The role of the university as a catalyst of Social Entrepreneurship in Entrepreneurial Ecosystems

An exploration of the functions and contributions of universities, and their maturity, in Social Entrepreneurial Ecosystems

Master Thesis Strategic Management

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Acknowledgement

In this study, titled '*The role of the university as a catalyst of Social Entrepreneurship in Entrepreneurial Ecosystems*', I have researched the role of universities in Social Entrepreneurial Ecosystems. It provides an indication of university contributions today, and proposes a trajectory for future developments. It is the final effort for my Master degree in Strategic Management at the Radboud University Nijmegen.

I would like to take the opportunity to thank a number of people. First, I would like to thank Prof. Dr. Nikolay Dentchev for his support, contributions and feedback. The material provided at the start of the study was a major help to emerge myself in the topic of SE, entrepreneurial ecosystems and associated concepts, which I believe massively contributed to the quality of the final product. Additionally, the feedback helped me to create a more logically progressive and streamlined report. Secondly, I would like to thank dr. K.F. van den Oever. His feedback helped me to critically reassess the central topics of study and create a more comprehensive and logical foundation for the thesis to build on. Additionally, I would like to thank dr. van den Oever for his willingness to oversee the final stages of the thesis trajectory. Thirdly, I would like to thank dr. ir. G.W. Ziggers for his contributions in the completion of the final stages of the master thesis. Lastly, I would like to thank all the participants for their insights, ideas and the discussions. Your insights were invaluable for the study and helped me to develop a comprehensive picture of the role of universities in SEE's, as well as the instruments to build theory to develop it.

Finally, I would like to end by saying that I have learned a lot about myself, Social Entrepreneurship, and the process of conducting a Grounded Theory study. The extraordinary events regarding the COVID-19 pandemic, while writing the thesis, provided me with some (major) unexpected challenges and insights both practically and personally. In addition to the challenges that it provided me with, it also demonstrated the need for actors and institutions to come together to cope with major (societal) issues and to care for the communities affected by them. I strongly believe that Social Entrepreneurship represents a promising opportunity for universities to do something remarkable to contribute to (disadvantaged) communities and expand their societal- and economic impact. It is a strategic topic for universities to keep up with the spirit of times and to reinvent themselves, and the time is now for universities to participate. I believe universities have the ability and responsibility to make the world a(n) (even) better place.

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Abstract

To respond to the major challenges of the twenty-first century (e.g. climate change, poverty, increasing economic inequality), society is looking for new perspectives to entrepreneurship and new forms of social organisation facilitation. One perspective, previously invisible in academic literature and at policy level, is Social Entrepreneurship (SE). To respond to economic- and social problems, regions, countries and their policymakers are seeking to strengthen their levels of social economic development through entrepreneurial ecosystems. One important pillar in these ecosystems are universities. Universities perform several vital functions, and are expected to fulfil a growing number of additional roles in them. In modern society, it is no longer accepted for universities to be remote 'ivory towers'. Today, they are expected to impart (social) entrepreneurial skills to students, to stimulate productivity by collaborating with external partners, and to contribute to (local) social-economic wellbeing. These expectations have resulted in new university missions and models. Although SE and ecosystem thinking are generating interest from actors at different levels of society, there remain significant gaps in academic literature. The role of the university in Social Entrepreneurial Ecosystems (SEE's) remains largely unexplored, and authors criticise present university structures suggesting an imbalance in its missions. Subsequently, *this qualitative study explores the role of universities in entrepreneurial ecosystems in support of SE*. Using Grounded Theory methodology, it seeks to understand what it is that makes this institute a (un)suitable supportive pillar [what], what roles/functions it could assume to mobilize them [how], and what it is that (could) motivate(s) them to support, promote and participate in SE [why]. To study the role of universities in SEE's, research was conducted in the (Social) Entrepreneurial Ecosystem of the Netherlands using semi structured interviews, involving 12 experts. Additionally, (policy) documents were accessed to amplify the data. The findings indicate that SE is nascent in universities, SE support is in its infancy and the role of universities in SEE's is considered insignificant. Contributions of universities are largely limited to its cardinal functions, and universities struggle to adopt participatory functions to develop third- and fourth mission activities. The findings indicate an imbalance in its missions and a disconnect with the larger ecosystem. Several explanations are provided, captured by seven types of barriers. Generally, these barriers are related to inadequacies in the structure of the university and its education. Together, they contribute to a boundary that withholds effective adoption of participatory functions in current university models. Subsequently, this study suggests a need for structural reform. It introduces the concept of the Socially Engaged University, and proposes SE as a strategic instrument for universities to transition to more unified structures. It suggests that the benefits of participation in SE are not limited to social entrepreneurs and their environment. Rather, it indicates that the university itself could benefit from the corresponding (increasing) societal integration. Finally, the study proposes practises at strategic and operational level to develop SE. These practises offer a logical pathway to develop the discipline within universities and contribute to a more balanced structure. It offers concrete practises to cope with, and respond to the imbalance and disconnect in its missions.

Keywords: Social Entrepreneurship (SE), Social Entrepreneurial Ecosystems (SEE's), Evolution of the university, Third- & fourth mission, University structures, Ecosystem integration, Boundary to participation, the Socially Engaged University.

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Chapter 1: Introduction

Multiple academic studies suggest that entrepreneurship takes a key position within society and economic development. Entrepreneurship is generally considered an engine for innovation, increasing economic efficiency, and creating new jobs (Harbi & Anderson, 2010; Minniti & Lévesque, 2008; Sá & Kretz, 2015; Shane & Venkataraman, 2000; Zhang, Duysters, & Cloodt, 2014). As policymakers worldwide are continuously searching for effective mechanisms to stimulate their economies (Autio, Kenney, Mustar, Siegel, & Wright, 2014; Fuster, Padilla-Meléndez, Lockett, & del-Águila-Obra, 2019), the field of entrepreneurship is increasingly getting attention and its role in economic development is actively being debated (Matlay, 2008; Wilson, Vyakarnam, Volkmann, Mariotti, & Rabuzzi, 2009). Due to growing societal concerns and an ever increasing urgency to address the major challenges that society faces (e.g. climate change, poverty, increasing economic inequality), people are looking at new perspectives to entrepreneurship. The challenges of the twenty-first century demand new forms of social organisation facilitation (Benneworth & Cunha, 2015) and a different outlook to entrepreneurship. One perspective, previously invisible in academic literature and at policy level, is Social Entrepreneurship (SE).

Traditionally, entrepreneurship is associated with business, resources, innovation and value creation (Dees, 1998; Eisenmann, 2013). SE introduces a 'new' dimension. It adds a social-mission to its definition and takes a different orientation (P. A. Dacin, Dacin, & Matear, 2010; Dees, 1998). Whereas entrepreneurship focuses on economic value, SE strives to integrate economic and social value creation. Despite the interest for new perspectives to entrepreneurship, it received a somewhat muted reception- and some fierce scepticism from an academic perspective (M. T. Dacin, Dacin, & Tracey, 2011). Some academics remain unconvinced of the potential and legitimacy of SE as a domain of inquiry in its own right and indicate a number of issues with the concept itself, most notably the significant challenges relating to definitional and conceptual clarity (M. T. Dacin et al., 2011; P. A. Dacin et al., 2010; Dees, 1998; Short, Moss, & Lumpkin, 2009). In spite of a lack of consensus, Mair and Martí (2006) provide some clarity by unveiling its core and broadly defining SE as: "*a process involving the innovative use and combination of resources to pursue opportunities to catalyze social change and/or address social needs*".

Despite the scepticism, SE is generating momentum and appears to be gaining a foothold. Society has become more aware of the pressing social challenges that need to be faced and influential organisations have been promoting the idea of individuals "changing the world" (Bornstein, 2004; M. T. Dacin, Dacin, & Tracey, 2011). However, research in SE competencies, who to provide them and how to effectively mobilise them in support of SE is absent (Amini, Arasti, & Bagheri, 2018). Subsequently, many organisations struggle to develop successful social entrepreneurial endeavours. Despite present challenges, policymakers recognise the benefits of social enterprises in the (social) economic landscape and governments have begun to setup policy measures and programmes to support their development (European Commission, 2020a). The European Commission launched efforts to boost social enterprises as they create jobs, innovate in welfare provision, provide opportunities to participate in economic life, and help demographic, green and digital transitions (European Commission, 2020b). In an effort to support social enterprises it published the report 'Social enterprises and their ecosystems in Europe', in which they tried to map social entrepreneurial activity and ecosystems in 35 countries (European Commission, 2020a). Such reports imply the importance of ecosystem support to the development of SE as a discipline. SE is generating interest amongst a variety of actors at different levels of society and there are indications that suggest the need for a solid supporting ecosystem.

In spite of these indications, the majority of literature and discourse has been driven by a definitional debate rather than the conceptualisation of SE and its development (Sengupta, Sahay, & Croce, 2018). It is remarkable that little research has been conducted on its ecosystem and the role of its supporting components (pillars). Coherently, Roundy Philip (2017) argues: "*Scholars examining entrepreneurial ecosystems have not studied the role of an increasingly important market actor: the social entrepreneur*". Continuing he adds: "*At the same time, work on social entrepreneurship has not emphasized the community of social relations and cultural milieu in which social entrepreneurs found their ventures"* (p. 2). Although there has been research in entrepreneurial ecosystems, it has been limited to conventional entrepreneurs. This, however, is insufficient. The multidimensional nature of SE demands a different orientation and a broad spectrum of competencies beyond those traditionally required in business (Harbi & Anderson, 2010). Subsequently, the relations with and the functions adopted by the pillars in a Social Entrepreneurial Ecosystem (SEE) may significantly differ from those in conventional entrepreneurial ecosystems.

While a very limited number of studies have only recently made an attempt to incorporate social enterprises' surrounding ecosystems, they take a more general approach. They study the state of the overarching ecosystem rather than the individual underlying components. Contrary to literature in SE, scholarly attention in entrepreneurial ecosystems regarding conventional ventures has resulted in the identification of several key attributes and components (H. M. Neck, Meyer, Cohen, & Corbett, 2004). Roundy Philip (2017) argues that social entrepreneurs are likely affected by many of the same factors in entrepreneurial ecosystems as conventional entrepreneurs. One pillar continuously included in academic literature are universities. Universities perform a wide range of vital functions in the support- and development of entrepreneurial ecosystems (Amini et al., 2018; Davey, Hannon, & Penaluna, 2016; Fuster, Padilla-Meléndez, Lockett, & del-Águila-Obra, 2019; Wilson et al., 2009; Wolfe, 2016). They have the ability to enhance regional development and (social) economic growth by adopting a variety of functions. Subsequently, they are considered an important pillar in entrepreneurial ecosystems. Coherently, policymakers are advocating enterprise and entrepreneurship across universities, suggesting an increased need for education and training of (social) venture creators (Calvo, 2016; Wilson et al., 2009). This is illustrated by the prominent role of education in the European commission's policies and objectives for economic growth and jobs, predominantly focused on the promotion of entrepreneurship (European Commission, n.d.), and the success of Silicon Valley. Silicon Valley is built on the principals of the triple helix of innovation, a unique collaboration between University, Industry and Government (Henry Etzkowitz & Zhou, 2017). It illustrates that university integration in an ecosystem or region could enhance both regional development and the development of a discipline.

The importance of universities in entrepreneurship is recognised and this has resulted in a shift in their role in society. Whereas universities traditionally focused on education, research and knowledge exchange, today they are expected to fulfil a growing number of additional roles. They are expected to impart entrepreneurial skills to students, to stimulate productivity by collaborating with external partners and to contribute to (local) social-economic wellbeing (Sánchez-Barrioluengo, Uyarra, & Kitagawa, 2019). This shift, in which universities are expected to adopt stronger entrepreneurial and innovative activities in order to provide wider social and economic benefits (Siegel & Wright, 2015), has given birth to new university models (Fuster et al., 2019) and missions (Appe, Rubaii, Líppez-De Castro, & Capobianco, 2017). Although the importance of universities in entrepreneurship as well as to economic, social and political realms of the community is increasingly understood, many universities fail to incorporate and promote it (Appe et al., 2017). There are tensions between the new- and the conventional missions, and universities continue to struggle to find balance.

To summarize, there is interest for ecosystem thinking and new perspectives to entrepreneurship from different corners of society. Universities are recognised to perform vital functions in entrepreneurial ecosystems, and there are growing societal expectations for universities to adopt and promote socially oriented perspectives to entrepreneurship. Simultaneously, businesses and policymakers recognise the need for education of- and social enterprises in the (social) economic landscape. Nevertheless, universities continue to struggle to respond to societal expectations and their role in SEE's remains to be explored. An analyses of the contributions that universities (can) make in support of SE and their motives to engage in it provides several insights. First, it sheds a light on the (potential) functions of universities in SEE's. Second, it gives an indication of the maturity of SE education- and initiatives in universities. This contributes to the discussion whether, how and why universities should engage in SE, and what role(s) they could assume in it. Third, it provides valuable insights for future development of SE in universities. Finally, it benefits the university itself. It helps to shape and guide the development of their structures, their initiatives in regards to its (new) missions, and it could enhance their ecosystem integration. This has resulted in the following problem definition: *"What is the role of Universities in the entrepreneurial ecosystem in support of social entrepreneurs(hip)?".* And three research questions: (1) What characteristics make universities suitable actors in support of SE?, (2) What roles can universities assume to mobilize their characteristics in support of SE?, and (3) What are the motives for universities to support, promote and participate in SE?

This study is structured in six chapters. First, the topic and the research question(s) are introduced. Second, literature regarding the central topics of study are discussed (SE, the entrepreneurial ecosystem, and the role of universities) and a theoretical framework is presented. Third, it provides an outline of the research design, a motivation of the methods applied, and insight in data analysis. Fourth, it presents the findings from data analyses. The findings were the starting point of the discussion, the formulation of theoretical propositions and theory development in the fifth chapter. Finally, research implications, limitations & directions for future research are discussed, and a conclusion is provided.

Chapter 2: Theoretical background

This chapter explores academic literature regarding the central topics of the study. First, the concept of Social Entrepreneurship (SE) is discussed. Second, (Social) Entrepreneurial Ecosystems (SEE's) and the place of the university within them is explored. Third, the study takes a look at the evolution of the university and its function(s) within ecosystems. Finally, competencies and motivations for universities to engage in SE are debated.

2.1 Social Entrepreneurship, what does it mean?

Traditional entrepreneurship aimed at economic value creation has been thoroughly researched from an academic perspective. Contrary, SE has only recently captured interest (Dees, 1998; Mair & Martí, 2006). Academics argue that there remain significant challenges in this young field of study, particularly regarding its definitional and conceptual clarity (M. T. Dacin et al., 2011; P. A. Dacin et al., 2010; Dees, 1998; Mair & Martí, 2006; Short et al., 2009). The term SE holds a variety of meanings to different people (Dees, 1998) and the boundaries to other fields of study are blurry (Mair & Martí, 2006). Despite variating definitions, most include "an ability to leverage resources to address social problems". However, beyond this generalization there appears to be little consensus between scholars (P. A. Dacin et al., 2010). Subsequently, P. A. Dacin et al. (2010) provide an useful overview of the variety of definitions applied in academic research. They indicate a discrepancy between authors that ascribe SE to not-for-profit initiatives focused on social value, and those that include for profit businesses (P. A. Dacin et al., 2010; Mair & Martí, 2006). Lasprogata and Cotten (2003) attribute SE purely to non-profit organizations, whereas Austin, Stevenson, and Wei-Skillern (2006) include public organizations (e.g. government) and commercial businesses. Although SE is often understood as entrepreneurial initiatives exclusively in the not-for-profit realm, such reasoning suggests false boundaries. It implicitly or explicitly excludes both public and for-profit organizations. It creates the perception that social entrepreneurs must choose whether to create social- or economic value, while Mair and Martí (2006) suggest that they in fact can do both (Schmidbauer, 2012). To eliminate ambiguity, SE in this study is defined as: "*a process involving the innovative use and combination of resources to pursue opportunities to catalyze social change and/or address social needs*" (Mair & Martí 2006, p. 37). It is about the process of social- and economic value creation by means of entrepreneurial principles in the effort of a social mission. This definition captures the notion of "an ability to leverage resources to address social problems" that is at the heart of SE, and simultaneously provides the width to capture its multidimensional nature.

2.1.1 Exploring the multidimensional nature of Social Entrepreneurship

Mair and Martí (2006) take a broad perspective to SE. They imply that it has tight relations with and is positioned at the boundaries of multiple research domains. It is about the innovation of services and products, the exploration of opportunities, and the utilization of a combination of resources to create both social- and economic value, and can occur equally well in new and established organisations (Mair & Martí, 2006, p. 37). The notion that SE is multidimensional in nature (Harbi & Anderson, 2010) and that it is positioned at the intersection of different domains (Mair & Martí, 2006), is endorsed by numerous authors. Sengupta et al. (2018) describe a wide range of sub-concepts that fall under the umbrella of

SE. Although different fields of inquiry are linked or even intertwined with SE, this study is limited to the area in in which they conjoin; Social Entrepreneurship (appendix 1).

2.1.2 Delineation by venture typology

Although SE has many similarities to conventional entrepreneurship, academic literature indicates pivotal differences. Contrary to conventional entrepreneurs, social entrepreneurs integrate social- and economic value creation. However, not all organisations that create social- and economic value are social enterprises. To make a clear distinction between ventures across the spectrum of value creation, the typology proposed by H. Neck, Brush, and Allen (2009) is applied. H. Neck et al. (2009) use two axis to distinguish venture typologies: (1) the venture mission (its purpose), and (2) the ventures primary market impact (the outcome). They propose that ventures can assume an economic or social focus for both their mission and market impact. Their premise is that the ventures behaviour is rooted in its purpose; its mission. The mission is the foundation upon which the entire structure of the organisation is build. It guides the venture its strategy, policies, its approach towards customers, stakeholder management and its market approach. The market impact is the outcome of the ventures its efforts and is the input for performance measurement based on the objectives formulated. Using these axis, H. Neck et al. (2009) propose five types of ventures (visualised in appendix 2). First, they describe '*Traditional Ventures*'. They argue that these ventures are founded on the premise that a social problem will be solved, yet the venture is for-profit and the impact on the market is typically perceived as economic (H. Neck et al., 2009, p. 15). Second, they present '*Social Consequence Ventures*'. These ventures are similar to the traditional venture except that many of their practices have social outcomes, although these social outcomes are not the reason for the firm's existence but an outcome of doing business. The popular term Corporate Social Responsibility (CSR) most closely aligns with the social consequence venture (H. Neck et al., 2009, p. 15). Third, they discern '*Social Purpose Ventures*'. These ventures are founded on the premise that a social problem will be solved, yet the venture is for-profit and the impact on the market is typically perceived as economic (H. Neck et al., 2009, p. 15). Fourth, they describe '*Enterprising Nonprofits*'. They argue that these enterprises have earned income activities which very much apply the general principles of entrepreneurship (Dees, 1998). These ventures focus on growth and economic sustainability, and may be funded by venture philanthropists (H. Neck et al., 2009, p. 15). Finally, they describe '*Hybrids'*. Hybrids are ventures that show a combination of behaviours and characteristics that can be attributed to more than one type (H. Neck et al., 2009, p. 16). Although the typologies all apply principles central to entrepreneurship, only some are social entrepreneurial. Except for the traditional ventures, they all include a social element (social outcome and/or social purpose) that is essential to SE. However, only two capture the component of a social mission: the Social purpose ventures & Enterprising non-profit ventures. They create social- and economic value in the effort of a social mission, and are therefore subject of this study. These ventures are the tangible outcome of SE, referred to as social enterprises (Mair & Martí, 2006). Additionally, SE activities by corporates can be discerned, referred to as Corporate Social Entrepreneurship (CSE). There is a wide range of organisations on the business impact continuum from social- to economic value but only a sub-group can truly be regarded social entrepreneurial (Appendix 2).

2.1.3 The five stages of Social Entrepreneurship

Similar to traditional ventures, social enterprises experience organizational growth in different stages. However, academic literature suggests different stages and characteristics. Tanabe (2020) proposes "The Five Stages of Social Entrepreneurship" as a framework to describe the maturity process of SE and social enterprises. He presents five stages: (1) Defining systemic Problem, (2) Individualizing Enterprise, (3) Organizing Enterprise, (4) Socializing Enterprise, and (5) Achieving Systemic Change. Each stage is characterised by different features and a unique purpose, illustrated by figure 9 in appendix 3. Tanabe (2020) argues that social enterprises face different challenges- and have varying needs throughout the stages, and describes specific success factors for each stage. As the focus and needs of the enterprise change throughout the maturity process, so may the role of- and relationship with supporting organisations. The function and contribution of the university may significantly vary across stages of maturity. The stages can be split in three overarching quadrants: [a] Development (1), [b] Formation, validation & growth (2 & 3), and [c] Expansion & maturity (4 & 5).

2.2 The (Social) Entrepreneurial Ecosystem and the university

Worldwide, policymakers have been searching for effective mechanisms to stimulate their economies (Autio, Kenney, Mustar, Siegel, & Wright, 2014; Fuster et al., 2019). Entrepreneurship, the process of new firm formation, has proven fundamental to economic geography (Stam, 2007). It is considered an engine for innovation and key to economic development, increasing economic efficiency, and creating new jobs (Harbi & Anderson, 2010; Minniti & Lévesque, 2008; Sá & Kretz, 2015; Shane & Venkataraman, 2000; Zhang et al., 2014). Entrepreneurs stimulate wealth creation, disrupt the status quo, and serve multiple important functions (Roundy Philip, 2017). Policymakers have therefore made several attempts to spark entrepreneurship over the last decade. Numerous countries and regions are promoting the formation of start-ups and the merit for a more systems-based form of entrepreneurship support is increasingly recognized (Nicotra, Romano, Del Giudice, & Schillaci, 2018). One emerging approach is focused on entrepreneurial ecosystems.

The notion of 'entrepreneurial ecosystems' is relatively new. Although the concept has only recently emerged, it has rapidly generated interest. Presently, it is the dominant concept in academic literature to describe entrepreneurial environments (Malecki, 2018). One of the reasons for its rapid emergence is the need to promote innovation and creativity to find answers to economic- and social problems (Moore, 1993; Nicotra et al., 2018). By encouraging the development of entrepreneurial ecosystems, countries and regions aim to strengthen their levels of (social-) economic development (Theodoraki, Messeghem, & Rice, 2018). However, academics indicate that there is no universally accepted definition for entrepreneurial ecosystems (Malecki, 2018; Stam, 2015). The absence of a universally shared definition is the result of different authors using a variety of definitions, as well as there being multiple kinds of ecosystems of which the entrepreneurial type is only one (Malecki, 2018). The term includes two components: (1) Entrepreneurial, and (2) Ecosystem. Entrepreneurial refers to the process of entrepreneurship in which opportunities for innovation of goods and services are explored, evaluated and exploited (Stam, 2015). The second component, ecosystem, is often interpreted from a biological perspective which considers an organism the focus of the ecosystem, with the remaining ecosystem components acting as a resource base for that focal organism (Blew, 1996). Hence, the entrepreneurial ecosystem refers to entrepreneurs and the interrelations with their physical environment in a given region. Malecki (2018) reviewed several definitions. He describes that in spite of varying definitions, most highlight the combination or interaction of elements, often through networks, producing shared cultural values that support entrepreneurial activity. For the purpose of this research, the definition provided by Spigel (2017) is applied: *"the union of localized cultural outlooks, social networks, investment capital, universities, and active economic policies that create environments supportive of innovation -based ventures"* (p. 1). It is about a set of interdependent actors and factors that collaborate to enable productive entrepreneurship.

Other concepts such as industrial districts, clusters, and innovation systems have similarities. However, contrary to the concept of the entrepreneurial ecosystem, the focus of these frameworks is not specifically on entrepreneurs but on the larger system of value creation and innovation. In these concepts new firms (start-ups) are merely thought to be smaller versions of large, international firms (Nicotra et al., 2018). The entrepreneurial ecosystem approach distinguishes itself from these concepts as it rejects this notion. Moreover, the entrepreneurial ecosystem approach focuses specifically on entrepreneurs and start-ups, and considers them unique organizational entities that possess and require different capabilities and resources while simultaneously endorsing their unique role regarding the social- and economic contexts surrounding their entrepreneurial processes (Nicotra et al., 2018). Therein it aligns with the core principals of SE. Although entrepreneurship is local in nature, entrepreneurial ecosystems can exist both on a local and a national scale, and often even contain (some) global links. Isenberg (2010) indicates that most countries with an entrepreneurial ecosystem at a national-scale are relatively small. Examples include Finland and the Netherlands (Malecki, 2018; Rannikko & Autio, 2015; Stam, 2014).

Although the notion of entrepreneurial ecosystems is relatively new, researchers and institutions have described their ingredients. This resulted in the identification of several key attributes and components. H. M. Neck et al. (2004) describe seven components: (1) Informal network, (2) Formal network, (3) University, (4) Government, (5) Professional end support services, (6) Capital services and (7) Talent pool. More recently, the World Economic Forum (2013) presented eight pillars: (1) Accessible markets, (2) Human capital/workforce, (3) Funding & finance, (4) Support systems/mentors, (5) Government & regulatory framework, (6) Education & training, (7) Major universities as catalysts, and (8) Cultural support (World Economic Forum, 2013). Despite somewhat different diagrams, authors include similar elements and endorse the notion that the key concept in entrepreneurial ecosystems is that it is a system. Meaning that the entrepreneurial processes are dependent on different flows and relations in- and outside of the (local) ecosystem (Malecki, 2018; Spigel, 2017; Stam, 2007).

One pillar continuously included by academic literature are universities. Universities perform vital functions in entrepreneurial ecosystems, both as a generator of new knowledge through cutting-edge research activities as well as an educator of highly qualified labour (Wolfe, 2016). Wolfe (2016) argues that if the two functions are integrally linked, universities could significantly contribute to regional economic growth, economic development, and cluster formation. Wilson et al. (2009) supports this notion and argues that education is a key driver in the support- and development of entrepreneurial ecosystems because they have the ability to develop the skills, the attitudes and behaviours necessary to create jobs, are able to generate economic growth and advance human welfare, and have the proficiency to stimulate innovation to address global challenges. Coherently, research indicates the importance of universities and business schools to the development of entrepreneurial competencies (Amini et al., 2018; Lawrence, Phillips, & Tracey, 2012). Furthermore, it argues their importance in the promotion of entrepreneurship in the knowledge-based society (Davey et al., 2016). Fuster et al. (2019) add that universities are widely considered key actors to entrepreneurship as they stimulate the production and diffusion of knowledge across regions. Hence, universities have the ability to enhance regional development and are able to support entrepreneurship in numerous ways. Subsequently, they are an important pilar in entrepreneurial ecosystems.

Prior work on entrepreneurial ecosystems has provided insights in the phenomenon, but there is much left unexplored. Roundy Philip (2017) indicates gaps in ecosystem literature on the role of social entrepreneurs and the community of social relations in which they found their ventures. Presently, research in entrepreneurial ecosystems has been limited to conventional entrepreneurs. Harbi and Anderson (2010) imply that this is insufficient because the multidimensional nature of SE demands a different orientation and a broad spectrum of competencies beyond those traditionally required in business. This suggests that the relations with and the roles assumed by the pillars in a SEE may significantly differ from those in the conventional entrepreneurial ecosystem. Although there are some significant differences between social- and conventional entrepreneurship, it is argued that social entrepreneurs are likely affected by many of the same factors in entrepreneurial ecosystems as conventional entrepreneurs (Roundy Philip, 2017). Universities, as an important pillar in- and to the development of entrepreneurial ecosystems and clusters, are therefore likely an important component for the development of SE and its ecosystem. To summarize, prior academic work provides little insight in the entrepreneurial ecosystem in which social entrepreneurs operate. Academic literature has considered some (key) stakeholders in entrepreneurial ecosystems, but the majority of research has been limited to entrepreneurial leaders and policymakers (Roundy Philip, 2017). The role of universities in the SEE is yet to be explored.

2.3 Evolutionary process of Universities and their functions

Today, universities perform several vital functions and have significant influence on society in numerous respects. First, as an educator of highly qualified labour (Lawrence et al., 2012; Mazzarol, Battisti, & Clark, 2016; Sedlacek, 2013; Wilson et al., 2009; Wolfe, 2016). Second, because of their focus on research, resulting in the generation and stimulation of knowledge production and diffusion across regions (Fuster et al., 2019; Wolfe, 2016). Third, as a catalyst of innovation to address global challenges (Fuster et al., 2019; Mazzarol et al., 2016; Wilson et al., 2009). And finally, because they participate in governance at both national- and regional level (Sedlacek, 2013). Universities have taken a prominent place in society and different models have merged because of changing societal expectations. To comprehend the university, its functions, its orientation, and the issues and challenges that these institutes face in modern society, it is important to understand their evolutionary process.

2.3.1 The evolutionary process of the university (model)

Universities have been part of the institutional landscape as early as the 12th century (Denman, 2009; Perkin, 2007) and originally had two functions: teaching and scholarship (Martin & Etzkowitz, 2000). As society evolved, so did universities and their functions. Society became increasingly knowledge driven and universities gradually took a more prominent position in them (Mazzarol et al., 2016). In response to changing societal needs and new expectations to higher education, universities evolved in several respects (Weerts & Sandmann, 2008). Whereas universities traditionally focused on education, the first mission, universities now integrated research activities. Hence, a first transition initiated a shift from teaching institutions to research universities. In addition to the educational responsibilities universities were now expected to engage in research activities to generate new knowledge, referred to as the second mission (H. Etzkowitz et al., 2008). Universities thus fulfilled three core functions: education, research and knowledge exchange.

In modern society, universities are expected to fulfil a growing number of additional roles. They are expected to impart entrepreneurial skills to students, stimulate productivity by collaborating with external partners and to contribute to (local- and regional) social-economic wellbeing (Sánchez-Barrioluengo et al., 2019). These expectations are associated with the second academic transition in which universities were expected to adopt stronger entrepreneurial and innovative activities to provide wider social and economic benefits (Siegel & Wright, 2015). This transition gave birth to the third mission (Appe et al., 2017), the entrepreneurial university (Fuster et al., 2019), and it entailed several changes in the orientation and role of universities. First, universities were now expected to collaborate with other sectors of the economy (Bano & Taylor, 2015). They adopted activities involving actors outside the core social bodies forming a university (teachers, technical-administrative, and "traditional" students) to contribute to the economic development of the region (Boffo & Cocorullo, 2019). Second, universities developed activities to enable true economic value creation. Schulte (2004) argues that these activities took shape in: (1) training future entrepreneurs and developing the entrepreneurial spirit among students, (2) Operating in a more entrepreneurial manner (e.g. organizing business incubators, technology and science parks, promoting and creating spin-off activities, and facilitating the interaction between businesses and students). The introduction of a third mission led to the emergence of a new university model, the entrepreneurial university, and introduced entrepreneurial science & entrepreneurial scientists to the academic environment (H. Etzkowitz et al., 2008).

The term entrepreneurial university describes universities that have extended and improved different mechanisms to contribute to regional development and whom have increased their incomes (Guerrero & Urbano, 2012). Contrary to more traditional models of the university, the entrepreneurial university presumes a considerable degree of independence from and involvement with government, industry and sponsors (Henry Etzkowitz, 2016). This new type of university quickly became a globally spread phenomenon as universities, worldwide, grabbed the opportunity (Henry Etzkowitz, 2016). This process was stimulated by a need for an institutional framework in which university, industry and government each would take the role of the other while simultaneously fulfilling their traditional missions (the triple helix). In the model of the triple helix the entrepreneurial university proved to be a keystone. University interactions with government and industry took shape and universities increasingly served as a (knowledge) partner and a catalyst to socio- economic development.

