdfunding market, there are a number of other crowdfunding modalities that are more economically driven, which may impact the findings. However, the research's objective was to advance the understanding of entrepreneurial activities in crowdfunding; in narrowing its focus to the reward-based crowdfunding market, the data in this study adequately represented the dominant sector in this market.

Secondly, the research utilises data gathered from one CFP, namely Kickstarter. While this CFP has been used in previous research given the access of data it provides and its prominent position in the crowdfunding market, the unique setting and context of Kickstarter likely influenced the findings of this research. However, the selected CFP for this thesis generated a large sample from which to construct a

unique and valid empirical dataset over an extended period of time, which balances out the resulting data limitations.

Thirdly, as was aforementioned, the research findings are based on data derived from a U.S. context. Although, the data reflects crowdfunding campaigns that originate in the U.S., the CFP is accessible worldwide and allows individuals from outside the U.S. to participate and financially support crowdfunding campaigns listed on Kickstarter. Therefore, caution needs to be taken when generalising findings to other geographic contexts, such as the European market. However, inasmuch as crowdfunding activities take place online, it can be assumed that online behaviour might share more commonalities than differences between countries (Chau et al., 2002).

Finally, the three studies employed established measurements for the concepts of narratives and legitimacy, networks and role identity. This may have hindered the exploratory process of identifying new and potentially distinctive variables and occurrences in entrepreneurial crowdfunding.

These research limitations can, however, also be interpreted as opportunities for further exploration of the crowdfunding phenomenon, and more specifically of the entrepreneurial crowdfunding phenomenon. The next section identifies a number of potential future research directions that can advance understandings of entrepreneurial activities and capital assembly in crowdfunding.

6.5 Opportunities for future research

In addition to the previously discussed research limitations that indicate future research opportunities, the findings and newly established theoretical models also present potential avenues for future research. Table 6.5 summarises the proposed future research avenues derived from each separate study.

Table 6.5 Summary of future research opportunities for each study

Potential avenues of research	
Study one	<ul style="list-style-type: none">- Extend exploration on co-creation processes with campaign supporters to understand how project legitimacy is conferred and capital is assembled.- Explorative data revealed that crowdfunding success rates are proportionally higher for female-run crowdfunding campaigns than for male-run crowdfunding campaigns. The suggested gender difference opens the door for future research.- Reduce emphasis on online data, engaging in more qualitative studies that capture offline activities and processes.- Incorporate more qualitative analysis to analyse crowdfunding campaign content in terms of storytelling, narrative and legitimacy strategies.
Study two	<ul style="list-style-type: none">- Replicate the study and include additional variables to improve understanding with regard to how the size and quality of an entrepreneur's network affects fundraising performance and outcomes (including multi-channel communication, e.g. Twitter and Facebook channels).- Include qualitative analysis to study content (e.g. discourse analysis of project updates and comments) in addition to activities.
Study three	<ul style="list-style-type: none">- Test for causality with time series data.- Test whether the identified identity strategies support fundraising performance and outcomes for campaigns across other categories and sectors.- Future research might address the different types of ventures in order to provide distinctions across the metrics used by supporters to confer legitimacy.- Test the offered findings given a larger sample size (e.g. multiple case studies or quantitative data sets).- Operationalise syndicate-based identity with campaign variables and construct measurements for project-identity.

(Source: Author)

Future research should further analyse and clarify the theoretical models introduced in this thesis, that is, 'project-syndicates' and 'syndicate-identity formation'. Each of these models requires additional empirical testing through quantitative studies. Additionally, there is a need for increased theoretical amplification through qualitative or mixed-method research approaches in the crowdfunding field.

This thesis calls for more qualitative research approaches in the crowdfunding field that move away from the current research focus of 'online crowdfunding activities' on CFPs, redirecting attention to the broader context of crowdfunding (online and offline). This will ensure valuable contributions that advance the field of entrepreneurial crowdfunding.

6.6 Final words

Crowdfunding creates an inspiring entrepreneurial finance mechanism that can guide the future of venture capital. The exciting prospective of entrepreneurial crowdfunding should encourage scholars to continue researching the complexity of the crowdfunding phenomenon and to advance understanding about the different social, economic and managerial dimensions of crowdfunding through multidisciplinary perspectives. It is anticipated that the contributions of this thesis to theories of entrepreneurship open new stimulating questions for future research to answer.

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Appendices

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Appendix A – Cartography of crowdfunding research activity

A review about the research activity on the subject of crowdfunding has been conducted with the aim to provide an overview about the emerging field. The review procedure and the descriptive findings are reported in the following and provide additional understanding about the current state of the emerging research field on crowdfunding.

Review Method

In order to shed light on the origin of the current understanding of crowdfunding, the contemporary scholarly literature is explored descriptively. To achieve this objective, and to guarantee the quality of the cartography of crowdfunding research, a literature review is applied that follows suggested principles from prior studies⁵¹. As such, seminal and recent (primarily published) scholarly studies on crowdfunding are looked for. In doing so, the field of crowdfunding research is mapped and provides an overview of different scholarly areas that guide and shape research efforts on crowdfunding.

Inclusion Criteria

There are several challenges to review prior, relevant literature on the crowdfunding phenomenon. Given that crowdfunding is a relatively recent phenomenon, research is rather communicated through various research outlets and not concentrated on several key channels. This often gives the misunderstanding that a dearth of research exists. Overall, the phenomenon of crowdfunding is not as limited researched as expected. While the scholarly conversation translates into a small number of published studies, it is vital to consider work-in-progress and conference papers to provide a comprehensive picture of the current research activity state. In addition, crowdfunding appears to draw on several research domains including information

⁵¹ Webster, J., & Watson, R. T. (2002). Analyzing the past to prepare for the future: Writing a literature review. *MIS Quarterly*, 26(2), xiii-xxiii.

Tranfield, D. R., Denyer, D., & Smart, P. (2003). Towards a methodology for developing evidence-informed management knowledge by means of systematic review. *British Journal of Management*, 14(3), 207-222.

system, law and management, establishing an interdisciplinary research field. Thus, to gain greater understanding of the extant crowdfunding literature, available articles that explicitly use the term ‘crowdfunding’ in their title, abstract, or key words were searched for.

Given the emerging novelty of crowdfunding research, the goal was to include every available article on the subject. Thus, the search was conducted without any time limitation or research domain emphasis. The collection of articles, however, was limited to articles available in English language, and focused on peer-reviewed articles, book chapters, conference papers that are available in conference proceedings, and editorials from publishers. The same search criteria were used for the following databases: 1) EBSCOHost Business Source Complete, 2) Science Direct, and 3) Scopus. Due to the high number of work-in-progress papers on the topic of crowdfunding, working papers and conference proceedings that are available through the Social Science Research Network (SSRN) were included in addition. The inclusion of these four databases provide a large amount of search results, enabling a comprehensive overview of the current state of crowdfunding research activities.

All collected information about the literature was updated during May 2015. The search results from the databases were comprised together into one document to allow cross-checking the entries and to remove duplicate records. Table A.1 provides descriptive information about the retrieved data for each database. The initial findings recorded 425 total entries before the data was cleaned, which led to the removal of 126 entries (which included duplicate entries), resulting into 299 article entries.

Table A.1 Database search results for crowdfunding articles

Databases	Article entries	Published / Working paper / Conference proceeding
EBSCOHost Business Source Complete	42	41 / 0 / 1
Science Direct	7	5 / 0 / 2
SSRN	141	44 / 96 / 1
Scopus	109	62 / 0 / 47
Total	299	152 / 96 / 51

(Source: Author)

Notes: Search term ‘crowdfunding’. The literature search has been carried out on the 25th May 2015.

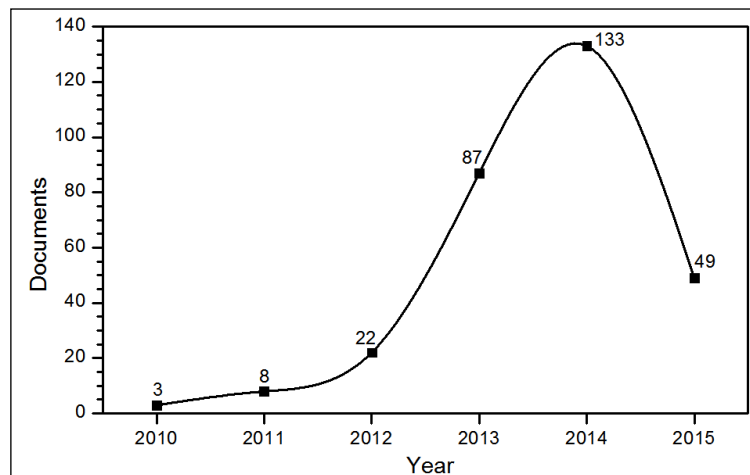
Mapping the Field

In this section, a cartography of the extant scholarly crowdfunding literature is provided. The tables and figures below illustrate the development of research activities in the field of crowdfunding since 2010, where the first published articles on crowdfunding are recorded.

Development of Crowdfunding Research

The past few years experienced rapid development of the crowdfunding market that introduced some significant disruption and alterations in how entrepreneurial finance is understood. The phenomenon and its impact in the practical field has triggered scholars to investigate the implications of this innovative funding mechanism towards management, economy and society. Figure A.1 illustrate how scholarly activity on the subject of crowdfunding developed since 2010. As can be seen from Figure A.1, only in 2013 research on crowdfunding started to emerge rapidly and to enter the broader scholarly conversation about this often as ‘innovative alternative venture capital’ described phenomenon. Interestingly, the research activity follows the same growth pattern as the industry itself. Almost half of the extant literature was distributed and published in 2014, where the majority originate from the entrepreneurship field.

Figure A.1 Development of crowdfunding research

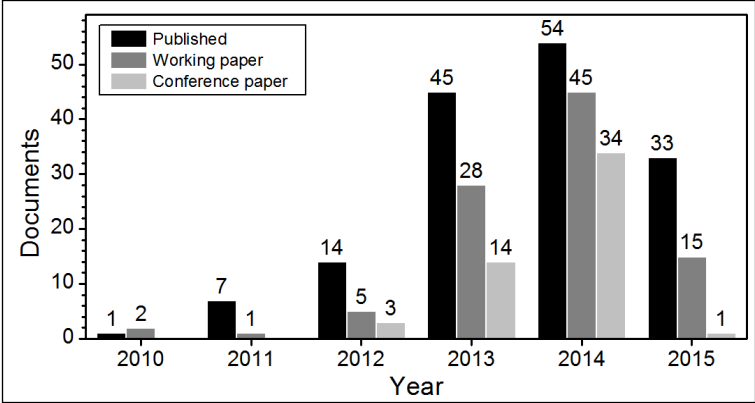


(Source: Author)

Notes: Data was collected in May 2015, thus the number for 2015 represents the number of available documents for January-May 2015.

As illustrated in Figure A.2, the growth in crowdfunding research is based on published articles. However, the growth in working papers and conference papers further illustrate that research activity remains high and it can be expected that a large number of new crowdfunding studies aim to address and will continue the scholarly discussion.

