

ENTREPRENEURSHIP AS A
MULTI-DIMENSIONAL PHENOMENON
and a closer view on social entrepreneurship

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ABBREVIATIONS

CEGSE – Commission Expert Group on Social Entrepreneurship

CPA – Certified Public Accountants

GEM – Global Entrepreneurship Monitor

N/A – Not Available

NECI – National Entrepreneurship Context Index

KfW – Kreditanstalt für Wiederaufbau

NGO – Non-Governmental Organizations

NPO – Nonprofit Organizations

SEND – Social Entrepreneurship Netzwerk Deutschland

SDGs – Sustainable Development Goals

SSCI – Social Science Citation Index

SCI – Science Citation Index

TEA – Total early-stage Entrepreneurial Activity

VC – Venture Capital

LIST OF PUBLICATIONS

Article 1: Network Actors within Entrepreneurial Networks: The Current State of Research (post print version extended by an abstract)

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Article 2: What type of entrepreneurship do you mean? It comes in different shapes and sizes! (in preparation for publication)

Article 3: Social Entrepreneurship: Dissection of a Phenomenon through a German Lens (post print version)

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Article 4: Social Entrepreneurship on its way to significance: The case of Germany. (preprint version)

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1. EXECUTIVE SUMMARY

Purpose

Entrepreneurship is acknowledged as an essential factor for economic growth and as a critical force for a more sustainable future. However, knowledge remains vague about the variety of entrepreneurial forms as well as different treatments thereof. The present thesis seeks to strengthen the recognition of entrepreneurship as a multi-faceted phenomenon and shows that even sub-groups of entrepreneurship as in this case social entrepreneurship are rather complex and heavily dependent on the environmental context.

Literature Analysis

This thesis is rooted in the research streams of social networks analysis, research on social entrepreneurship, institutional theory and the classification literature of entrepreneurial forms. The goal is to investigate the complexity of the entrepreneurial phenomenon in terms of its classifications, diversity and dependence on the environmental context. In order to do that entrepreneurship articles in peer-reviewed journals focusing on social network actors (article 1) and all entrepreneurship articles mentioning a specific form of entrepreneurship are analysed (article 2). Next, a historical flashback and typology on social entrepreneurship is provided (article 3) and the national environment in Germany is analysed (article 4). This thesis shows how important it is to distinguish between the different forms of entrepreneurship and paying attention to the environmental context.

Research Design

The present thesis is of explorative nature and applies a varied set of methodologies starting with two reviews and proceeding with an article using a mixed-methods approach and concluding with a quantitative analysis. Article 1 and Article 2 employs bibliometric analysis to investigate the scientific landscape of the social networks involved in the entrepreneurial process (article 1) and the different forms of entrepreneurship discussed in scientific literature (article 2). Article 3 applies a 'Policy Delphi' in order to identify the elements of the social entrepreneurship definition. Furthermore, a factor analysis is applied to extract the different dimensions that describe social entrepreneurship and the intercorrelations are examined. Article 4 employs Logistic Regression to find out how national environmental conditions vary in terms of two different entrepreneurial forms.

Results

Article 1 shows the importance of social network actors within the entrepreneurial process and draws attention to the variety of entrepreneurial forms. Article 2 presents the different entrepreneurial typologies discussed in academic literature. Moreover, the first two articles provide a description of the scientific landscape. Article 3 reveals the most and least important elements in terms of the definition of social entrepreneurship. Furthermore, the article presents five factors that define social

entrepreneurship. Article 4 discloses the difference in governmental funding allocation between entrepreneurs who follow social SDGs and the ones who follow economical SDGs.

Implications

The present thesis contributes to the entrepreneurship literature by showing how multi-faceted the phenomenon is. The results contribute to the attempt of classification of different forms of entrepreneurship. Furthermore, the results provide insights on the factors of social entrepreneurship and highlight the awareness of environmental context in defining a specific form of entrepreneurship. The application of institutional theory for two different entrepreneurial forms within one national context highlights the differences within a single national context in contrast to cross-national differences. Finally, the results contribute to practice by providing insights into the variety of entrepreneurial facets and how different there are treated within one national contexts. These insights allow public policy makers to create new and re-evaluate current programs in terms of their target group.

2. INTRODUCTION

‘Today, we might characterize this “organizations are all alike” approach

as one of extreme decontextualization’

(Aldrich, 2009, p. 23).

2.1. Relevance of the thesis/Research Gap

Following the critique on generalizing organisations and not paying enough attention to their heterogeneity the core of this doctoral thesis is to show how multi-faceted and complex the concept of organization is taking the case of entrepreneurial organizations. As all economic action is embedded in social networks (Granovetter, 1985) and as Granovetter pointed out social networks are “no luxury but of central importance” (1973, p. 1378) the present doctoral thesis takes social networks as a starting point for its analysis of the multi-dimensional phenomenon of entrepreneurship. As the literature through decades indicates social networks determine most if not all organizational processes (Ozman, 2009). Internally in formal and informally structuring teams, projects and departments, externally in manifesting the ties to business partners, customers or governmental organizations. In addition, creating something new, innovative as organized endeavour strongly refers to the embeddedness in social networks, in which information, knowledge and ideas circulate and innovations diffuse. Likewise, when constituting business networks a balance of strong and weak ties is vital (Uzzi, 1997). Already back in 1986 Aldrich and Zimmer (1986) encouraged researchers to address this embeddedness in social networks within entrepreneurship research.