This transition was rapidly followed by a third, and to date, final transition that introduced a fourth mission to the academic landscape. G. Trencher, Yarime, McCormick, Doll, and Kraines (2013) argue that this mission is still evolving and suggest that it differs significantly from the economic focus of the third mission and the university its conventional technology transfer practices. As the concept of the fourth mission is arguably in its developing stage, academic work on the concept is limited. Despite academics applying and suggesting different descriptions (Boffo & Cocorullo, 2019; Cocorullo, 2017; Fernández et al., 2018; Öhrström, Weiderud, Youssef, & Yaghi, 2018; Rinaldi, Cavicchi, Spigarelli, Lacchè, & Rubens, 2018; G. Trencher et al., 2013), they agree that it has the principle of "science for society" at its core. It expands the role of universities in regional development by adding a social dimension. G. Trencher et al. (2013), for example, argue that it is about co-creation with society for sustainability. Coherently, academics suggest that the adoption of a fourth mission is a way for universities to move towards co-creation for sustainability and social issues, in which they collaborate with government, industry and civil society. They argue that the university could advance sustainable development and create sustainable- & socially desirable transformations in their university partners (Akolgo-Azupogo, Bardy, & Rubens, 2018; G. Trencher, Bai, Evans, McCormick, & Yarime, 2014; G. Trencher et al., 2013). Additionally, this transition introduced a new university model that recognises the university's responsibility as a driver of social change: the innovative university.

Fernández, Fernández, Rey, and Bobillo (2018) argue that the conceptualization of universities as "entrepreneurial" is to limited, and therefore introduce and characterise 'innovative universities'. Fernández et al. (2018) define the innovative university as "*those institutions that translate a transformative vision, attitude, and vocation to all of their functions, becoming drivers of economic and social change in their area of influence*" (p. 33). Although the innovative- and the entrepreneurial university have previously been used to describe similar conditions, Fernández et al. argue that it is more appropriate to speak of innovative universities. They argue that it is bigger in scope than the entrepreneurial university. Innovation implies an entrepreneurial mentality. However, it also involves novelty in contrast to entrepreneurship (Fernández et al., 2018). Additionally, the innovative university includes the idea of profitability and returns for society, and therein expands the role of the university in regional development. Similar to the entrepreneurial university, interactions with ecosystem stakeholders are regarded vital. Fernández et al. (2018) argue that ecosystem interactions are a key element because they modulate the impact of the institution's educational and research model. Therein they suggest that ecosystem interactions have a controlling influence on the impact of the first- and second mission. Despite clear associations with the third- and more importantly the fourth mission, Fernández et al. (2018) conclude that these missions disappear in this new model of the university. They criticise that the third- and fourth mission are still "*mere extensions of the teaching and research responsibilities*" (Fernández et al., 2018, p. 44). Whereas the innovative university is associated with the third transition, the typology is only partially representative to the third- and fourth mission. It merely considers its role in social- and regional development in the realms of education and research. Although it makes a first attempt to adopt social value creation as a core function, it does not include functions and activities beyond the traditional core functions.

Changing societal expectations have introduced- and taken shape in the form of new missions and new university typologies in the academic landscape. Whereas the entrepreneurial- and the innovative university specifically emerged in response to the second- and third transition, the associated concepts of the third- and fourth mission aren't limited to these models. They are relevant to all universities. Presently, universities are expected to collaborate and engage in place-based, multi-stakeholder partnerships that stimulate economic regional development, to address or solve real and complex world issues (G. Trencher et al., 2013). In modern society it is no longer accepted for universities to be remote 'ivory towers' (Bano & Taylor, 2015). In fact, the third- and fourth mission demands universities to integrate in ecosystems and take an integral role in knowledge creation. Be they (inter)national, regional or local ones. They are expected to build relationships with their local communities and create shared knowledge (Frondizi, Fantauzzi, Colasanti, & Fiorani, 2019). Although many universities have recognised the shift in societal expectations and made efforts to embrace them by adopting new missions, this does not imply that universities are in control of this transition.

Most universities struggle to make the new missions part of their strategies, and subsequently struggle to adopt new functions and develop appropriate activities (Nabi, Lina, Fayolle, Krueger, & Walmsley, 2017; Wakkee, van der Sijde, Vaupell, & Ghuman, 2019). Moreover, the structure of the "modern" university is being criticised, with many calling for (drastic) modifications (Trencher, Yarime, & Kharrazi, 2013). Several university traits are called into question by academics like Trencher et al. (2013) such as its inclination to separate academic disciplines and specialised, fragmented knowledge (Ford, 2002; M'Gonigle & Starke, 2006; Orr, 2004; Taylor, 2009), its tendency to study societal problems rather than generating actual and concrete solutions (Clark & Holiday, 2006), and its disregard for place-based, real-world problem solving and engaged research (Crow, 2010; Ford, 2002; Orr, 2004; Taylor, 2009) (p. 41). Although the potential role of universities in regard to entrepreneurship as well as to economic, social and political realms of the community is increasingly accepted (Appe et al., 2017) and some universities have made reforms to adapt to societal expectations, academics argue that most universities fail to incorporate and promote it. Henry Etzkowitz (2016) remarks that there is over-attention to the first and second mission, while the university's missions regarding innovation & the entrepreneurial dimension in support of economic- and social development remain overlooked. There are tensions between the 'new'- and the conventional missions, and universities continue to struggle to find balance.

2.3.2 Evolution in the core functions of the university

Previous paragraph discussed the evolution of universities and its missions. This paragraph explores the effects of aforementioned developments in science to the cardinal functions of the university. To describe the evolution of its core functions, Gibbons et al. (1994) introduce the concept of modes of knowledge production. Multiple academics (Carayannis & Campbell, 2009; Fernández et al., 2018; Martin & Etzkowitz, 2000; Nowotny, Scott, & Gibbons, 2003) have incorporated these modes to describe different approaches of universities. The modes present a useful concept to describe the development of science within universities.

First, Gibbons et al. (1994) argue that we are witnessing a shift from 'Mode 1' to 'Mode 2' in the academic landscape. Mode 1 describes the initial approach of universities to knowledge production. According to Gibbons et al. (1994) and Martin & Etzkowitz (2000) it involves the production of knowledge primarily within individual disciplines, mainly in universities and other academic institutes. Martin and Etzkowitz (2000) argue that in Mode 1 there is no or minimal connection of knowledge production to societal needs and the transfer of research results is very limited. Additionally, they argue that there is limited societal accountability required to justify expenditure of public funds. The initial approach to knowledge production was largely disconnected from societal problems and universities had a considerable degree of autonomy in research as well as in the selection of problems for research.

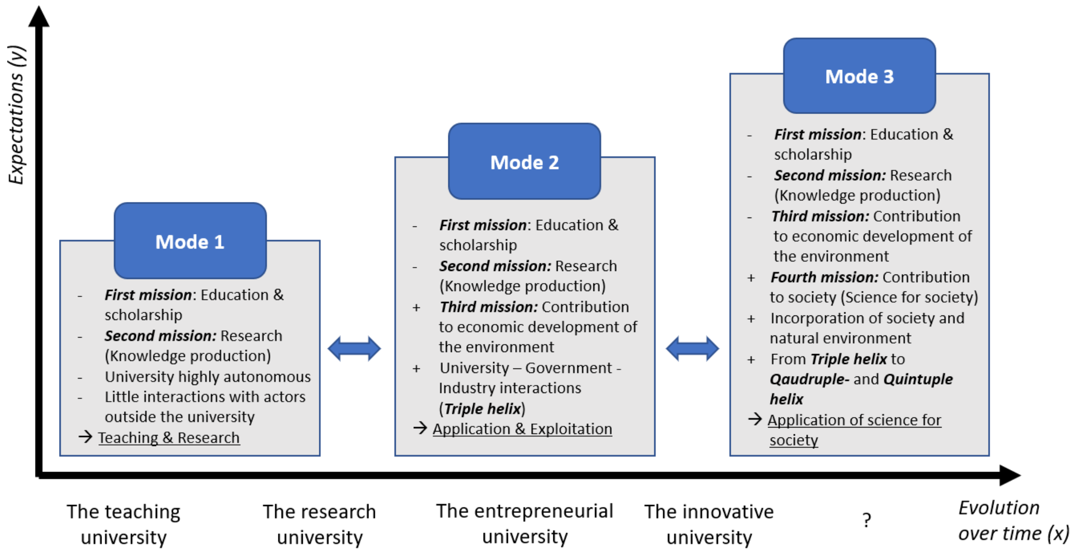
In contrast to Mode 1, Mode 2 involves multi-disciplinary research across a variety of institutions (Martin & Etzkowitz, 2000). Martin & Etzkowitz note that research is no longer limited to universities, and boundaries between sectors have become more blurry as interactions have emerged across them (e.g. university – industry interactions). However, these interactions are limited to government, industry and the university (the triple helix). Subsequently, they argue that knowledge in Mode 2 is now produced "in the context of application". Hence, societal needs have a direct influence on knowledge production and there is relatively explicit social accountability for the public funding received (Martin & Etzkowitz, 2000). Nowotny et al. (2003) add that Mode 2 is trans-disciplinary and subsequently they state that "*in 'Mode 2' knowledge is embodied in the expertise of individual researchers and research teams as much as, or possibly more than, it is encoded in conventional research products such as journal articles or patents*" (p. 186). Because of its multi-disciplinary character, Mode 2 involves actors outside the core social bodies forming a university. Mode 2 is therefore associated by Fernández et al. (2018) with the third mission of universities. Martin and Etzkowitz (2000) endorse that this approach to knowledge production by universities is very new. Although authors do not disagree that a transition is taking place, several academics (Godin, 1998; Weingart, 1997) criticised that the research provided by Gibbons et al. (1994) is less convincing in terms of putting evidence forward to indicate that academic institutes are actually entering Mode 2. They rather speak of a shift in balance than an actual shift in modes. They argue that there is a shift in balance as universities appear increasingly involved in this new approach compared to previous decades, but there is too little systemic evidence to speak of a new phenomenon (a new Mode in universities).

Despite indications that in many universities today this shift has yet to take place, Fernández et al. (2018) suggests that some institutes have recently successfully made this transition. Fernández et al. (2018) argue that those universities that have managed to accommodate the third mission and gave it texture, have become decisive actors in economic and social development. According to Fernández et al. (2018) these institutes have the ability to strengthen connections between different agents in their environment and can therefore make meaningful contributions to regional development in several ways. First, such connections generate more democratic access to university knowledge (Carayannis & Campbell, 2009; Fernández et al., 2018). Second, these connections have the potential to invigorate innovation processes exponentially (Carayannis & Campbell, 2009; Fernández et al., 2018). Finally, and perhaps most important is that these connections produce and initiate new relationships for the production of knowledge (Fernández et al., 2018). These new connections are described as Mode 3 by Carayannis and Campbell (2009); Fernández et al. (2018).

Similar to Mode 2, Mode 3 operates in the context of application. However, whereas university interactions in Mode 2 were limited to government and industry, Mode 3 incorporates social actors and the natural environment of society (Fernández et al., 2018). Fernández et al. associate Mode 3 with the Quadruple- and Quintuple helix model (University – Government – Industry – Society - Natural environment). Furthermore, they argue that research activities move beyond mere productivity. According to Carayannis, Barth, and Campbell (2012), research efforts respond to societal problems and the communities afflicted by them. Additionally, Fernández et al. (2018) argue that "*knowledge transfer and business incubation cease to be casual and become permanent activities that occur in all strata of the university*" (p. 35). Hence, this Mode is associated with the fourth mission and effectively links the university to the socio- economic environment. Universities that successfully managed to direct their research activities towards social needs and who have subsequently been able to build strong links to the socio- economic environment, are capable of generating virtuous cycles in which firms benefit from greater competitiveness (Castro Martínez & Vega Jurado, 2009; Fernández et al., 2018). However, benefits are not limited to the environment. Fernández et al. (2018) suggest that it might present benefits to the university itself as well. They argue that the university might benefit from the (increased) societal integration.

To summarize, there have been several shifts in the core functions of the university and these shifts appear related the evolution of the university, emerging university models, and the university its missions. Figure 1 visualises these links and connects the modes, missions, and university typologies. As academic literature implies that the innovative university is only partially representative for Mode 3, there appears to be a gap. No university typology could be identified in academic literature that is comprehensive to Mode 3, represented by the "?".

Figure 1 The evolution of the university and its core functions



Source: Developed by the author, inspired by Fernández et al. (2018)

2.3.3 Experiential learning in Higher Education

Simultaneously to the academic transitions, there has been increasing interest for experiential learning approaches in higher education. This appears related to the expanding responsibilities associated to these very transitions, particularly the expectations of a stronger entrepreneurial- and social orientation in education. Coherently, academics (Henry, Hill, & Leitch, 2005; Katz, 2007; Klein & Bullock, 2006) have studied if entrepreneurship can be taught. Although Henry et al. (2005) indicate that little uniformity can be found amongst entrepreneurship education, they argue that there is consensus that at least some aspects can successfully be taught. Cooper, Bottomley, and Gordon (2004) indicate that the traditional lecture- and class-based method to disseminate knowledge is vital to teaching and learning, but suggest that stand-alone it is insufficient for entrepreneurship education. Although universities are able to educate and provide a theoretical framework, Apostolakis (2011) argues that this is insufficient for (social) entrepreneurship because of the importance of- and the tight linkages to the 'real-world' environment. As universities are expected to become increasingly entrepreneurial (Kretz & Sá, 2013), educators are turning to new educational approaches that can establish real-world linkages. One emerging approach is Service Learning (SL). SL has been used to characterise a wide array of experiential educational endeavours, from volunteer and community service projects to field studies and internship programs (Furco, 1996). Educational programs that promote learning through active participation and experience in community engagement, referred to as Community Service Learning (CSL), are of particular interest to SE. Contrary to lecture- and class-based methods, CSL programs provide (wider) societal benefits. They promote learning through services for (disadvantaged) communities, and therefore have a clear societal component. CSL provides benefits to student & university (provider) and the community (recipient), with a focus on the latter (Furco, 1996). In spite of growing interest for experiential learning in higher education, it is mostly business schools that have capitalised the opportunity (Smith, Barr, Barbosa, & Kickul, 2008).

2.3.4 Entrepreneurial competencies for new venture creation

In an effort to become more entrepreneurial, universities have adopted several activities to support entrepreneurship and venture development. To explore the contribution of universities to entrepreneurial competencies for venture development, the entrepreneurial competency framework by Einar Rasmussen, Mosey, and Wright (2011, 2014) is used. It provides a theoretical basis to understand the entrepreneurial competencies required for (new) venture development, as well as insight in the diversity among those who provide them. Rasmussen et al. discuss actors that can contribute to the creation and continuation of (new) ventures in different stages, one of which are universities. E. Rasmussen and Wright (2015) split entrepreneurial competencies for new venture development in three groups, associated with three core processes: (1) the need to develop a viable business opportunity *[Opportunity development competency],* (2) the need for championing individuals that provide meaning, direction and energy to the entrepreneurial process *[Championing competency]*, and (3) the need to access the resources necessary to develop the new venture *[Resource acquisition competency]*. They argue that universities can to support all of the core processes on different levels, and therein imply its relevancy to both venture development and the development of entrepreneurial competencies. The core processes correspond with the characteristics described by Tanabe (2020) in the stages of SE. By linking both concepts, the core processes and associated university characteristics can be connected with different quadrants of SE. Although the processes are not limited to a single stage, they appear more significant to one stage than to others. Opportunity development corresponds with '*Development*'. Championing corresponds with *'Formation, Validation & Growth'*. And resource acquisition, while relevant to all stages, appears most significant in '*Formation, Validation & Growth*'. The core processes are explored, discussed and connected to the stages of SE in appendix 5 .

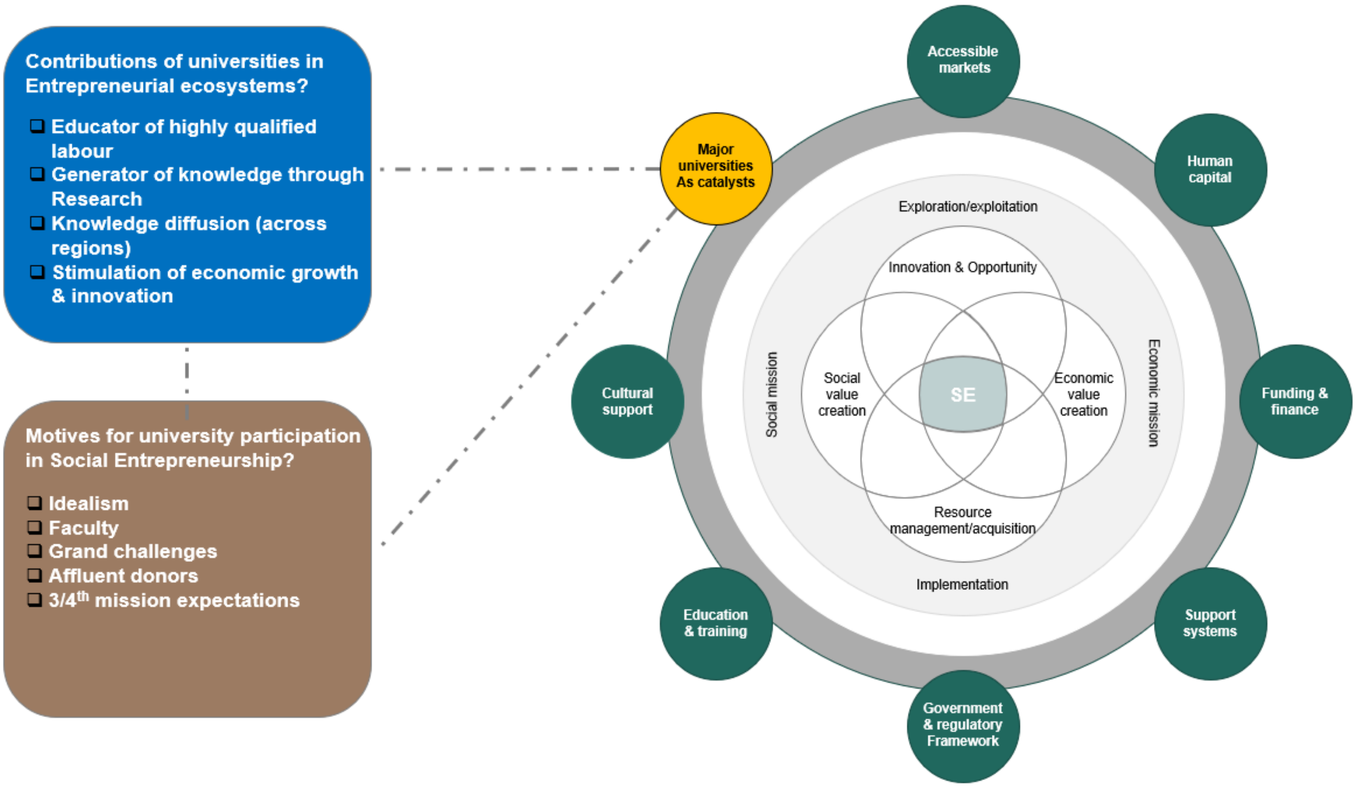
2.4 Motives for universities to embrace Social Entrepreneurship

Whereas previous paragraphs provided indications as to why and how universities may present a relevant and (possibly) valuable actor to SE, they fail to provide insight in the motives for universities to participate. Thorp and Goldstein (2013) suggests four practical reasons for universities to embrace SE. First, they describe an unprecedented level of idealism on college campuses. They argue that students are passionate about SE and increasingly take on lower-paying jobs after graduation to contribute to improving the world. Idealists on campuses are increasingly embracing the principles of entrepreneurship in order to learn the entrepreneurial skills to realise their own plans to make the world a better place (Thorp & Goldstein, 2013). Second, Thorp and Goldstein (2013) argue that SE presents a useful method to "winning the hearts and minds" of faculty in the university. Universities that embraced SE and recruited academics with similar research interests, created greater interest and even competition among departments to facilitate it in their curricula (Thorp & Goldstein, 2013). Hence, it sparks entrepreneurial thinking, catalyses interest in SE and adds a new dimension to it. Third, Thorp and Goldstein (2013) describe an intellectual challenge in the grand societal challenges, and argue that SE could spark intellectual discussion towards tackling them. Although the challenges are often recognised in- and attempts are made by universities to resolve them, efforts are generally limited to a small number of unconnected, one-off projects funded by external foundations and agencies (Thorp & Goldstein, 2013). When external funding vanishes, so do these projects. Furthermore, Thorp and Goldstein (2013) suggest that SE could play an important role as a 'connector' because it offers a unifying structure. It could connect multiple departments and disciplines in the university, and connect the university to external parties. Finally, they refer to affluent donors. Whereas students and faculty members are attracted to SE from an idealistic perspective, potential sponsors and investors are drawn to the idea because it incorporates many of the entrepreneurial principles to which they are familiar (Thorp & Goldstein, 2013). Supporting SE could benefit public opinion both donor and university. A final motive implied in literature is the drive to address social needs (Javed, Yasir, & Majid, 2019; Ratten & Welpe, 2011). The urge to live up to societal expectations may present an additional motive for universities to engage in SE.

2.5 Learnings

This research studies the role of universities in the entrepreneurial ecosystem in support of social entrepreneurs. Figure 2 combines the theory discussed in chapter 2 to visualise some of the relations between the topics reviewed.

Figure 2 Visualisation of the construct



Source: Own interpretation

Chapter 3: Methodology

This chapter provides insight in the methodology applied. First, the aim of the study and the outline of the research design is presented. Second, the selected research method is motivated. Third, the process of data collection and the corresponding selection criteria are discussed. Thereafter, insight is provided in the data analysis approach and the coding process. Finally, the trustworthiness of the findings is discussed and the research ethics are presented.

3.1 Research design

Few scholars have focused on SE in regards to entrepreneurial ecosystems and the limited body of work today has not emphasized and incorporated its surrounding environment and relations (Roundy Philip, 2017). This study aspires to provide insight in the role(s) of one of the key actors, universities, in the entrepreneurial ecosystem in support of SE. As current research in the role of universities within the SEE is very limited, the phenomena is studied with minimal a priori expectations. The study seeks to develop understanding of the research element in order to produce generalizations to inform theory development. Hence, it takes an inductive perspective in which systematic analysis of empirical data is leading in deriving theory (Bleijenbergh, 2015). To enable effective exploration, ‘flexibility’ and ‘open-mindedness’ are regarded key orientations in the research approach and the set-up of the research methodology (Stebbins, 2001). Although Stebbins (2001) indicates that both quantitative- and qualitative methods can present effective methods for data gathering in exploratory research, this study takes a qualitative approach. Qualitative research was selected as it is generally regarded a more useful method to collect rich data and detailed descriptions, and allows for more flexibility and open-mindedness in the research design and subsequently benefits theory development (elaborated in 3.2 “Research method”).

3.2 Research method

The purpose of this study is to explore, explain and develop deeper understanding about the relationships between the central topics of study. Because it seeks to explain ‘why’ and ‘how’ universities play or can play a (integral) role in support of SE within Entrepreneurial Ecosystems, qualitative research presents the most appropriate research method (Sutton & Austin, 2015). To support the collection of rich data, the generation of knowledge, and theory development to describe- or ascribe to the phenomenon, the study focuses on interviews. It takes a Grounded Theory (GT) approach in which theory is generated through systematic and constant comparative analysis of the empirical data (Bowen, 2006; Strauss & Corbin, 1990). Glaser and Strauss advocate that researchers postpone (extensive) literature review till after systemic comparative analysis, to minimalize knowledge generation being driven by theory (Barney G Glaser & Strauss, 2017). Contrary, Thornberg (2012) criticises that this could impede creativity and ultimately the generation of new themes or topics. Thornberg (2012) therefore suggests an ‘Informed Grounded Theory’ approach where literature is not regarded a dogma. Rather, literature is consulted to identify possible areas of enquiry and to spark creativity. This approach is similar to Straussian GT, selected for this study (paragraph 3.2.1). Subsequently, a literature review was conducted prior to analysis to get a solid understanding of the central topics and complementary theory, as well as to inspire themes for spontaneous questioning during interviews. Data was therefore collected by means of in depth semi-structured interviews. Although the semi-structured interviews are partially informed by theory, the interview questions were purposely designed to support free-flowing and spontaneous conversations and questioning. The semi-structured interviews provided the ‘flexibility’ to ask follow up questions and left plenty of ‘open-mindedness’ to incorporate topics and themes that emerged during the interviews. Hence, the iterative nature of the research approach was preserved.

3.2.1 Grounded Theory approach

Grounded Theory (GT) was developed by Barney G. Glaser and Strauss (1967) and could be described as a method that continually demands interplay between data collection and data analysis in the effort of generating theory (Bowen, 2006). Using a GT approach, theory was generated through systematic and constant comparative analysis of the empirical data. Central characteristics of this approach include that it is: 1) Inductive, 2) Iterative, and 3) Uses comparative methods (Charmaz, 2014). Furthermore, there are several key principles that underlie GT. The first and the most important concept is the principle of *constant comparison*. According to Corbin and Strauss (2013) constant comparison is “the analytic process of comparing different pieces of data for similarities and differences” (p.66). To successfully compare interviews, higher-level concepts were identified to which lower-level concepts could be attributed (Corbin & Strauss, 2013). Categories or concepts were identified on a more abstract level to find similarities and differences amongst the interviews. Constant comparison included comparing data with data, data with concepts, concepts with new data, and finally concepts with concepts. The second principle is the notion of *sensitizing concepts*. It is the idea that the concepts from which we depart, and those that emerge in the process of data analysis, are provisional rather than definitive. Concepts were temporary guiding themes that were developed throughout the stages of research. The final principle is the writing of *memo’s*. Memos are important because they support theory building, create transparency by providing insight in the thought process of the researcher, and they grant the opportunity to reflect. It is in the memo’s that connections were made and theory started to emerge. Corbin and Strauss (2013) therefore regard memos the engine that drives the analytical process.

Despite these universal characteristics and principles, different variations to GT can be distinguished: Classic Grounded Theory (Barney G. Glaser & Strauss, 1967), Straussian Grounded Theory (Strauss & Corbin, 1990), and Constructivist Grounded Theory (Charmaz, 2000). Although the variations have similar core elements and they all find their origins in the work of Barney G. Glaser and Strauss (1967), there are significant differences in their approach. Most notably, their contending coding procedures, their opposing philosophical positions, and their conflicting use of literature (Kenny & Fourie, 2015), elaborated in appendix 6. This study takes a Straussian approach. Subsequently, a fairly straightforward literature review was conducted prior to research. The initial literature review was than revisited, extended and refined during the process of data analysis in an effort to connect empirical data, were possible, with academic literature to support and substantiate theory development. The coding process followed Open-, Axial-, and Selective coding.

3.2.2 Case & Research context

To study the role of universities in the SEE, this study takes an in depth look at the role of universities in the national Entrepreneurial Ecosystem of the Netherlands. This ecosystem was selected for three reasons. Firstly, this Entrepreneurial Ecosystem was selected because it contains all the necessary components described by H. M. Neck et al. (2004) and the World Economic Forum (2013). Most important universities, social enterprises, supportive organisations and social entrepreneurial initiatives. Secondly, project and research documents like: "Building an ecosystem for social entrepreneurship: lessons learned from The Netherlands" (PwC, 2018) & "Social enterprises and their ecosystems in Europe" (European Commission, 2020a), indicate the development of a SEE in the Netherlands. Finally, aforementioned reports hint at the start of university participation in SE. Additionally, they suggest the importance of university involvement in sector development and the integration of SE in education (PwC, 2018). Hence, the (Social) Entrepreneurial Ecosystem of the Netherlands is considered an appropriate and relevant context and case of study.

3.3 Data collection & sampling

The main method to collect data were in depth semi-structured interviews. Additionally, documents were accessed. First, a literature study and quick scan was conducted to get an adequate understanding of the central concepts of study. This inspired the interview protocol, provided a first overview of SE initiatives and potential participants, and helped to determine appropriate and informed interviewee selection criteria. In this process, literature, university documents, and project & policy documents were accessed. Second, in depth semi-structured interviews were conducted. Participants were selected through a combination of purposive sampling methods. Participants were selected because of their academic, managerial and/or practical experience in SE, higher education, or both. They had to have a steep degree of knowledge, expertise and/or experience in SE or its surrounding ecosystem. To get access to a bigger pool of respondents, snowball sampling was utilized in addition to judgement sampling. Interviewees, initially selected for their expertise, were asked to identify other knowledgeable potential participants that could provide (new) insights to this research. Three categories of interviewees could be distinguished: 1) academics and university associates involved in SE, its development or management, 2) social entrepreneurs and employees at social enterprises or social entrepreneurial initiatives (practitioners), and 3) experts in supportive organisations and initiatives specialized in SE. Participants that were selected due to their affiliation with a social enterprise complied to the following criteria: [a] the venture creates value in the effort of a social mission (type of venture); [b] the venture operates in and/or is located in the entrepreneurial ecosystem of the Netherlands (geographical location); [c] the activities and the scope of the social enterprise provide a merit for academic support and/or an academic challenge (degree of specialisation). The social enterprise could operate as a for profit or not-for profit. Data analysis was started during the process of data collection to identify themes and analytical memos were created. To support memo creation and theory development, documents were accessed in addition to the empirical data from the interviews. Documents were consulted to enrich, support and validate the empirical data gathered through the interviews. The interplay between data collection and data analysis was crucial as it inspired questioning in subsequent interviews. In total 12 interviews, exceeding an hour, were conducted. In the final interviews no new categories or key themes emerged relevant to answering the research question. Additionally, the data gathered at this point provided considerable detail and insight in the properties of the categories that emerged during the analysis process (Appendix 11 Memos & Network Schemes). In compliance with the concept of *theoretical saturation*, the level of saturation attained was regarded sufficient for the scope and purpose of this study. Although the interviews were initially planned to be conducted face-to-face, the corona pandemic necessitated a change in approach. Interviews were therefore conducted digitally through video calls (Zoom, Skype, or Teams) to preserve as much of the elements of face-to-face interviews as possible.

Table 1 provides insight in the dispersion of interviewees across aforementioned categories. Because six of the respondents corresponded with multiple categories, the accumulative number exceeds the number of interviews conducted. Examples include, but are not limited to, a professor of practise who is simultaneously chair of a supportive organisation in SE, a social entrepreneur who is also a lecturer at the university, and a coach/trainer of SE at an independent educational service provider which is a social enterprise itself.

Category	***Number of corresponding respondents***
1) Academics and university associates involved in SE, its development or management	6
2) Social entrepreneurs and employees at social enterprises or social entrepreneurial initiatives (practitioners)	4
3) Experts in supportive organisations and initiatives specialized in SE	8

Table 1 Dispersion of interviewees across the categories

3.4 Data analysis

GT was applied to generate theory through systematic and constant comparative analysis of the empirical data. Concepts were derived from raw empirical data and assigned to different categories, in order to develop an overarching and encompassing theory of the element of study. In accordance with Straussian GT, data analysis was conducted in three steps: Open-, Axial- and Selective coding. In each of the steps the key principles of constant comparison, sensitizing concepts and the writing of memo's took a central role. Memos were created throughout all the stages of research. To support in depth analysis and theory development, computer assisted qualitative analysis was performed in ATLAS.ti 22.

Labelling segments of data to identify themes: Open coding

The first step was open coding. Open coding is an interpretive process by which data can be broken down analytically to identify themes, concepts and (sub)categories (Corbin & Strauss, 1990). Data segments were labelled to develop a rough pre-structured overview of themes within the data, providing better movability to find similar, contradicting and confirming topics. The labelling or conceptualisation of data not only supported the reduction of data

(Corbin & Strauss, 2013), it also provided an overview to support constant comparison across the data in axial coding and the analysis process as a whole. Furthermore, open coding provided and inspired language to effectively and accurately describe the data (Corbin & Strauss, 2013). In compliance with Straussian GT, literature was consulted to support the open coding process. However, codes and themes were predominantly derived from the empirical data. The open coding process did not start with a predetermined coding scheme; codes emerged from the data during the coding process in an effort to stay as close the empirical data as possible (Charmaz, 2008; Kenny & Fourie, 2015).

Bundling of lower-level concepts (themes) in higher-level concepts (categories): Axial coding
The second step was axial coding. According to Corbin and Strauss (2013) axial coding is "the process of crosscutting or relating concepts to each other" (p.196). In this step the lower-level concepts, the open codes, were reviewed and possibilities for aggregation or bundling were explored. The initial list of lower-level concepts was gradually transformed into a category system of higher-level concepts in which they gained methodological significance by exploring relations amongst the themes through memos, thought and literature. Hence, a structure amongst the codes emerged in this step of the bottom-up process to theory construction as open codes were transformed to categories. These abstract categories are the axial codes which created a structure amongst the "building blocks". Axial coding provided a comprehensive structure amongst the codes, but it also supported the researcher to reduce the number of codes and select those that are relevant and grounded.