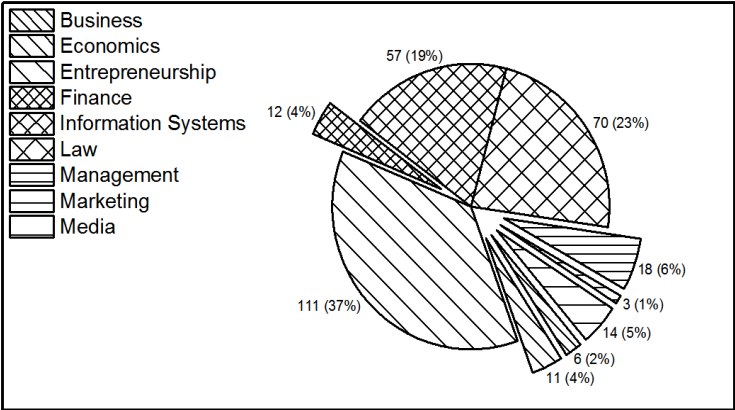
Figure A.2 Development of crowdfunding research by document types



(Source: Author)
Notes: The first publication date of the working paper version was used.

Figure A.3 illustrates that crowdfunding research originates in a multidisciplinary context. While most studies originate from the Entrepreneurship field, a large number of studies derive from the Law and Information Systems domains. Behind these three domains, which account for 79% of current crowdfunding literature, research is rather distributed into different research domains.

Figure A.3 Overview of crowdfunding research by subject area

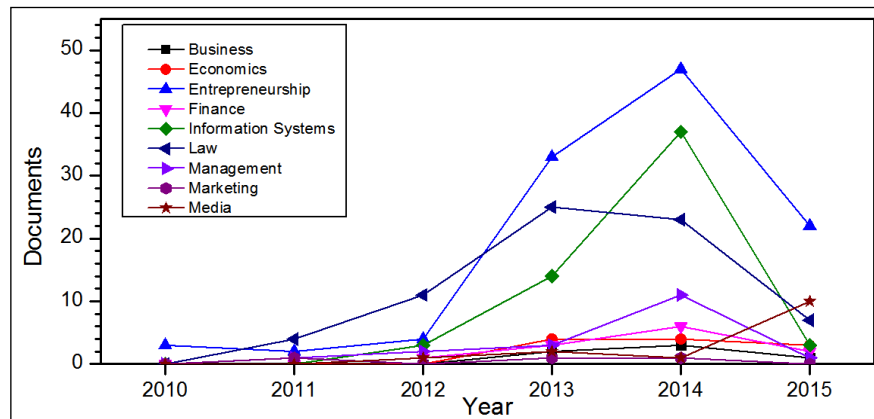


(Source: Author)

Figure A.4 depicts the development of research activities in the different identified research domains, represented by the number of available published, work-in-

progress, and conference papers. The first available scholarly study on crowdfunding was identified in 2010 from the entrepreneurship field. Research activity on crowdfunding started to growth in the entrepreneurship domain in 2012/2013, whereas the Law domain started earlier to study the emerging phenomenon of crowdfunding.

Figure A.4 Development of crowdfunding research by subject area

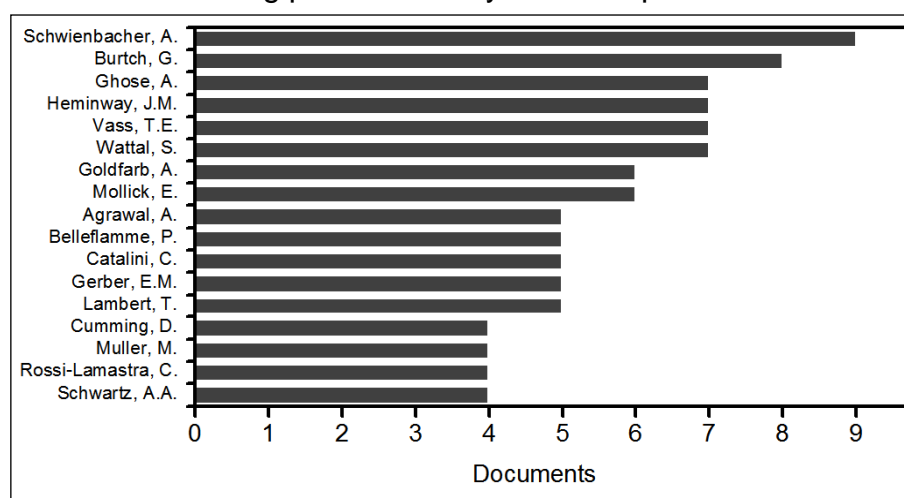


(Source: Author)

Authors

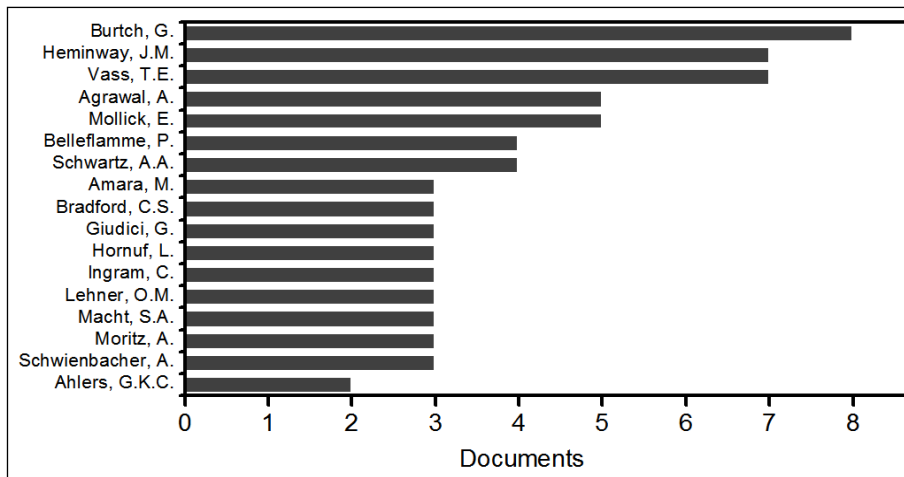
Among the authors in the crowdfunding research domain, numerous are working in the Management and Finance field, however, also several leading publishing authors are coming from a Law background. Figure A.5 provides the top 17 publishing authors on crowdfunding. Figure A.6 rearranged the list by looking on first authorships for crowdfunding publications.

Figure A.5 Crowdfunding publications by authorship



(Source: Author, adapted from Scopus 'analyse search results' output)

Figure A.6 Crowdfunding publications by lead authorship

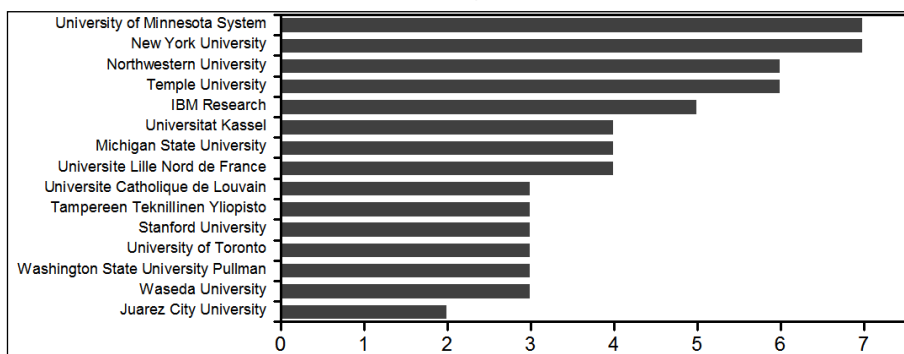


(Source: Author, adapted from Scopus 'analyse search results' output)

Affiliation

It is of interest to identify which academic institutes are leading research activities in the crowdfunding field. The Scopus 'analyse search results' function⁵² was used to compare the document counts for the leading affiliations. Figure A.7 illustrates the results.

Figure A.7 Documents on crowdfunding by the top 15 affiliations



(Source: Author, adapted from Scopus 'analyse search results' output)

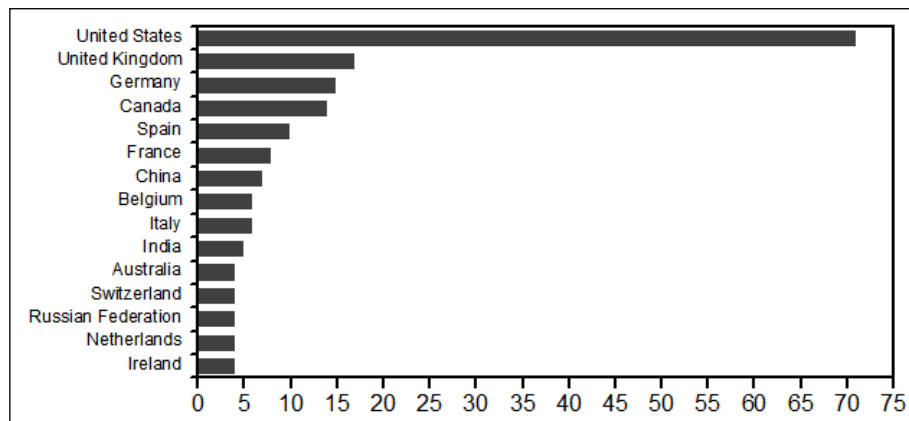
Country/Territory

As can be seen in Figure A.7, most crowdfunding publishing affiliations are located in North America. Thus, most research activity in crowdfunding originates in the U.S. (Figure A.8). One of the reasons for this is that law scholars in the U.S. have

⁵² See Scopus' blog entry for an explanation of the 'analyse search results' functions: <http://blog.scopus.com/posts/analyze-thousands-of-search-results-in-less-than-a-minute> (Accessed: 20.05.2015).

published a large number of work on the Jumpstart Our Business Startups Act (JOBS Act)⁵³ once it passed the congress in 2012 to enable altered and new regulations from the Securities and Exchange Commission that facilitate the development of crowdfunding for entrepreneurs and small businesses. After the U.S., research from Europe is predominant, with the UK and Germany producing the second and third largest crowdfunding research output respectively.

Figure A.8 Documents on crowdfunding by territory origin



(Source: Author, adapted from Scopus 'analyse search results' output)

⁵³ See SEC (2012). Jumpstart Our Business Startup (JOBS) Act. Retrieved from: <http://www.gpo.gov/fdsys/pkg/BILLS-112hr3606enr/pdf/BILLS-112hr3606enr.pdf> (Accessed: 19.08.2013).

Appendix B – Participant information letter



Denis Frydrych
Ph.D. Candidate
University of Edinburgh Business School
29 Buccleuch Place, Room 2.02
EH8 9JS, Edinburgh, UK

Reference: Participant Information Letter for Cory Cullinan (Doctor Noize Inc.)

Dear Cory Cullinan,

This information letter will provide you with detail information about the research work and should be read carefully in order to assist your decision about participating in this study.

Research project: Investigation of Doctor Noize Inc.'s (DNI) crowdfunding campaign on Kickstarter

Purpose of the study

I am interested in studying reward-based crowdfunding from the project initiators perspective. Analysing the DNI Kickstarter campaign would provide a case study which allows to understand more comprehensively the decision-making processes and actions taken in the pre-crowdfunding and crowdfunding process. While following the campaign it is aimed to measure the effect of specific actions on the final crowdfunding outcome.

Researcher

Mr. Denis Frydrych
Ph.D. Candidate
University of Edinburgh Business School
29 Buccleuch Place, Room 2.02
EH8 9JS, Edinburgh, UK
Email: D.Frydrych@ed.ac.uk

Methods and demands on participants (What I would like you to do)

The total interview time is planned not to extend more than 2 hours before and during the Kickstarter campaign, and 1 hour after the campaign. If access to the Kickstarter campaign is granted, the web data collection will be carried out by the researcher.

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EH8 9JS	e	business.school@ed.ac.uk
Scotland		www.business-school.ed.ac.uk

The University of Edinburgh is a charitable body, registered in Scotland, with registration number SC005336.

Proposed action plan			
Task	Time	Required Resources	Outcome
Phone/skype interview	<i>Before launch</i> of the Kickstarter campaign	Cullinan's management time, researcher time (60 min)	Open interview about the idea of starting a crowdfunding campaign: 1) Understanding the rationale for selecting crowdfunding, 2) Identifying the campaigns target, 3) Identifying the selected crowdfunding strategy, 4) Understanding the processes related to the pre-launch of a Kickstarter campaign.
Access to internal documents (initial campaign documents, minutes of meetings, pre-Kickstarter documentations, etc.)	<i>Before launch</i> of the Kickstarter campaign	Cullinan's management time (Create a file of documents) , internal documents, researcher time	Document analysis: 1) Analysing the process from initial campaign idea to the final Kickstarter campaign, 2) Text analysis to interpret the entrepreneurial narrative.
Access to the DNI Kickstarter page	<i>During</i> Kickstarter campaign	Researcher time, access to Kickstarter page	Web data collection: 1) Collecting daily snapshots of the Kickstarter page to monitor activities until the end of the campaign.
Phone/Skype interview	<i>Midterm</i> of the campaign or after the campaign reaches its target	Cullinan's management time, researcher time (30 min)	Open interview: 1) Recall the initiators feelings and experiences related to the Kickstarter campaign, 2) Identifying whether strategies, processes changed from the initial campaign plan, 3) Identify preliminary thoughts from campaign initiators regarding crowdfunding.
Phone/Skype interview	<i>End of</i> the campaign	Cullinan's management time, researcher time (30 min)	Open interview: 1) Revisit the initial campaign plan and compare to the final result, 2) Get insights about final feelings and thoughts of Kickstarter and crowdfunding, 3) Ask about specific actions that took place during the campaign.
Phone/Skype interview	<i>2-3 months</i> after the campaign end	Cullinan's management time, researcher time (60 min)	Open interview: 1) Understand processes after the crowdfunding campaign.

Possible risks, inconveniences and discomforts

To reduce any risk or inconveniences for your participation all data can be anonymised, if requested. I appreciate the fact that you are willing to share your experiences and acknowledge that information about specific business processes might be strictly confidential. Therefore, identifications may be eliminated and the interviewee has access to the data to monitor the analysing process. Moreover, the

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participant has always the right to withdraw from this study and can delete specific data.

Funding and benefits of the research

No funding institution is involved in this study. Findings from this study will be used for a Ph.D. thesis' research study on reward-based crowdfunding completed at the University of Edinburgh Business School.

Ethics review and complaints

This research project has been reviewed with the Research and Research Ethics Committee (University of Edinburgh, School of Social and Political Studies). However, for specific information and further questions please do not hesitate to contact me.

Next steps

Should you be interested in participating in this study and willing to be interviewed, please send your preferred date, time and place for the interviews.

I appreciate your time and consideration and am looking forward to hearing from you.

Yours sincerely,

Denis Frydrych

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Appendix C – Participant’s consent form



UNIVERSITY OF EDINBURGH
Business School

Denis Frydrych
Ph.D. Candidate
University of Edinburgh Business School
29 Buccleuch Place, Room 2.02
EH8 9JS, Edinburgh, UK

Participant’s Consent Form for

Interviewing Cory Cullinan (Doctor Noize Inc.)

I AGREE WITH THE FOLLOWING:

- (1) I read the Participant Information Letter and understand the purpose of this study.
- (2) I read the Participant Information Letter and understand the demands to participate.
- (3) I volunteer to participate in this research project.
- (4) I understand that the interview will be recorded and transcribed.
- (5) I can wish to anonymise the data to eliminate all identifications, as well as delete any specific data.
- (6) I can withdraw from this research project at any time.
- (7) I understand that this research is conducted according to the Research and Research Ethics Committee Standards (University of Edinburgh, School of Social and Political Studies).
- (8) I have been given a copy of this Participant’s Consent Form for my records.

Printed Name of the Interviewee

Date and Place

Signature of the Interviewee

Signature of the researchers

Denis Frydrych

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Appendix D – Data dictionary

Variables	Type	Definition	Values	Measure
ID	Numeric	Unique Identification (ID) number for each project, used for SPSS and Stata.	1 - 81,829	Scale
ProjectID	Numeric	Unique Identification number originated from the web data extraction. This ID is provided by Kickstarter as a unique ID number for each project. The projectID is randomly issued and does not provide any information on the time order.	5,971 - 2,147,460,119	Scale
Name	String	The crowdfunding project title as provided by the project founder. This is the title under which the project was listed on Kickstarter.	Text	Nominal
State	String	This variable indicates whether a project was successful (funding goal achieved), unsuccessful (funding goal not achieved), cancelled (project withdrawn by project creator), purged (by web data extraction system) or suspended (withdrawn by the platform).	failed=0 cancelled=1 successful=2 suspended=3 purged=4	Nominal
Currency	String	The variable indicates the currency used for acquiring financial capital. It also can be used as an indicator for the geographical origin of the project (e.g. USD = U.S., CAD = Canada, GBP = UK).	USD=0 GBP=1 CAD=2	Nominal
TopCategory	String	Kickstarter's definition of creative projects is broad and divided in 13 categories. Each project on Kickstarter must fit into one of the 13 predefined categories (guideline by Kickstarter).	Art=1 Comics=2 Dance=3 Design=4 Fashion=5 Film & Video=6 Food=7 Games=8 Music=9 Photography=10 Publishing=11 Technology=12 Theater=13	Nominal
Category	String	Each TopCategory has sub-categories. The sub-categories are represented by this variable. Kickstarter offer a total of 50 sub-categories.		Nominal
Creator	String	The name(s) of the project creator(s) for each project. The creator can be an individual, a group of people or organisations (non-profit, for-profit).		Nominal

(Appendix D Continued)

Variables	Type	Definition	Values	Measure
Location	String	The geographical origin of each project. Provided in the following form: 'City', 'State' (only U.S. projects). 'City', 'country' (projects from outside U.S.). This variable contains all geographical information.		Nominal
City	String	The geographical origin of a project, provided as the city name.		Nominal
USstate	String	The geographical origin of a project, provided as the 2 letter U.S. state abbreviation. This data is only provided for projects originating in the U.S.		Nominal
Country	String	This variable provides the information on the country from where the project is from.		Nominal
Updates	Numeric	The total number of published project updates for each project until the date on which the data was gathered.		Scale
Comments	Numeric	The total number of comments (including from the community, project supporters, project creator) for each project until the date on which the data was gathered.		Scale
Rewards	Numeric	The number of reward levels for each project. Kickstarter does not have a limit for the maximum reward levels. The maximum in our data is 139 reward levels for one project.		Scale
Facebook	String	The variable indicates whether the project creator linked the project to his/her/their Facebook account. This variable is a dichotomy variable.	No=0 Yes=1	Scale
FBFriends	Numeric	The number of Facebook contacts the connected Facebook account has at the date of the data collection.		Scale
FBShares	Numeric	The number of Facebook shares of the project at the date of the data collection.		Scale
Goal	Numeric	The funding goal, which the project creator defined for the Kickstarter campaign. This goal must be achieved in order to be listed as a successful project.		Scale
Pledged	Numeric	The funding that the project achieved at the end of the funding campaign. This number can be lower (implying an unsuccessful project) or higher (implying a successful project) than the Goal variable.		Scale
FundingRatio	Numeric	This variable is calculated as (Pledged / Goal).		Scale
Backers	Numeric	The final number of total supporters for each project.		Scale
Start	Date	The start date of the Kickstarter campaign (funding campaign). The date indicates that the project was online for the public from that date. Variable format: DD-MMM-YYYY		Scale

(Appendix D Continued)

Variables	Type	Definition	Values	Measure
End	Date	The end date of the Kickstarter campaign (funding campaign). The date indicates that the project can no longer collect financial capital through the campaign. It also provides the date on which the 'pledged' variable will not be changed anymore. Variable format: DD-MMM-YYYY		Ordinal
Duration	Numeric	The days between the 'Start' and 'End' dates. The Kickstarter campaign duration, represented in number of days. Variable format: DD. The Duration can vary between 1 day and 91 days (Kickstarter did have a limit of 91 days for projects in 2009, 2010 and 2011. They changed the maximum day in 2012 to 60 days).		Ordinal
Month	String	This variable represents the Month in form of MMM (e.g. Jan).		Nominal
Year	Numeric	The year in which the project was fundraising (2009, 2010, 2011, 2012, 2013).		Scale
MonthYear	Date	This variable represents the Month and Year in which the project was fundraising.		Nominal
TimeM	Numeric	This variable represents a time variable where May 2009 = 1 (first month of Kickstarter) and each subsequent month till October 2013 represents an ascending number (e.g. May 2010 = 13, May 2011 = 25, etc.).	1 - 55	Ordinal
Collection_Date	Date	The date at which the data was collected (23/10/2013).		Scale
Video	String	The variable indicates whether a project had a video incorporated or not in their pitch. A dichotomy variable where Yes=1 and No=0.	No=0 Yes=1	Nominal
RL1	Numeric	The price in 'Currency' for the respective reward level.		Scale
RL1backers	Numeric	The number of 'backers' for the respective reward level.		Scale
RL139	Numeric	The amount in 'Currency' for the respective reward level.		Scale
RL139backers	Numeric	The number of 'backers' for the respective reward level.		Scale

Notes: The data was collected on the 23.10.2013 and therefore provides cross-sectional data of the status of all projects at that date. RL was reduced to RL1 (minimum) and RL139 (maximum) in the table for ease of display.

Appendix E – Chronological case narrative

The case study, which is presented in chapter 5 (study three) in this thesis, describes the development of a creative entrepreneur and his venture that produces symphony orchestral music for children to educate and inspire them. The following case narrative is provided in order to present a more comprehensive overview of the case, which adds background information to the entrepreneur and his venture that are studied in chapter 5 (study three).

Background

From his early ages on Cory Cullinan connected with music. However, it was not the MTV mainstream pop music in which he was interested in, but rather the Mozart's and Beethoven's of classical music. For Cullinan, the classic composers were like 'rock stars'. Growing up in Los Altos, California, and having graduated with Distinction and Honours in Music and Political Science from Stanford in 1992, Cullinan always wanted to promote and make classical music approachable for children and high school students in order to inspire them. Therefore, after his time at Stanford and led by his ambition, he started composing music and succeeded with several national U.S. hits. Although he made a good living out of his projects and appeared to succeed, income fluctuated based on monthly sales: a typical issue for independent musicians. Thus, while continuing composing new music pieces, he decided to take on a high school music teacher position and became a soccer coach between 1998 and 2003.