Integrating and connecting categories in a discursive core category: Selective coding
The third and final step of data analysis according to Straussian GT is selective coding. Selective coding is the process of integrating and connecting the identified categories (axial codes) in overarching core categories or a "story" to produce a discursive set of theoretical propositions. In this stage, categories were compared to one another to support theory development from the empirical data and to integrate them in overarching core categories and subsequently a storyline, to support the answering of the research question.

3.5 Trustworthiness of findings

The evaluation of the quality of research conducted is essential to assure that findings are credible and trustworthy. This is particularly true for research with a qualitative approach, where the researcher's subjectivity can so readily cloud the interpretation of the data, and in which research findings are repeatedly met with scepticism by the scientific community (Brink, 1993). To assess the quality of research, scholars often turn to the concept of validity and reliability. However, in qualitative research many researchers avoid the use of these terms as the nature of qualitative research methods does not lend itself for statistical or empirical calculations of validity and reliability (Brink, 1993). Glaser and Strauss argue that adhering to concepts such as objectivity, validity, reliability, and replicability could inhibit theorizing and theory construction when rich first-hand data is collected in an inductive qualitative research study. Instead of validity and reliability, many qualitative researchers apply terms such as credibility, trustworthiness, truth, value, applicability, consistency and confirmability (Brink, 1993; Barney G. Glaser & Strauss, 1967; Leininger & Reynolds, 1991; Lincoln & Guba, 1985). Sikolia, Biros, Mason, and Weiser (2013) argue for the application of trustworthiness in Grounded Theory Methodology (GTM) and present categories equivalent to internal- and external validity, reliability, and objectivity. The categories include: a] credibility, b] transferability, c] dependability, and d] confirmability (Sikolia et al., 2013). Credibility matches internal validity, transferability matches external validity, and dependability matches reliability (Sikolia et al., 2013). Although Glaser and Strauss warn that the application of concepts like reliability and validity may inhibit the process of theorizing and Stebbins (2001) emphasizes the importance of flexibility & open-mindedness in GTM, several measures were taken to maintain the study its rigor.

Credibility
Credibility refers to accuracy of the empirical data collected. It is about the extent to which the data on a phenomenon accurately reflects reality (Sikolia et al., 2013). In order to establish credibility several measures were taken. First, multiple sources of data (documents and interviews) were collected and accessed during all the stages of the research (data triangulation). The use of multiple sources and the interplay between them enriched, supported and enabled (some) validation of the empirical data collected. Second, interviews were processed verbatim and interviewees were granted the opportunity to review the transcripts. Thirdly, verbatim quotations were cited to support themes, concepts and categories as well as its interpretation. The use of verbatim quotations increases the credibility of the findings by directly connecting the interpretations made by the researcher with that which participants actually said. Finally, the concepts and categories that emerged during the process of coding were developed, supported and compared or enriched with (academic) literature. Thereafter, the theoretical background was extended and revised accordingly.

Transferability
Transferability refers to the applicability of a set of findings from one research setting to another (Sikolia et al., 2013). Extensive memos were created to enhance transferability. They provide insight in and support the thought process of the researcher as an instrument to transform raw empirical data to concepts, categories, and finally theory & theoretical propositions. Additionally, transferability was stimulated in participant selection by the inclusion of participants from different backgrounds (E.g. academics, practitioners, and experts from supporting organisations or initiatives). Hence, data was collected from a range of participants with diverse perspectives and experiences.

Dependability
The concept of dependability closely resembles reliability (Sikolia et al., 2013). Dependability is about the consistency of the research process and the extent to which careful attention has been paid to conventions of qualitative methodology (Guest, MacQueen, & Namey, 2012). It refers to the extent to which the data accurately represents changing conditions of the phenomenon, consistency over time, and consistency amongst researchers and their application of research techniques (Sikolia et al., 2013). Although a GTM approach is iterative by nature and in many ways demands a certain degree of "inconsistencies" within the research process (e.g. it demands interplay between data collection and data analysis to inspire questioning and therein creates inconsistencies across interviews), the researcher strived to create consistencies in its application. First, the application of semi-structured interviews

increased dependability as the interview protocol provided a basic degree of consistency and structure across the interviews and the central topics up for discussion. All participants were given access to the interview protocol (appendix 7) prior to the interview. Hence, interviewees were familiar with its structure and had the opportunity to make preparations. Second, data was monitored and analysed as it was collected. Interviewees were given the opportunity to review the verbatim transcribed interviews to improve its quality and consistency. Finally, the process of data analysis was consistent for all data and strictly followed the process described in paragraph 3.4.

Confirmability
Confirmability refers to the objectivity of the research (Sikolia et al., 2013). It is about the level of confidence to which the study its findings represent first-hand data and therefore participants their experiences, views and words rather than (potential) researcher biases. To minimize researcher biases, language was inspired by the data. Hence, codes, categories, and finally theory were (directly) derived from verbatim quotes and/or associated literature. Computer assisted qualitative analysis in ATLAS.ti 22 enabled more in-depth exploration of relations amongst codes and categories in network schemes by linking and incorporating actual data and verbatim quotations. Furthermore, verbatim quotes have been incorporated to support the findings throughout chapter 4. The quotes were the starting point in theorizing.

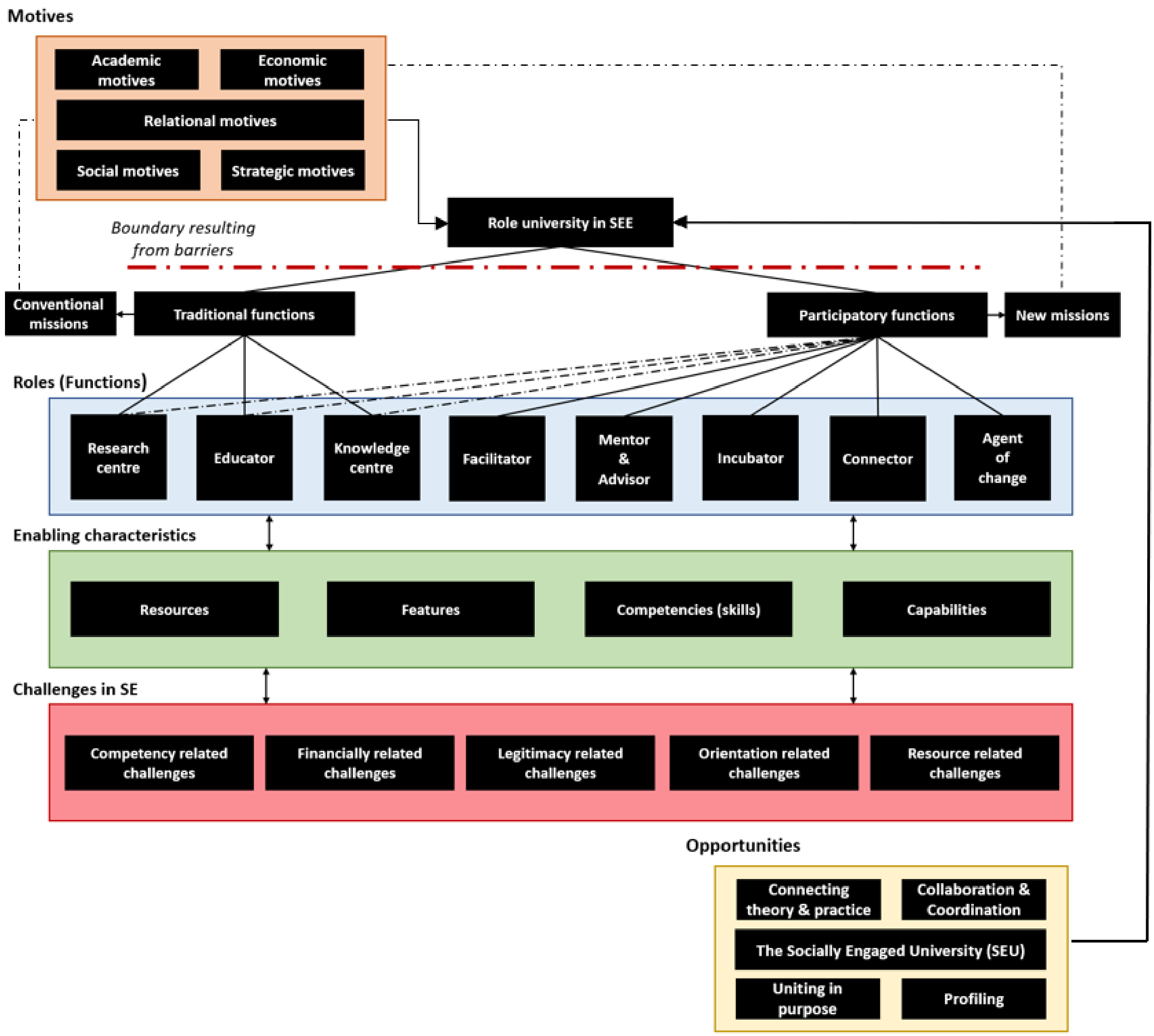
3.6 Ethical considerations

The participants were able to invoke their right to privacy and their right to refuse to answer certain questions. Participants were asked permission before the interview to record them to support data transcription and analyses. At the end of each interview, participants were given the opportunity to suggest additional topics and/or to make remarks. Interviewees were granted the opportunity to withdraw from the research at any time. Disclosure of respondent identity will only be provided in consent with the respondents.

Chapter 4: Results

Figure 3 provides the inductively derived conceptual overview. It visualises the core and sub-categories that emerged during data analysis and places them in an overarching storyline; the role of the university in the Social Entrepreneurial Ecosystem. Respectively, it shows: (1) Enabling characteristics, (2) Challenges to SE, (3) Roles or functions of the university, (4) Barriers, (5) Motives, and (6) Opportunities. Each of the categories and its underlying elements are discussed in the following paragraphs. The enabling characteristics and challenges have been grouped in the first paragraph. Additionally, the category 'Maturity' and 'Phenomenon' were created during data analysis. However, these categories are related to and follow from aforementioned categories and were created for analytical purposes.

Figure 3 Conceptual overview core categories



4.1 Enabling university characteristics and Challenges to SE

The first core category encompasses characteristics from the empirical data that make the university a suitable actor in support of SE. Analysis of these characteristics resulted in several observations. First, interviewees argued the relevancy of a wide range of university characteristics to the development of SE. Second, the characteristics to which participants referred could be categorised. Four types of enabling university characteristics could be distinguished from the empirical data: resources, features, competencies, and capabilities (table 2, appendix 8). Thirdly, although the characteristics could be classified in categories, the data implied interrelations. Characteristics within- and across the categories appeared to enable, reinforce or connect to one another, most apparent in the features. Fourthly, interviewees referred to characteristics that are associated with each of the university Modes of knowledge production. However, whereas nearly all interviewees referred to characteristics associated with university models in the conventional approach to knowledge production (Mode 1), this was less true for characteristics associated with newer models of the university (Mode 2 & 3). This was most apparent in the capabilities. Fifthly, participants related the characteristics that they described to five types of challenges to social entrepreneurs(hip), and therein implied the relevancy of universities to SE. Finally, interviewees used the characteristics that they identified to describe and ascribe a variety of "roles" to the university in SE (paragraph 4.2).

4.1.1 Resources

The first category of characteristics are resources. Participants mentioned two types of university resources: tangible- and intangible resources. Tangible resources included the university its specialised and knowledgeable staff (Expertise workforce), its access to (young) talent (Pool of talent (students)) and its buildings, IT and research equipment (Physical facilities). The intangible resources encompassed the university its vast knowledge (Knowledge & expertise), its contacts and connections within- and outside the academic community (University network) and, finally, its reputation (Reputation). Multiple interviewees used aforementioned elements to describe the university more broadly as a useful source of knowledge & expertise, a source of (affordable) capacity, and a source of credibility & contacts in SE. One interviewee stated: "*What these clubs of social entrepreneurs often need is simply a few hours here and a few hours there. At a certain point this will not suffice, but they still can't afford it to hire everyone and make them part of the company if there is no big venture capatalist (…). This is why this stage in Social Entrepreneurship is so difficult. You are expected to function as a professional company but you don't have the bankwidth to do so yet. Not financially nor characteristically. That is perhaps another reason why the university, with its students and academics, in particular is an interesting party.*" (5:89). Participants referred to common challenges such as the continuous struggle for sufficient resources in the process of professionalizing the social enterprise, and proposed the university as a useful and accessible source.

4.1.2 Features (Functionings)

The second category contains features or functionings. It encompasses characteristics from the empirical data that are inherent to the university. Hence, it includes characteristics that, to a certain degree, are unique to the university as an academic institute. Interviewees referred to the university's independency, self-regulation and its right of self-government with respect to local or internal matters and its academic endeavours (Institutional autonomy), its pursuit and practice of academic work in the absence of (outside) interference, censure or obstacles (Academic freedom), its ability to look at topics and challenges from a combination of different- and, simultaneously, multiple perspectives (Transdisciplinary), and finally its drive to produce knowledge from a principal of learning to advance understanding (Objective academic attitude). It was striking that interviewees predominantly referred to features in combination with characteristics in other categories. Institutional autonomy and the Objective academic attitude, for example, were often cited in the context of the university its skill in conducting research and performing sound analysis. A participants argued: "*Well, the university should have a hand in creating the frameworks of Social Entrepreneurship. They are well equipped to do so based on their research qualities and an objective scientific point of view."* (1:54). Interviewees consciously or unconsciously related these inherent characteristics to those in other categories, suggesting interrelations amongst the categories.

4.1.3 Competencies (Skills)

The third category encompasses a set of 'lower level' skills. Competencies are smaller-scale identifiable elements. They are demonstrable skills that interviewees mentioned that are associated with or integral to the completion of a task or goal that contributes to a more comprehensive capability. Hence, the skills that interviewees described were largely related to (specific) capabilities. Participants mentioned the university its proficiency in educating people (Teaching). Its skill in conducting rigorous research (Conducting research). Its ability to critically review and build explanations to resolve gaps or inconsistencies in knowledge, to illuminate areas of tension and/or new phenomena by defining them and giving them meaning (Sense-making). The ability to question phenomena, experiences & developments, and form informed judgements based on interpreting, understanding, applying and synthesising evidence gathered from observation, reading and experimentation. Thus the making of reasoned conclusions or judgements from a variety of sources of evidence (Shared critical mind-set/problem solving). And finally its ability to identify, conceptualize, and solve intricate problems and thereafter develop corresponding theory based on evidence. Hence, the conversion of knowledge to theory (Conceptualizing/Theorizing).

4.1.4 Capabilities

The final category encompasses characteristics that describe 'higher level' competencies or skills. Capabilities are to be understood as a more holistic set of competencies. Capabilities mentioned by the interviewees included the university its: Analytical-, Research-, Knowledge production-, Knowledge transfer-, Innovation-, and Organizational capabilities. Although each of the capabilities was mentioned several times across multiple interviews (and therefore found grounded), the first four were mentioned by the majority of interviewees. Contrary, the remaining two were only mentioned by a few participants. Hence, interviewees predominantly referred to capabilities that are commonly associated with the university its cardinal functions (Mode 1). They associated the university primarily with- and regarded its contribution in the light of its conventional functions and characteristics.

4.1.5 Challenges for Social Entrepreneurs(hip)

Participants described a wide range challenges in SE, including: (1) Competency related challenges (the ability to scale up, a lack of business competencies, and the complexity in developing sustainable & scalable business models), (2) Financial related challenges (a lack of access to a smaller range of investors, problematic acquisition of funding, and financial dependency & uncertainty), (3) Legitimacy related challenges (Organisational credibility, and the complexity in proving social- and ecological impact), (4) Orientation related challenges (clash between social- and economic value creation, and increased complexity due to challenges & demands from social aspects), and (5) Resource related challenges (the lack of skilled human resources, limited (access to) resources, complex and costly processes to justify social impact, and substantial talent slippage). They postulated the university as a suitable institute in support of SE precisely for the variety of enabling characteristics that they described. They related its resources, features, competencies and capabilities to the challenges, and argued that universities can support social entrepreneurs to tackle them.

4.2 The role of the university in the Social Entrepreneurial Ecosystem (SEE)

Previous paragraph discussed the enabling characteristics of the university. This paragraph presents the way in which interviewees used said characteristics to describe and/or ascribe several roles (functions) to the university in SE. Several observations can be made. First, multiple roles emerged from the empirical data. Second, the variety of "roles" that interviewees described and/or ascribed to the university all find their origins in the enabling characteristics to which they referred. In other words, it is the diversity and multiplicity of the characteristics of the university that enables the adoption of numerous roles and functions in SE. Third, many of the identified roles go beyond the boundaries, characteristics and functions associated with the traditional university models (Mode 1). Rather, interviewees referred to functions and inferred characteristics that are commonly associated with university models in Mode 2- and 3. Fourth, there are indications that academic presence in SE shows considerable variation across the different roles. Although many of the functions that interviewees attributed to the university fall outside the scope of the traditional university model, it is remarkable that the majority of university initiatives that they described fall inside this very scope. There appears to be a discrepancy between that which interviewees regard university support in SE ought to be, and what it is in reality. One element that appears related to this phenomenon are the missions of the university and their perceived priority. The data indicates an imbalance between the conventional- and the 'new' missions or functions in universities. Finally, there are multiple indications that universities remain largely unsuccessful in integrating- and assuming a significant role in the SEE.

4.2.1 Roles & functions in the realm of SE

Interviewees described and ascribed a variety of roles to the university in regards to SE. They broadly argued that it could support and catalyse SE in two respects. First, they argued that universities could advance SE by developing and conceptualising it. Thereby pushing the discipline forward (structural support). Secondly, they argued that it could support the discipline by providing support to entities within the field of SE (e.g. making students, professors and knowledge available for societal issues). Hence, interviewees argued that universities are able to provide practical support to an individual social entrepreneur, social enterprise or supportive organisation. In addition to the broad categories, they described specific functions. These roles, and their characteristics, show great similarities to the functions and characteristics encompassed by the different modes of knowledge production and the corresponding missions that were identified throughout the evolutionary stages of the university (Paragraph 2.3.2). Eight roles were distinguished from the empirical data.

(1) The university as a 'Research centre' - (MODE 1)

The first role is *the university as a research centre.* It has the university's proficiency in conducting research at its core. Interviewees referred to the university's research-, analytical-, and knowledge production capabilities, and implied their relevancy to the development of the discipline. They emphasized the importance of university research activities in exploring, defining and developing SE, and therein granting it utility and legitimacy. This is exemplified by an interviewee that was asked if the university could take up an (integral) role in SE: "*Yes, I certainly think so. This because it is a fairly new discipline. Where Higher Education, and in particular the university, can play an important role is by simply conducting research. I think that this is very relevant for a new field of study. Today it's just very much pioneering*" (4:22). Continuing the interviewee adds: "*When it comes to mapping the ecosystem and landscape, and providing it with a solid foundation, I think research is really important. Where this became clear was in the entire lobby that formed to get the BVm on the agenda in the first place. (...). An incredible amount of research was conducted to accomplish this. (...).*"(4:40). He concludes: "*(...) It is my understanding and believe that universities and science can make a very important contribution to substantiate it [SE] and in doing so they can provide even more convincing proof of the importance of this form of enterprise. I think that is an important task for universities and universities of applied sciences*." (4:41). The university as a research centre aligns with Mode 1 of knowledge production and the second mission of universities. Participants mentioned a number of examples of university SE research activities and initiatives (table 3, appendix 10). One example provided was the recent appointment of a professor of Social Entrepreneurship at the Erasmus University who is committed to research. However, exempt one or two exceptions, the research activities that interviewees described were initiated from the interest and enthusiasm of an individual academic, rather than part of coordinated and dedicated efforts by the university and its research groups.

(2) The university as an 'Educator' - (MODE 1)

The second role is *the university as an educator*. Interviewees implied the university its relevancy in instilling a social entrepreneurial mindset in (non-) students through the transfer of knowledge and SE education. Interviewees argued that the knowledge produced in SE, amongst others through the university its own research endeavours, should be taught. They argued that this is an important function of the university. When discussing CSL programmes, one interviewee stated: "*Well because, if I understand you correctly, it is much more about facilitating students to do something socially meaningful in addition to their studies. This I can only applaud, however it is separate from the study program and our responsibility as a university to provide education and conduct research in the field of social entrepreneurship.*" (1:17). Interviewees suggested the university's responsibility in the production of knowledge and its transfer as core functions of the university. Additionally they pointed out the academic challenge in SE. One interviewee remarked: "*The topic [SE] is being discussed and little is* *known about it. This means that knowledge has to be acquired. This is what universities do. That's what universities do! In addition to the acquisition of knowledge through research, it is about the transfer of that knowledge. Which is accomplished through education.*" (2:89 & 2:90). The university as an educator approximates Mode 1 and the first mission of universities. Interviewees mentioned several SE modules that have been and/or are being set-up by universities as part of this function (table 3, appendix 10). However, multiple interviewees indicated that universities have only recently started this process where previously they largely disregarded it. Subsequently, they mentioned several independent education service providers that created programs to bridge this gap (table 3, appendix 10). Hence, a significant part of SE modules today is offered by non-university institutes that have created substitutional or complementary programmes. Additionally, they argued that the majority of modules in universities are electives (e.g. Minors) or extracurricular (e.g. the Enactus programmes). Very few programs specifically focus on SE and it is yet to be integrated as part of the standard educational programmes and curricula. Hence, they are optional rather than mandatory. This is exemplified by a participant stating: "*I think that merging is happening but there are still very few business schools and universities that design their entire program really well around questions of social entrepreneurship, sustainability and purpose. Very, very few.*" (9:69).

(3) The university as a 'Knowledge centre' (repository) - (MODE 2)

The third role in some respects could be regarded as an extension of the previous function, however, it is more comprehensive and sophisticated. Whereas previous function centred around the transfer of knowledge, the *university as a knowledge centre* has the management of knowledge at its core. Interviewees argued that it is about the structuring of knowledge and making it readily accessible to anyone interested. Hence, it concerns both the management of knowledge as well as its transfer. In contrast to the university as an educator, that predominantly focuses on actors inside of the university atmosphere, interviewees indicated that the university as a knowledge centre includes a broader public. One interviewee commented: "*(...) I can imagine that universities and colleges have to play a role when it comes to knowledge management. We're talking about there being a lot of knowledge, but you and I both know that the knowledge is often hard to navigate. And it is often even more difficult to place it in context. I think universities and universities of applied sciences could play a role in that. Would it be like a helpdesk? I do not know. Can they take responsibility for knowledge management? Well that I think they certainly can. Yes, that I think they certainly can!*" (2:26). Continuing the interviewee added: "*I do think that the role of universities should be a kind of knowledge/management centre. Research is taking place all over the world. And then it will be published. So the knowledge, to make it available in a satisfactory and accessible way for people who want to use it, I think that is a very important task for the university and the university of applied sciences*." (2:71 & 2:72). In contrast to aforementioned roles, the characteristics imparted to the university as a knowledge centre connect to Mode 2. Similar to Mode 2, the university as a knowledge centre does not limit knowledge production, management or its transfer to the university. Rather, interviewees argued that this function seeks to make knowledge accessible to a wide range of actors so it may be put in the context of application (knowledge valorisation). Hence, it touches the concept of the third mission and could potentially even approach the fourth mission. Despite numerous references to the knowledge that resides in universities, multiple interviewees indicated significant gaps in SE literature. Furthermore, they implied that there is a need for better knowledge management. They argued that knowledge is not readily accessible to the public at large, demonstrated by aforementioned quotes. Interviewees implied that there is no accessible and low-threshold centre where knowledge in SE is brought together.

(4) The university as a 'Facilitator' - (MODE 2)

In addition to the intangible resources, interviewees referred to the tangible resources. The university as a facilitator finds its origin in these tangible resources. Participants argued that universities could make their physical facilities available to activities and goals of society, illustrated by an interviewee: "*First universities can contribute as a place. Hence, making the buildings and facilities of the university available to things within society.*" (3:43). Furthermore, interviewees suggested that universities have- and can create campus environments that facilitate economic activity through the access of university facilities (science parks). An interviewee described some of these science parks and stated: "*Universities have a number of things an entrepreneur needs. This is not limited to social entrepreneurs, but rather to a starter so to speak. There are a few practical things that you need which are related to: 'I don't have money but I need to sit on a chair somewhere, I need a PC and there has to be a door somewhere because I have to be able to consult with my colleagues'. In other words, office space and other similar facilities. This is of course what you minimally need as a foundation. This is facilitated quite well at the RUG's, or whatever they are named, around the university of Nijmegen, Enschede and Delft. That's one facet.*" (12:20). Coherently, an interviewee commented: "*At the university in Eindhoven and in Twente, for example, the university offers on campus spaces to ventures and start-ups*." (8:39). It is at the very least remarkable that the majority of science park like initiatives mentioned are initiated by Technical Universities. There are indications that these initiatives are most common and mature at Technical Universities, and subsequently that they predominantly encompass ventures with a technological orientation rather than businesses with a social orientation. This is illustrated by an interviewee that was asked whether there are similar initiatives for social entrepreneurs or that the existing ones include them: "*Hmmm well they are not by definition aimed at social entrepreneurs, but at starters. In my opinion, Technical Universities do this particularly well. They really try to get starters with a technical orientation to the campus. Of course, this may also include some social entrepreneurs.*" (12:24). Secondary data and a quick review of the science parks mentioned supports the notion (appendix 9). Activities and characteristics imparted to the university as a facilitator align with Mode 2 and the third mission of universities. Interviewees related it to the adoption of actors outside the core body of the university, entrepreneurs, by creating favourable campus environments and thereby contributing to the economic development of the region (as a location). Although interviewees were able to describe several universities whom have successfully set-up science parks or similar environments (table 3, appendix 10), no examples were provided of science parks with a social focus; Social Innovation Parks.

(5) The university as a 'Mentor & Advisor' - (MODE 2)

The fifth role is all about mentorship and the advisory contributions of universities.

Interviewees argued that universities have the expertise to provide coaching to practitioners and build the frameworks of SE. They suggested that it could develop SE through advisory activities such as policy development and the development of appropriate regulation. As an example an interviewee referred to the introduction of a new legal structure: "*Presently, you probably know this, there is a bill in the house of representatives [tweede kamer] to give the BVm legal status (...). To accomplish this academic research was conducted and various advise was given.*" (4:23). Contrary to aforementioned function(s), university participation now is imperative. It corresponds with Mode 2 of knowledge production. The associated activities necessitate universities to interact with actors outside the social body of the university and they contribute to economic development. Although interviewees mentioned some advisory and coaching practises, the examples provided are predominantly one-off projects and activities rather than structural initiatives or activities in the university.

(6) The university as an 'Incubator' - (MODE 3)

Whereas a number of interviewees described how the university could enable entrepreneurship through the access of university facilities (the university as a facilitator), interviewees referred more frequently to a function which goes beyond mere facilitation of economic activity. They argued that the university itself could produce social- economic activity on campus and referred to *the university as an incubator*. Unlike previous roles that supported or enabled SE, the university as an incubator actually takes part in it. Interviewees argued that the university could promote the establishment of social enterprises by students, assisted by faculty members and their experiences. An interviewee remarked: "*Well, I think that a university or a university of applied sciences could even go so far as to let students establish social enterprises under the guidance of professors, that might even come from that corner of the business community [SE]. In doing so the university could immediately apply their research efforts that are already taking place. This is happening in some places, but in this I think you will get a really interesting model. (...).*" (5:31). Coherently, interviewees mentioned several university initiatives across the Netherlands that address new venture creation and entrepreneurship such as the Erasmus Centre for Entrepreneurship, the Tilburg Center of Entrepreneurship and the Radboud Entrepreneurship Initiative (table 3, appendix 10). Despite these initiatives, interviewees again emphasized that the majority of university spin-offs are traditional enterprises driven by technology. They predominantly referred to incubation practises in the context of University Medical Centres and Technological Universities. Hence, these university initiatives may sporadically happen to include and produce social entrepreneurs(hip), however, this is not their main priority. The one exception mentioned was the Skoll Centre for Social Entrepreneurship. Although it does make the incubation and catalysation of SE a priority, this initiative is initiated by the Saïd Business School University of Oxford. Hence, no examples were provided of SE focused incubation practises at universities in the Netherlands. As the incubation of social ventures would cease to be sporadic and would become a permanent activity in the practises that are adopted by the university as an incubator, this function connects to Mode 3 and the fourth mission. However, because the majority of university incubation efforts today produce socially oriented ventures incidentally, they are limited to Mode 2 and the third mission.

(7) The university as a 'Connector' (MODE 2 & 3)

One role that the vast majority of interviewees referred to is *the university as a connector*. This function finds its origin in- and has the university its network at its core. Interviewees indicated the university's experience and proficiency in building networks, referred to its extensive networks both in- and outside the academic community, and argued that the university is perfectly placed to take up a connecting function because of its academic orientation and independency. They argued for university support through the utilization of these networks, thereby connecting a variety of actors. One interviewee stated: "*Well I think universities could be one of those parties, not uniquely but one of the parties, that with their networks (…) and from a… erm well a pure academic drive could bring all these organizations together*" (11:24). Furthermore, participants emphasized the importance of connecting organisations from different quadrants of the business continuum in support of SE. They alluded to gaps between the quadrants as well as between different entities. They argued that the business quadrants, and its stakeholders, remain largely disconnected from one another. When asked about university initiatives and their participation in SE, an interviewee argued: "*Well, I think very little. I have to say that I haven't specifically looked into it, but there is undoubtedly a very big gap there. Traditionally, the entire social entrepreneur community has always been mistrusted by the business community and vice versa. Now you need to bring them together. Certainly in the Netherlands, I think there is still a gaping gap between them. Higher education could play a role in this by narrowing that gap.*" (5:90). Coherently, interviewees argued that the university could serve an important function in bridging these gaps and suggested several practises. One interviewee suggested: "*In fact, what should happen at the university is that in those programs [SE modules] the public sector is invited to speak, the financial sector comes to talk and the private sector. And/or that they jointly propose programs. That leaders or ambassadors are invited to debate about this [SE] with each other.*" (7:47). The participant argued that such initiatives could help to "*draw attention to the topic, to enthuse students, but also to get companies involved*" (7:45). Whereas some interviewees implied that the potential of this function is rather limited because they could merely serve as a "platform", others suggested the contrary and argued that universities could go far beyond these activities. For example by partnering with Regional Development Agencies (RDA's), and connecting RDA's with students, alumni and professors with promising ideas to establish start-ups (incubator) that address societal issues and the Sustainable Development Goals (SDG's). Interviewees mentioned several connective initiatives in SE. However, whereas some of these initiatives are supported by the university (e.g. the university is mentioned as a partner), they rarely included initiatives that are initiated by the university itself. Participants argued that these practises are more common in non-university entities (e.g. Social Enterprise NL and Ashoka) than in universities. One exception mentioned is the Social Entrepreneurship Initiative (SEI) at the university of Utrecht. Interviewees indicated that the university of Utrecht has organized multiple festivals and symposia in SE, thereby connecting students, academia and business. The university as a connector fits both Mode 2- & 3 as well as the third- & fourth mission. Associated initiatives actively seek to connect actors outside the social body of the university (academia and business) and support regional development. Hence, they connect with Mode 2 and the third mission. Furthermore, they connect different entities on societal and/or ecological issues through mixed use of academic- and practitioner knowledge in pursuit of systemic change. Therefore, they also align with Mode 3 and the fourth mission.