“It was commercially ridiculous but it was less commercially ridiculous than what I had done before because I was actually pulling a pay cheque, right, and it was very rewarding.” (Cullinan, Interview 2011, 2)

Cullinan considered his time as a teacher and coach as crucial to his capability to create the right educational products and music designed for kids. Building upon his experience from his indie releases and teaching time, Cullinan left his teaching job and focused on producing music for different purposes such as documentary soundtracks before he assigned his effort to create his alter ego, Doctor Noize, under

which he put his efforts together to create inspiring orchestral music that is recorded for ‘the most important people in the world – kids’.

“I was ready to have another go at entrepreneurialism. Even when I was a high school teacher I was entrepreneurial, I refused to use any pre-existing music curriculum.” (Cullinan, Interview 2011, 2)

Cullinan began to think carefully about how to set up his business as Doctor Noize and on which key products the business should focus. While talking to other musicians in this industry he quickly figured out that most musicians generate the highest share of their income through their shows, and only a partial part comes from CD and merchandise sales. While he was interested in creating music albums and other products, this information required him to alter his business focus at the beginning.

“I took that [information] and I said ‘okay, that’s how I have to start the business obviously’. This required a change of philosophy for me, because at heart I am somebody who likes to create things. So that required a shift in my focus where I said ‘okay, I won’t make CDs and books and then just make US\$75,000 revenue a year.’” (Cullinan, Interview 2011, 2)

Despite the fact that other people in this business told Cullinan to focus on live shows and prioritise his resources on booking tours across the country, he decided to develop Doctor Noize into a multimedia business that produces family products and services. Having identified a clear gap in the market for children music he produced songs that became not just songs but a story with characters upon which he then decided to create supplementary products that go along with the music. One of his goals was to launch a CD and a book at the same time to interact on an audio-visual level with children and reinforce the story of the characters – following the character based teaching technique philosophy that Doctor Noize builds upon.

“I thought that kids’ music was a better genre for me because I thought that kids are willing to be more creative than adults. I also thought that there was a clear target market.” (Cullinan, Interview 2011, 2)

“Doing all these music projects I’d done over the years showed me that I could do very high level or complicated sort of cohesive music projects that were more than just songs. I had not succeeded

at selling a big project, but I knew that there are few people who can create a 45 minute work of music as opposed to just songs. I knew I could do that and I thought 'that's what I could do' and 'that's something different from what's out in the market right now.' (Cullinan, Interview 2011, 2)

Cullinan developed his music into larger more comprehensive pieces that tell stories and have educational elements for children. Cullinan invested 12 months working full-time on developing the story, characters and music for the first Doctor Noize CD (released in 2007). During this time, Cullinan received a large amount of support from his family and particularly from his wife. He did not have a job that provided a regular income during this time, and his wife was holding the family financially together. In spring 2007, a large children's radio station in the U.S. found out about Doctor Noize's music projects and wanted to play the released album and promote his CD on radio. The positive reaction from the radio station about his concept and approach provided him critical market validation but also legitimacy for his venture. Cullinan recalls the phone call between him and one of the key radio hosts as follows:

"The lady on the phone said: 'I'm halfway through your CD and I just want you to know that I get it and I think this rock opera approach to kids' music is awesome'. She continued saying that she want to promote the CD and the songs like crazy because she liked it. She also want to interview me, and promised to play the CD four times over the 4th July weekend in its entirety because it can be a huge hit on their radio station." (Cullinan, Interview 2011, 2)

It only took two months after this phone call until Cullinan had his first Doctor Noize number one hit song, which was played day and night at children's radio stations. This lead to wider market exposure of Doctor Noize's innovative concept and industry recognition such as being named as one of *Dr. Toy's* 100 Best Children's Products⁵⁴ in the U.S.. Individuals started to perceive Cullinan and his alter ego Doctor Noize as a successful entrepreneur who provides innovative educational music and products for children that are engaging with the whole family.

⁵⁴ For more information about Dr. Toy, see: <http://www.drtoy.com/about-dr-toy/> (Accessed: 12.06.2014).

“I now know from being Dr. Noize that you can appear very successful and be making US\$15,000 a year. However, at the core, every single individual in this industry [children musicians], are all in it for a wonderful reason. They think this would be a good thing to do and nobody at their core is in it to make US\$50 million.”
(Cullinan, Interview 2011, 2)

Cullinan’s idea caught on. The brand became well known nationally and started to attract a market abroad. His initial success and the increasing market demand positively assured Cullinan that he provides a product and service for a market that is not saturated yet – children’s music. In addition to the CD, Doctor Noize also started to perform live shows in which he continued to stimulate the creative process of his audience. His innovative engaging performance approach invites kids onstage and perform with symphony orchestras. At this point Cullinan realised that he was on the right track to turn his vision for Doctor Noize into a viable business model with the development of additional products. However, while his wife and family entirely financially supported the venture, Cullinan knew that he would need to find an external finance source to turn Doctor Noize into the multimedia business he envisioned.

Decisions for business growth

The success of his concept about music with integrated stories and characters for family media caught on and led to further business growth opportunities. By coincidence, Cullinan met Dave, an old college friend and a former Stanford Chamber Choral member. Cullinan learned that Dave became a successful manager; working for a Hong Kong based multimedia company focusing on digital media products. Catching up as old friends, Cullinan told Dave all about Doctor Noize, the character-based story approach for children’s music and that he will perform a live show the next day in the Bay area. While Cullinan was not in business pitch mode, Dave wanted to learn more about Doctor Noize and agreed to see the live show where a full venue with engaging and enthusiastic fans singing to Cullinan’s songs astonished Dave immediately. This show provided a successful proof of concept and market validation to assure Dave, who analysed Doctor Noize from a business perspective that business potential and untapped opportunities for further growth is

available. It was good timing, as Dave mentioned that his company in Hong Kong was looking for a brand in which they can become an investor and business partner to leverage the brand through their multimedia products. In particular, the Hong Kong company was interested in Doctor Noize's characters, which they wanted to monetise. After six months of negotiations, Cullinan teamed up with the company in Hong Kong and became the CEO and Creative Director of Doctor Noize Inc (DNI). Although it appears that Cullinan met his old college friend which turned out to be the beginning for a three-year business partnership by chances, Cullinan also believes that it was not only luck that made this happen, but this opportunity is also a result of a plan and obstinate pushing. Cullinan knew that when he heads in the right direction and keeps pushing, something good might happen. So with all this prior business moves, he was pushing to such an opportunity to come up.

"There hasn't been a single day since I signed the partnership that I have wondered whether I did the right thing. Having a salary and having a team to work with made me believe that this will work. I'm trying to make business decisions to make it work, but if it doesn't work, it still wasn't a horrible deal for me to be honest." (Cullinan, Interview 2011, 2)

"The one thing that is totally true is that the only reason I got the deal is that I was crazy and obstinate enough to keep pushing. I know it's a total cliché, but what happened was luck. But it was also part of the plan and what happened was the following: I was doing something unique, both in terms of the show and the products, and I was getting out there, and I did just happen to get my products and shows in front of somebody who could help me take it to the next level." (Cullinan, Interview 2011, 3)

Having closed the deal in August 2010, Cullinan felt quickly that his project-based Doctor Noize venture turned into a professional business with investors from Hong Kong and a three-year business plan with specific commercial objectives in the pipeline. The partnership started positive and quickly DNI's multimedia line expanded to 3D animated books, and DNI's first mobile app that was based on his music and was downloaded more than 300,000 times in over 25 countries.

"The point I've gotten, where I've never gotten before, is that I really have a legitimate chance through this partnership and support for a successful career. It shows me that this can be a successful brand and that's exciting." (Cullinan, Interview 2011, 3)

“If it doesn’t work it’s not because I wasn’t creative, it’s because I wasn’t smart enough. However, I hope that I’m smart especially when I’m playing with other people’s money. I would rather lose my own money than somebody else’s money.” (Cullinan, Interview 2011, 3)

With the financial injection and a three-year plan in place, Cullinan invested into the business and employed a leading booking agent from the children music industry to promote the brand but also to book live shows countrywide. He also involved two friends who already helped him in his early days of Doctor Noize with the creative character development, illustration, digital animations and internet presence. The Hong Kong partner was supporting DNI with the development of the digital multimedia product portfolio. The capital was much required to build up the business fundament for future growth. Cullinan invested many resources into business development tasks; however, he failed managing the transition of his team from a project-based venture to a business culture. Critical deadlines and specific objectives were often not met. For example, while the booking agent was responsible to organise and book live shows, most bookings still were directly done through Cullinan himself. In addition, the animated book was published with almost a one-year delay. It was not solely a people management issue, but also an inherited laid-back attitude with ‘friends’, rather than having a professional business approach with his ‘business team’. Cullinan was aware that this attitude and management style could not continue in order to exploit the opportunities that come with the partnership.

“I have to demonstrate that I’m not just some creative idiot who wants to be a perfectionist but doesn’t understand how business works. This isn’t playtime anymore. It’s like you know what you have to do, you’ve told me you can do this and now you have to do it.” (Cullinan, Interview 2011, 6)

While DNI continued to perform shows, Cullinan also focused on developing a second CD as a follow-up from the first CD. Yet, he wanted to offer a much more sophisticated story and music that features a full symphony orchestra. Cullinan was able to secure a commission by *The McConnell Foundation*, an independent foundation that supports Art and Culture as well as Community projects, to compose a 60-minute orchestra, which premiered with the *California’s North State Symphony*.

The second CD was released and DNI performed the album during more live performances across the U.S. Although DNI had developed a product range, his live shows were still his main product (analogous to most musicians in this particular market). Cullinan could not monetise his apps and book that use the animated characters as successfully as he planned. Partially, this was a result of his managerial mistakes not to push the products through traditional sales activities and channels. Another reason why sales did not take off was that DNI's investor and partner did not provide the assistance and support in leveraging their international sales channels. Relatively quickly into the partnership, Cullinan felt that intercultural business boundaries increased difficulties to work on the same line and an increasing commitment to a growing portfolio of firms and projects in Hong Kong decreased the available resources for DNI's business development. The three years were characterised by non-complied terms, missed deadlines, non-delivered products and late salary payments. Increasing doubt and independent management but also resource constraints from the Hong Kong side led to the non-renewal of the contract. The partnership expired with the end of the three-year agreement in August 2013. However, before the official expiration of the contract, the Hong Kong partners suggested Cullinan to look for new ways of finance to fund some of his planned activities. Having established a proven record of accomplishment with the creation of a strong brand, a solid product portfolio and a unique and innovative character-based orchestral music approach for children, Cullinan had to commit himself to finding new ways to fuel his ventures business growth.

New developments require new decisions

Cullinan could have leveraged on the prior partnership with an international investor to find new external finance sources. However, Cullinan decided not to exploit the partnership and the linked legitimacy and market validation for DNI, but rather to look into a way to receive capital by not negotiating with venture's equity and to compromise his independency. Cullinan knew that by booking and playing enough shows he is able to make a sufficient income to continue as DNI without a partnership. However, Cullinan will not have the resources in terms of time and capital to work on new projects to develop the business. Therefore, into the last

months of the partnership Cullinan started to think about the time after. One of the key partners from Hong Kong and a good friend and supporter of DNI, had demonstrated a positive interest into crowdfunding and particularly into running a Kickstarter campaign during the partnership. It was a year before the partnership expired that the partner from Hong Kong had actually run one Kickstarter campaign and successfully raised money for a project. The partner communicated the positive experience about crowdfunding to Cullinan six months before the partnership ended. Thus, Cullinan was introduced to the idea about crowdfunding as a project-based funding approach through his business partner. Although, his business partner nurtured the first idea about crowdfunding, the close review about crowdfunding as a funding route for DNI's new project was further influenced by the necessity of receiving funding in a timely manner but also by the requirement not to dilute equity and release more percentage of the business to external partners. Cullinan was very reflective about his decision to sign the partnership three years ago and about the time during this agreement. It appears that he lost trust in the strengths of international investors. He is having his vision and long-term strategy for DNI and want to move on with his new project without any constraints linked to it. Thus, crowdfunding provided a potential project-based funding approach. However, Cullinan did not want to run a crowdfunding campaign while being in the business partnership, because it would complicate the crowdfunding process and business relationship. Nonetheless, it is interesting to see that alternative funding sources were not an option and not looked into in more detail once crowdfunding was set as the potential funding strategy.

“It was nice to have the partnership years because I could pull a salary for once. As supposed to having an entrepreneurial career where I had to go out and make it. I had a salary and this is how much I made per year. Now when the three years are over I'm back to the entrepreneurial mode where the way I earn money is playing shows. This starts in a week when I play at Google. But it's different than a salary. So I don't have the money personally to do this project [third music album] on my own.” (Cullinan, Interview 1)

“It might be easier to do crowdfunding. I'm checking Kickstarter instead of going around and try to find some other funding sources.” (Cullinan, Interview 1)

Once the decision was made to opt for crowdfunding, the attitude towards crowdfunding changed quickly from an initially sceptical to a very positive one. This positive attitude amplified during the process of researching and preparing for the crowdfunding campaign. Further, as Cullinan required a one-off investment for a particular project rather than a long-term investment to operate DNI, crowdfunding offered Cullinan a project-based funding option that he was seeking.

Building on his two albums, Cullinan wants to continue the story of his characters in a third music album. Cullinan often refers to this new project as his dream project – a double-CF musical theatre, which involves a full orchestra to introduce children to the world of the orchestra. The ambition for Cullinan’s next entrepreneurial project for DNI is high.

“I want to record a music album and I expect it to take US\$125,000, from which almost half of it or even one-third of it is hiring the orchestra. And through all available resources I don’t have much funding as I initially was going to have from my partnership.” (Cullinan, Interview 1)

Cullinan believes that this album is crucial for the development of DNI but also for himself as a musician. Parts of the album have been composed months ago during the Hong Kong partnership, and DNI performed short concerts of 45-60 minutes with different orchestras around the country.

The next steps for Cullinan is to work on the production plan for this album and to secure the funding to start production.

Getting the crowdfunding campaign underway

Early in 2013, Cullinan started to get more familiar with crowdfunding. The whole crowdfunding campaign preparation can be split into four phases: 1) desk research, 2) crowdfunding platform research, 3) advisors feedback, and 4) campaign preparation.

Once the Hong Kong partner stimulated Cullinan to look into crowdfunding, he started to do desk research on crowdfunding.

“The first thing I did was that I looked for a bunch of articles on Kickstarter. I probably read 10 articles and some of them are very detailed and geeky.” (Cullinan, Interview 1)

Most articles focused on Kickstarter and provided initial understanding about success drivers for Kickstarter. Cullinan improved his understanding about the characteristics and governance issues linked to crowdfunding. For example, he read facts such as 30 days is the most effective time for Kickstarter campaigns. Any campaign longer than that resolves diminishing. He did not searched for specific articles but mainly ‘Googled’ for crowdfunding. Most articles were by either people who did Kickstarter campaigns or by marketing-type and business-type people who are interested in how crowdfunding works. Crowdfunding is still an emerging market and the industry is changing. Although at that time particular crowdfunding consultancy ventures operated, for Cullinan it was not an option to use a business consultant.

“I read a bunch of articles on how crowdfunding works. That was cheaper than hiring a business consultant.” (Cullinan, Interview 1)

Interestingly, although a broad range of different crowdfunding platforms are available Cullinan decided to select Kickstarter for his crowdfunding campaign. He also did not researched for other platform options. Based on his initial research he was convinced that Kickstarter is the right platform for his project because it has the necessary community size but also the market exposure.

“I selected Kickstarter because it’s the biggest crowdfunding platform. Actually, I assume it is. I believe in it from what I’ve heard of. And I don’t know much about these things so I assume that it’s the biggest crowdfunding platform.” (Cullinan, Interview 1)

Before Cullinan moved on to think about the campaign pitch development and campaign strategy, he spend a couple of weeks researching different campaigns on Kickstarter.

“What I did in the last couple of weeks is that I have been looking at a whole bunch of different successful Kickstarter campaigns. Mainly projects that were very successful.” (Cullinan, Interview 1)

By investigating successful campaigns, Cullinan quickly obtained understanding about some of the key features of successful Kickstarter pitches. Cullinan reflected

on key lessons learned by pointing to one very successful campaign at this time on Kickstarter; the Veronica Mars⁵⁵ movie that raised US\$5.7m in funding in April 2013.

“I found it interesting to observe how campaign supporters were formed for projects. In Veronica Mars’ case [a Kickstarter campaign], only half of the audience were people who wanted the movie. But also I think the other half supported the project because they did a really good job with the Kickstarter campaign.”
(Cullinan, Interview 1)

Cullinan particularly points to the importance of the campaign video pitch. What he saw from successful campaigns is that the video is not just an audio-visual pitch about the product that is going to be, but rather an engaging short story. Good campaign videos do provide a short scene of the final show or a scene with the product to communicate to potential backers that this is what the creators are trying to do. Thus, the challenge is to create a video that is not targeted to the pre-established fan base and community, but also to stimulate a new target audience within the crowdfunding platform communities.

“I spent hours looking at Kickstarter campaigns that were successful. I started to see and understand the useful things that made them successful. In almost all cases they have a compelling video. And at the end lots of money.” (Cullinan, Interview 1)

Around February 2013, Cullinan realised that the video is one of the key aspects in the online campaign. Thus, visualising and writing campaign video scripts was one of the first tasks Cullinan focused on. He has written three different versions of the Kickstarter campaign video – from which all followed more a good cause approach rather than an entertaining and engaging story – before he came up with the idea of the actual video used for the Kickstarter campaign.

“My first video draft was sort of like ‘here is why this project is important and why I want to do it and why it is important for the world’. I realised that this was not probably the way to engage people. And then I recognised that what I needed to do was to write a 5 to 6 minute mini-musical about what I’m doing.” (Cullinan, Interview 1)

⁵⁵ The ‘Veronica Mars’ movie Kickstarter campaign can be accessed through: <https://www.kickstarter.com/projects/559914737/the-veronica-mars-movie-project/description>

Cullinan invested most time and resources for the development and production of the campaign video. He was convinced that the video is the key success driver of the campaign.

“If there is one thing that can get us money – that (video) will give us enough money. Because if you watch it – it’s really the product that we are going to do. So either it engages people and people will support it or the project should not get the money and support because nobody wants it anyway.” (Cullinan, Interview 1)

Cullinan put the viability of his dream project onto this campaign video. As it was such a heavily weighted part of the whole campaign and project, he aimed to record a mini-musical with all key individuals involved in it. In developing the video pitch, Cullinan was continuously communicating with his business advisors, a mixed group of three experienced individuals and close friends. He also communicated drafts and ideas of the campaign to his close network of musicians, and music industry professionals and experts to receive early feedback on the development of his campaign. Some of the feedback was so positive that it appears that the simple communication about doing a video for a crowdfunding campaign opened new business opportunities during the early stages of the crowdfunding preparation. For example, two friends from the ‘Lone Tree Symphony Orchestra’ and ‘Denver University’ came back to Cullinan with positive feedback and wanted him to connect with the ‘Colorado Symphony Orchestra’ (CSO) to make DNI’s new album a Colorado production that inspires and energises local musicians. Cullinan initially thought about recording the music with symphonies in the Czech Republic where pure recording symphony orchestras are available, which offer a more attractive value-for-money ratio.

However, Cullinan’s advisors questioned him about his options – going abroad to reduce costs or producing it locally and try to increase benefits with being associated with the CSO and the local music scene. Therefore, the critical question for Cullinan at this stage was whether he wants to focus on the production of the album with an orchestra solely or he want to generate additional benefits such as a partnership or long-term affiliation to a national and local institution such as the CSO for his business development. Furthermore, Cullinan advisors forced him to think carefully about running to quickly into the idea of crowdfunding. It was often highlighted

during discussions between Cullinan and his advisors that working with local organisations that support art and creative projects might be a more attractive funding approach than paying around 10% of the raised funding to the crowdfunding platform and its money transaction partner⁵⁶. The initial local support for producing and recording this album was positive but Cullinan was careful in how to interpret the support for a long-term relationship. On the one side, he agreed with the additional benefits and potential new connections with symphony orchestras and schools to perform and be involved in. However, he was concerned that this also might be an exaggeration and the extra benefit is marginal. The issue about working in a partnership setting was the key concern for Cullinan.

“I want to produce and record the album here in the U.S., but I also want to make sure I’m in complete control of the project. So I don’t give a flying fig about how the money is raised as long as I’m in control of the money. It’s experience after three years of having too many cooks in the kitchen with the international partner. I know how that prevented things from getting done. I need to be able to drive the project into the direction where it needs to go without getting to buy-in my partners every two weeks. What if the local groups want some ownership of the project? Then we’re back to square one.” (Cullinan, Email 24)

Noticeably, Cullinan had big concerns to be locked-in in new partnership agreements and did not want to lose his independency for the creative and business aspect. After continuous discussions with his advisors and potential local supporters, Cullinan decided to explore as many local avenues as possible. However, at the same time Cullinan continued moving on with the crowdfunding preparations and tried to get the music stars booked for the production of the Kickstarter campaign video. The rational is to see how much support and funding Cullinan can raise before he launches the Kickstarter campaign, and then reduce the funding goal by the amount of secured capital. Further, Cullinan took a strong leadership position in terms of where to record the album.

⁵⁶ Kickstarter takes per successful campaign a 5% fee of the total funds collected, and a 3% payment processing fee, in addition to a fixed charge of US\$0.20 per pledge. More information about Kickstarter’s fee structure can be obtained from here: <https://www.kickstarter.com/help/fees?country=US> (Accessed: 20.02.2015).