(8) The university as an agent of change (MODE 3)

The final role that emerged from the empirical data is unlike any of the aforementioned functions. Whereas interviewees previously described functions in which the university supports, facilitates and/or even actively participates in SE and its development, *the university as an agent of change* subjects it under scrutiny. Several interviewees argued that critically questioning new developments or topics, scrutinizing them, and determining whether or not they are desirable should be an important function of universities. Across the interviews, participants described SE as a resonating topic and implied that it is gaining momentum. Generally, interviewees used a positive connotation. However, some participants voiced concerns and even referred to it at as a ‘hype’. One interviewee stated: “*At the same time, it is important to teach students to look critically at the practice from the theoretical knowledge that is available. Hence, feeding them with literature and insights that are valid, reliable and solid enough to make that hype somewhat visible, as it were. Or lets say the trend, to put it positively. Thus to actually support the current trend on the one hand, but to critically question it on the other*” (1:37). Although interviewees unanimously recognised the relevancy of university support to its development, and they each described a variety of functions that universities (could) take up, academics expressed some doubts about its legitimacy. They insinuated that precisely because SE is gaining momentum rapidly, it is also surrounded by a lack of scrutiny, questioning and even ignorance. Merely because its stakeholders and participants define it as “social” does not mean that it actually is, they argued. These negative connotations and the function that connected to them are captured by an interviewee stating: “*Ehm well… in making the field less naive yes. I still don't know if I want to call it a discipline, that’s one thing, but there's just a lot… Of course I understand this, people are trying to develop this area of expertise. There are just a lot of uncritical normative stories in it. Nonetheless, it's the university its responsibility to wonder if something is helpful, period. Or perhaps that something else works better (…)*” (3:16). Interviewees argued that universities have a civic responsibility to guard communities and society from undesirable developments, and argued that participatory functions should be part of the primary focus of universities. They regarded the university a civic agent that has the ability to shape and ensure the potential of transformative processes that may lead to systemic change. This function reflects the principal of “science for society” and subsequently connects to Mode 3 - and the fourth mission of universities. Interviewees implied that this function is yet to be adopted in the SEE, illustrated by a participant: “*I think the ecosystem, as you call it, at the moment predominantly consists of people who want to get it going. People who like to define themselves along the lines of: “we are different from the others”, and who are not ready for criticism. However, it also needs people who critically question it.*” (3:29).

As the functions progress, interviewees imply that an increasing degree of participation- and integration in the (S)EE is required from the university. This suggests an increasing complexity in the functions. Although participants argue the importance of the traditional functions for the development of SE (research & education), they emphasize that university participation in- and engagement with the larger ecosystem is imperative. Some interviewees even going as far as to suggest the latter being (perhaps) even more relevant. One professor remarked: "*Well I think the most important role of the university is in the first statement [contributing through practical approaches]. Thus by participating actively. This could include action learning and action research. However, I believe that the university considers itself to be predominantly in the ivory tower of knowledge development, that others should use.*" (3:56). Similarly, another professor argued: "*So they [universities] can make very different contributions in all sorts of disciplines that go far beyond mere education of students in these areas. In fact, I think that's an important function, but possibly not even the most important. Education of course is important, but what is even more vital is that entrepreneurial ideas are picked up and used to realize social change and innovation.*" (1:73 & 1:74). It is remarkable that in spite of the importance that interviewees place in the (participatory) non-traditional functions, the majority of university initiatives- and activities that they describe are limited to its traditional functions (table 3, appendix 10). Although some interviewees described activities beyond the boundaries of the traditional functions, the majority was initiated by parties outside of the university (they are external- or complementary initiatives) or they encompassed activities that fit the non-traditional functions but do not, or merely by chance, focus on SE. A professor of practise involved in SE coherently talks about initiatives and collaborations, and describes: "*Yes… um… it's in an exploratory phase. It's [initiatives and collaborations] actually kind of classic and not specifically related to social entrepreneurs either. There is certainly cooperation with universities. However, I don't think these collaborations are sufficiently focused on social entrepreneurs. This has a lot to do with profiling and positioning that is chosen, or not chosen. Collaborations between governments, the business community and academia exist in all kinds of areas, but I can't say exactly what that is like for Social Entrepreneurship."* (2:29). Furthermore, interviewees suggested that SE initiatives are disconnected and clear concentrations of SE in universities are nearly non-existent. A professor of SE stated: "*I must say that it is all still a bit in its infancy. You see it [SE] now and then in dissertations and theses, but to say that there are very clear concentrations of social entrepreneurship education, I have to say that I find that very disappointing.*" (1:12). They indicate that initiatives are fragmented across universities and supportive organisations. Finally, the majority of initiatives that interviewees described required little university participation and engagement with the larger ecosystem. Coherently, all participants indicate that university support in SE is in its infancy and ecosystem integration is negligible compared to more developed and specialised fields of study (e.g. healthcare and technology). Subsequently, they argued that universities are not (yet) a significant pillar in the SEE of the Netherlands. Additionally, interviewees provided multiple indications that the maturity of SE varies significantly amongst universities and countries, and implied that the Netherlands is no frontrunner.

4.3 Barriers to (effective) university participation in SE

Previous paragraphs provided indications that university support in SE is nascent. More specifically, they provided empirical evidence that the majority of university initiatives in the Netherlands are focused on- and limited to its traditional functions. Whereas research and education are considered core activities, initiatives that require a steeper degree of university participation and engagement with the larger ecosystem are regarded secondary (non-core). Interviewees suggest several explanations for the current state of SE in universities and its limited participation, captured by seven types of barriers. Many of the barriers described appear related to inadequacies in the structure of the university and the structure of education. Together, they create a boundary to effective adoption of participatory functions.

The first type are *Awareness related barriers*. Interviewees argued that people are unaware of SE in several respects. First, they indicated that students on average scarcely come in contact with SE, let alone experience it. They related this to the majority of SE educational programmes being optional rather than mandatory. Secondly, they argued that SE initiatives are fairly unknown. Interviewees suggested that students are unfamiliar with SE initiatives both in- and outside of the university. Coherently, the CEO of Enactus Nederland argued: "*(…) One of the things that students often encounter when they are recruiting is that we [Enactus] are still relatively unknown. So even in universities and universities of applied sciences we still have a lot of work to do. To show who we are and what we do, while we have been in the Netherlands for 15 years now.*" (4:73). However, the empirical data suggests that this is not unique to students. It also appears true for practitioners, supportive organisations, academics, and even the university itself. Practitioners indicated that they are disinclined to seek university support for several reasons. One reason being that they are unfamiliar with university initiatives. Even the academics amongst the interviewees, who are involved in SE, struggled to name university initiatives in that respect. That initiatives remain relatively unknown, even to the university itself, is illustrated by the following quote: "*The interesting thing is that in a sense Enactus is different in each country. Our relationship with universities is very loose. With some universities we have… Formally we must have a faculty advisor at each university that recognizes that a team, from their university, is active in Enactus. This is a formal rule derived from America. In America, for example, a lot is done by Enactus on campus. The affiliation of universities there is much more evident than in the Netherlands. I am aware that, except for one or two cases, the university itself is actually completely unaware that there is an Enactus team active at their university. (…)*" (4:29).

The second type of barriers are *Collaboration related barriers*. Interviewees mentioned three collaboration related barriers: 1) Academic market competition, 2) Demanding collaboration requirements, and 3) Conflicting interests & Intellectual Property. They argued that these barriers inhibit collaborations in SE with- and between universities in several respects. First, market competition between universities for students, faculty, funding, and prestige discourages inter-university collaborations and coordinated social entrepreneurial efforts. Although interviewees remarked that market competition is less fierce than in some other countries (e.g. the US), they argued that it certainly does apply and should not be disregarded. Secondly, participants argued that collaboration requirements imposed by the university itself often inhibit university-industry interaction. They described that universities generally seek collaborations with large corporations because they have more capacity and resources to innovate and experiment, are more stable, and can financially contribute to scale (research) initiatives. Contrary, interviewees argued that social enterprises are generally small and yet to be scaled, and do not have the financial means, time nor capacity to meet said expectations. However, they suggest that SE initiatives are at least as relevant for SME's. Some even suggesting that they are particularly beneficial for small enterprises and start-ups. Unlike most SME's, large enterprises have exhaustive knowledge as well as the resources to supplement knowledge and skills externally, they argued. Despite multiple indications that university initiatives are at least as, if not more, relevant to small ventures, interviewees indicated that collaboration requirements are un-suitable to the majority of social enterprises. Consequently, participants argued that collaborative initiatives with social enterprises, even those that actively seek university support, rarely get started. Additionally, social entrepreneurs related the lack of collaborative initiatives to the indistinctiveness of practical yields. Finally, interviewees pointed out challenges due to conflicting interests and Intellectual Property (IP). They argued that universities and business are increasingly expected to learn collaboratively. However, they also noted that conflicting interests often withhold such collaborations or impede their potential. Whereas universities generally seek to advance understanding and strive to make knowledge accessible, interviewees argued that many enterprises, even those with social aspirations, seek collaborations for competitive reasons. Hence, they argued that many enterprises impose conditions regarding ownership that (severely) limits the exchange of the created IP, which discourages collaboration.

The third type of barriers derived from the empirical data are *Legitimacy related barriers*. Interviewees questioned the legitimacy of SE as a discipline and domain of inquiry in its own right (demonstrated by quote 3:16, paragraph 4.2.1). They argued that SE, and therefore social enterprises, are ill-defined. What a social enterprise is and whether or not an organisation truly is to be regarded a social enterprise is somewhat of a grey area. Some academics argued that whereas the concept of an 'enterprise' has been defined reasonably well, the concept of 'social' is by definition contested. Activities regarded by one enterprise or entrepreneur as 'social', might be questioned or disputed by others. Hence, they argued that there is no universally accepted measure to determine the validity of the claim. This is demonstrated by another participant that coherently remarked: *"(...) The beauty of the whole system is that it has a kind of peer-to-peer review system. So people have to judge each other whether or not you are a social enterprise with your idea. (...)*" (4:41). In other words, today it is up to entrepreneurs to judge each other to determine whether or not their concept is to be considered social entrepreneurial. Not only does definitional unclarity impede the legitimacy of SE as a field of inquiry and the validity of its tangible outcome (social enterprises), interviewees also imply that the resulting definitional struggles draw superfluous amounts of university attention that could have been spend on other (participatory) functions. An academic argued: "*Yes, I really think that universities, and I am of course an example of this myself, we are disproportionally entangled in a kind of definition battle, while the outside world does not really need such a definition battle.*" (3:92). However, interviewee scepticism isn't limited to its definition. Participants argued that SE at large remains an unexplored intermediary category that, despite increasing interest, is unpopular and questioned. It is unpopular in the sense that it is yet to be embraced. Interviewees indicated that the majority of businesses and universities are yet to participate. They argued that both universities and businesses generally take a passive rather than an active stance towards SE. As one of the root causes interviewees suggested the numerous unanswered questions and gaps in knowledge (e.g. about scaling and regulation), and aforementioned scepticism and unawareness.

The fourth type are *Orientation related barriers*. First, interviewees indicated that the university its orientation to education is rigid and stale. They argued that education has largely remained unchanged and in a sense is outdated. They suggested that it is outdated in two respects: a) its organisation (the methods applied), and b) its structure. According to interviewees, the majority of education in universities has a strong theoretical focus. They argued that education, like several decades ago, predominantly takes place inside of the lecture halls through the transfer of knowledge from professor to student. Contrary, they indicated that participatory approaches are more appropriate to fields of study such as SE. They described that knowledge has become less of a proprietary asset as it is increasingly accessible. Consequently, interviewees argued that universities should put less emphasis on the transfer- and production of knowledge, and more attention to placing it in context and appropriate application. Participants believe that students should spend less time in lecture halls, and more time learning through participation and experience (learning by doing). Some interviewees even implied that this is not unique to SE and that other fields of study, and their ecosystems, could equally benefit from participatory approaches. Furthermore, participants indicated a disconnect between theory and practise in universities. They partly attributed this disconnect to aforementioned over attention to theory and the lack of participatory approaches to education. Additionally, they suggested that it is related to the university's tendency to seek faculty that represent their conventional functions. Despite the addition of new missions and efforts to incorporate the SDG's through Sustainable Development education, interviewees argued that universities are still fundamentally organised and oriented to their conventional functions and missions. Coherently, they argued that universities seek- and evaluate faculty on these very activities. However, they implied that this is insufficient to accommodate the new societal expectations and ambitions, and argued that the university has to reinvent itself. Amongst others, they proposed the integration of participatory methods in the organisation of educational programmes at universities (e.g. Service Learning- and Experimental Learning methods) and advocated for a wider range of faculty representing all four missions. In addition to a conservative design and a gap between theory and practise, interviewees indicated that there is relatively low flexibility to change the structure of educational programmes at universities. They argued that the transformation of the structure of educational programmes is often slow, particularly in core courses. Furthermore, they indicated that university participation is hindered by conflicting cultures and mechanisms. Whereas the transformation of education is reactive rather than proactive, they argued that the contrary is true for social entrepreneurs and their enterprises. Subsequently, they suggested that both operate at different speeds. Finally, interviewees argued that campus development and science is advanced through disagreement, whereas initiatives outside the academic sphere thrive by seeking points of agreement in which interests coincide.

The fifth type of barriers are *Practical barriers*. First, the majority of interviewees described both a lack of initiative by- and initiatives at universities. They argued that university initiatives in SE, and third- and fourth mission activities, are limited. Participants argued that the sense of urgency for change is too minimal. The empirical data suggests that this is true for businesses and universities alike. When discussing third- and fourth mission activities, a professor of practise expressed concerns and argued: "*Well… I've heard about it, but I am not* *sure if it's more than just an intention. I just don't know and I am aware that it sounds very sceptical or cynical how I phrase that, but I certainly don't mean it that way. I just do not know. (...) I think universities are reinventing themselves. Yes, reinventing.*" (2:58). Continuing, the interviewee stated: "*But on the other hand, I think the incentive for that change is limited. I think it's good that there is limited market forces in higher education. I like that very much. I would not be in favour of that myself, but that does mean that I notice that the sense of urgency that you often see in companies to do things differently quickly, because otherwise another will, in universities I notice this much less.*" (2:59). Coherently, a practitioner involved in CSE initiatives at Philips Healthcare remarked: "*The problem is that other companies are not so committed to it [SE]. Everyone always asks: 'who is your competitor?'. If you were to ask this question to your dad, than he would be able to name quite a few. However, we do not have the same competitors in our humanitarian framework. These are all waiting to see which way the wind blows.*" (7:37). Continuing the interviewee argued: "*But I believe this also applies to universities and universities of applied sciences. Universities are also just waiting and seeing. They sometimes organize a program, but that's it. They don't really know how and where to really send their students to gain real experience through, for example, internships. (...).*" (7:40). Hence, interviewees implied that change in the focus and functions of universities is slow, that the incentive to change is too limited, and that their stance towards SE is generally reactive. They related the lack of initiative(s) in universities partly to the limited adoption of SE practises by businesses, particularly large corporates. Second, interviewees described a language barrier. They indicated that social entrepreneurs and academics speak different languages. First, because they literally use different words. Second, because many entrepreneurs do not understand or see the utility in the practical application of complex models and theories. Additionally, interviewees indicated that the majority of social entrepreneurial endeavours take place in countries (e.g. Congo) in which neither English nor Dutch is the native language. They argued that this language barrier presents separate challenges to university participation.

Another type of barriers that emerged from the empirical data are *Resource constraints*. Interviewees described two resource constraints that hinder university participation in SE: 1) Limited availability of students & academics, and 2) Shortage of academic staff. Whereas interviewees recognised and emphasized the importance of participation by both students and academics, they argued that their availability is rather limited. They related the unavailability of students and professors to the lack of participatory methods to education in universities and their incentive structures. As SE initiatives are likely to take place in instable, precarious environments, and focus on disadvantaged communities, interviewees argued that projects are often complex and take a long time. Contrary, they argued that the opportunity for students and professors to participate is slim. According to practitioners, students are merely available for a couple of weeks for university projects or a couple of months for internships. They argued that this is insufficient for students to truly get to experience and learn from most SE endeavours, as well as for the enterprise to benefit from them. Although they agreed that universities could and should play a role in the development of SE and its ecosystem, and they each described a different composition of the functions, some interviewees expressed concerns that a shortage of staff at all levels of education could obstruct this.

Finally, interviewees described *Structure related barriers*. They argued that the way in which universities are structured hinder or, to put it at its mildest, does not encourage university participation, collaboration nor rapid change of course. First, interviewees suggested that incentive structures and performance evaluation does not encourage participation and collaboration. Rather the contrary. They argued that performances of university professors are predominantly determined by academic publications and the propagation, transmission and communication of knowledge. They implied that professors achieve status and increase their career prospects through publications in prestigious academic journals with high impact scores. In other words, whereas interviewees described that professors are expected and incentivized to conduct research, and communicate- and teach the findings to advance their careers, they argued that the opposite is true for participatory functions and responsibilities. They argued that professors are insufficiently expected and motivated to take up participatory responsibilities and roles throughout their careers. Subsequently, they indicated that the majority of research efforts by professors, as well as the activities and programs they set-up, have an (pure) academic orientation. They seldomly include practically oriented efforts, publications and/or participatory activities that require ecosystem integration and which directly contribute to developments within society (e.g. advisory reports). Some participants even implied that these incentive structures, to a certain extent, encourage competition between academics, departments and faculties, rather than collaboration. Second, interviewees related the university's governance structure to aforementioned inflexibility for change and collaboration. They argued that its governance and incentive structures do not advocate a natural tendency for collaboration. More specifically, interviewees argued that the university's governance is characterised by academic autonomy. They argued that there is a large degree of autonomy of individuals, departments, and faculties. Professors and researchers have a large degree of freedom to select and determine activities, topics, and their priority in education, according to their own interests. Although interviewees described academic and institutional autonomy as an enabling feature (paragraph 4.1.2), some argued that it may also impede (the speed of) change. They implied that it is precisely this academic freedom and autonomy that allows for a lack of alignment, coordination, and disagreement on topics such as SE in universities. One participant stating: "*I think the academic freedom is absolutely the reason why people tend to disagree on these things pretty quickly.*" (3:64).

4.4 Motives for university participation & engagement in SE

The fourth core category derived from the empirical data encompasses motives for university participation in SE. Interviewees described and proposed five types motives.

(1) Academic Motive(s)

Interviewees argued that there is a great intellectual challenge in SE. They argued that it is a new phenomenon in which significant gaps in knowledge exist and a number of important questions remain unanswered. Interviewees alluded to academic motives for university participation, suggesting that they could fill the gaps and answer these big questions. They argued that universities have the ability to shape and legitimize its development and can adopt a variety of roles. Furthermore, they suggested that if universities truly wish to achieve their missions, they should lead the way and build the frameworks for societal developments by integrating participatory practises in their primal functions.

(2) Social Motive(s)
Interviewees proposed several social motives. They argued that universities have a social responsibility to get involved in societal issues. First, interviewees argued that many of the wicked problems that society faces today find their roots in societal issues that are so complex that they require all pillars within society to tackle them. As an important pilar in society, they argued that universities should be involved in tackling these societal issues. Second, they argued that universities in the Netherlands are publicly funded and therefore, in a sense, have an obligation to take on some responsibility for societal issues. They described a social obligation to take part in and contribute to (regional) social- economic development and the communities from- and in which they are founded. Finally, they argued that universities have a moral duty to educate future generations to become responsible and ethical leaders. They argued that educating students in more socially oriented approaches to entrepreneurship and business, such as SE, takes an important place in this process.

(3) Relational Motive(s)
Participants suggested that stakeholders respond to SE. First, they argued that universities have target audiences that are passionate to make a difference in the world. They argued that students are open to new approaches to business and realise that there is a need for social change. Subsequently, interviewees argued that the integration of SE in curricula and SE initiatives could attract students to the university. Second, interviewees argued that faculty respond to it. They suggested that many university employees are socially driven and argued that the adoption of SE initiatives and practises could attract faculty to the university. Finally, they implied that affluent donors respond to SE. Interviewees regarded SE a strategic topic for profiling to attract additional resources to the university. They indicated that consciously pursuing a SE profile could benefit the universities reputation and prestige, and attract additional students, faculty and resources to the university.

(4) Economic Motive(s)
Fourth, interviewees described economic motives. They argued that a motive for university participation in SE is market demand. They described that companies, the government and the university are all feeling increasing pressure from public opinion to act more socially responsible. Coherently, interviewees suggested that a business transition is already taking place towards more socially oriented forms of business. They argued that many conventional businesses are transitioning to- or making place for businesses and models that account for social value. Hence, interviewees indicated a shift on the business continuum where organisations are increasingly moving, and expected to move, from economic value towards social value. Whereas many organisations today have tried to keep up with the spirit of the times by adopting CSR efforts, they argued that most organisations are still struggling to create a (social) business purpose. However, interviewees expect this shift to continue and intensify for the foreseeable future. Subsequently, they indicated that SE is more relevant than ever and suggested it as a useful avenue to attract students, staff and funding. They argued that businesses will increasingly be seeking hybrid and self-sustainable business models that account for economic- and social value, and that they need employees who are educated in new- and socially oriented types of entrepreneurship to support this transition.

(5) Strategic Motives
In line with the economic motives, interviewees argued that universities should participate in SE to stay relevant. Although some interviewees remarked that participating in SE is by no means the only way to stay relevant as a university, the majority suggested that SE and a more social entrepreneurial mind-set to business is what society needs and where business increasingly appears to be moving towards. Hence, they argued that universities should be involved in SE because both society and business care, and university curricula should reflect this. They argued that precisely because universities take an important place in the generation of knowledge and its management, and they educate future leaders, their curricula should adequately reflect developments within society. A final motive that interviewees proposed is related to the imbalance between the new and conventional missions to which they referred. Interviewees argued that universities focus and prioritize the first and second mission, while third and- fourth mission activities often remain overlooked. They argued that there is excessive attention for the conventional functions while participatory functions are regarded secondary. Subsequently, they proposed the balancing of the university's missions as a motive for universities to engage in SE. They argued that SE presents an opportunity for universities to develop third- and fourth mission activities, and suggested that participation in SE could be a vehicle to get these new missions on the map.

4.5 Opportunities for universities in SE

The final core category are opportunities. Interviewees described a wide range of opportunities. However, these opportunities can be grouped in five overarching themes.

Collaboration & Coordination: Cluster formation
Interviewees argued that SE activities in universities today are limited, and fragmented & disconnected. They argued that there is very little collaboration between universities, and universities and non-academic parties. Furthermore, they described a lack of coordination between SE programmes and activities amongst universities. Subsequently, interviewees argued that there is a great opportunity for universities to establish collaborations and to develop communication to coordinate social entrepreneurial endeavours. First, they suggested SE initiatives and education could benefit from academic cross-pollination. Therein they argued for inter-university collaborations and coordinated academic activities. Second, interviewees suggested that there are numerous untapped opportunities for universities to engage in non-academic collaborations. They argued for multi-institutional collaborations with stakeholders such as social entrepreneurs, (large) corporates, Regional Development Agencies, policymakers and the government. By establishing stronger relationships with actors outside of the university, interviewees implied that universities could decrease the gap between theory and practise (illustrated by quote 5:90, paragraph 4.2.1), increase their support for- and extent their influence on the development of SE, and strengthen their ecosystem integration. Therein, they implied that these collaborations could support the development of the SEE itself. As a best practise, interviewees referred to Technical Universities and University Medical Centres. Contrary to SE, they implied that universities have successfully established inter-university collaborations and links with parties outside the university in their technical- and medical oriented endeavours. Interviewees described that Technical

Universities have established strong inter-university relationships & collaborations (e.g. Vier TU's), and tight university-business interactions (e.g. the TU/e and the High Tech Campus).

Opportunity for profiling: Demonstrating the practical yields in SE Life cycle support
Interviewees suggested that university participation in SE could enhance the institutes reputation and provide several benefits (e.g. prestige, students, faculty and resources). Although interviewees recognised multiple benefits in adopting SE initiatives, they argued that the vast majority of universities has not included SE practises in their profiling. Subsequently, participants argued that there is an opportunity for universities to consciously profile oneself on SE and the accompanying SDG's. Furthermore, social entrepreneurs described that collaborative initiatives between universities and social enterprises rarely get started. They related the lack of collaborative initiatives to the indistinctiveness of practical yields. Social entrepreneurs indicated that they are disinclined to seek university support because the practical yields of such collaborations are unclear. Subsequently, they argued that there is an opportunity for universities to invigorate their SE initiatives by demonstrating the practical yields of participation and promoting & marketing these practises. One opportunity that interviewees suggested is related to the steep degree of drop-outs throughout the organisational life cycle of social enterprises that they indicated. Participants argued that universities could promote their initiatives by linking them to the key stumbling blocks and activities throughout the stages of SE. They argued that universities are able to support a social enterprise in each of stage of SE in several ways, regardless of the enterprise its maturity. However, they did indicate that the nature of the relationship and its intensity changes throughout the stages and pointed out several concrete supportive activities that universities could undertake that lend themselves particularly well for profiling. Including the identification of systemic problems, the development of scalable & sustainable business models, academic validation of the business concept and model, and practises for scaling-up (e.g. connecting entrepreneurs to RDA's, students, professors and/or a network of investors).

Need for a connector: Uniting in purpose
In spite of growing attention for create social value and business purpose, interviewees suggested that SE in universities is nascent. They indicated a lack of clear concentrations at universities and argued that university initiatives in SE are fragmented and disconnected, they suggested that the different quadrants of the business continuum are disconnected from one another, and they argued that several collaboration barriers impede cooperative initiatives. Subsequently, interviewees argued that there is a need for a connector in order to catalyse SE. They argued for the adoption of SE initiatives in universities as it presents an opportunity to unite a variety of different actors in purpose, that otherwise would not come together. More specifically, interviewees suggested that the adoption of a social purpose through SE initiatives could support universities to mobilize different enabling characteristics (e.g. their networks) for their third- and fourth mission activities, and support it to build greater ecosystem integration. They argued that universities could connect actors, overcome differences and support the development of SE by uniting its stakeholders in purpose.

Bridging the gap between theory and practice
Nearly all of the interviewees argued that there is a disconnect between theory and practice in

universities. They indicated that there is too great a focus on theory, whereas participatory methods are often overlooked. Subsequently, they argued that there is a great opportunity for universities to connect theory and practise through (increased) integration of participatory methods in educational programmes. Additionally, they argued that universities could strengthen ecosystem integration by getting practitioners and other relevant actors outside of the university (more) involved in their programmes and initiatives. Be it in their development or their implementation. Interviewees suggested several practises that should become common in the university, including: a) the integration of participatory functions, b) the adoption of participatory methods to education, c) the appointment of professors of practise & the inclusion of practitioners in educational programmes, d) debates between students, professors and thought leaders from different fields of expertise and different quadrants of the business continuum, e) the set-up of collaboratory goals & projects with businesses and the government (on the SDG's), f) connecting students and professors with innovative social ideas to financial investors by partnering with RDA's. Additionally, they indicated an opportunity for universities to enhance ecosystem integration by adjusting performance evaluation and incentive structures to account for practical contributions. Interviewees argued that university professors should be expected and encouraged to make themselves available for societal issues and developments. For example by taking advisory or board positions. They argued that professors should be expected to make greater societal contributions by supporting and shaping developments within society. Furthermore, they argued that this "societal contribution" should become part of standard performance evaluation.

A new university model (structure): The Socially Engaged University
A final opportunity described is related to the university its structure. Nearly all interviewees suggested that current university structures are insufficiently adequate to facilitate and catalyse third- and fourth mission activities, and associated topics such as SE. Subsequently, they argued that structural changes are required and that there is a need for a new university model. A model that connects & balances the university's missions, that enables and encourages third- & fourth mission activities, that adopts participatory functions, and which altogether seeks greater (social) ecosystem integration. Fittingly a respondent described that there is a need for a "socially engaged university", stating : "*(...) the academic community is just too focused on one/two things that happen internally and needs the question: how do you make a socially engaged university? The moment you create a socially engaged university, you also contribute to social entrepreneurship."* (3:23).

Chapter 5: Discussion and Theory development

The study started with a general lack of understanding of the role of universities in SEE's. Insight was required because SE is gaining momentum, universities are expected to fulfil a growing number of roles, and there are growing societal expectations for universities to make greater contributions to economic- and social value creation. Although universities are recognised to perform several vital functions, the characteristics that make them a (un)suitable institute in the support of SE (what), the roles or functions they could assume to mobilize these characteristics (how), and what motivates them to support, promote and participate in it (why), remains largely unexplored. Through the use of GT methodology, insight was provided by studying SE practises at universities in the Netherlands. In this chapter the research results are interpreted and explained. First, the main findings are evaluated in respect to the research questions and related to academic literature. Second, constructed theory from the empirical data is presented. The presented theory is connected to academic literature, its usefulness is discussed, theoretical propositions are formulated and the significance and implications of the results are postulated. Thereafter, the studies limitations are considered. Finally, implications for future research are discussed and recommendations are presented.

5.1 Theoretical Implications

5.1.1 What makes universities an appropriate institute for the support of SE?

First, the study contributes to SE(E) literature through the identification of enabling characteristics of one of the pillars in entrepreneurial ecosystems: universities. It identifies the university as an appropriate supportive organ and provides insight in the different elements that make it a meaningful supportive pillar. Subsequently, it answers: *'What characteristics make universities suitable actors in support of SE?'*. The results suggests that universities are an appropriate supportive pilar in SE(E's) because of four categories of characteristics: resources (tangible- and intangible), features, competencies and capabilities. The categories correspond, to a certain degree, with the limited body of prior literature on university contributions to entrepreneurial competencies (E. Rasmussen & Wright, 2015) and Social Innovation (SI) (Benneworth & Cunha, 2015). However, the study extends current literature by providing a more comprehensive classification of the characteristics and a deeper understanding of the underlying elements. Benneworth and Cunha (2015) described the contribution of universities in SI processes through their knowledge (e.g. existing knowledge or co-created with affected communities), resources (e.g. access to financial resources, infrastructure and assets for innovation), and their support through advice and persuasion. They implied knowledge and resources as separate categories, limited the university its contribution and skills to its knowledge, resources and its advisory activities, and failed to make a distinction in hierarchy amongst these skills. Contrary, this study suggests that knowledge is but one element of the university's resources (an intangible resource), it makes a clear distinction between lower-level competencies and higher-level capabilities, and adds an additional category to those suggested by Benneworth and Cunha (2015). Suggesting that those characteristics inherent to the university as an academic institute, its 'features', are an important element that makes the university a compelling supportive pillar in SE(E's). As it expands the categories and provides a more comprehensive and detailed image of the underlying elements, this study is able to identify a wider array of (potential) roles and contributions of universities than authors such as Benneworth and Cunha (2015). Furthermore it confirms the premises by E. Rasmussen and Wright (2015). It shows that universities can contribute to- and develop the entrepreneurial processes core to (social) venture development (opportunity development, championing and resource acquisition). Additionally, this study indicates interrelations between the different categories of characteristics, suggesting that they enable, reinforce or connect to one another. Similar to literature on capabilities (Holdsworth & Thomas, 2021), the results imply that it is in the interaction, integration and/or co-ordination between them that a set of resources, features and skills (competencies) can become a higher-level capability. Hence, this study suggests that it is the ability of a university to draw on, exploit and utilize different resources, features and competencies in a given situation that shape its capabilities and their variety, and which enables it to support a multidimensional topic such as SE in a comprehensive manner. It is precisely this diversity and multiplicity of the characteristics of the university that enables it to adopt an array of roles in SE. Combined, the characteristics enable universities to tackle many of the challenges that social entrepreneurs face (be they competency-, financial-, resource-, legitimacy- or orientation related) and move the process of SE forward through the development of the discipline, social enterprises, or its progression through the evolutionary stages. Therein, it proposes the university as a potential decisive pillar in SEE's. Be it through structural support by studying, conceptualising and developing the frameworks of SE, therein granting it the suggested legitimacy as a domain of inquiry in its own right (M. T. Dacin et al., 2011). Or practical support by encouraging individual social entrepreneurs, social enterprises or supportive organisations through a variety of (participatory) functions and initiatives.