“I think we could put together a suitable orchestra here in Colorado. However, it is more of a wild card. The BRNO orchestra in the Czech Republic earns their living making recording clients happy. It will sound great if we do it there. Here, it will ‘probably’ sound great. We might spend US\$50,000 on an orchestral recording here, and it’s not good enough to use. The recording in the U.S. is more of a wild card than BRNO. I think the chance is worth it for all the goodwill that might happen to ‘go America/go Colorado’.” (Cullinan, Email 24)

Cullinan moved on to schedule getting the music stars on-board for the album, and for recording the crowdfunding campaign video. Surprisingly, it was a relatively straightforward process to ‘persuade’ the musicians. A key individual in the process to bring the well-known opera singers to this project, was Cullinan’s close friend and conductor of DNI – Kyle Wiley Pickett. Kyle suggested and connected Cullinan to Nathan Gunn, a leading U.S. opera singer for one of the earlier DNI music album. It was no surprise that Gunn immediately wanted to participate in this new project.

“I would love to do this project. I’m absolutely into it. I love the mission you are on!” (Gunn in email correspondence with Cullinan, Email 25)

Gunn is an early supporter of DNI and was critical for this particular album project to connect Cullinan to another colleague from the music industry who appeared to be interested to join the project as well.

“I was thinking that you may want to add a female element to the mix. I have a colleague who could be a good addition.” (Gunn in email correspondence with Cullinan, Email 25)

Not even 24 hours after Gunn’s suggestion, his colleague called Cullinan and said that she is very interested in joining for this project. Personal networking but also to utilise close friends is a critical element for Cullinan and his DNI crowdfunding project. With strong people involved and associated to the project, the venture creates traction for further support. Cullinan triggered support from individuals and local authorities by actively communicating and engaging with well-known individuals in the industry to quickly build up reputation to facilitate capital assembly for the production of the album. Cullinan has entrepreneurial characteristics and can pitch and sell ideas successfully with his positive attitude and

optimism. He used those skills to communicate and display externally that this new DNI project is going to be successful. This was actually one of his key tasks for the whole process of setting up and running the campaign.

“There is this sort of positive buzz going on, we have some talented and influential people who are interested in the project. But like I said, we haven’t succeeded yet. But it’s not looking bad right now and I do think it is because at the moment I’m successfully giving the people the vibe that I am successful and this is going to be a success.” (Cullinan, Interview 2)

Cullinan is not only exposing a positive vibe to convince individuals to be part of this particular project, but also to be a supporter of DNI’s purpose and mission. At particular stages, individuals were convinced by Cullinan’s proposal that the project sounds like something fun and purposeful. After receiving the good news that both U.S. opera stars are joining the project within 48 hours, Cullinan’s concern about the recording location (U.S. or the Czech Republic) emerged again.

“With Nathan throwing their weight and talents behind it, I may also review with more seriousness the possibility of recording this project with an American orchestra. We all agree that it’s more important to get a great recording than to record in America - but if we have a few big names in opera attached, and an American orchestra, I do believe this will make it more likely to get performed live here in the states faster and more often. People in the business know each other - the buzz will move more quickly.” (Cullinan, Email 25)

The focus to go for a local recording rather than going abroad shifted. As earlier mentioned, one of Cullinan’s friend already connected him with the CSO for this project. Once Cullinan had secured two opera singers for the project, the project transmitted a successful and legitimate signal, which amplified local interest and support.

“They (the CSO) had already heard about that great thing which is going on and they already wanted to do it before I even contacted them. Which was pretty amazing because four months ago, they would probably say: ‘who the hell is Dr. Noize and why would we want to do a children’s album?’” (Cullinan, Interview 2)

Cullinan envisioned the video as the critical element for the crowdfunding campaign and put lots of effort in writing the script for the final mini-musical version. However, he did not have the money to film a proper campaign video. Out of necessity, he started a little pre-fundraising campaign to collect the funds for recording the video. Cullinan send out an email to DNI's network and community to ask for financial support for the video recording. Cullinan offered supporters to credit them as a producer in the video in exchange for their financial support. The pre-fundraising activity ended up successful and raised US\$7,500 toward the video production. This was enough to get the logistics ready. However, the closer Cullinan got to the production of the video, the more he realised that the video is not the final product for sale, but a promotion video with the goal to engage potential supporters to fund the music album.

“It quickly became apparent to me that even we have those great talents if we would actually do a top production quality video, which will match the production quality of the album, the video production would probably cost US\$20,000-US\$25,000. And we don't have this budget. Therefore, I had to change my perspective a little bit and keep remembering that the goal of this video is promotion and raising money and it is not a product we are making for sale. However, we were banking on the talents involved, and the fun vibe and everything would make people get it and like it, and make you like the video anyways.” (Cullinan, Interview 2)

DNI's project in its developing state created a positive message. Some talented and influential people are interested in the project, which stimulated further interest and attention. Once the recording of the campaign video was completed, Cullinan received some encouraging signs from showing it to his friends, who spread the word about the DNI project.

“We keep communicating that we want to do our show to several people and everyone thinks it looks really fun right now. They love the music and the performances and they usually say that I got the right people. Isabel Leonard is hilarious and Nathan Gunn is fantastic.” (Cullinan, Interview 2)

Cullinan showed early versions of the campaign video to a couple of his friends and some key individuals who are connected to local funding institutions and the music industry. Their positive feedback about the campaign video facilitated new

opportunities for potential funding sources. Some individuals told Cullinan that they might be interested in making a substantial donation to the project, others wanted to connect Cullinan to prospective big donors. It is interesting to see how quickly new confidence about securing the required funding through other means challenged Cullinan's plan to use crowdfunding. It is probably the flexibility and possibility of crowdfunding to cancel the plan without large losses but also to be able to 'recycle' material from the campaign for other means, reducing the loss.

"At this point I'm not even sure if this video is ever going to reach a Kickstarter page. It is possible that we'll get no money from these sources and it will serve as our Kickstarter video." (Cullinan, Interview 2)

In particular, Cullinan received two promising phone calls from two different groups of potential donors. One group is located in Silicon Valley, CA, U.S., the other in China. The individuals who connected Cullinan with these individuals are both suggesting that these sources are interesting opportunities to 'go big'. More specifically, the production of the campaign video might have already served its purpose before it goes online.

"Your Kickstarter video might be better used showing it to four very important people in Silicon Valley and just having them spot the whole thing, than 40,000 people on Kickstarter." (Supporter rephrased by Cullinan in Interview 2)

While the opportunity from China turned out not to be an attractive and serious option, eventually, Cullinan met the one group of potential big donors From Silicon Valley in Palo Alto in August 2013 when DNI performed a show there. The meeting did not result into the promising big funding injection but secured Cullinan a generous US\$5,000 donation and a valuable learning experience for pitching his DNI project. Different demographics of donors have different motivation to support projects and are interested in different information. Cullinan took these insights and changed the structure of his Kickstarter pitch again. He learned that some people prefer to have a quick pitch and do not spend more than 5 minutes on reading information about the project. Others want to receive more information about the project and spend around 10-15 minutes on the pitch. The last group of individuals want to spend more than 20 minutes to get to know everything about the project.

Cullinan addressed these issues and made changes to his Kickstarter pitch accordingly, which resulted in a pitch that incorporates these three formats.

“I think I have done the Kickstarter pitch right now. It gives the options to choose your level. There are three levels available for you. There is an almost no detail, a medium detail, and there is a ‘crazy involved’ detail if you go to the business plan document.”
(Cullinan, Interview 3)

Another interesting twist Cullinan figured out is that big donors want to make tax-deductible charitable donations.

“People who have a fair amount of money like to give money to projects that are good for both the project and themselves.”
(Cullinan, Interview 3)

DNI and Kickstarter are not able to collect tax-deductible donations. The meeting with potential big donors in person was an insightful experience as Cullinan learnt that he might miss big donations by simply going through the Kickstarter route. This triggered Cullinan to investigate alternative options to design a fundraising strategy that allows receiving tax-deductible donations. The CSO, as an organisation of charitable donations can accept tax-deductible donations. Cullinan negotiated with the CSO to receive tax-deductible donations through the CSO, which will be restricted to the DNI project. This appeared to be the most straightforward solution to this concern. As such, individuals are not donating the money directly to DNI, but rather through the CSO in order to make their donations tax-deductible. Cullinan will use the amount of money that is on the CSO account but restricted to his recordings to pay the CSO. With this solution, Cullinan offers people who are interested in giving more to the DNI project a suitable benefit to do so.

The initial positive feedback and vibe around the DNI project made Cullinan recognise that there should be enough support to realise his dream project. However, at this stage it is up to Cullinan and his decisions and managerial processes to raise the required capital, and to produce and deliver the product.

“If I spend the next couple of months doing the crowdfunding campaign and it doesn’t work, then I’ll be looking at six months where I hardly will make any money because I haven’t really

booked my shows between now [July] and December 2013.”
(Cullinan, Interview 2)

The crowdfunding campaign

“Kickstarter is just ‘boom’, it is about ‘here is what I’m doing and here is what I need to get money for.’ So that’s the reason we decided to do a Kickstarter campaign.” (Cullinan, Interview 1)

Cullinan was very specific and a creative perfectionist in the pre-crowdfunding phase. While the preparation for the campaign video took most of Cullinan’s resources and focus, he still was performing live shows. However, having only secured US\$7,500 for producing the campaign video, and a US\$5,000 check from the big donors from Silicon Valley, California, U.S., he knew that the real sales is yet to come. Due to some of the developments and opportunities during the preparation for the crowdfunding campaign, some tasks and processes took longer than initially expected. Particularly, digging around and perfecting the campaign pitch took months, but also figuring out the issues regarding tax-deductible donations with the CSO and networking with other potential funding sources were resource intensive. Although, Cullinan had more time tinkering around the crowdfunding campaign, he did not spend much time in planning the launch of his campaign but rather redefined and developed the pitch. So in terms of launching the campaign, Cullinan did some additional desk-research and read articles about how to launch a Kickstarter campaign successfully. He was aware about the best practice and the importance of a strong campaign start, and did research on how to identify the right network of people to go and promote the DNI Kickstarter pitch. Cullinan also tried identifying who might be the group of people most interested in supporting the project.

“Once the Kickstarter campaign is going online, I need to be spending tons of time, actually most of my work time trying to get people to email, talk to friends about this, and trying to get blogger to write about the project. I need to be pushing this.” (Cullinan, Interview 3)

The strategy and resource requirement for the official Kickstarter campaign launch was clear to Cullinan. The CSO was set-up to receive tax-deductible donations since September, and on October 2nd 2013, Cullinan pressed the button to launch the DNI

Kickstarter campaign. Cullinan knew that the next 30 days are going to be the most intense part of the whole crowdfunding process.

The very start of the DNI fundraising campaign on Kickstarter looked promising as more than 10% of the funding goal was collected during the first day. However, the following three weeks did not look encouraging. Although Cullinan knew that he had to push the campaign and mobilise his networks once the DNI campaign is online, he had other committed work for DNI, which were time-consuming.

“The campaign was looking disastrous after a week. I kind of botched the launch of the Kickstarter campaign. The reasons for this are not impressive, but involved a bunch of family obligations and business matters.” (Cullinan, Interview 4)

The first weekend into the Kickstarter campaign, Cullinan had a booked DNI show, which took all his time getting the performance prepared and set-up. In addition, the day after the launch, Cullinan went on a long ahead planned three-day family vacation. Therefore, at the time when the DNI campaign launched on Kickstarter, Cullinan did not have done the things that are recommended to do in the first few days of the campaign such as contacting his network, sending out press kits through the press contact list he had developed for DNI, and drumming up enthusiasm. Instead, Cullinan was busy in performing a DNI show and dealing with daily business matters. When he came back from his vacation, 7 days into the campaign the project just received around US\$7,336. Cullinan knew how serious the situation was because during his research, most articles tell that the majority of capital is collected at the start and at the end of the crowdfunding campaign, but almost no money comes in in the middle – and Cullinan was in the middle of his campaign. In addition, the CSO did not receive as many donations tagged for DNI at the beginning as Cullinan expected. Both funding channels did not appear promising at that time. Cullinan recalls this moment as follows:

“There was almost dead silence at the start of the campaign. Honestly, I think to some degree that’s because I bungled the launch. I had people saying: ‘This Kickstarter has already failed. This is not going to work. We must move on to the next thing’.” (Cullinan, Interview 4)

Based on prior empirical studies the campaign had at this stage a higher probability to fail than to succeed. The signs did not look good for Cullinan with two weeks to go and around US\$40,000 under the funding target. However, Cullinan could not cancel the campaign. He reflected on all the resources that have been already put into the campaign development and Cullinan could not stop thinking about the encouraging and enthusiastic individuals who accompanied him on his path.

“I’m not going to bed for 30 days thinking that I gave up on this campaign after four days or five days. That is ridiculous. So we see it through and if it doesn’t work, it doesn’t work. But it won’t be from lack of trying.” (Cullinan, Interview 4)

Cullinan’s close friends and family started to increase their donations and a couple of big donations came in, which improved the numbers on the campaign site, as the received funding was not as low anymore. However, that did not stimulate other individuals to start supporting the project. A week before the campaign end, Cullinan had raised US\$13,201 out of the US\$50,000 funding goal. With all his energy, he finally started campaigning. On day 22 of the campaign, Cullinan published a first campaign update and started to send out personalised emails to his friends. One of the big turning points in the campaign was that Cullinan send out a personalised video message to some of his contacts. His advisors and friends recommended him to show potential supporters the personal story behind the DNI project – it is important to show why this project is so important for him. Cullinan recorded a video, just him sitting in front of his computer, where he provided personal information and talked about his inspiration for this project. It turned out that the video engaged people to contact Cullinan and started to trigger contributions to the campaign. One of his advisors commented on the importance of this video as follows:

“I know you want people to be giving to orchestral music for kids. I know you want that. But that is actually the second thing people like to give to. The main thing people like to be giving to is you. Are you the person that they trust and are you a person whose purpose is valuable? And all the other stuff is secondary.” (Advisor rephrased by Cullinan, Interview 4)

Cullinan became smarter throughout the campaign, meaning that he understood what works and where he needs to focus in his campaigning efforts. He started to engage

with potential supporters who contacted him after they received the personal video. Cullinan was following-up emails and contacting everybody, but most importantly, he became instantly responsive to everyone: answering emails within 30 minutes 24 hours a day. He did not sleep a lot and was online and working on the campaign all the time. Cullinan stopped all other DNI commitments during this time. Cullinan quickly had engaging email communications with several people. This reassured him that a community of individuals exist, which are willing to support the project when it still needs the money to reach its funding goal in the last days. However, even three days before the campaign end, the funding amount was US\$20,000 short from the goal. During the last days, one particular project supporter, who already gave US\$1,000 to the campaign started having a back and forth email conversation with Cullinan. Within few days, this one supporter increased the support to US\$10,000. Interestingly, another supporter gave US\$7,000. It turned out that both big supporters are friends from the individuals Cullinan met in Silicon Valley during summer and received the initial US\$5,000 funding.

“None of that would happened if I haven’t had that meeting in the Bay Area back in August. This connection ended up yielding a lot of donations.” (Cullinan, Interview 4)

All of the sudden, the campaign was within reaching distance of the funding goal. Particularly, as Cullinan was emailing with lots of potential supporters he understood that many people are interested in the campaign but have not yet committed their financial support. Some potential supporters were following the campaign and ‘watching the numbers’, meaning that they did not invest in the project yet, but would be willing to make a financial contribution to reach the funding goal at the end.

“By the end we had this big group, dozens of people who were committed to making this happen. By the night before the campaign ended, I knew that it is going to succeed. I knew from all those correspondents that I had those various people who could make the difference, and who were planning to get up and were looking at the numbers. I knew at that point that it was going to happen.” (Cullinan, Interview 4)

The longer Cullinan was into the campaign, the more he got into the ‘Kickstarter politics’. Before launching the Kickstarter campaign, Cullinan assumed that funds would derive from two funding groups. Half of the money would come from ‘small’ donations, financial support from US\$5 to US\$500, and the other half of the money would be assembled through ‘large’ donations, any donations from US\$500 upwards. In addition, Cullinan was aware that if he would not receive large donations the campaign would not reach the funding goal. Cullinan felt uncomfortable as the expected large contributions through the CSO were still due. Furthermore, he knew that small donations would not total up to the US\$50,000 on Kickstarter. Thus, Cullinan tried to mobilise people who he thought would want to contribute larger amounts, but they mostly declined. However, he knew that a couple of individuals were willing to contribute during the last day when the DNI project still was low of its funding goal.

Cullinan has gone through major challenges during the campaign, and aimed to overcome the slow campaign start and the ominous signs from the first three weeks of the campaign. The campaign evidence showed that the DNI campaign already failed. However, Cullinan did ignore these signs and was motivated to run the campaign until the end. He managed these challenges and turned a 30-day Kickstarter campaign marathon into a 7-day campaign sprint. After a short night and lots of email correspondence, Cullinan woke up on the last morning of his Kickstarter campaign, had Kickstarter and his emails up online on his computer and knew that there are enough individuals who are interested in the DNI campaign and more importantly willing to support the project during the last minutes.

“Ironically, the last morning of the Kickstarter campaign was hilarious because unlike all other mornings the donations were flying fast and furious. Literally, every 30 seconds I received emails from Kickstarter saying somebody had given US\$100, somebody had given US\$200, US\$500.” (Cullinan, Interview 4)

The ‘small’ supporters who have not contributed to the campaign yet, but followed the progress, are starting to contribute to the campaign. Cullinan reflects upon the last three hours of the campaign as follows:

“About three hours before the campaign was set to end, we had maybe US\$3,000 or US\$4,000 to go and somebody came in and gave a US\$5,000 donation. Somebody had given a big donation. And ‘boom’ it was over and we were at US\$51,700 or something. I had this hilarious reaction. My first reaction was not ‘awesome we made the campaign’, which is ridiculous because 72 hours before I still wasn’t sure whether we will reach the goal. My first reaction was: ‘Oooh, you shouldn’t had given that big donation right now, because tons of people are still giving’. And I correctly predicted that most of those donations would stop as soon as the campaign received the goal of US\$50,000. As soon as that big donation came in and put us over the top, I think we got nine more donations after that. However, it wasn’t that people were donating every 30 seconds anymore. They came in every 30 minutes. But of course my second reaction was: ‘fantastic we made our goal’.” (Cullinan, Interview 4)

Cullinan got into the politics and strategy of how to raise money through Kickstarter at that point that he comfortably knew that the campaign would reach its funding goal. Moreover, he also correctly predicted that half of the funding were from small donations and half from large donations. Once the campaign raised the funding goal and officially ended, Cullinan and the DNI project were perceived as a successful entrepreneur and project. The Kickstarter success then triggered additional larger donations through the CSO. Although Cullinan expected some large donations coming through the CSO before and during the Kickstarter campaign, almost no donations were made until after the successful Kickstarter campaign end. Potential supporters like to get involved with successful projects. As Cullinan did not have this initial success in the Kickstarter campaign in the first three weeks, he could not communicate a predetermine success to potential supporters and less people were keen to get involved in this project.

“When somebody visits the Kickstarter campaign page a week or two into the campaign and there is US\$6,000 to a US\$50,000 funding goal campaign, people are like: ‘Uh, this project is not going to make it. I am not wasting my time on that’.” (Cullinan, Interview 4)

The key point is to communicate confidence throughout the campaign. Cullinan might have failed in the first three weeks of his Kickstarter campaign to communicate this confidence, however, managed to turn it around and succeeded in demonstrating that the DNI project will happen. The DNI Kickstarter campaign

officially ended on the 1st November 2013 with US\$51,904 in funding raised from 218 supporters around the world.

“What really makes the difference is when you go out on the campaign trail and you shake a bunch of people’s hands. [...] Then all the sudden they are personally more connected to it. [...] When I engaged with people, they were more involved in it and it seemed to go further. Then what is interesting is that everybody saw that this is a great success.” (Cullinan, Interview 4)

The time after the campaign - business as usual?

“There is this momentum and perception now that this is some big success story. But behind the scene I’m still struggling to figure out how the hell does this all will work.” (Cullinan, Interview 4)

Cullinan succeeded in raising his funding goal through Kickstarter. However, the received funding does not cover all the costs for producing the album. The estimated full budget for the production of the album is calculated to be around US\$110,000 - US\$125,000. As such, Cullinan did only raise 50% of the overall required capital through Kickstarter. Early in the crowdfunding process, when Cullinan negotiated the possibility to receive tax-deductible donations through the CSO, he decided to raise 50% through Kickstarter and 50% of the budget through fundraising activities outside of Kickstarter. However, at the time the Kickstarter campaign closed, only around US\$10,000 were donated through the CSO. This decision appeared risky, but Cullinan was prepared to continue assembling funds through post-crowdfunding fundraising campaigns. Once the Kickstarter campaign succeeded, Cullinan knew that he can leverage on the success and motivate larger supporters to contribute to the project. Cullinan’s entrepreneurial wager worked. In the subsequent two months of the Kickstarter campaign (November and December 2013) Cullinan secured additional US\$40,000 through donations made to the CSO and additional pre-sales through his Squareup online store. Most donations were made through Cullinan’s close network such as his friends and relatives. His personal network started donating to the project once the DNI project was successful on Kickstarter.

“Once the Kickstarter campaign was successful, we already have this big success story to talk about. This is a big deal. Then the big

money ‘players’ will start to get interested. So I’m looking pretty smart now, but three days before the end of the campaign I was looking pretty stupid.” (Cullinan, Interview 4)

After the Kickstarter campaign, it is not business as usual for DNI. Cullinan has to continue to raise the remainder of the production budget for the album. His priority is to finish the fundraising by assembling another US\$25,000. Secondly, he assigns most resources to work on the scores and album production. This will take him around six months full-time. At the same time, Cullinan aims to book shows for the second half of 2014.