Proposition 1: *The greater the diversity and multiplicity of the characteristics of the university, the wider the array of functions it can adopt and the greater its (potential) contributions in SEE's.*

5.2.2 How can universities mobilize their characteristics in support of SE?

In addition to 'what', this study adds to SE(E) literature by presenting 'how' universities can contribute to SE. The findings suggest that universities can provide both practical- and structural support assuming different roles. It adds to SE(E) literature by identifying a variety of specific functions for universities within these broad categories and their contributions in them. Subsequently, it responds to the question: *'What roles can universities adopt to mobilize their characteristics in support of SE?'*. The results indicate eight distinct roles, the university as a: (1) Research Centre, (2) Educator, (3) Knowledge Centre, (4) Facilitator, (5) Mentor & Advisor, (6) Incubator, (7) Connector, and (8) Agent of change. Each role finds their origin in- and is associated with a different subset of characteristics. By adopting the functions in their strategy and structure, this study suggests that universities could consciously and structurally mobilise their characteristics in support of SE. The identified functions partly correspond with literature on the general roles of universities (Amini et al., 2018; Davey et al., 2016; Fuster et al., 2019; Wilson et al., 2009; Wolfe, 2016) and their functions in Social Innovation (Benneworth & Cunha, 2015). However, this study proposes a different classification, a wider array of functions, and connects them with the modes of knowledge production (Gibbons et al., 1994) and the associated concepts. As the identified roles align with the modes of knowledge production, the study was able to connect the identified functions and the corresponding initiatives & activities to the different university models and missions associated with them. Although the roles could be related to each of the modes of knowledge production described by Gibbons et al. (1994), this does not imply that they are evenly distributed. In fact, the results confirm the imbalance in the university its missions suggested by Henry Etzkowitz (2016), indicating a clear focus on research and educationally oriented SE practises. The majority of university initiatives are currently limited to Mode 1. Hence, they are associated with the traditional university model and correspond with the first & second mission. This finding indicates the legitimacy of the criticism by Godin (1998) and Weingart (1997) as it suggests that the majority of universities is yet to truly make the transition to Modes 2 and 3. Whereas the study confirms that many universities recognise the need to adopt a third- and fourth mission, the findings suggests that universities remain largely unsuccessful in developing third- and fourth mission activities. It indicates that participatory functions are yet to be adopted in its core. This is coherent with the notions by Nabi et al. (2017) and Wakkee et al. (2019) whom suggest that universities struggle to adopt new functions and find it challenging to develop appropriate corresponding activities. Subsequently, the findings indicate a disconnect between the university its missions in current university structures (traditional university models) and SE initiatives. The third and fourth mission remain largely overlooked and there is a disregard for Service Learning approaches and action research. This suggests a certain degree of immaturity (infancy) in SE and SE support in universities. Furthermore, it implies a certain extent of inadequacy in present university structures. Coherent with the criticism on the structure of 'modern' universities, the findings indicate fragmentation of knowledge and initiatives (Ford, 2002; M'Gonigle & Starke, 2006; Orr, 2004; Taylor, 2009), a focus on studying and teaching about societal problems rather than participating in the generation and implementation of concrete solutions (Clark & Holiday, 2006), and a disregard for participatory methods to education and action based research (Crow, 2010; Ford, 2002; Orr, 2004; Taylor, 2009). Despite these structural issues, the findings suggest that universities are qualified to support SE in each of the stages described by Tanabe (2020). However, similar to Benneworth and Cunha (2015) the results indicate that there is no simple one-to-one correspondence between the university's contributions, the roles it could assume in SE and the point in which they occur in the process. Its diverse characteristics qualifies the university to contribute to- and support social entrepreneurs(hip) in each stage in a variety of ways, regardless of the enterprise its maturity. However, the results suggest that the nature of the relationship and its intensity changes throughout the stages of SE between universities, social entrepreneurs and the overall ecosystem. Whereas the contributions associated with the traditional and less complex functions (e.g. research, education, or university resources such as its facilities) can support social entrepreneurs(hip) in the early stages and the development of an ecosystem at the very beginning, support of a more mature and the development of a more sophisticated ecosystem requires the adoption of functions characterised by increasing complexity and a stronger degree of ecosystem integration. This suggests that the university has to adopt participatory functions and methods in its primary activities, in addition to- and connected with its cardinal functions, to become a decisive actor in SE(E's) and social economic value creation.

Proposition 2: *Modern university structures are insufficiently adequate to develop the third- and fourth mission, and corresponding participatory SE initiatives in universities.*

Proposition 3: *The more integrated participatory functions are in the core of the university, the more likely it is to develop third- and fourth mission activities and balance its missions.*

Proposition 4: *The more mature and sophisticated the SEE, the more complex the functions- and the greater the ecosystem integration of the university has to become.*

5.2.3 Why would universities engage- and provide systemic support in SE?

Finally, the study contributes to the body of academic literature through the identification of specific motives for universities to engage and participate in SE. It corresponds to the 'why', and answers: '*What are the motives for universities to support, promote and participate in SE?*'. The study suggests five types of motives for university participation in SE: 1) Academic-, 2) Social-, 3) Relational-, 4) Economic-, and 5) Strategic motives. Each category contains several underlying rationales that correspond to the aforementioned typologies (paragraph 4.4). The corresponding motives are largely confirmatory to those proposed by Thorp and Goldstein (2013). However, this study expands them, identifies several additional motives and proposes a categorisation by typology. The motives correspond with- and contribute to each of the missions of universities and are therefore a worthy premise for university participation in SE. First, the results suggest that universities are perfectly placed to contribute to the development of SE as a field of inquiry, the instillment of SE principles in students, practitioners and (future) leaders, and the development of the SEE and social enterprises. However, the benefits of university participation are not limited to social entrepreneurs and their environment. Coherently with Fernández et al. (2018), the findings suggest that the university itself could benefit from the (increasing) societal integration, as an academic institute. First, the study suggests that SE is a strategic topic for profiling in order to accumulate additional resources (e.g. funding, students, professors) and prestige. Second, it affirms the notion that SE could provide a unifying structure (Thorp & Goldstein, 2013). It could connect multiple departments, disciplines, and external parties and unite them in purpose (paragraph 4.5). Third, participation in SE could enhance the university's (regional) economic- and social contribution through the development and implementation of associated third- and fourth mission activities. Therein SE could contribute to the development of the third- and fourth mission in universities. Furthermore, it suggests that the integration of SE initiatives could function as a vehicle to balance the university its missions. It implies that engaging in SE could support universities in the transition to Modes 2 and 3 of knowledge production. This through the adoption of participatory functions and methods in the core of the university and the development of aforementioned third- and fourth mission activities.

Proposition 5: *Universities that actively engage in, promote and support SE are able to accumulate greater benefits (e.g. resources and prestige) and build more unified structures.*

Proposition 6: *Universities that participate and engage in SE are more likely to successfully reinvent their structures, and meet societal demands and third- & fourth mission expectations.*

5.2 A theory on how to develop the role of universities in SE(E's) and its usefulness

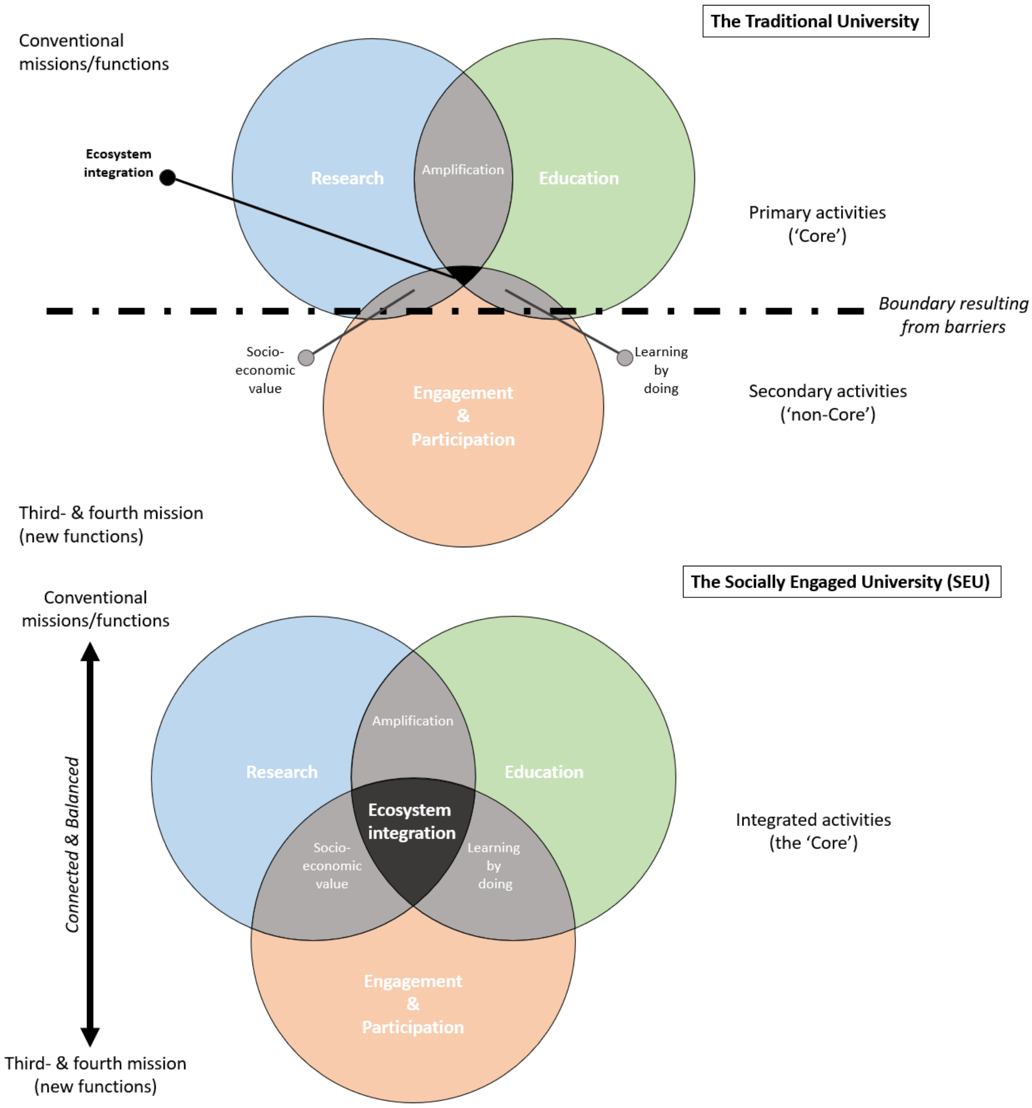
In this section, the first steps are taken to develop theory to progress the role of universities in Social Entrepreneurial Ecosystems. It constructs theory from the empirical data using the core categories from the results: (a) the characteristics that make universities a compelling supportive pillar in SE(E's), (b) the SE challenges, (c) the functions ascribed to the university in SE(E's), (d) the barriers, (e) the motives for university participation, and (f) the opportunities for universities in SE(E's). Although the data unanimously indicated that SE is still in its infancy in the vast majority of universities in the Netherlands, it did result in the identification of several reforms and practises at different levels of the university. First, reforms at the level of the university's structure are presented. Second, practises and reforms at strategy & operational level are discussed.

5.2.1 Structural innovation: The Socially Engaged University (SEU)

First, the findings suggest a need for structural reform and innovation in the university. Figure 4 visualises two university structures derived from the empirical data. The first structure, the Traditional University, reflects the model that participants associated with the majority of universities today. A structure in which the conventional- and the new missions or functions are disconnected and unbalanced, that makes a clear distinction between core (research & education) and non-core activities (participatory functions), and which subsequently provides little ecosystem integration. It does not promote the adoption of SE activities outside its core functions, and third- and fourth mission activities are regarded secondary. The second structure, the Socially Engaged University (SEU), is a reflection of the model to which participants alluded in respect to SE. This structure balances and connects the university's missions by integrating participatory functions, methods and responsibilities in the core of the university. Therein, it eliminates many of the pre-existing barriers impeding university support in SE in the traditional model (the boundary to participation). Subsequently, it provides a greater degree of ecosystem integration. This study argues that this structure is more adequate and appropriate to facilitate and catalyse SE, or similar subjects, because it regards third- and fourth mission initiatives as primary activities (core). As third- and fourth mission activities are no longer regarded secondary and participatory roles and methods become primary functions in the university its strategy and structure (e.g. performance evaluation, profiling and educational approaches), this study suggests that it is more adequate to respond to social challenges.

Aforementioned structures, constructed from the empirical data, in essence correspond with the concept of the 'civic' and 'un-civic' university by Goddard, Hazelkorn, and Vallance (2016). Similarly to Goddard et al. (2016), they make a distinction between Research, Education and Engagement (referred to as participation & engagement) and visualise a boundary between the first two and the latter activities. Therefore the figures were partly inspired by- and build upon the structures presented by Goddard et al. (2016). However, whereas Goddard et al. (2016) suggest that a hard boundary between the functions in the un-civic university emerges merely from the university its focus on rankings and a global positioning, this study suggests a much wider array of barriers that contribute to the wedge between the university its conventional- and its participatory functions in the Traditional University in SE (paragraph 4.3). Additionally, Goddard et al. (2016) do not incorporate the university its missions and their models are centred around university management & leadership. Contrary, the structures proposed in this study centre around ecosystem integration and connect the university's functions to its missions. Hence, although I was not aware of these structure typologies a priori to- and whilst conducting & analysing the interviews (they were not included in academic literature on the evolution of universities and its structure), this study provides similar results that confirm and expand many of the principles that underly the concept of the 'civic' university (Goddard et al., 2016). The SEU appears (more) adequately structured to develop and balance all of the university its missions. The findings therein suggest it as an appropriate and comprehensive structure for universities in Mode 3 of knowledge production (Gibbons et al., 1994). Subsequently, this study adds to academic literature on university structure typologies. It responds to the critique by Fernández et al. (2018) who indicated a shortcoming in university structures, and it proposes the SEU as a prospect. The SEU may well prove a substitute for the "?" in figure 1 in Mode 3.

Figure 4 From the traditional university model to a more inclusive model



Source: Own interpretation, inspired by Goddard et al. (2016)

Proposition 7a: *Universities that reinvent or transition to structures that balance and connect their conventional- and 'new' missions & functions are able to build greater ecosystem integration in (Social) Entrepreneurial Ecosystems.*

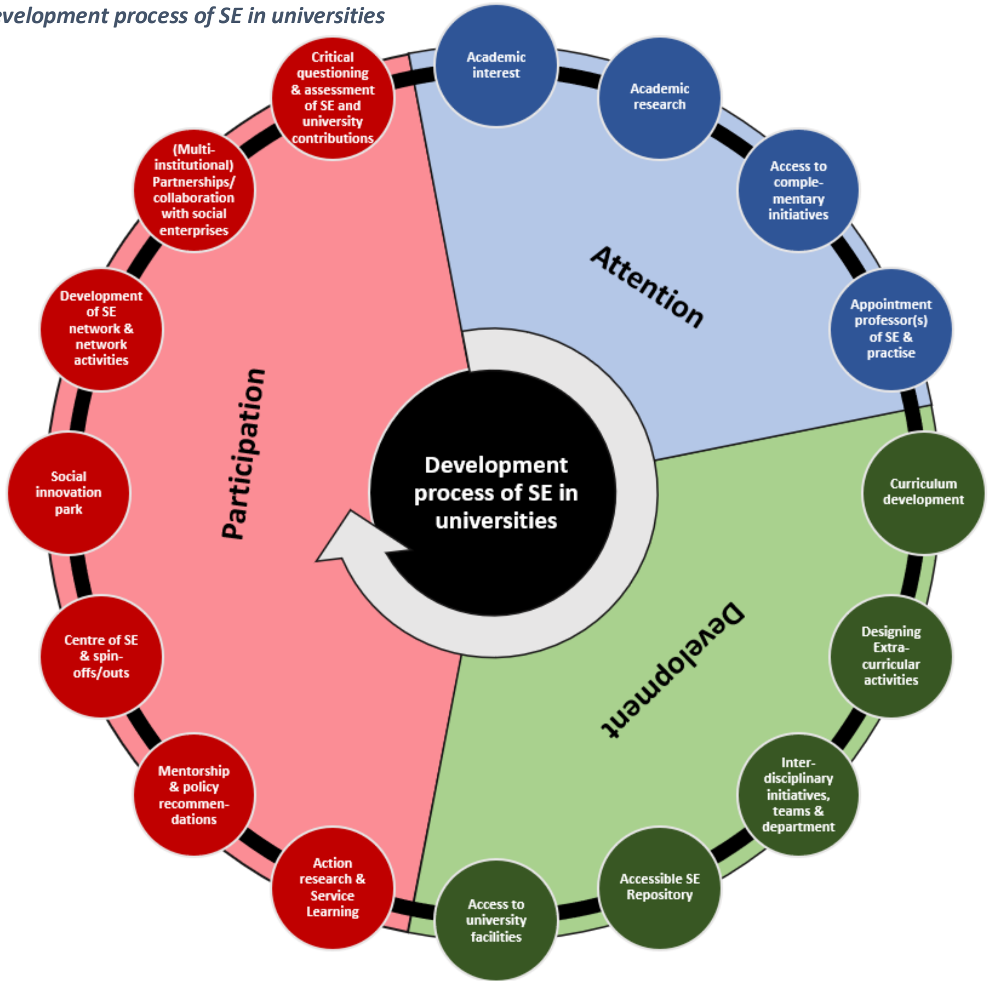
Proposition 7b: *Universities with structures that balance and connect their conventional- and 'new' missions & functions are more likely to become decisive supportive pillars in (Social) Entrepreneurial Ecosystems.*

5.2.1 Development process of SE in universities

Second, the results suggest practises at strategic and operational level. Once the university has made third- and fourth mission activities part of its core and recognised the need to adopt participatory functions to enhance its ecosystem integration, it can now adopt SE as a strategic topic for implementation. To achieve this, SE first has to be developed in universities. The findings suggest a development process to accomplish this (figure 5). It follows three logically consecutive steps: 1) Academic attention, 2) Academic development, 3) Academic participation. The practises identified and suggested in the empirical data correspond with aforementioned steps. Hence, by placing the identified SE practises from the data in the progressive steps, a logical step-by-step development process emerges. As the activities are associated with the functions and the functions find their origin in the enabling characteristics, a picture emerges that provides an indication when and how to mobilise/utilise certain characteristics of the university. Coherently with the functions, there is a certain degree of increasing complexity in the process. Whereas the activities in the early stages have historically been associated to- and require little engagement with actors outside of the university, the latter activities are more contemporary and require significantly greater ecosystem integration. The process can support universities to implement the suggested structural reforms and therein create a more unified structure. Incorporating (some of) the associated activities can support universities to develop SE as a field of inquiry in the university, help them integrate in the ecosystem, expand their contributions in SE(E's) & enhance their socio-economic contributions, and develop the university as an academic institute. Although there is a logical progression in the overarching steps, universities do not have to assume each of the identified roles and develop all the associated activities in order to proceed to the next phase. They can largely decide what participatory functions to pick up based on their characteristics, set of skills and specialisations. However, the practises in attention and development are far less arbitrary. They predominantly focus on research and education, and build a foundation for the participatory activities. Without these functions, the university would no longer be a university. However, failing to adopt any participatory functions makes it unlikely for the university to become a significant pillar in SEE's. The more functions the university successfully integrates, and the stronger their interconnectedness, the greater the (variety of) contribution of the university is likely to be in the SEE and societal issues.

Proposition 8: *The contribution and integration of a university in SE(E's) increases with and depends on the maturity of the activities and their interconnectedness in the evolutionary process from academic attention, development to participation.*

Figure 5 Development process of SE in universities



Source: Own rendering based on acquired data

5.3 Managerial implications

First, the findings support the development of SE as a domain of inquiry in its own right. It provides educators, managers and board members insight in the maturity of SE (initiatives) at universities, and presents a logical pathway and process to develop it. Second, it provides a merit for universities to incorporate SE in the strategy of the university. It indicates that the benefits of university participation in SE are not limited to social entrepreneurs and their environment, but that the corresponding (increasing) societal integration could benefit the university itself as an academic institute. The associated structural reforms and the corresponding practises at strategic & operational level can support universities, their managers and board members to transition to a more unified structure that is more adequate and comprehensive to all of its missions. Therein, the findings support universities to cope with- and respond to the imbalance in their missions and the inadequacies in their structures. This could support the development of third- and fourth mission in universities, enhance the university its (regional) social- and economic contributions, and increase their integration in (Social Entrepreneurial) Ecosystems. Finally, the findings provide insight in the (potential) contributions of universities in SEE's, which could provide merit and/or convince stakeholders to seek university support and build stronger relationships.

5.4 Limitations

The study provides a first insight in the role of universities in SE(E's) and presents theory on how to develop it. Nevertheless, there are several limitations that follow from its focus and demarcation. First, the study specifically focused on SE. The structural reforms and the transition from the traditional university to the SEU, in which participation and engagement becomes a core function, appears appropriate and highly desirable to develop the contribution of universities in SE(E's). Despite indications that the benefits are not limited to SE, other fields of study appear similarly disconnected from their ecosystem and therefore could (equally) benefit from the corresponding ecosystem integration, this was not part of the scope of this study. Hence, although it appears that several disciplines at the very least could benefit from the suggested structural innovations, there may also be disciplines whose nature is so different that they may not benefit, or to which these reforms may even be detrimental (e.g. philosophy and history). Some disciplines may thrive better in the traditional model of the university. Second, the case study focused specifically on the (S)EE of the Netherlands. Although it is an appropriate context for study because it contains all the necessary components (paragraph 3.2.2), research in other ecosystems might lead to different results. Differences could be explained by the variety of (S)EE's and their maturity, differences in evolutionary stages across universities, and subsequently their initiatives, or by the variation in educational systems. This has implications for the generalizability and transferability of the results. Whereas the findings indicate that SE support in universities is in its infancy, universities and their initiatives might be more mature in other (S)EE's. Despite this limitation, the empirical data contained several indications that the immaturity of SE practises in universities is not limited to the Netherlands. The empirical data suggests that it is the large and well-known institutions in which SE (support) has been significantly more developed (e.g. Harvard and Oxford University). Third, although the study provides insight in the maturity of SE, the functions that universities can assume in SEE's, and insight in the implementation and diversity of SE initiatives in the Netherlands, it did not study all practises at every university in detail. Hence, although the study provides a solid first insight in- and discusses a great variety of SE practises at the majority of universities, some activities may yet be missing. Furthermore, there are limitations that follow from the research design. Although codes, categories and finally theory were derived from verbatim quotes and related to literature to strive for objectivity, much of the theorizing in GT takes place in the interpretation of the data in the memos by the researcher. This is where the initial codes received methodological significance. Because the study was conducted by a single researcher, the data may contain researcher biases that could have been avoided if the interpretations and assumptions could have been discussed with a team of researchers. This has implications for the dependability (reliability) of the research results. Finally, because the study takes a qualitative approach the strength of the relations between the core categories, the core categories and the identified phenomena (e.g. between the barriers, the boundary to participation & engagement and the resulting effects on the contribution of universities in SE), and the core categories and their underlying elements, could not be quantified. The study establishes relationships between- and amongst the categories and phenomena, and may even provide insight in the direction of these relationships, but it does not provide any indications of the strength of the relationships between the identified concepts.

5.5 Directions for future research

From aforementioned limitations, several directions for future research follow. First, research could be conducted on the implications of the structural reforms suggested in a greater variety of disciplines in the university. This could help to assert whether the benefits of the structural innovations are limited to SE, and similar disciplines, or if they are more broadly applicable. Secondly, this research could be replicated in different (S)EE's. This could help to determine whether the findings are generalizable to different types of (S)EE's and countries with divergent educational systems. This could help to identify similarities and/or contradictions in the maturity of university support across (S)EE's, and provide explanations for them. Furthermore, it could support the findings that SE (support) is in its infancy in the majority of universities. Therein, it could establish whether this is unique to universities in the Netherlands or that this is a (more) common phenomenon. Finally, the theoretical propositions presented by this study could be empirically verified. The use of quantitative methods, although this might prove difficult because of the complexity of SE and SEE's, could help to explore the relationship amongst the variables associated with the constructs. This could provide insight in the strength of the relationships between the categories, their elements and the described phenomena.

Chapter 6: Conclusion

The study started with the problem statement: *What is the role of Universities in the entrepreneurial ecosystem in support of social entrepreneurs(hip)?".* This chapter provides a concise answer and summarizes the most important implications.

Presently, universities are largely acknowledged and seen in the light of their contribution as educators and research institutes. In other words, as engines for knowledge production and the training of qualified and specialized personnel. However, as academic literature suggests and the findings of this study indicate, universities can contribute to, and perform several vital functions in (S)EE's that go beyond these traditional roles. Aforementioned core functions are important, without them the university would no longer be a university, but roles and missions that correspond with 'new' societal expectations deserve their place in the academic landscape. Although this study recognises the importance of the traditional functions in the development of SE, it suggests that university participation in- and engagement with the larger ecosystem is imperative. The study identifies six additional functions for universities in SEE's: knowledge centre, facilitator, mentor & advisor, incubator, connector, and agent of change. The findings indicate that SE is a strategic topic for universities. It expands their (regional) social- and economic contributions through participatory roles and third & fourth mission activities. However, because universities and their structures are presently geared towards the first- and second mission, these functions and activities have not been incorporated in the core of the university. Subsequently, third and fourth mission activities, and the corresponding participatory functions, remain largely overlooked. As a consequence there is over attention for the traditional activities, and disciplines that are closely related to the third and fourth mission, such as SE, stay and lag behind. Coherently, the study indicates that SE initiatives in universities are largely limited to education and research through conventional methods. It identifies several barriers to participation that obstruct the development of the third and fourth mission. There is a boundary to university participation that is related to the imbalance in, and the disconnect between the missions of the university. Additionally, the study indicates that this boundary contributes to the detachment of universities in ecosystems. The result is that the majority of universities is not successful in integrating in SEE's, and making meaningful contributions beyond conventional education and research. Stakeholders, social entrepreneurs and academics therefore do not recognise the university as a significant pillar yet. They argue that their role and integration in SEE's is negligible compared to more mature disciplines. Subsequently, social entrepreneurs and their stakeholders rarely turn to the university for support. SE in universities is nascent, SE support is in its infancy and the role of universities in SEE's today is considered insignificant.

Contrary, the study does suggest that universities have the potential to become decisive pillars in SEE's. Although the study endorses their potential, it clearly indicates that this potential is not being capitalised. Its current set-up does not lend itself for the facilitation and catalysis of disciplines like SE, which require strong linkages to the 'real-world' environment, and ecosystem integration in them. Universities are insufficiently successful in adopting participatory functions and methods in SE (and other disciplines), which is largely related to inadequacies in the university structure. Subsequently, this study suggests a need for structural reform. It identifies the need for a model that inherently incorporates, connects and endorses all of the university's missions and roles. A structure that promotes the integration of participatory functions, that considers new educational approaches to serve society more adequately, and which helps to balance and connect its missions to enhance their social- and economic contributions. Consecutively, it introduces the concept of the Socially Engaged University, and proposes SE as a useful and strategic instrument for universities to transition to more unified structures. It suggests that the benefits of university participation in SE are not limited to social entrepreneurs and their environment. Rather, the study indicates that the university itself could benefit from the corresponding (increasing) societal integration, as an academic institute. Finally, the study proposes practises at strategic and operational level to develop SE. These practises offer a logical pathway to develop SE as a discipline within universities and can contribute to a more balanced structure. Hence, the suggested development process, and the associated activities, could support universities to respond to the structural inadequacies and to develop SE as a domain of inquiry in its own right. It offers concrete practises to cope with, and respond to the imbalance and disconnect in its missions.

Social Entrepreneurship represents a promising opportunity for universities to do something remarkable to contribute to (disadvantaged) communities and expand their societal- and economic impact. But it’s an opportunity that is constantly and arrogantly being avoided.

References

Amini, Z., Arasti, Z., & Bagheri, A. (2018). Identifying social entrepreneurship competencies of managers in social entrepreneurship organizations in healthcare sector. *Journal of Global Entrepreneurship Research, 8*(1), 19.

Appe, S., Rubaii, N., Líppez-De Castro, S., & Capobianco, S. (2017). The Concept and Context of the Engaged University in the Global South: Lessons from Latin America to Guide a Research Agenda. *Journal of Higher Education Outreach and Engagement, 21*(2), 7-36.

Ashoka. (2015). These 5 Different Categories Of Game-Changing Social Entreprises Are Transforming The World Today. *Forbes*. Retrieved from https://www.forbes.com/sites/ashoka/2015/02/11/these-5-different-categories-of-game-changing-social-entreprises-are-transforming-the-world-today/#6585f91443f6

Ashoka. (n.d.). Social entrepreneurship. Retrieved from https://www.philips-foundation.com/a-w/our-work/social-entrepreneurship.html

Austin, J., Stevenson, H., & Wei-Skillern, J. (2006). Social and commercial entrepreneurship: same, different, or both? *Entrepreneurship theory and practice, 30*(1), 1-22.

Autio, E., Kenney, M., Mustar, P., Siegel, D., & Wright, M. (2014). Entrepreneurial innovation: The importance of context. *Research Policy, 43*(7), 1097-1108. doi:https://doi.org/10.1016/j.respol.2014.01.015

Bano, S., & Taylor, J. (2015). Universities and the knowledge-based economy: Perceptions from a developing country. *Higher Education Research & Development, 34*(2), 242-255.

Baron, R. A. (2006). Opportunity Recognition as Pattern Recognition: How Entrepreneurs "Connect the Dots" to Identify New Business Opportunities. *Academy of Management Perspectives, 20*(1), 104-119.

Benneworth, P., & Cunha, J. (2015). Universities’ contributions to social innovation: reflections in theory&practice. *European Journal of Innovation Management, 18*(4), 508-527. doi:10.1108/EJIM-10-2013-0099

Bleijenbergh, I. (2015). *Kwalitatief onderzoek in organisaties* (Tweede druk. ed.). Den Haag: Boom Lemma uitgevers.

Blew, R. D. (1996). On the Definition of Ecosystem. *Bulletin of the Ecological Society of America, 77*(3), 171-173. Retrieved from www.jstor.org/stable/20168066

Bloom, P. N., & Dees, G. (2008). Cultivate your ecosystem. *Stanford social innovation review, 6*(1), 47-53.

Boffo, S., & Cocorullo, A. (2019). *University Fourth Mission: Spin-offs and Academic Entrenreneurship: Connecting Public Policies with new missions and management issues of universities.* Paper presented at the Higher Education Forum.

Bowen, G. A. (2006). Grounded Theory and Sensitizing Concepts. *International Journal of Qualitative Methods, 5*(3), 12-23. doi:10.1177/160940690600500304

Brink, H. (1993). Validity and reliability in qualitative research. *Curationis, 16*, 35-38. doi:10.4102/curationis.v16i2.1396

Brush, C. G., Greene, P. G., & Hart, M. M. (2002). From Initial Idea to Unique Advantage: The Entrepreneurial Challenge of Constructing a Resource Base. *IEEE ENGINEERING MANAGEMENT REVIEW, 30*(Part 1), 86-99.

Calvo, S. (2016). Connecting social enterprise and higher education: universities as drivers in the support of social enterprises in the United Kingdom. In *Handbook of Research on Entrepreneurial Success and its Impact on Regional Development* (pp. 600-630): IGI Global.

Carayannis, E. G., Barth, T. D., & Campbell, D. F. (2012). The Quintuple Helix innovation model: global warming as a challenge and driver for innovation. *Journal of innovation and entrepreneurship, 1*(1), 1-12.

Carayannis, E. G., & Campbell, D. F. (2009). 'Mode 3'and'Quadruple Helix': toward a 21st century fractal innovation ecosystem. *International journal of technology management, 46*(3-4), 201-234.

Castro Martínez, E., & Vega Jurado, J. (2009). Las relaciones universidad-entorno socioeconómico en el Espacio Iberoamericano del Conocimiento.
Charmaz, K. (2000). Grounded theory: Objectivist and constructivist methods. *Handbook of qualitative research, 2*, 509-535.
Charmaz, K. (2006). *Constructing grounded theory: A practical guide through qualitative analysis*: sage.
Charmaz, K. (2008). Grounded theory as an emergent method. *Handbook of emergent methods, 155*, 172.
Charmaz, K. (2014). *Constructing grounded theory*: sage.
Clark, W., & Holiday, L. (2006). *Linking Knowledge with Action for Sustainable Development: The Role of Program Management: Summary of a Workshop*: National Academies Press.
Clarysse, B., & Moray, N. (2004). A process study of entrepreneurial team formation: the case of a research-based spin-off. *Journal of Business Venturing, 19*(1), 55-79. doi:10.1016/S0883-9026(02)00113-1
Clarysse, B., Tartari, V., & Salter, A. (2011). The impact of entrepreneurial capacity, experience and organizational support on academic entrepreneurship. *Research Policy, 40*(8), 1084-1093. doi:10.1016/j.respol.2011.05.010
Commission, T. E. (n.d.). Promoting entrepreneurship. Retrieved from https://ec.europa.eu/growth/smes/promoting-entrepreneurship_en
Corbin, J. M., & Strauss, A. (1990). Grounded theory research: Procedures, canons, and evaluative criteria. *Qualitative Sociology, 13*(1), 3-21. doi:10.1007/BF00988593
Corbin, J. M., & Strauss, A. L. (2013). *Basics of qualitative research : techniques and procedures for developing grounded theory* (4th ed. ed.). Los Angeles: SAGE.
Crow, M. M. (2010). Organizing teaching and research to address the grand challenges of sustainable development. *BioScience, 60*(7), 488-489.
D'Este, P., Mahdi, S., Neely, A., & Rentocchini, F. (2012). Inventors and entrepreneurs in academia: What types of skills and experience matter? *Technovation, 32*(5), 293-303. doi:10.1016/j.technovation.2011.12.005
Dacin, M. T., Dacin, P. A., & Tracey, P. (2011). Social Entrepreneurship: A Critique and Future Directions. *Organization Science, 22*(5), 1203-1213. doi:10.1287/orsc.1100.0620
Dacin, P. A., Dacin, M. T., & Matear, M. (2010). Social Entrepreneurship: Why We Don't Need a New Theory and How We Move Forward From Here. *Academy of Management Perspectives, 24*(3), 37-57.
Davey, T., Hannon, P., & Penaluna, A. (2016). Entrepreneurship education and the role of universities in entrepreneurship: Introduction to the special issue. *Industry and Higher Education, 30*(3), 171-182. doi:10.1177/0950422216656699
Dees, J. G. (1998). The meaning of social entrepreneurship. In: Kauffman Center for Entrepreneurial Leadership.
Denman, B. D. (2009). What is a university in the 21st century? *Higher education Management and policy, 17*(2), 9-28.
Eisenmann, T. R. (2013). Entrepreneurship: A working definition. *Harvard Business Review, 10*.
Etzkowitz, H. (2016). The Entrepreneurial University: Vision and Metrics. *Industry and Higher Education, 30*(2), 83-97.
Etzkowitz, H., Ranga, M., Benner, M., Guaranys, L., Maculan, A. M., & Kneller, R. (2008). Pathways to the entrepreneurial university: Towards a global convergence. *Science and Public Policy, 35*(9), 681-695. doi:10.3152/030234208X389701
Etzkowitz, H., & Zhou, C. (2017). *The triple helix: University–industry–government innovation and entrepreneurship*: Routledge.
Fernández, L., Fernández, S., Rey, L., & Bobillo, M. (2018). Innovation in the first mission of universities. *Journal of Innovation Management, 6*(4), 32-48.
Ford, M. P. (2002). *Beyond the modern university: Toward a constructive postmodern university*: Greenwood Publishing Group.

Forum, W. E. (2013). Entrepreneurial Ecosystems Around the Globe and Company Growth Dynamics. *World Economic Forum*.

Furco, A. (1996). Service-learning: A balanced approach to experiential education.

Fuster, E., Padilla-Meléndez, A., Lockett, N., & del-Águila-Obra, A. R. (2019). The emerging role of university spin-off companies in developing regional entrepreneurial university ecosystems: The case of Andalusia. *Technological Forecasting and Social Change, 141*, 219-231. doi:https://doi.org/10.1016/j.techfore.2018.10.020

Gibbons, M., Limoges, C., Nowotny, H., Schwartzman, S., Scott, P., & Trow, M. (1994). *The new production of knowledge: The dynamics of science and research in contemporary societies*: sage.

Glaser, B. G. (1978). *Theoretical sensitivity advances in the methodology of grounded theory*: The Sociology Press.

Glaser, B. G. (1992). *Emergence vs. forcing basics of grounded theory analysis*: The Sociology Press.

Glaser, B. G. (2007). Constructivist grounded theory? *Historical Social Research/Historische Sozialforschung. Supplement*, 93-105.

Glaser, B. G., & Strauss, A. L. (1967). *The discovery of grounded theory : strategies for qualitative research*. Chicago: Aldine Pub. Co.

Glaser, B. G., & Strauss, A. L. (2017). *Discovery of grounded theory: Strategies for qualitative research*: Routledge.

Goddard, J., Hazelkorn, E., & Vallance, P. (2016). *The civic university: The policy and leadership challenges*: Edward Elgar Publishing.

Godin, B. (1998). Writing performative history: The new new Atlantis? *Social studies of science, 28*(3), 465-483.

Guerrero, M., & Urbano, D. (2012). The development of an entrepreneurial university. *The Journal of Technology Transfer, 37*(1), 43-74. doi:10.1007/s10961-010-9171-x

Guest, G., MacQueen, K. M., & Namey, E. E. (2012). *Applied thematic analysis* [1 online resource (xx, 295 pages) : illustrations]. Retrieved from https://dx.doi.org/10.4135/9781483384436

Gugelev, A., & Stern, A. (2015). What's your Endgame. *Stanford social innovation review, 13*(1), 40-47.

Harbi, S. E., & Anderson, A. R. (2010). Institutions and the shaping of different forms of entrepreneurship. *The Journal of Socio-Economics, 39*(3), 436-444. doi:https://doi.org/10.1016/j.socec.2010.02.011

Holdsworth, S., & Thomas, I. (2021). Competencies or capabilities in the Australian higher education landscape and its implications for the development and delivery of sustainability education. *Higher Education Research & Development, 40*(7), 1466-1481. doi:10.1080/07294360.2020.1830038

Howell, J. M., & Higgins, C. A. (1990). Champions of Technological Innovation. *Administrative Science Quarterly, 35*(2), 317-341.

Hunter, A., Murphy, K., Grealish, A., Casey, D., & Keady, J. (2011). Navigating the grounded theory terrain. Part 1. *Nurse researcher, 18*, 6-10. doi:10.7748/nr2011.07.18.4.6.c8636

International, B. C. (2018). Inventarisatie en Meerwaarde Van Campussen in Nederland. In: Buck Consultants International Den Haag.

Isenberg, D. J. (2010). The big idea: How to start an entrepreneurial revolution. *Harvard Business Review, 88*(6).

Javed, A., Yasir, M., & Majid, A. (2019). Is social entrepreneurship a panacea for sustainable enterprise development? *Pakistan Journal of Commerce and Social Sciences (PJCSS), 13*(1), 1-29.

Kenny, M., & Fourie, R. (2015). Contrasting Classic, Straussian, and Constructivist Grounded Theory: Methodological and Philosophical Conflicts. *Qualitative Report, 20*, 1270-1289. doi:10.46743/2160-3715/2015.2251

Lasprogata, G. A., & Cotten, M. N. (2003). Contemplating Enterprise: The Business and Legal Challenges of Social Entrepeneurship. *Am. Bus. LJ, 41*, 67.
Lawrence, T., Phillips, N., & Tracey, P. (2012). From the guest editors: Educating social entrepreneurs and social innovators. In: Academy of Management Briarcliff Manor, NY.
Leininger, M., & Reynolds, C. (1991). Culture care diversity and universality theory. *Nursing*.
Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*: sage.
M'Gonigle, R. M., & Starke, J. (2006). *Planet U: Sustaining the world, reinventing the university*: New Society Pub.
Mair, J., & Martí, I. (2006). Social entrepreneurship research: A source of explanation, prediction, and delight. *Journal of World Business, 41*(1), 36-44. doi:https://doi.org/10.1016/j.jwb.2005.09.002
Malecki, E. J. (2018). Entrepreneurship and entrepreneurial ecosystems. *Geography Compass, 12*(3). doi:10.1111/gec3.12359
Martin, B., & Etzkowitz, H. (2000). The origin and evolution of the university species. *Organisation of mode, 2*.
Matlay, H. (2008). The impact of entrepreneurship education on entrepreneurial outcomes. *Journal of small business and enterprise development*.
Mazzarol, T., Battisti, M., & Clark, D. (2016). The role of universities as catalysts within entrepreneurial ecosystems. *Rhetoric and reality: Building vibrant and sustainable entrepreneurial ecosystems*, 36-68.
Minniti, M., & Lévesque, M. (2008). Recent developments in the economics of entrepreneurship. *Journal of Business Venturing, 23*(6), 603-612. doi:https://doi.org/10.1016/j.jbusvent.2008.01.001
Moore, J. F. (1993). Predators and prey: a new ecology of competition. *Harvard Business Review, 71*(3), 75-86.
Musa, M. F., & Ahmad, Z. (2012). Higher education physical assets and facilities. *Procedia-Social and Behavioral Sciences, 50*, 472-478.
Nabi, G., Lina, N. F., Fayolle, A., Krueger, N., & Walmsley, A. (2017). The impact of entrepreneurship education in higher education: A systematic review and research agenda. *Academy of Management Learning and Education, 16*(2), 277-299. doi:10.5465/amle.2015.0026
Neck, H., Brush, C., & Allen, E. (2009). The landscape of social entrepreneurship. *Business Horizons, 52*(1), 13-19. doi:https://doi.org/10.1016/j.bushor.2008.09.002
Neck, H. M., Meyer, G. D., Cohen, B., & Corbett, A. C. (2004). An Entrepreneurial System View of New Venture Creation. *Journal of small business management, 42*(2), 190-208.
Nicotra, M., Romano, M., Del Giudice, M., & Schillaci, C. E. (2018). The causal relation between entrepreneurial ecosystem and productive entrepreneurship: a measurement framework. *The Journal of Technology Transfer, 43*(3), 640-673. doi:10.1007/s10961-017-9628-2
Nowotny, H., Scott, P., & Gibbons, M. (2003). INTRODUCTION: 'Mode 2' Revisited: The New Production of Knowledge. *Minerva, 41*(3), 179-194.
Orr, D. W. (2004). *Earth in mind: On education, environment, and the human prospect*: Island Press.
Perkin, H. (2007). History of universities. In *International handbook of higher education* (pp. 159-205): Springer.
PwC. (2018). Het bouwen van een ecosysteem voor sociaal ondernemerschap: de geleerde lessen uit Nederland. 52. Retrieved from https://www.pwc.nl/nl/actueel-publicaties/assets/pdfs/pwc-bouwen-van-een-ecosysteem-voor-sociaal-ondernemerschap.pdf
Rannikko, H., & Autio, E. (2015). The impact of high-growth entrepreneurship policy in Finland. *Science & Business Publishing. OECD (2015). Entrepreneurship at a Glance*.
Rasmussen, E., & Borch, O. J. (2010). University capabilities in facilitating entrepreneurship: A longitudinal study of spin-off ventures at mid-range universities. *Research Policy, 39*(5), 602-612. doi:10.1016/j.respol.2010.02.002

Rasmussen, E., Mosey, S., & Wright, M. (2011). The Evolution of Entrepreneurial Competencies: A Longitudinal Study of University Spin-Off Venture Emergence. *Journal of Management Studies, 48*(6), 1314-1345. doi:10.1111/j.1467-6486.2010.00995.x

Rasmussen, E., Mosey, S., & Wright, M. (2014). The influence of university departments on the evolution of entrepreneurial competencies in spin-off ventures. *Research Policy, 43*(1), 92-106. doi:10.1016/j.respol.2013.06.007

Rasmussen, E., & Wright, M. (2015). How can universities facilitate academic spin-offs? An entrepreneurial competency perspective. *JOURNAL OF TECHNOLOGY TRANSFER, 40*(5), 782-799.

Ratten, V., & Welpe, I. M. (2011). Special issue: Community-based, social and societal entrepreneurship. *Entrepreneurship & Regional Development, 23*(5-6), 283-286. doi:10.1080/08985626.2011.580159

Roundy Philip, T. (2017). Social entrepreneurship and entrepreneurial ecosystems: Complementary or disjoint phenomena? *International Journal of Social Economics, 44*(9), 1252-1267. doi:10.1108/IJSE-02-2016-0045

Sá, C., & Kretz, A. (2015). *The entrepreneurship movement and the university*: Springer.

Sánchez-Barrioluengo, M., Uyarra, E., & Kitagawa, F. (2019). Understanding the evolution of the entrepreneurial university. The case of English Higher Education institutions. *Higher Education Quarterly, 73*(4), 469-495.

Schmidbauer, R. (2012). *The opportunity recognition process of serial social entrepreneurs*: na.

Schulte, P. (2004). The entrepreneurial university: a strategy for institutional development. *Higher Education in Europe, 29*(2), 187-191. doi:10.1080/0379772042000234811

Sedlacek, S. (2013). The role of universities in fostering sustainable development at the regional level. *Journal of Cleaner Production, 48*, 74-84. doi:https://doi.org/10.1016/j.jclepro.2013.01.029

Senge, P. M., Lichtenstein, B. B., Kaeufer, K., Bradbury, H., & Carroll, J. S. (2007). Collaborating for systemic change. *MIT Sloan management review, 48*(2), 44.

Sengupta, S., Sahay, A., & Croce, F. (2018). Conceptualizing social entrepreneurship in the context of emerging economies: an integrative review of past research from BRIICS. *International Entrepreneurship and Management Journal, 14*(4), 771-803.

Shane, S., & Venkataraman, S. (2000). The promise of entrepreneurship as a field of research. *Academy of Management Review, 25*(1), 217-226. doi:10.5465/amr.2000.2791611

Short, J. C., Moss, T. W., & Lumpkin, G. T. (2009). RESEARCH IN SOCIAL ENTREPRENEURSHIP: PAST CONTRIBUTIONS AND FUTURE OPPORTUNITIES. *Strategic Entrepreneurship Journal, 3*(2), 161-194. doi:10.1002/sej.69

Siegel, D. S., & Wright, M. (2015). Academic entrepreneurship: time for a rethink? *British Journal of Management, 26*(4), 582-595.

Sikolia, D., Biros, D., Mason, M., & Weiser, M. (2013). Trustworthiness of grounded theory methodology research in information systems.

Spigel, B. (2017). The Relational Organization of Entrepreneurial Ecosystems. *Entrepreneurship theory and practice, 41*(1), 49-72. doi:10.1111/etap.12167

Stam, E. (2007). Why butterflies don 't leave: Locational behavior of entrepreneurial firms. *Economic geography, 83*(1), 27-50.

Stam, E. (2014). The Dutch entrepreneurial ecosystem. *Available at SSRN 2473475*.

Stam, E. (2015). Entrepreneurial Ecosystems and Regional Policy: A Sympathetic Critique. *European Planning Studies, 23*(9), 1759-1769. doi:10.1080/09654313.2015.1061484

Stebbins, R. (2001). Exploratory research in the social sciences: what is exploration? *Exploratory Research in the Social Sciences*, 2-18.

Strauss, A., & Corbin, J. (1990). *Basics of qualitative research*: Sage publications.

Sutton, J., & Austin, Z. (2015). Qualitative research: Data collection, analysis, and management. *The Canadian journal of hospital pharmacy, 68*(3), 226.

Tanabe, Y. (2020). *The Five Stages of Social Entrepreneurship. What is a broadly applicable framework?* : GRIN Verlag.

Taylor, M. C. (2009). End the university as we know it. *New York Times, 27*, A23.
Theodoraki, C., Messeghem, K., & Rice, M. P. (2018). A social capital approach to the development of sustainable entrepreneurial ecosystems: an explorative study. *Small Business Economics, 51*(1), 153-170.
Thornberg, R. (2012). Informed grounded theory. *Scandinavian journal of educational research, 56*(3), 243-259.
Thorp, H., & Goldstein, B. (2013). *Engines of innovation: The entrepreneurial university in the twenty-first century*: UNC Press Books.
Trencher, G. P., Yarime, M., & Kharrazi, A. (2013). Co-creating sustainability: cross-sector university collaborations for driving sustainable urban transformations. *Journal of Cleaner Production, 50*, 40-55. doi:https://doi.org/10.1016/j.jclepro.2012.11.047
Vanaelst, I., Clarysse, B., Wright, M., Lockett, A., Moray, N., & S'Jegers, R. (2006). Entrepreneurial Team Development in Academic Spinouts: An Examination of Team Heterogeneity. *Entrepreneurship theory and practice, 30*(2), 249-271. doi:10.1111/j.1540-6520.2006.00120.x
Visintin, F., & Pittino, D. (2014). Founding team composition and early performance of university—Based spin-off companies. *Technovation, 34*(1), 31-43. doi:10.1016/j.technovation.2013.09.004
Wakkee, I., van der Sijde, P., Vaupell, C., & Ghuman, K. (2019). The university's role in sustainable development: Activating entrepreneurial scholars as agents of change. *Technological Forecasting and Social Change, 141*, 195-205.
Walter, A., Parboteeah, K. P., Riesenhuber, F., & Hoegl, M. (2011). Championship behaviors and innovations success: An empirical investigation of university spin-offs. *Journal of product innovation management, 28*(4), 586-598.
Weerts, D. J., & Sandmann, L. R. (2008). Building a two-way street: Challenges and opportunities for community engagement at research universities. *The Review of Higher Education, 32*(1), 73-106.
Weingart, P. (1997). From "Finalization" to "Mode 2": old wine in new bottles? *Social science information, 36*(4), 591-613.
Wilson, K. E., Vyakarnam, S., Volkmann, C., Mariotti, S., & Rabuzzi, D. (2009). *Educating the next wave of entrepreneurs: Unlocking entrepreneurial capabilities to meet the global challenges of the 21st century.* Paper presented at the World Economic Forum: A Report of the Global Education Initiative.
Wolfe, D. A. (2016). 10. The Role of Universities in Regional Development and Cluster Formation. In *Creating knowledge, strengthening nations* (pp. 167-194): University of Toronto Press.
Zahra, S. A., Sapienza, H. J., & Davidsson, P. (2006). Entrepreneurship and Dynamic Capabilities: A Review, Model and Research Agenda. *Journal of Management Studies, 43*(4), 917-955.
Zhang, Y., Duysters, G., & Cloodt, M. (2014). The role of entrepreneurship education as a predictor of university students' entrepreneurial intention. *International Entrepreneurship and Management Journal, 10*(3), 623-641. doi:10.1007/s11365-012-0246-z
Zhou, C., & Lundström, A. (2014). The Rise of Social Innovation Parks. In *Social Entrepreneurship* (pp. 259-269): Springer.

Appendixes

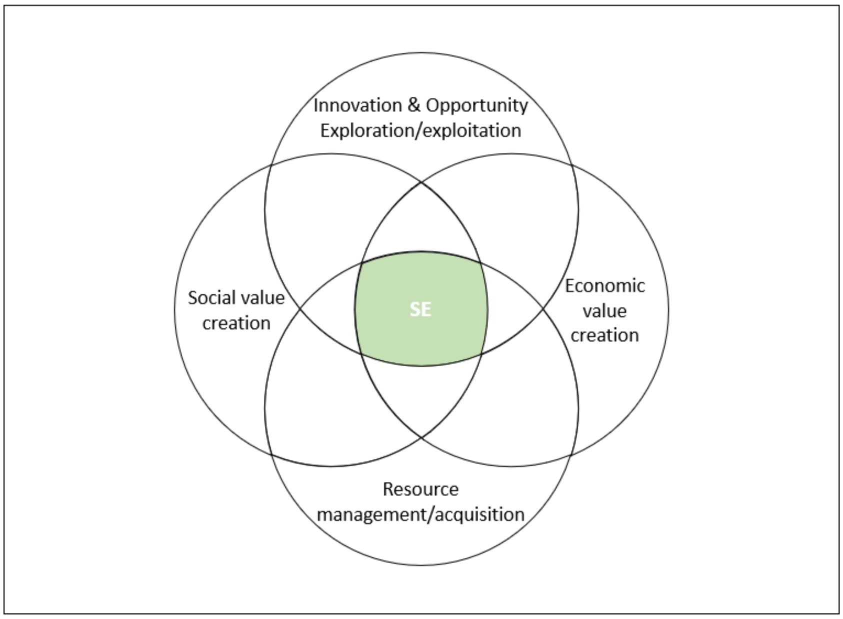
Appendix 1 – The multidimensional nature of SE

Mair and Martí (2006) take a broad perspective to SE, and describe it as:

> *First, we view social entrepreneurship as a process of creating value by combining resources in new ways. Second, these resource combinations are intended primarily to explore and exploit opportunities to create social value by stimulating social change or meeting social needs. And third, when viewed as a process, social entrepreneurship involves the offering of services and products but can also refer to the creation of new organizations. Importantly, social entrepreneurship, as viewed in this article, can occur equally well in a new organization or in an established organization, where it may be labelled 'social intrapreneurship.' Like intrapreneurship in the business sector, social intrapreneurship can refer to either new venture creation or entrepreneurial process innovation. (Mair & Martí, 2006, p. 37)*

Mair and Martí (2006) imply that SE has tight relations with and is positioned at the boundaries of multiple research domains. It is about the innovation of services and products, the exploration of opportunities, and the utilization of a combination of resources to create both social- and economic value. Hence, it is positioned at the intersection of different domains, and combines and includes characteristics from various fields of study. This endorsed by academic literature which describes several sub-concepts under the umbrella of SE including: the creation of sustainable business models, the triple bottom-line (people, planet and profit), the design of end to end value offerings for communities, experimentation and innovation, scaling, the development of local embeddedness, developing non-traditional partnerships, new leadership & organizational culture in support of a social mission, the combination of market orientation, social value creation, social innovation, organizational characteristics and social entrepreneurial attributes (Sengupta et al., 2018). Although various domains are linked or even intertwined with SE, this study is limited to the area in in which they conjoin; Social Entrepreneurship (SE). Figure 6 visualises how the different concepts discussed in paragraph 2.1.1 conjoin. Additionally, it provides an indication of the scope of this research. As visualised, this study is limited to the centre of the figure (SE, the green area). Although the other areas and their subcategories may have tight linkages and perhaps may even be intertwined to a certain degree, it is not part of this research to study the role of the university in these areas.

Figure 6 Delineation of Social Entrepreneurship

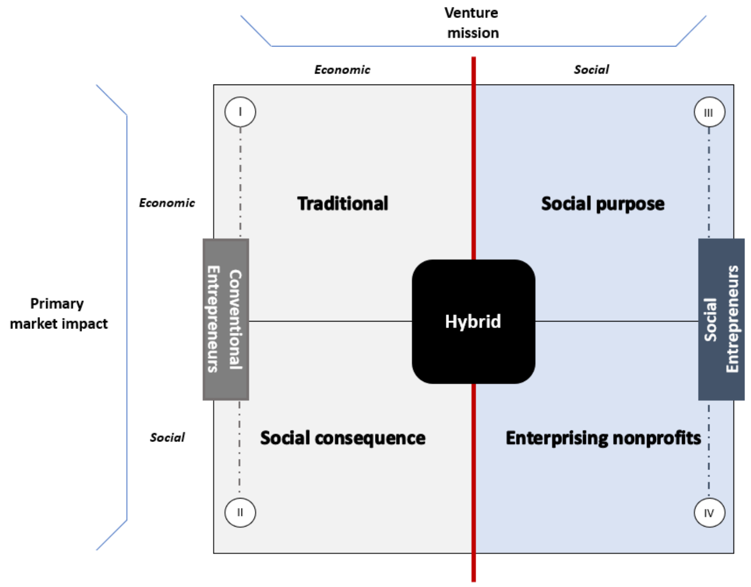


Source: Developed by author based on own interpretation

Appendix 2 – Delineation by venture typology

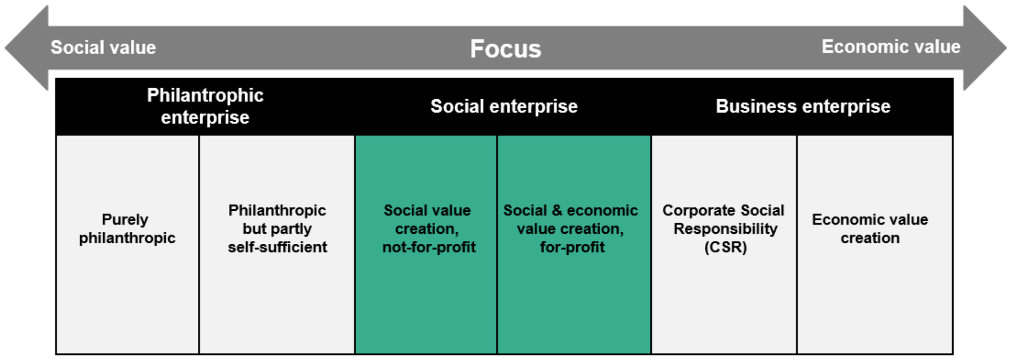
SE is the process of social- and economic value creation by means of entrepreneurial principles in the effort of a social mission (paragraph 2.1). All quadrants, except the traditional ventures (quadrant I), include a social element necessary for SE. However, only two out of three, quadrant III & IV, capture the component of a social mission. The 'Social purpose ventures' and the 'Enterprising non-profit ventures' best represent the domain of social entrepreneurship and are therefore subject of this study. These ventures are the tangible outcome of SE and are referred to as social enterprises (Mair & Martí, 2006), visualized in the business impact continuum figure 8. Additionally, we discern activities of corporates in SE, which are referred to as Corporate Social Entrepreneurship (CSE).

Figure 7 Entrepreneurial venture typology



Source: Own rendering based on the venture typology of H. Neck et al. (2009)

Figure 8 Business impact continuum



Source: Own rendering based on the venture typology of H. Neck et al. (2009) and PwC (2018)

Appendix 3 – Five stages of Social Entrepreneurship

(1) Defining Systemic Problem

In the first stage the social entrepreneur is focused on identifying and/or recognizing a systemic problem within the social system or structure. The social entrepreneur aims to expose the root cause(s) of the identified systemic problem and seeks opportunities for change. In this stage the opportunity to create a social enterprise is generated (Tanabe, 2020).

(2) Individualizing Enterprise

When an opportunity has been identified, the social venture enters the second stage. In the second stage the social enterprise is founded, often by a single social entrepreneur (Tanabe, 2020). When the social enterprise is founded and in its early stages (start-up), the focus of the social entrepreneur is predominantly on gaining traction and sustaining the social enterprise in spite of a weak brand, low capital, and/or professional immaturity (Tanabe, 2020). The social entrepreneur needs a strong sense of individuality during this stage. He/she has to define the systemic problem, advocate the vison and mission with confidence, and create a management system (e.g. developing membership programs, fundraising, and marketing) (Tanabe, 2020). If the social entrepreneur fails to create a strong sense of individuality, the social enterprise is unlikely to be successful. Even if the social enterprise is co-founded by a team of social entrepreneurs, a strong sense of individuality is required from each of the co-founders (Tanabe, 2020). In the second stage strong leadership and the collection of appropriate management resources are crucial for the success and survival of the social enterprise.

(3) Organizing Enterprise

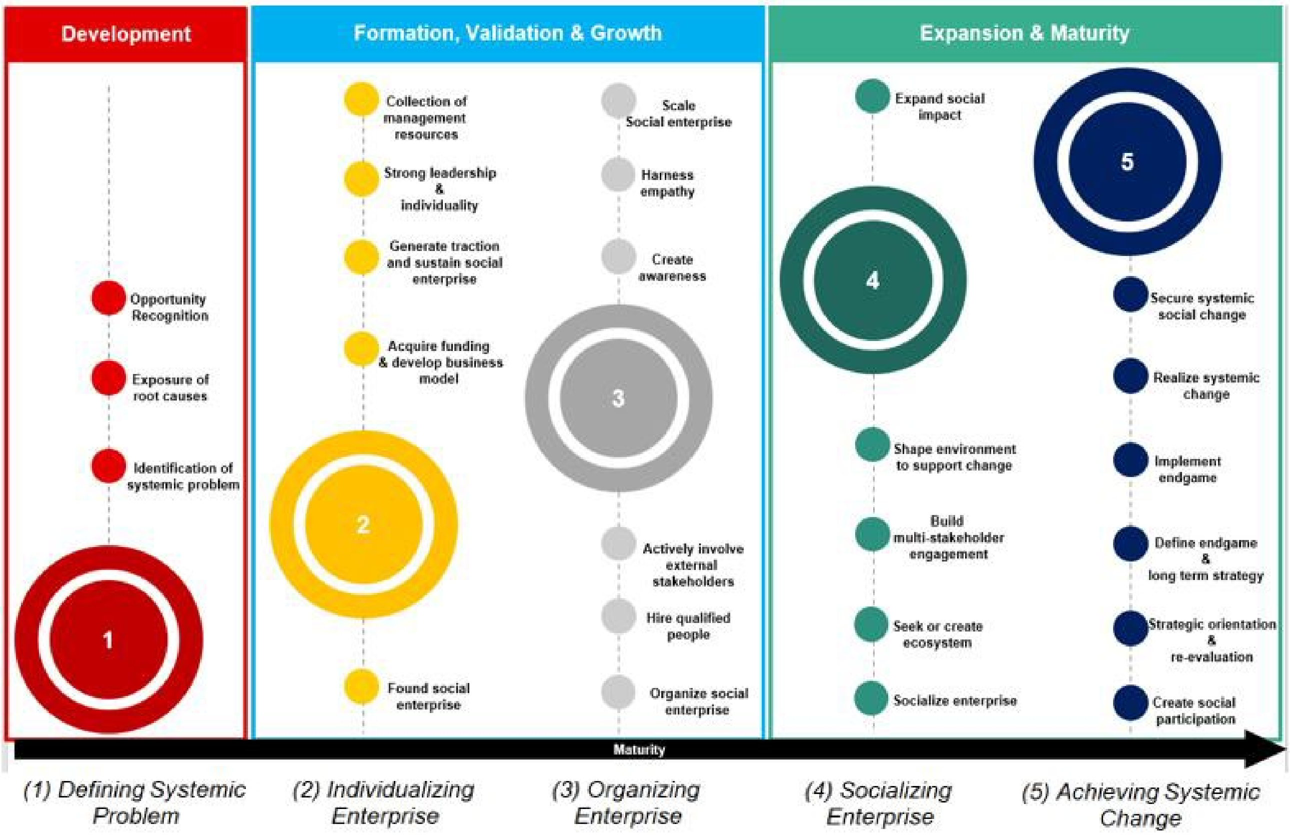
The third stage is focused on building, organizing and utilizing the social enterprise its activities. In this stage the vision and mission of the social enterprise is shared with internal members of the enterprise as well as with the external stakeholders (Tanabe, 2020). Qualified people are hired to develop and spread communication about the systemic problem and the social enterprise (Tanabe, 2020). During this stage the social enterprise is focused on harnessing empathy by sharing information, setting up alliances, and growing the enterprise as a team (Tanabe, 2020). Strong and professional teamwork is generated to tackle the systemic problem (Tanabe, 2020). Scaling and organizing is key in this stage.

(4) Socializing Enterprise

Although the social enterprise was organized in the previous stage, its capacity to drive change is still rather limited. For the social enterprise to have a significant social impact, the social entrepreneur has to socialize the enterprise (Tanabe, 2020). To socialize the enterprise, the entrepreneur seeks and/or creates an ecosystem with multi-stakeholder engagement, social impact estimation, impact investment, and policy proposals to support social change (Tanabe, 2020). To facilitate this process, the social entrepreneur his/her understanding has to go beyond the boundaries of the field in which they operate. Not only does the entrepreneur need to understand the broad environment of his/her domain, they also need to acquire the ability to shape those environments to support their goals when feasible (Bloom & Dees, 2008). Hence, in this stage the social enterprise strives to expand its social impact by shaping its environment in support of their efforts towards social change.