“The only reason I made this incredible stressful gamble, which is: ‘I’m going to take US\$50,000 of people’s money if I can get it’, even though I know that we actually need around US\$100,000. The only reason I was willing to take this gamble was because in my gut I thought that if we get the US\$50,000 on Kickstarter we’ll get the other US\$50,000.” (Cullinan, Interview 5)

During January 2014, Cullinan was actively negotiating with the CSO to schedule and book the recording sessions with the orchestra. However, in order to finish the music album within the set out DNI timeframe, recording had to take place at the latest in October 2014. The CSO, unfortunately was not able to offer Cullinan enough recording slots to guarantee a quality production before the end of 2014. As such, Cullinan was forced to review other recording options and select a new orchestra. In the selection process, Cullinan went back to his initial idea about recording in the Czech Republic. He was able to book three days of recording sessions for October 2014 with the City of Prague Philharmonic Orchestra, and Cullinan announced this news to his supporters through a project update on Kickstarter in March 2014. Cullinan was excited to record with the City of Prague Philharmonic Orchestra:

“Their mastery of orchestral performance is matched by their in-house staff’s mastery of orchestral recording engineering, and this was a huge selling point for us. There is now no question our collective investments – yours and ours – will result in a top quality, audiophile orchestra recording.” (Cullinan, project update 11).

Cullinan allocated most of his resources for the writing and pre-production recording work between March 2014 and October 2014. However, he also had several live performances booked nationwide, increasing the complexity of his day to day business processes. Furthermore, Cullinan started recording the chorus during summer 2014. In October 2014, Cullinan recorded the orchestra music with Kyle W. Pickett in Prague. During winter 2014, Cullinan worked on the post-production and additional vocal recordings. Cullinan met with Isabel Leonard and Nathan Gunn in January 2015 in New York City, NY, U.S., to record their vocals for the inclusion in the music album. The full release is scheduled for late 2015.

Appendix F – Screen capture of DNI’s Kickstarter campaign

Phineas McBoof Crashes The Symphony



A 21st Century "Peter & The Wolf"! Nathan Gunn, Isabel Leonard, Kyle Pickett, Colorado Symphony, You & I bring the orchestra to kids!

Created by
Doctor Noize



218 backers pledged \$51,904 to help bring this project to life.

About this project



Rewards

Pledge \$5 or more

3 backers

THE BUDGET BENEFACITOR. You can't give much, but you wanna support something great for kids and families anyway. We love you! Our sincere gratitude and regular Email Updates on the project.

Estimated delivery:
Nov 2013

Pledge \$10 or more

7 backers

THE FAN. All of the above, plus a digital download of Three Showstopper Tracks from the album before public release.

Estimated delivery:
Aug 2014

Pledge \$25 or more

45 backers

THE NOIZEMAKER. All of the above, plus a digital download of the entire Double Album before public release.

Estimated delivery:
Aug 2014

Denver, CO Classical Music

\$51,904

pledged of \$50,000 goal

What Should Our Most Important Audience Hear?

Peter & The Wolf is great -- but old fashioned. We need a 21st Century approach to inspire kids to explore classical music. *Phineas McBoof Crashes The Symphony* -- a recording of lasting value to support our hit live interactive shows -- is the answer.

(Appendix F Continued)

We invite you to make a difference in children's lives with the click of a mouse... to join our campaign to bring orchestral music to kids. We need to raise at least \$50k on Kickstarter to help pay for a top American orchestra and world-class voice talent to record Doctor Noize's hit innovative show for kids, all wrapped in state-of-the-art character artwork and design.

Here's how and why it matters. By taking a few minutes to contribute your dollars and spread the word, you'll help produce a fun-filled, star-studded Doctor Noize album of *Phineas McBoof Crashes The Symphony* that will inspire kids to stretch their minds and explore the adventurous world of classical music -- developing sophisticated critical thinking in the next generation.

"Spectacular! I've never seen kids respond with so much enthusiasm to classical music. Your gift for inspiring kids is unparalleled." -- Kyle Pickett, Conductor

Watch our fast and funny Mini Children's Opera below with renowned opera superstars [Nathan Gunn](#) and [Isabel Leonard](#), conductor [Kyle Pickett](#), [Doctor Noize](#), the [Colorado Symphony Orchestra](#), Mozart, and all four Beatles! (Okay... maybe not all four Beatles.) If you like the video, you'll love the recording...



Smiling? Wanna hear more? So will the kids who hear this album. Please choose now from our awesome perks at right. A gift of any size makes a difference.

And last but not least... **Share the news!** Take a minute to forward this page to anyone who might be interested in bringing the world of the orchestra to kids. Post it on Facebook. Hire an airplane to drag a banner over stadiums during NFL games (make sure it's not a dome). Get creative for creativity!

Questions? Thoughts? Wanna hear me personally tell you why kids are the most important audience in the world, and they deserve our most sophisticated and colorful music? Then email cory@doctornoize.com or call 303-858-0007. Nothing on my schedule is more important than discussing the brilliance and creativity of kids, and why I believe we must inspire big dreams and big thinking in the next generation. I'd love to hear your thoughts on that too as we create something valuable for kids and parents to share together.

Thank you for your help bringing the world of the orchestra -- and the spirit of boundless exploration -- to kids.

Want more background and details on our project? You got it...

Background & Details...

Doctor Noize is a chart-topping children's musician, composer, author and app designer with a Classical Music degree from Stanford. He's an award-winning former school teacher and arts department head and the current CEO of Doctor Noize Inc.

Our recording cast includes Doctor Noize, opera superstars [Nathan Gunn](#) and [Isabel Leonard](#), the [Colorado Symphony Orchestra](#) with conductor [Kyle Pickett](#), and the entire Doctor Noize voice character cast from [Doctor Noize's beloved existing catalog](#).

Pledge \$50 or more

51 backers

THE VERY IMPORTANT NOIZEMAKER. All of the above, plus a specially numbered 2-CD Double Album signed and dedicated to you by Doctor Noize and delivered before public release.

Estimated delivery: Aug 2014 Ships to: Anywhere in the world

Pledge \$100 or more

39 backers

THE PLAYER. All of the above, plus your Double Album is signed by Doctor Noize, Nathan Gunn, Isabel Leonard, and Maestro Kyle Pickett.

Estimated delivery: Aug 2014 Ships to: Anywhere in the world

Pledge \$250 or more

16 backers

THE FIRST CHAIR. All of the above, plus a Signed Full Dr. Noize Set -- all 4 albums plus both books. Credited as a First Chair Benefactor in album liner notes.

Estimated delivery: Aug 2014 Ships to: Anywhere in the world

Pledge \$500 or more

7 backers

THE CONCERT MASTER. All of the above, plus credit as a Concert Master Benefactor in album liner notes. And the child of your choice gets to perform a role in a future Doctor Noize Live! or Symphony Show on tour.

Estimated delivery: Aug 2014 Ships to: Anywhere in the world

Pledge \$1,000 or more

1 backer

THE MAESTRO. All of the above, plus a spoken or sung line on the album is yours -- including performer's credit in album liner notes. And get this, Maestro... The child of your choice can conduct the full orchestra for a piece during a Doctor Noize Symphony Show OR Doctor Noize will play an Unplugged Show at the home or location of your choice on tour.

Estimated delivery: Aug 2014 Ships to: Anywhere in the world

(Appendix F Continued)

Our Creative Team also includes hit multimedia company [Outblaze](#) (3D-illustrated album artwork and design) and the [Children's Museum of Indianapolis](#) (the world's largest children's museum with whom we're developing a traveling *Symphony* Exhibit).

A live version of *Phineas* -- originally commissioned by the fantastic [McConnell Foundation](#) and premiered by CA's North State Symphony -- has premiered to [multiple sold-out symphony audiences](#), who sang, danced, and didn't want to leave at the end -- all while watching a story teaching kids sophisticated concepts like **Classical Sonata Form & Music History Periods**.

"I had tears in my eyes when you asked the kids if they wanted to hear Beethoven, and they all screamed: YEAAAAHHHH!!!" -- [Briar Segal](#), North State Symphony Trumpeter

Phineas is the story of **one monkey's quest** to master classical music and orchestral conducting. It's also the story of **one angry villainess** who desperately wants to destroy *Phineas*' premiere. It's learning so adventurous and colorful, **kids won't even know they're learning**.

"I wish I had a recording to hand the kids right after the show, when their interest in the orchestra is at an all time high." -- [Tom Burkett](#), Redding School of Arts Music Teacher

Well, Tom... we're making one.

Parenting Philosophy Guides Our Project Passion...

Everyone in the cast is a parent dedicating their time and talent to fill a need and make a deep impact in a shallow children's arts culture. Studies show music education is critical to your child's development, but it's being cut from school curricula.

Today's culture promotes *increasingly short-attention-span multimedia* to a generation who'll grow up to face *increasingly sophisticated challenges*. Kids want to reach and challenge themselves to *master Big Things*. To reach is the purest state of joy.

Like any great teacher, *Phineas* has high expectations of kids. Like all kids, today's kids are up to the challenge. Watch 'em memorize every bit of a song in ways an adult never would, and you'll know they'll conquer music's highest forms with *Phineas*.

Looking to the future... This album is only the beginning of Doctor Noize's long-term plan to inspire kids to explore ambitious music and gain the confidence to *master Big Things*. For details of *everything* in our larger **10 Step Plan**, review our [Symphony Keynote Presentation](#), and contact Doctor Noize with questions or comments!

We'll see you at the **Symphony!**

Doctor Noize, the Cast & Creative Team of *Phineas McBoof Crashes The Symphony*

Risks and challenges

The post-funding challenges of this project mostly involve the administration and planning of a recording of large scale -- an 80-piece orchestra, a voice cast of 15 characters and a choir, engineers, mixers, and masters for all of the above. Plus, we have to take out all the green M & M's from Placido Flamingo's bowl every time he performs. It's arduous.

Rest assured: We'll get it done, and we'll get it done right. Doctor Noize has a lot of experience making recordings of large scale -- "The Return Of Phineas McBoof" featured over 100 musicians and singers -- and we have the passion and purpose to pull this off. Our goal for kids and families is far too important to us to fail.

[Learn about accountability on Kickstarter](#)

FAQ

Have a question? If the info above doesn't help, you can ask the project creator directly.

[Ask a question](#)

(Source: DNI Kickstarter campaign page. Retrieved from: <https://www.kickstarter.com/projects/doctornoize/phineas-mcboof-crashes-the-symphony/description> (Accessed: 20.09.2015)).

Pledge \$5,000 or more

2 backers

THE COMMISSIONER. All of the above, plus you'll be listed as one of the people or organizations who commissioned *Phineas McBoof Crashes The Symphony* on all albums and future live performance playbills of the work. Dinner with Dr. Noize, VIP seating, and a Backstage Pass to a future tour's Doctor Noize Live!, Symphony Show, or Staged Production.

Estimated delivery: Aug 2014 Ships to: Anywhere in the world

Pledge \$10,000

0 backers

THE EXECUTIVE PRODUCER. All of the above, plus credit on the album's Back Cover and liner notes as an Executive Producer of the recording. Thank you for devoting so much of your valuable resources to something that will inspire kids and families to reach for more in their music and learning.

Estimated delivery: Aug 2014 Ships to: Anywhere in the world

Funding period

Oct 2 2013 - Nov 1 2013 (30 days)