(5) Achieving Systemic Change
The final stage is all about lasting fundamental change at the level of the social system. Achieving systemic change is a long-term process because it has to be supported and embraced by the majority of society. According to Senge, Lichtenstein, Kaeufer, Bradbury, and Carroll (2007) realizing true systemic change means enacting new ways of thinking, creating new formal structures and, ultimately, transforming relationships (Tanabe, 2020). Social enterprises rarely appear to reach this stage as many drop-out in the early stages or linger in previous ones. Ashoka, the largest global network of leading social entrepreneurs that supports the transformation of ideas into national, regional and global social impact (Ashoka, n.d.), identified the 5 most common patterns of systemic change: (1) Market Dynamics and Value Chains, (2) Public Policy and Industry Norms, (3) Business-Social Congruence, (4) Full Citizenship and Empathetic Ethics, and (5) Creating a Culture of Changemaking and Social Entrepreneurship (Ashoka, 2015; Tanabe, 2020). In this stage it is important for the social entrepreneur and the social enterprise to ensure that the "endgame", as referred to by Gugelev and Stern (2015), is defined. The endgame refers to the specific role that the social enterprise intends to play in the overall solution to a social problem, once it has proven the effectiveness of its core model or intervention (Gugelev & Stern, 2015). Gugelev and Stern (2015) describe 6 endgames: Open source, Replication, Government adoption, Commercial adoption, Mission achievement, and Sustained service Tanabe (2020) adds that the endgame could also support social entrepreneurs in the process of planning a responsible exit strategy.

Figure 9 The five stages of Social Entrepreneurship (SE)

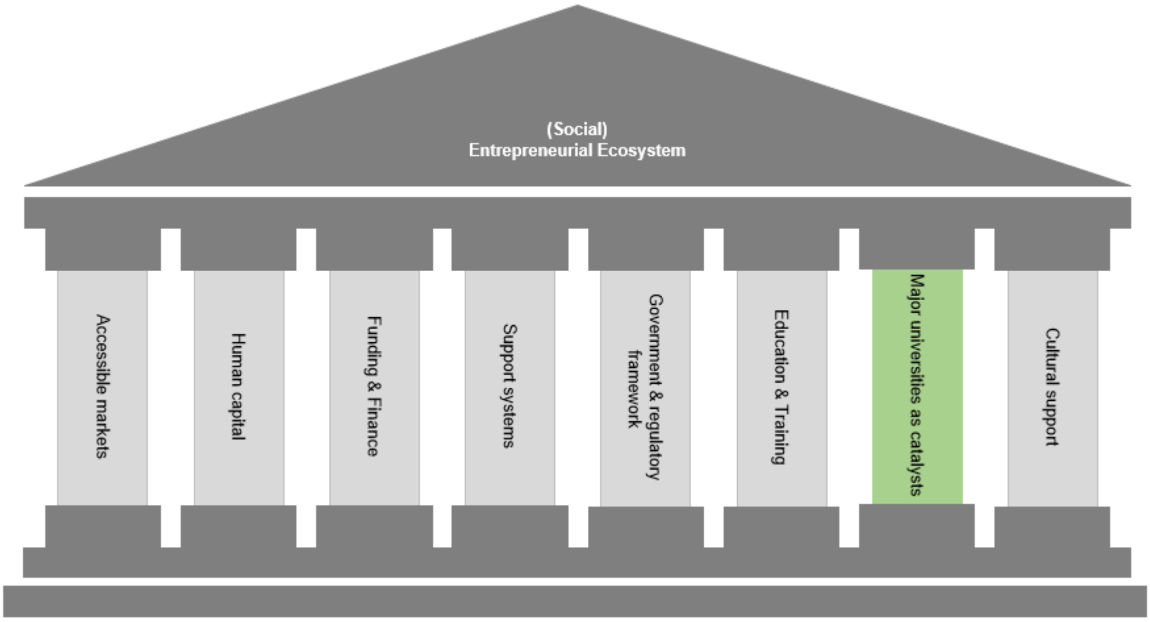


Source: Own rendering based on the five stage of SE by Tanabe (2020)

Appendix 4 – The pillars of the entrepreneurial ecosystem

Academic literature provides several models that describe the ingredients of an entrepreneurial ecosystem. Although authors use different terms, they describe very similar pillars. Figure 10 visualises the model by the World Economic Forum (2013). One pillar are incorporated are (major) universities, indicated in green.

Figure 10 The pillars of the entrepreneurial ecosystem



Source: Own rendering based on the pillars by the World Economic Forum (2013)

Appendix 5 – Entreprenuerial competencies

Paragraph 2.1.1 established that SE can occur equally well in new organizations as in established organizations, and there several indications that universities have adopted multiple activities in their strive to become more entrepreneurial. One of these activities concern the creation and promotion of spin-off activities (Boffo & Cocorullo, 2019). Even though SE can emerge both in new- and established organisations, it is predominantly associated with new ventures by academic literature. To explore the role of universities in the realm of SE and the contributions that they may offer, the competencies required for venture development are discussed using an entrepreneurial competency framework. The entrepreneurial competency framework by Einar Rasmussen et al. (2011, 2014), provides a theoretical basis to understand the entrepreneurial competencies required for (new) venture development, as well as insight in the diversity among those who provide them (Einar Rasmussen et al., 2011). Different actors can contribute to the creation and continuation of (new) ventures in different stages. One of the actors that is well positioned to support venture development according to E. Rasmussen and Wright (2015) are universities. E. Rasmussen and Wright (2015) argue that the entrepreneurial competencies for new venture development can be divided in three groups, associated with three core processes: (1) the need to develop a viable business opportunity *[Opportunity development competency],* (2) the need for championing individuals that provide meaning and energy to the entrepreneurial process *[Championing competency]*, and (3) the need to access the resources necessary to develop the new venture *[Resource acquisition competency].* E. Rasmussen and Wright (2015) suggest that universities are able to support each of the core processes on different levels.

Although the entrepreneurial competency framework provides a useful outline of the competencies required for new venture development, it is somewhat limited because it was developed from studying the early stages of university spin-off development. This framework therefore assumes that ventures are founded by academics or developed to pursue ideas generated within the boundaries of the university, which is not true for all (social) ventures. Despite this limitation, the competencies and the associated processes described by E. Rasmussen and Wright (2015) are applicable to (new) ventures in general. One minor addition that has been made to account for this limitation is the inclusion of opportunity recognition in the first competency (opportunity development). According to Baron (2006) entrepreneurs often identify opportunities for new ventures by "connecting the dots" and "recognizing patterns". By linking the entrepreneurial competency framework to the stages of SE, the core processes and associated university characteristics can be connected with different quadrants of SE. Although the processes are not limited to a single stage, they appear more significant to one stage than to others. Opportunity development corresponds with '*Development*'. Championing corresponds with *'Formation, Validation & Growth'*. And resource acquisition, though relevant to all stages, appears most significant in '*Formation, Validation & Growth*'.

(1) Opportunity development competency

Entrepreneurial activities, such as SE, require the identification and exploitation of opportunities (Einar Rasmussen & Borch, 2010; Zahra, Sapienza, & Davidsson, 2006). When an opportunity is identified, a new venture can be established. These opportunities are often created through scientific excellence (D'Este, Mahdi, Neely, & Rentocchini, 2012). To identify opportunities the entrepreneur needs to connect seemingly unrelated events or trends and recognize patterns (Baron, 2006). Baron (2006) argues that three factors are important in opportunity recognition: searching for opportunities, alertness and knowledge & experience. The vast knowledge and experience of universities may very well support the identification and development of opportunities. Clarysse, Tartari, and Salter (2011) for example indicate that the 'opportunity recognition capacity' is the most important explanation for the engagement of academics in new ventures. Another characteristic that may support this process is the breadth of the university its (social) network. According to Baron (2006) the breadth of an entrepreneurs social network plays an important role in opportunity recognition and has therefore received growing scholarly attention. In regards to the five stages of SE, the opportunity development competency corresponds with the first quadrant '*Development*'.

(2) Championing competency

When a new venture is started by an entrepreneur or a team of entrepreneurs, championing is required to enable organizational growth. Champions have an important role within new ventures because they can induce the necessary commitment of others to the new venture by providing emotional meaning and energy (Howell & Higgins, 1990). Walter, Parboteeah, Riesenhuber, and Hoegl (2011) describe champions as "individuals who aggressively pursue ideas and make important contributions by persevering and overcoming barriers to enthusiastically promote the idea through organizational stages" (p. 588). Commonly, new ventures are developed through dynamic interaction of different individuals with different competencies throughout the start-up process (Clarysse & Moray, 2004; E. Rasmussen & Wright, 2015; Vanaelst et al., 2006). Both members of the team as well as key supporters can make significant contributions in supporting and stimulating venture development. Einar Rasmussen et al. (2011) argue that people within as well as outside of the university can play a championing role at some stage in the venturing process. This notion is supported by Visintin and Pittino (2014) who indicate that balanced teams, containing both academic and non-academic staff, show superior performance in terms of firm growth. Although championing is important in all organizational stages, it is most crucial in the second quadrant of '*Formation, Validation & Growth*'.

(3) Resource acquisition competency

The establishment of new ventures requires access to various types of resources such as financial capital, physical assets, technology, human capital, and information (E. Rasmussen & Wright, 2015). An important factor in the success and continuation of a new venture is its ability to collect and organize the necessary resources (Brush, Greene, & Hart, 2002; E. Rasmussen & Wright, 2015). Acquiring and leveraging resources is crucial to grow the venture over time. Universities appear to be one of these institutes that have access to many of the aforementioned types of resources and may therefore a present a valuable institute to (new) venture development. Firstly, universities have vast amounts of knowledge and experience (information) in different fields of expertise. Secondly, universities are capable of stimulating innovation and technology transfer by the production- and diffusion of knowledge in (social) ventures across regions (Fuster et al., 2019; Mazzarol et al., 2016). Third, universities have access to students and academics (human capital) that can contribute to (social) ventures through theses, projects and research (E. Rasmussen & Wright, 2015). Finally, universities have physical assets and facilities such as its research laboratories, libraries, ICT centres, classrooms, and buildings (Musa & Ahmad, 2012). This resource acquisition competency is relevant to all of the quadrants (figure 9, appendix 3). In each of the quadrants access to sufficient resources is a requirement. However, the type of resources required and their importance may logically differ throughout the stages of SE. Although the resource acquisition competency is relevant in each of the stages of SE, there are indications that it is most essential in '*formation validation and growth'*.

To summarize, aforementioned characteristics and competencies enable universities to support venture development (both in new- and established firms) and the development of entrepreneurial competencies. As SE shares many of the principle similar role in the development of social entrepreneurial ventures. An example provided by E. Rasmussen and Wright (2015) of how the university could support such ventures is by becoming a collaboration partner.

Appendix 6 – Schools of Grounded Theory

Despite the universal characteristics and principles described in paragraph 3.2.1, different variations to GT can be distinguished. Although the variations have similar core elements and they all find their origins in the work of Barney G. Glaser and Strauss (1967), there are significant differences in their approach. Most notably: their contending coding procedures, their opposing philosophical positions, and their conflicting use of literature (Kenny & Fourie, 2015). The first school is 'Classic Grounded Theory'. Classic GT originates from the work of Barney G. Glaser and Strauss (1967) and, according to B. G. Glaser (1978, 1992, 2007), it is the purest representation of the original work (Hunter, Murphy, Grealish, Casey, & Keady, 2011). Classic GT takes a "laissez-faire attitude" to theory development and a completely open approach (Hunter et al., 2011). Identifications of themes, topics and problem areas is considered an emergent process. Subsequently, there is no initial literature review in the classic approach as it could cloud and compromise the researcher's ability to perceive new and dynamic concepts (Kenny & Fourie, 2015). In regards to coding, it follows the process of Open-, Selective- and Theoretical coding. The second school is 'Straussian Grounded Theory' by Strauss and Corbin (1990). Unlike Classic GT, Straussian GT takes an pragmatic approach. It strives to connect practice and theory, and encourages appropriate use of literature. Strauss and Corbin argue that former experiences and exposure to a subject, as well as literature may (and should) be employed throughout all the stages of the research (Kenny & Fourie, 2015; Strauss & Corbin, 1990). Strauss and Corbin make a clear distinction between conducting a study with an "empty head" versus an "open mind". Whereas they encourage the use of literature, they do not advocate exhaustive prior reviews of all literature as a (to) steep degree of knowledge might constrain or impede creative efforts (Kenny & Fourie, 2015; Strauss & Corbin, 1990). Straussian GT follows the coding process of Open-, Axial- and Selective coding. The third and final school is 'Constructivist Grounded Theory' by Charmaz (2000). Charmaz emphasizes the importance of researcher & participant co-construction of knowledge and mutual interpretation of meaning for the reconstruction of data in theory (Hunter et al., 2011). Additionally, Charmaz (2006) reaffirms Strauss and Corbin (1990) their stance to the use of literature. However, she adds that literature should be compiled in a literature review chapter as well as interspersed throughout the stages of research (Charmaz, 2006; Kenny & Fourie, 2015). To guard against the loss of creativity, Charmaz suggests writing a literature review after data analysis. Constructivist GT follows the process of Initial (or open) coding, performed by line-by-line conceptual coding, and Refocused coding to synthesise large amounts of data (Hunter et al., 2011; Kenny & Fourie, 2015). This study takes a Straussian approach to GT. Hence, a fairly straightforward literature review was conducted prior to research which inspired creativity during all of the stages of research. The initial literature review was than revisited, extended and refined during and after the process of data analysis in an effort to connect empirical data, were possible, with academic literature to support and substantiate theory development. Open-, Axial-, and Selective coding was applied in the process of coding the empirical data.

Appendix 7 – Interview protocol

Interview: *The role of universities in the realm of SE*

Algemene introducerende vragen:

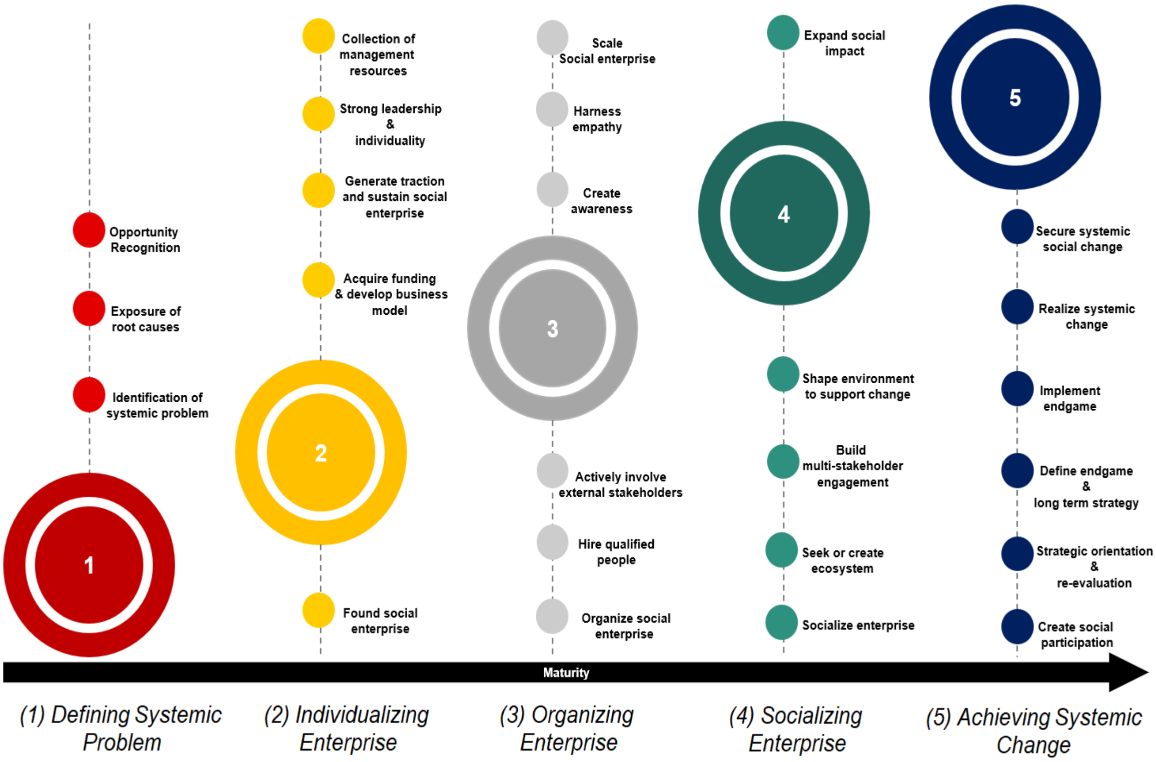
- Kunt u een indicatie geven hoe u/uw organisatie betrokken is op het gebied van sociaal ondernemerschap of dit vakgebied ondersteunt?
- Heeft u ervaring met de participatie van universiteiten t.a.v. sociaal ondernemers(chap)?
- Welke rol kunnen universiteiten spelen t.a.v. sociaal ondernemerschap?
    - Hoe ziet deze rol er momenteel uit binnen het SE ecosysteem ter ondersteuning van sociaal ondernemers in Nederland?
    - Hoe belangrijk zijn universiteiten voor sociaal ondernemerschap? (of voor u als social entrepreneur)
    - Waarom spelen universiteiten momenteel wel/geen belangrijke rol binnen dit ecosysteem?

What?

1. Over welke troeven (unieke eigenschappen) beschikken universiteiten om sociaal ondernemers te ondersteunen?
2. In hoeverre worden deze eigenschappen momenteel al benut t.a.v. sociaal ondernemerschap?
3. Welke verbeter mogelijkheden ziet u in de inzet van deze troeven (unieke eigenschappen) ten aanzien van sociaal ondernemerschap?

How?

4. Welke initiatieven worden momenteel genomen vanuit universiteiten om sociaal ondernemers(chap) te ondersteunen?
5. Welke initiatieven zouden er genomen kunnen worden om de bijdrage en meerwaarde van universiteiten te vergroten voor sociaal ondernemers(chap) en hun social enterprises?
    - Hoe kunnen de unieke eigenschappen van universiteiten (e.g. het netwerk, de studenten etc.) gemobiliseerd worden ter ondersteuning van deze initiatieven?
6. Welke uitdagingen ondervindt de universiteit, dan wel de social entrepreneur, in het mobiliseren of het verkrijgen van toegang tot de unieke eigenschappen van de universiteit?
7. In welk(e) stadium/stadia van sociaal ondernemerschap kan de universiteit de meeste meerwaarde bieden?
    - Waarom juist in dit stadium/stadia?
    - Op welke wijze kan de universiteit in dit stadium/stadia sociaal ondernemers ondersteunen?



Why?

8. Waarom zouden universiteiten hun resources inzetten t.a.v. sociaal ondernemerschap? (Motieven)
9. Wat is in uw optiek de toegevoegde waarde voor universiteiten van actieve deelname in sociaal ondernemerschap? (de benefits voor universiteiten)
10. Hoe zouden sociaal ondernemers en hun omgeving actieve deelname van universiteiten kunnen stimuleren t.a.v. sociaal ondernemerschap?

Afsluitende vragen:

- Zijn er momenteel nog kansen die door universiteiten onbenut blijven, waarbij zij echter wel een relevante rol zouden kunnen spelen in de ondersteuning van sociaal ondernemerschap (in Nederland)?
- Kent u andere personen wie relevante toevoegingen zouden kunnen leveren t.a.v. dit onderzoek en zou ik deze mogen contacteren en/of zou u mij met deze personen in contact kunnen brengen?

Appendix 8 – Overview of Enabling university characteristics

Table 2 Categorization of Enabling University Characteristics

Resources	Features (Functionings)	Competencies (Skills)
• Expertise personnel (faculty) *"The knowledge that resides with professors and with other thought leaders can then be utilized*" – 5:48 • Pool of talent (students) *"That they recognise that it is valuable to include students and the knowledge & experiences that surround these students*" – 4:48 • Physical facilities *"First, universities can contribute as a place. Hence, making the buildings and other facilities available to initiatives in society*" – 3:43 • Knowledge & Expertise *"In my opinion, it is precisely the university that could accommodate this topic with its diversity of faculties and their knowledge & expertise in different fields of study*" – 2:43 • University network *"Well obviously the university its knowledge and ehmm… well its network and contacts. Networks are important to all entrepreneurs, but this is*	• Academic freedom *"(…) However, the university is characterised by a large degree of autonomy of individuals, departments, faculties and that makes things… For example, the fact that I want to set up such a course myself. In a university this will never work in a way in which the rector or the chairman of the executive board says: "we are going to do that now, you are all cooperating and here is the money!". No, it just doesn't work like that. You are always dependent on your personal passion and enthusiasm to get people on board and to arrange it. And hence to put it on the map*" – 2:55 • Institutional autonomy "(…) *But the university will always emphasize that there is one thing that is of extraordinary importance to it and that is: scientific autonomy*" – 1:78 • Objective academic attitude/perspective *"Well, the university should have a hand in creating the frameworks for social entrepreneurship. They are well equipped to do so with*	• Conducting research *"The fact that these institutes have the ability to perform sound and thorough research and hence are able to measure impact, and additionally their systematic thinking as social entrepreneurship at the moment is very much pioneering because it is new*" – 6:9 • Teaching *"In addition to the acquisition of knowledge through research, it is about the transfer of that knowledge, which is accomplished through education*" – 2:90 • Sense-making *"In my opinion, the university is very capable to help and support people with a variety of ideas about the world. Firstly, by supporting them and getting them started conceptually. Secondly, because they have the ability to make a contribution in giving actual meaning to all those beautiful buzzwords that they use. In other words, by defining it properly*" – 3:11 • Shared critical mind-set

particularly true for social entrepreneurs" – 10:27 • Reputation *"(...) This is partly, obviously, because we have the advantage of the brand name Oxford. People and companies are really happy to work with us, they are really excited to start projects and they are really excited to sort of involve different researchers in our university. We are really lucky in that sense. It enables us to push our research and get ahead. For example on a topic like we are discussing today."* – 9:84	*their research competencies and their objective scientific perspective*" – 1:54 • Transdisciplinary "*Well that's actually what I meant to say. For example to study: 'What is the role of social entrepreneurs?'. What makes the university in particular interesting is that it could study this from a variety of different fields of expertise*" – 8:32	*"(...) I believe that universities, broadly speaking, are precisely the ones from which topics can be questioned and whom ask questions like: But how does it fit into all of this? And how does it work?"* – 3:30 • Conceptualizing / Theorizing *"(...) I have noticed that, generally speaking, there is no shortage of a sound analysis of what is happening around the world. Furthermore, there is not really a lack of knowledge on how we could approach these issues. The crux is always in the business model that has to be scalable. Intuitively I would put my focus on that, especially in terms of theory development. This is where the strength of the university lies."* – 2:82 • Novel & Adaptive Thinking *"Ja nou wat ik net bedoelde was eigenlijk meer in de richting van de innovatieve ideeën die uit universiteiten komen. Ik denk dat universiteiten meer kunnen nadenken over de valorisatie van hun ideeën dat is denk ik... van hoe... nou ja die term die ken je."* – 8:51

Capabilities
• Analytical capabilities "*Ehm… well I think it's all about creating mutually beneficial initiatives. Universities are interesting for businesses for many reasons like their knowledge, their research- and analytical capabilities, because of their students etc. On the other hand businesses can support such university initiatives, present avenues for research, and could give students valuable first-hand experience. (…).*" – 9:94 • Research capabilities "*Well yes and no. The university does possess the research capabilities to support social impact measurement as well as the knowledge to create models and tools, like our initiative, to enable them to show their impact and make it comparable. So to a certain degree they can support this. Especially when it comes to the social impact of operations.*" – 9:41 • Knowledge production capabilities "*We create more and more knowledge in the hope that the mistakes of yesterday are no longer repeated. Whether this concerns social entrepreneurs, whether this concerns PhDs or whether this concerns something entirely different. That is the job of academics; to ensure that that knowledge advances and that it is transferred. It doesn't matter if this is for social entrepreneurs or wherever. Apparently this does not work in a large number of fields [e.g. SE]. And in other fields this works reasonably well.*" – 3:89 • Knowledge transfer capabilities "*These are tasks that you have as a university. So it is not just the students that you teach what social entrepreneurship means and how they can possibly give substance to it, conduct research (in the field of theses, papers, etc.) and offer all kinds of courses in this field. They can do it all, but it is just as important to look over your own fence and look at executive education, for example, as it is so beautifully called. It is therefore not limited to a bachelor's degree at HBO for HBO students, it also focuses on Master's courses and it also focuses on people who are already working in the business world. This to teach them the more fundamental principles of social entrepreneurship.*" – 1:24 • Innovation capabilities "*(...) . So you see that educational institutions can also contribute to this [new actors such as social entrepreneurs and purpose driven ventures]. This is also about the importance of innovation. Here I come again to a point, which again is a link with your model. When you talk about social innovation, it goes beyond just the technical innovation or the product innovation, or the good idea that you have. Social innovation is also innovating the ecosystem and is innovating the business model. In the context of your story, I think the university could play a role in this.*" – 2:98 • Organizational capabilities

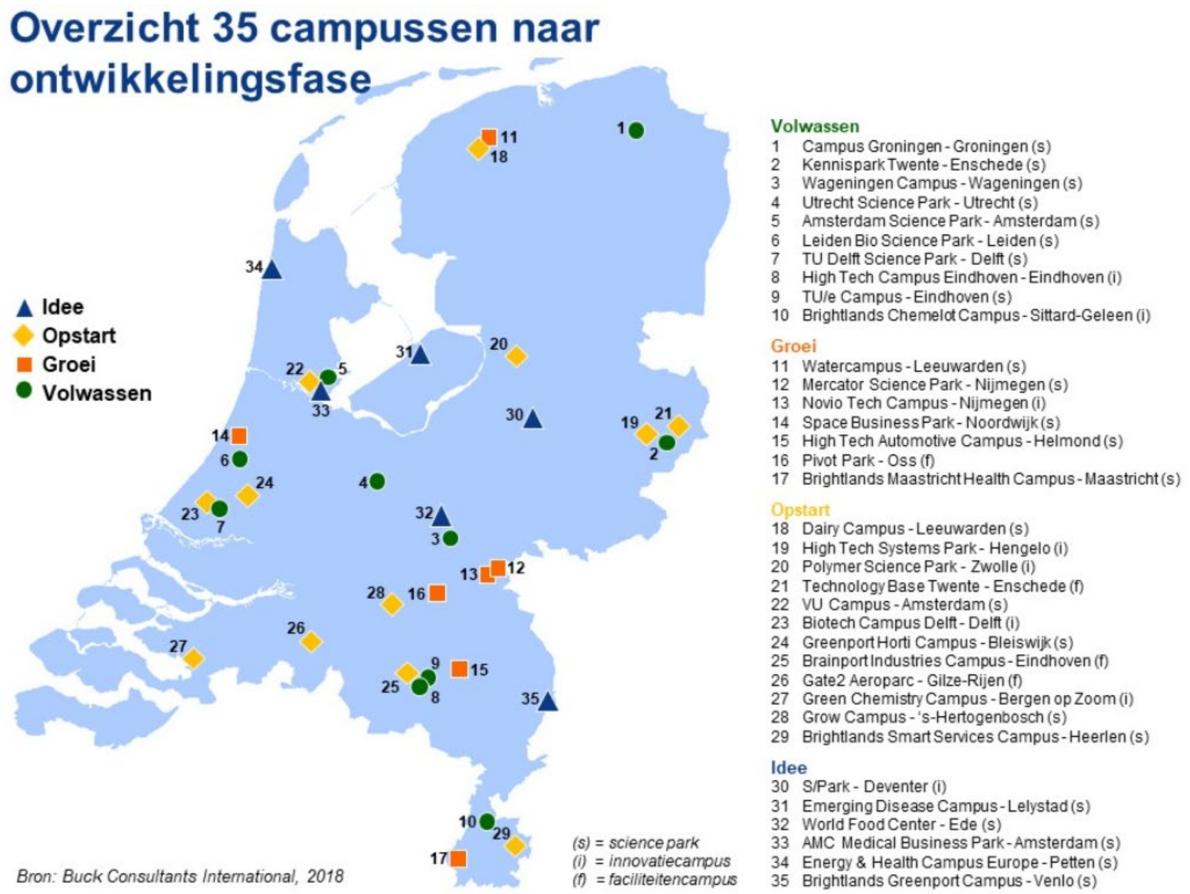
"S*econd I think is the funding story. So how you can work with vehicles and similar initiatives in SE. This is more dependent on the organizational abilities of the university than its academic abilities.*" – 5:65

Appendix 9 – Science parks in the Netherlands

Analysis of the data indicated that there a number of so called "science parks" at universities across the Netherlands. However, the data also provided indications that the majority of these science parks are part of the activities of Technical Universities. Hence, it's participants are likely to have a technical- rather than a social orientation. However, interviewees argued that universities could initiate similar activities and initiatives for start-ups and ventures with a social mission (social enterprises). They could create, what academic literature refers to as, 'Social Innovation parks'; an emerging institutional phenomena that can be started by universities, governmental agencies, NPOs, entrepreneurial philanthropists, and dedicated holding companies that incorporates a variety of actors to create favourable campus environments for ventures with a social orientation (social businesses and social entrepreneurs etc.) (Zhou & Lundström, 2014). To verify aforementioned indications among the data, the science parks that interviewees described were reviewed to a) confirm that they can be categorized as a science park, and b) to look into their activities and orientation. Science park like initiatives at several universities were mentioned including those at the TU/e (Twinning Center & links with the High Tech Campus), the UT (Kennispark Twente), the TU Delft (Science Centre Delft), the RU (Mercator Science Park), the UvT (Centre of Entrepreneurship (TCE)) and finally the Erasmus University (Centre for Entrepreneurship). These science parks facilitate (regional) economic value creation at universities through several activities such as education, research, access to facilities, and (some) even as an incubator.

A review of the aforementioned science parks and their activities largely confirms interviewee suspicions. Most of the initiatives mentioned have a technical orientation, not a social one. This is not to say that they may sporadically happen to include some socially oriented (entrepreneurial) activities or ventures with a social mission. However this is not their priority. They do no not exclude or disregard businesses with a social orientation nor do they structurally and purposely seek them. That science parks contribute to (regional) economic value creation and are most mature at technical universities is supported by a report, "*Inventarisatie en meerwaarde van campussen in Nederland*", commissioned by the Ministerie van Economische Zaken en Klimaat & Netwerk Kennissteden Nederland in 2018 (International, 2018). It reviewed 82 campus like locations and found that of these 82 locations in the Netherlands (locations with a concentration of companies and/or knowledge institutes where joint Research & Development takes place and open innovation relationships exist between partners), 35 could be classified as genuine campuses. They concluded that these campuses create employment and do this quicker than the municipalities in which they are located. They indicated that these locations are popular and high in demand by companies (e.g. because of the shared research facilities, mutual knowledge exchange & cross-pollination, and access to a talent). Additionally, they concluded that these campuses (including many of the aforementioned science parks) are an important accelerator of innovation. Furthermore, the report argued that extra attention to the development of these locations is not just desirable, but necessary. This, they argued, is partly to cope with the major societal challenges of today. Finally, the study looked at the maturity of these campuses and science parks and categorised them. The results of this categorisation have been visualised in figure 11 . When looking at the category 'mature' it is noteworthy that the majority of science parks, again, are part of Technical Universities. Hence, the indications are supported by secondary data.

Figure 11 Maturity of science parks and campuses in NL



Appendix 10 – Maturity of SE support: overview of initiatives

Initiator	Initiative(s)/Activities	Type	Functions/Roles							
			1	2	3	4	5	6	7	8
Utrecht University (^)	Minor Sociaal ondernemerschap	Educational programme (Elective)	+	+	-	-	+	-	+	-/+
	Master Business and Social Impact	Educational programme								
	Appointment of multiple professors of SE	Chair/faculty (strategic)								
	Social Entrepreneurship Initiative (SEI) (Interdisciplinary team focused on Research, Education & Social debate)	Coordinated long-term initiative								
	Social Entrepreneurship Festival	Event (yearly)								
Erasmus university (^)	Minor New economic thinking and Social Entrepreneurship	Educational programme (Elective)	+	+	-	-/+*	-/+*	-/+*	-/+	-
	Appointment of a professor of SE	Chair/faculty (strategic)								
	Erasmus Centre for Entrepreneurship (*)	Coordinated long-term initiative								
	DRIFT (*) - Research Centre	Coordinated long-term initiative								
	Impact Centre Erasmus (*)	Coordinated long-term initiative								
	Co-initiator of the Partnership Verkiezing	Event (yearly)								
Tilburg University (^)	Tilburg Center of Entrepreneurship (*)	Coordinated long-term initiative	-	+*	-	+*	-/+*	+*	+*	-
	IQONIC Incubator (*)	Coordinated long-term initiative								
	Set-up of course 'Responsible Leadership'(*)	Educational university programme - Structure t.b.d.								
Radboud University (^)	WEconomy Course (*)	Educational programme (Elective)	+	+	-	-/+*	-	-/+*	-	-
	Master Innovation and Entrepreneurship	Educational programme								
	Mercator (*)	Science park								
	Radboud Entrepreneurship Initiative (*) - Entrepreneurship Centre	Coordinated long-term initiative								
Maastricht University (^)	Professor engaged in SE from personal interest	Chair/faculty (voluntarily)	+	+	-	-	-	-	-	-
VU (^)	(International) Community Service Learning	Educational programme (Elective)	-	+	-	-	-/+	-	-	-
	Cursus Sociaal Ondernemen	Executive Educational programme (Elective)								
TU/e (^)	Twinning Center (*)	Science park	-	-	-	-/+*	-	-/+*	-	-
Twente University (^)	Kennispark Twente (*)	Science park	-	-	-	-/+*	-	-/+*	-	-
	Impact Studio (*)	Coordinated long-term university initiative	-	-	-	-/+*	-	-/+*	-	-

Delft University (^ → in progress)	CAD4COVID solution (*)	Industry-university collaboration								
Hogeshool Utrecht	Study in the scalability of SE	Short-term university research initiative	+	-	-	-	-/+	-	-	-
HAN	Opleiding Sociaal Maatschappelijk Ondernemer	Educational programme (post HBO)	-	+	-	-	-	-	-	-
Windesheim	Minor non-profit business	Educational programme (Elective)	+	+	-	-	-/+	-	-	-
	Cursus Sociaal Ondernemen	Executive Educational programme (Elective)								
	Research window Future-oriented and Sustainable Entrepreneurship	Long-term university research initiative								
Oxford Saïd Business School (UK)	Skoll Centre for Social Entrepreneurship	Coordinated long-term university initiative	+	+	-	+	+	+	+	-/+
	Oxford Foundary	Coordinated long-term university initiative								
	OSIRP (*)	Long-term university research initiative								
Harvard Business School (US)	Social Enterprise Initiative	Coordinated long-term university initiative	+	+	+	-/+	+	+	+	-/+
Instead (France)	Social Entrepreneurship Programme, part of the INSEAD's Social Impact Initiative	(Executive) Educational programme	+	+	-	-	+	-	-/+	-/+
Enactus	Enactus Project Teams at universities	Complementary educational initiative	-	-/+	-	-	+	+	+	-
	Enactus Leadership programme	Complementary educational initiative								
	Enactus World Cup	Event (yearly)								
Thrive Institute	Educational programmes in purposeful economy (education, research & action)	Independent education service provider (substitute)	+	+	-	-	+	+	-/+	-
Starters4Community	Social enterprise offering SE education (e.g. to WO, HBO & MBO students)	Independent education service provider (substitute)	-	+	-	-	-/+	-	-/+	-
Ashoka	Identifies, mobilises and supports a global community of social entrepreneurs	Independent supportive organisation	-	-	-	-/+	+	-	+	-
Social Enterprise NL	Connective organisation that builds and facilitates a network of social entrepreneurs	Independent supportive organisation	-	-	-/+	-	+	-	+	-
Philips Foundation	Acceleration of healthcare access in collaboration with Ashoka	Charity	-	-	-	+	+	-	-/+	-

Table 3 Maturity of SE initiatives in universities

+ = Yes - = No -/+ = Somewhat Blue = Non-university SE initiatives that are complementary, substitutes and/or collaborations

* = No specific focus on SE but mentions/sporadically or incidentally includes SE (^) = University with an Enactus project team

→ Disclaimer: Previous table is merely the inventory and classification based on the empirical data, reports and information that was provided during the interviews, and which was available during the study. It is possible that some initiatives were not mentioned and are therefore not included in the table. Additionally, new initiatives may have been developed. Nonetheless, the overview gives a first indication of SE support within universities in the Netherlands and an indication of their maturity. Furthermore, it provides indications that there is variety in maturity across academic institutes. Where SE support in the vast majority of Dutch universities appears nascent, SE support in large and prestigious foreign universities appears (much) more mature.

Appendix 11 – Memo report & Network schemes

Research diary

Pre-Memo: *Process to inductive coding according to the principles of Grounded Theory*
During the first phase I'll start by reading through the data of the first three interviews and adding my initial thoughts and ideas using quotation comments and tagging the data in ATLAS.ti. By taking this approach a rough pre-structured overview of the data will emerge as data segments are labelled, providing better movability to find similar, contradicting and confirming topics amongst the data. This will support constant comparison of the data during the analysis, an integral principle of the Grounded Theory approach. These initial tags, or open codes, will provide structure to the data and the analysis process but are still somewhat limited as they do not provide an indication of a hierarchical structure amongst the tags. Hence, the tags in this stage remain unsorted and uncoloured as they have not been assigned to categories yet.

After adding tags to the first three interviews the tag list will critically be reviewed, adjusted and memos will be added by means of comments. This will be part of the open coding process. The review of the list of "sub-codes" is necessary to prevent a too extensive number of sub-codes by searching for possibilities for aggregation and bundling. This will provide some structure to the codes. In other words: the initial list of tags will gradually be transformed into a category system of codes in which they receive clear descriptions and memos that link background information, thoughts and or previous encountered theory giving them methodological significance. This is the start of the axial coding stage.

By adding clear descriptive comments and memos, linkages within- and across categories are explored. The open codes will be linked and organised in categories, thus creating more abstract categories also referred to as axial codes. These axial codes encompass multiple supporting open codes and indicate the 'axes' to which the open codes revolve.

Memo 1: *Learnings & reflection after the first 3 interviews*
The interviewees seem to indicate and acknowledge that the engagement of universities (or Higher Education in general) in Social Entrepreneurship is still very limited and in its early stages at best. It appears that education today is still quite distanced from social entrepreneurs and not yet an integral part of its SEE. When asked to name initiatives of SE at universities in the Netherlands, participants appear to struggle. Initiatives that are offered and recalled appear to be predominantly linked to the traditional roles and missions of the university. In other words they have a focus on the education of SE and/or research. Contrary, interviewees ascribe a wide array of roles to universities in the realm of SE that far exceed the boundaries of traditional university models. The functions that they describe seem to be related to the "enabling" characteristics that they mention. The participants appear to hint at the importance of the integration of participatory functions and methods.

Memo 2: *Identification of common themes across the initial list of open codes*
Due to the vast variety of topics that interviewees brought up, there is already a great number of open codes that emerged after coding the first 3 interviews. However, certain common themes across the codes can be derived. The codes seem to relate to somewhat coherent overarching topics: university characteristics, maturity of SE (education), educational methods/approaches, roles/functions of universities in SE, challenges that social entrepreneurs encounter and difficulties that universities encounter in SE support, motives for university participation in SE, opportunities in SE for Higher Education, the development process of fields of study (e.g. SE), and codes that relate to the university its structure. Additionally, there are codes that indicate specific aspects and observable facts in SE support which for the moment remain uncategorised (e.g. the suggestion that there is a gap between theory and practise in SE education and SE support). Although I have managed to get to a rough first structure of sub-codes, I find it hard to ascribe some codes to specific categories because they appear to be related to more than one category. Additionally I still have some codes that don't fit any of the provisional categories. Hence, I will either have to adjust/merge these codes based on new or existing ones, add/adjust the sub-categories or aggregate these independent codes in a separate map.

Memo 3: *Categorisation of enabling university characteristics*
After conducting and analysing another five interviews a categorisation emerges amongst the characteristics that interviewees describe. First, they argue that the university is appropriate and well equipped to support SE because of its access to students, academics, university facilities, networks etc. Hence, they see the value in university support in its tangible and intangible resources. Second, interviewees describe characteristics that are somewhat unique to the university as an academic institute: academic freedom, institutional autonomy, transdisciplinatrity and its objectivity. In other words, they point to certain features or functionings of the university. Third, interviewees refer to demonstrable skills such as its proficiency in conducting research, teaching, sense-making, novel & adaptive thinking etc. Hence, they describe certain skills or competencies. Finally, they seem to point out skills that are somewhat more abstract. They describe its research-, analytical-, knowledge production-, knowledge transfer-, organisational-, and innovation skills. These characteristics are more abstract, they are higher-level skills, also referred in literature to as capabilities. Hence, the characteristics can be structured in four sub-categories that emerged in data analysis: 1) Resources, 2) Features/functionings, 3) Competencies (lower-level skills), and 4) Capabilities (higher-level skills). Additionally, characteristics across the categories appear related, enable or enhance one another. This suggests that there are interrelations amongst the categories. Again interviewees, emphasized the immaturity of university support in SE.

Memo 4: *From characteristics to functions, to ecosystem integration*
Whilst conducting the five interviews and comparing them to the previous three, I again find that the functions that interviewees ascribe or attribute to universities in SE all find their origins in the university characteristics that they previously mentioned. The described several characteristics to argue the university an appropriate supportive institute (its resources, features, competencies, and capabilities) and largely describe functions that

logically follow from them. Hence, in the data multiple categories of characteristics can be distinguished that make universities a relevant supporting actor and which enable university support in SE. Furthermore, several roles appear to emerge in the data which appear to be enabled by a different composition of these very characteristics. These roles include research and education (the conventional roles,) but interviewees also hint at and argue for multiple different 'new' roles that universities take and/or should take in regards to SE. These include the university as a(n): Connector, Incubator, Knowledge centre, Initiator, Facilitator, Partner and Policy advisor(?). One key difference hinted by the participants is that to successfully take up these 'new' roles/functions they appear to demand a different approach (and perhaps in a way a steeper degree of maturity) from universities; participation. They suggest that universities should recognise, balance and prioritize new responsibilities that go beyond their conventional missions and functions. In this, participants consciously and unconsciously hinted at the third- and fourth mission of universities. Participants implied that there is a sort of maturity process for SE in universities in which it gradually evolves from (1) research, to (2) education, to (3) participation (increased maturity). Logically, this process could lead to stronger ecosystem integration of universities in ecosystems. (Pro)active university participation through third- and fourth mission activities, as a part of the integration of participatory functions in universities in a specific domain of inquiry (e.g. SE), would logically lead to stronger ecosystem integration of that university in that specific ecosystem. This because of the interactions and collaborations with actors outside the university that emerge and which are required by the third mission. Whereas interviewees imply that the university in some of the more established specialisations (e.g. healthcare and technology) has successfully managed to go through a similar maturity process and hence has successfully integrated in these ecosystems, they argue that the opposite is true for SE. They indicate that university integration in the SEE is negligible compared to these areas of expertise. If we then look at the SE initiatives at universities mentioned up until now, it is clear that the majority of initiatives that interviewees could recall are focused on research or education. University initiatives in the domain of SE seem very much limited to its first and second mission (research and/or education). There are some initiatives that go beyond these functions (e.g. Enactus NL that also serves as an Incubator for social enterprises by students), however many of these initiatives are initiated by external parties rather than the university itself. Those that are initiated by universities itself appear to be related to the big , respected and prestigious institutes such as Oxford and Harvard university. However, there are clear indications in the data that universities do possess the characteristics necessary to successfully adopt these new roles and multiple interviewees suggest that SE is a good vehicle for universities to do so. In other words, universities appear to struggle to find balance between their conventional missions and new missions (3th and 4th mission), and SE presents an opportunity to give meaning to these new missions. Interviewees therein implied that the motives for universities to participate in SE are related to the missions that they set out to accomplish. Furthermore, the empirical data seems to support the notions by authors such as Henry Etzkowitz (2016) that imply an imbalance in the university its missions. Similarly to Henry Etzkowitz (2016) the empirical data suggests over attention on the university its first- and second mission.

Memo 5: *Boundary to university participation & engagement*
The 8 interviews up until now largely confirmed my observations and understanding from the thirst three interviews. Academics, practitioners and experts from supportive organisations all indicate the immaturity of SE support in universities in NL. They seem to be unanimous in that SE and SE support in universities is nascent, although several remarks are made that they do not have a complete overview. Participants indicate that SE in universities is very new, and many therein appear to struggle to name specific SE initiatives. Interviewees give a variety of explanations for the current state of SE in universities. More specifically, they give a variety of reasons for the lack of SE (initiatives and practises) in universities. These difficulties for universities to develop SE support & education are now coded as a separate category 'Barriers' and can further be dispersed/divided in a variety of sub-codes (e.g. from (un)awareness, legitimacy, resources, to structural related barriers etc.). These barriers appear to be related to the disconnect between theory and practise in universities that participants point out, and subsequently they appear to be related to the detachment of universities in ecosystems previously described. Many of the participants seem to argue that university models today (traditional models), and the associated barriers, are inadequate for the development of third- and fourth mission activities and SE support. Hence, the data seems to confirm many of the criticisms (G. P. Trencher, Yarime, & Kharrazi, 2013) from the theoretical background on modern university models/structures.

Memo 6: *The connection between SE challenges and the 'enabling' characteristics*
Similar to the barriers, different categories of challenges to SE can be derived from the empirical data. The challenges in SE that interviewees described can be divided in challenges that relate to competencies, finances, the legitimacy of social enterprises, the orientation of social enterprises, regulation, and resources. Furthermore, interviewees connect the enabling characteristics of the university that they describe (its resources, features, competencies and capabilities) to the challenges in SE that they find. Hence, they suggested that the university is a suitable institute in support of SE precisely for the variety of enabling characteristics that they described. They relate its resources, features, competencies and capabilities to the aforementioned challenges, and argue that universities have the characteristics to support social entrepreneurs and to tackle many of these very challenges.

Memo 7: *Need for refinement of initial categories and additional gathering of data*
After coding and analysing the first 8 interviews a rough structure of categories and sub-categories has emerged. However, I feel like there is currently still to great a number of codes and there are still some codes that could be attributed to multiple categories. Hence, the categories and codes need further refinement. Due to the amount of data and the great number of codes, I feel like I sometimes get lost in the details. Therefore, I'll have to take another critical look at the codes to look for possibilities for aggregation and bundling, remove those that are insufficiently grounded and explore if there are more categories to be identified in additional interviews. Further refinement of the categories would help to get to a manageable and structured overview and support the process to get from the vast amounts of data and codes to a concise overarching storyline.

Memo 8: *Refinement of core categories and extension of sub-categories*
Conducting and analysing two more interviews did not result in the identification of new categories. However, analysis led to the creation of "new" sub-categories in the existing categories that I previously did not identify. Most of the new sub-categories I could retrace and reoccurred in previous interviews. Although I had previously coded the data, I had not yet aggregated these codes in specific sub-categories. In the category opportunities I created 7 overarching sub-categories under which I could place the great number of open codes that previously were merely ascribed to the group (opportunities). Hence, I created 7 sub-categories that each have different underlying elements. One group, which at the beginning I had identified as a possible core category (codes relating to the university its structure), I recoded to two sub-category as interviewees predominantly referred to its structure and structural reforms as an barrier or opportunity for the university to get involved in SE and third- & fourth mission activities. Additionally I split the category maturity of Social Entrepreneurship in 3 themes: 1) Maturity of SE in universities, 2) Maturity of SE as a business domain, 3) The development process of SE in universities. Under the final sub-category I placed the evolutionary/maturity process that interviewees previously described and of which elements reoccurred across the interviews (from [a] research, to [b] education, to [c] participation). Additionally, I made several adjustments considering the roles/functions I previously described. I added the university as a mentor/advisor and the university as an agent of change, and removed the university as an initiator and partner. I did this because logically the university may be an initiator and/or a partner through each of the functions. I therefore decided they were unfit to be regarded as separate functions. Finally, I created a separate map for the codes that described specific aspects and observable facts called 'Phenomena'. This has resulted in 6 overarching categories with each several sub-categories: 1) Enabling characteristics, 2) Challenges in SE, 3) Roles/functions of universities in the SEE, 4) Barriers, 5) Motives, 6) Opportunities. Additionally I made a group and map describing phenomena that are related to each of the categories in several ways. To visualise how the categories relate to one another and how they fit in a storyline I have drawn several visualisations that will be added to the appendixes as they were part of the process to get from categories to theory, and eventually to theoretical propositions.

Memo 9: *Sufficient level of theoretical saturation*
To determine if more categories or sub-categories could be identified, I conducted two more interviews. These interviews again did not result in new core categories nor did they result in new sub-categories. Additionally, I used several documents (mentioned in the methodology chapter) to enrich and confirm the empirical data. The categories are now sufficiently grounded and the level of detail is ample to answer the research questions adequately. Although there are some contradictory statements in the empirical data, there is a clear overarching storyline that was confirmed throughout all of the interviews. Participants unanimously agree that universities are not yet a significant pillar in the SEE, and have provided several explanations for this. Additionally, they have described a wide array of functions that universities could assume in SE and suggested several associated

activities that they could take up. Hence, I feel confident that a sufficient level of saturation has now been attained for the purpose of this study.

Memo 10: *The creation of network schemes*
Now the categories are sufficiently grounded and new data gathering did not result in new categories- or sub-categories, I have started the process of creating network schemes to further explore and visualise the relation between categories, categories and sub-categories, and (sub-) categories and phenomena. For this purpose several codes were created that purely serve illustrational purposes. First, I created network scheme to visualise the enabling characteristics in which I visualised the four sub-categories and their underlying elements. Second, I created a network scheme that illustrates how the different barriers are related to the detachment of universities in (Social Entrepreneurial) Ecosystems, and how they serve as a boundary to university participation & engagement (in ecosystems). Third, I created a network scheme to visualise the different motives of universities to support and participate in SE. During this process, I identified a more useful categorisation of the motives according to typology. Hence, I restructured the category 'Motives' in 5 sub-categories that correspond to a specific focus: Academic-, Economic-, Relational-, Social-, and Strategic Motives. Finally, I created a network scheme that visualises the relations between codes across the themes regarding SE maturity. It visualises the practises associated with the evolutionary/maturity process that interviewees described for SE, that this process is related to the maturity of SE in universities, and that the maturity of SE in universities is related to the maturity of SE as a business domain itself.

Memo 11: *From core categories to an overarching storyline by means of a coherent and logical conceptual framework* | During the process of analysing the interviews several core categories and sub-categories emerged. Additionally, I made several analytical observations. I used these categories and observations to develop a logical and coherent framework that visualises the construct (the role of universities in the SEE). In this, I used my initial visualisations on how the categories link together and build upon them. I visualised the earlier described relations between the SE challenges and the enabling characteristics, the characteristics and the functions/roles, the functions, missions and university models, the motives and the missions, and finally the boundary resulting from the barriers. Together this gives an indication of the role of universities in SEE's, the overarching selective code. Additionally, I noticed that people described two university structures amongst the data. First, the structure that most universities are characterised by today. A structure that appears to be very traditional and which many of the interviewees regard inadequate for SE and 3th/4th mission activities. Second, a structure that interviewees inferred would be more appropriate to support SE and all its missions. Hence, I visualised the structure of universities as interviewees currently perceive them (the traditional university model) and started working on the creation of a "new" university structure that adequately represents the structural changes that they implied would be more adequate to support SE, as part of theory development.

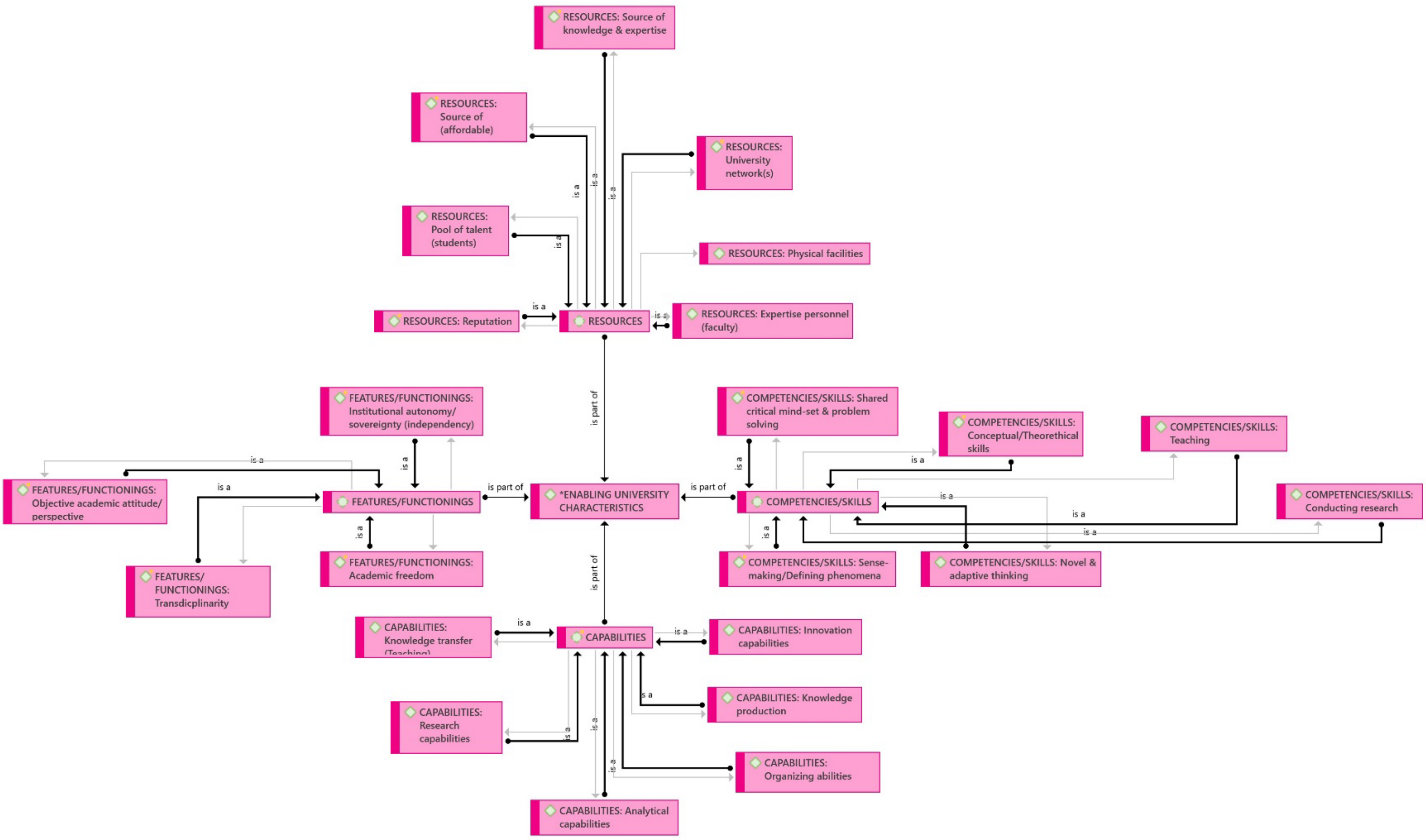
Memo 12: *The Socially Engaged University*

In order to get a better grasp of both the university structures and their differences that are described across the empirical data, I visualised them on paper. The visualisations help to understand both models, but it also shows precisely what it is that makes them essentially different and how to get from one model to the other. The first structure, the Traditional University, reflects the model that participants associated with the majority of universities today. A structure in which the conventional- and the new missions or functions are disconnected and unbalanced, that makes a clear distinction between core (research & education) and non-core activities (participatory functions), and which subsequently provides little ecosystem integration. It does not promote the adoption of SE activities beyond/outside its core functions, and third- and fourth mission activities are regarded secondary. The second structure, I have described as 'the Socially Engaged University'. I derived the name from a participant that precisely voiced this need for a new university structure and fittingly argued that there is a need for a university that is socially engaged; the Socially Engaged University. Hence, this structure is a reflection of the model to which participants alluded in respect to SE. This structure balances and connects the university's missions by adopting participatory functions and responsibilities in the core of the university. Therein, it eliminates many of the pre-existing barriers (and the resulting boundary) impeding/preventing university support in SE. Subsequently, it provides a greater degree of ecosystem integration. Logically it follows that this structure is more adequate and appropriate to facilitate and catalyse SE, or similar subjects, because it regards third- and fourth mission initiatives as primary activities (core). As third- and fourth mission activities are no longer regarded secondary and participatory roles now become a primary function in the university its strategy and structure (e.g. performance evaluation, profiling and educational approaches), interviewees regard such a structure more adequate to respond to social challenges. The key differences between both structures is that the Socially Engaged University integrates the third 'sphere' participation & engagement (see visualisation) in the core of the university, were in the traditional models these functions were regarded non-core and largely disconnected from its core functions. Whilst developing these structures, I searched for literature that corresponded or contradicted my findings. During this process, I came across the concept of 'the civic' and 'un-civic' university by Goddard, Hazelkorn, and Vallance (2016) which in essence very much corresponds with the concept of the Socially Engaged University and the Traditional University that I derived from my own empirical data and findings, and the associated structures I initially drawed. Similarly, they made a distinction between Research, Education and Engagement (in my research referred to as participation & engagement) and visualised a boundary between the first two and the latter activities. I therefore used their structure to inspire my own visualisations. However, whereas Goddard et al. (2016) suggest that a hard boundary between the functions in the un-civic university emerges merely from the university its focus on rankings and a global positioning, my research suggests a much wider array of barriers that contribute to the wedge between the university its conventional- and its participatory functions in the Traditional University. Additionally, Goddard et al. (2016) do not incorporate the university its missions and there models are centred around university management and leadership. Contrary, the structures I propose are focused on ecosystem integration and connect the university its functions to its missions. Hence, although I was not aware of these university structure typologies before and whilst conducting & analysing the interviews (they are not included in academic literature on the evolution of universities and its structure) my study provided similar results that confirm many of the principles that underly the idea of a 'civic' university introduced by Goddard et al. (2016).

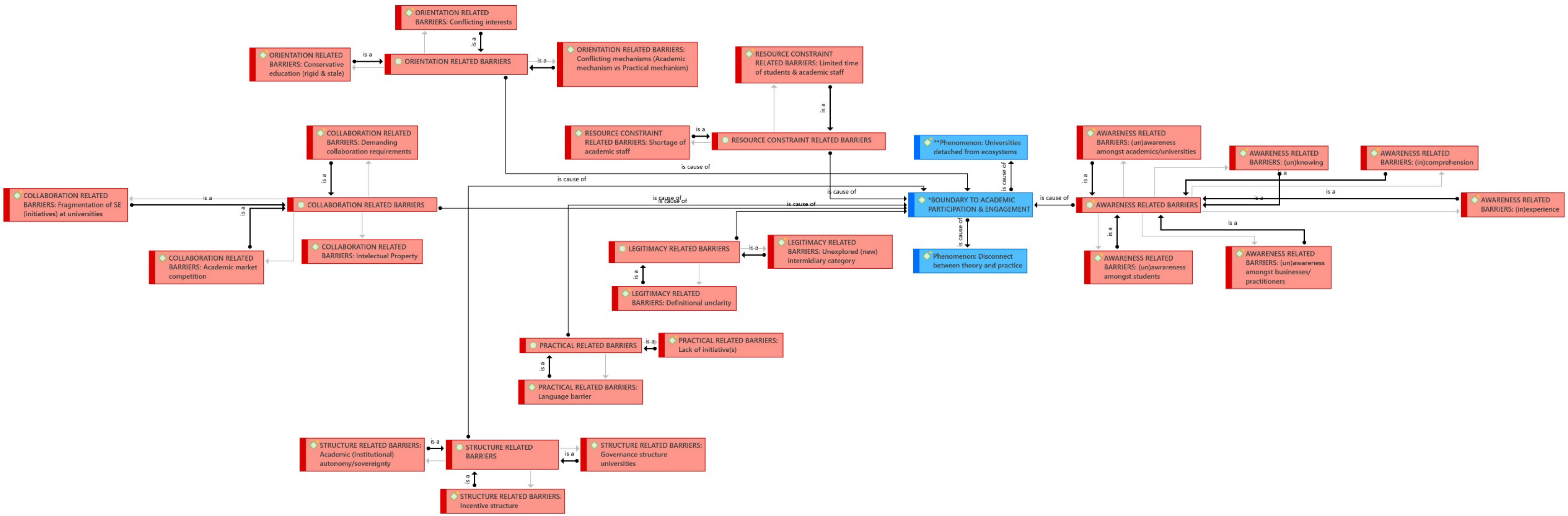
12 Memos

Network schemes

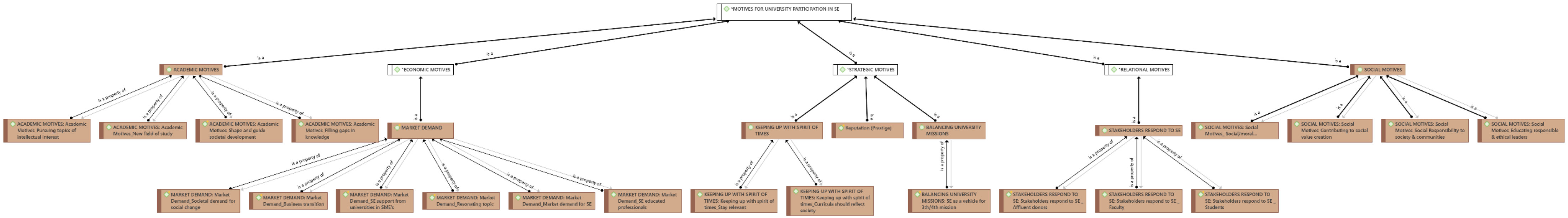
(1) The first network scheme visualises the enabling characteristics of the university, and their associated categories (Resources, Features/functionings, Competencies, and Capababilities).



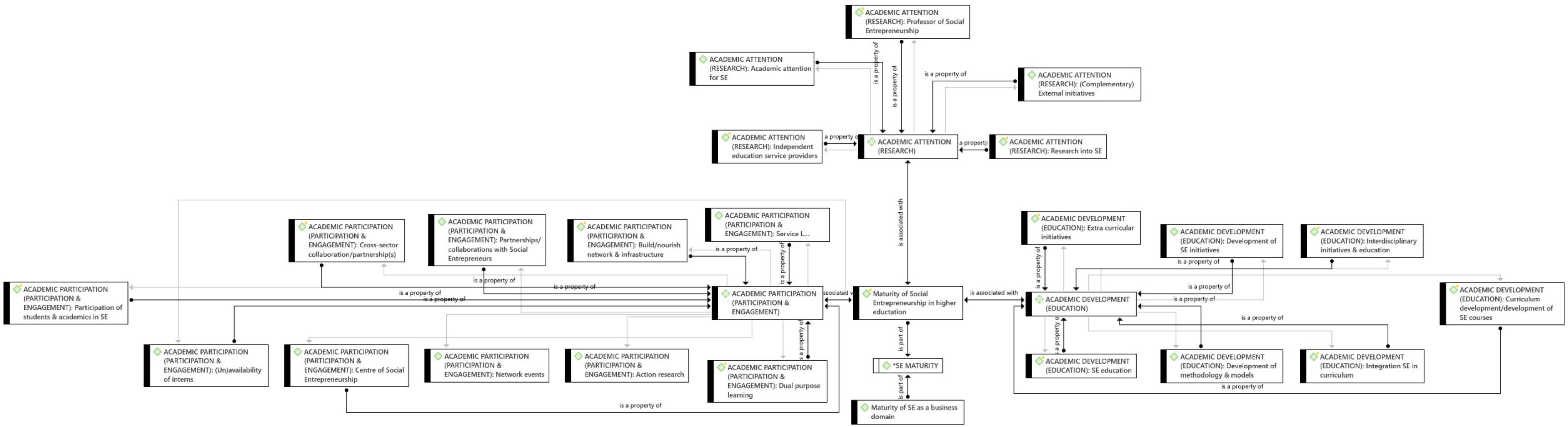
(2) The second network visualises the boundary to participation that is related to the barriers identified. Additionally it indicates that it contributes to the detachment of universities in ecosystem and the disconnect between theory & practise at the university.



(3) The third network visualises the five types of motives and their underlying elements



(4) The development process of SE and the associated elements



Appendix 12 – Interviews & Coding

For privacy reasons the interviews and the associated coding are not made public. They have been included in a separate document.