As social networks in which entrepreneurs are embedded are the origin and drivers of their existence investigating their differences and similarities does not work without paying social networks particular attention as done in article one. As Davidsson (1988, p. 89) acknowledged “A useful typology of entrepreneurs has a potential of high theoretical – and therefore also practical – value.” However, a clearly distinguishing classification system is still missing. This thesis in different investigations attempts to fill this gap at least partly by identifying the nature of different types of entrepreneurship in order to show the multi-faceted character of entrepreneurial organizations. Doing so the first two articles take a broader view on entrepreneurial organizations in general and paper three and four focus on the specific case of social entrepreneurship in particular. By taking social entrepreneurship as an example the thesis shows that not only entrepreneurship as a concept is multi-faceted but the subgroups as for example social entrepreneurship itself are rather complex and heavily dependent on the contextual environment. In the last two decades social entrepreneurship has gained a lot of attention. Especially after the postulation of the sustainable development goals (SDGs) social entrepreneurship has been established as a prominent term in academia. Still, although the concept itself was always present and is as old as mankind (Dees, 1998) it still has not got the attention in policy and business as claimed by scientist. Article four exemplifies this by showing that the governmental support system for start-ups still has hardly paid attention to social entrepreneurship. There are three major conclusions that can be drawn taking all four articles together. First, entrepreneurship research in theory, methodology and practical recommendations cannot avoid to addressing the multi-dimensional character of entrepreneurship. Second, perceptions, interpretations and applications of entrepreneurship concepts particularly in sustainable and/or social entrepreneurship are multi-faceted in having different historical

pathways and current appearances. And finally third, social entrepreneurship as term is on vogue in academia and beyond, however, a real economic and societal inclusions is just in the beginning.

The thesis is structured as follows. First, an introduction of all four articles is provided by describing the structure and all research questions followed by the scientific landscape and the theoretical framework. Finally, the corresponding empirical approaches are presented.

2.2. Structure and Guiding Research Questions

The doctoral thesis is of cumulative nature and is composed of four articles. After a brief introduction the thesis takes a funnel-approach by starting out with a broad focus on social networks in entrepreneurship (article 1), moving on to different typologies of entrepreneurship (article 2) and finally taking a deeper look into one particular form of entrepreneurship namely social entrepreneurship and its appearance (article 3) and governmental support (article 4). The first article looks at the individual level (micro-level) as well as the perspective of the company (meso-level). The second article focuses on the company level (meso-level) by identifying the different forms of organisations. Whereas article three and four explore the differences, characteristics and mechanism on a national level (macro-level) in this case Germany. In the following, the research questions for each article and underlying research design are presented and shortly described.

Research Questions Article 1:

Who are the network actors presented in scientific literature?

What authors and articles strongly shape the network related literature on entrepreneurship?

More specifically, the first article analyses peer reviewed academic journals in terms of the discussed social network actors involved in the entrepreneurial process. The article seeks out to identify the network actors and allocate them to into the developed schematic for a better overview. Furthermore, this article describes the research landscape that deals with network actors within entrepreneurship. In order to describe the scientific landscape bibliometric analysis is applied.

Research Questions Article 2:

What types of entrepreneurship are represented in academic journals?

What authors and articles strongly shape the individual entrepreneurship typologies?

The goal of the second article is to identify the different forms of entrepreneurship introduced into scientific literature. The first and the second article share that the whole scientific landscape is analysed. This is done by presenting the most influential authors and articles as well as the biggest contributors in terms of the number of published articles. As in article one article two uses bibliometric analysis in order to describe the scientific scenery.

Research Questions Article 3:

What is the underlying meaning of social entrepreneurship practitioners and researchers have?

What factors characterize social entrepreneurship?

The third article explores the phenomenon of social entrepreneurship and attempts to add to the discussion on its definition through shedding light upon the fuzzy concept by finding the elements that define the term. First a historical journey on the development of social entrepreneurship in US and Europe is presented highlighting all the differences and similarities. Practitioners and scientists in Germany are asked to define the concept and evaluate the elements of social entrepreneurship. Applying a “Policy Delphi” approach the participants are asked in the second round of the survey to identify the factors that characterize social entrepreneurship. A factor analysis is applied to extract the different dimensions of social entrepreneurship.

Research Questions Article 4:

Is there a difference in allocation of governmental funding for entrepreneurs who follow economic SDGs and those who follow social SDGs?

The last article deals with intra-country differences by comparing commercial and social entrepreneurship. Through the lens of the institutional theory and more specifically the regulative pillar the allocation of government support between commercial and social entrepreneurship in the specific case of the allocation of the EXIST Start-up Grant is analysed. The used logistic regression analysis is based on the “Gründungsumfrage Berlin/Brandenburg 2020” and a sample of 567 academic start-ups.

2.3. Scientific Landscape and Theoretical Framework

This doctoral thesis is embedded within three different research streams, namely social networks analysis, research on social entrepreneurship, and the application of institutional theory. Furthermore, the classification approach is the leading force behind all four articles.

Considering social networks analysis, the doctoral thesis shows how important it is to distinguish between different entrepreneurial forms and their embeddedness in social networks. The pure number of studies linking social networks and entrepreneurship witnesses the intertwinement of both and justifies the first step into this doctoral examination. However, the same pure number and its variety of concepts, operationalizations and applied methods request for investigating the concept of entrepreneurship much closer. Based on classification principles the thesis illustrates the empirical and theoretical cut-points between different forms of entrepreneurship. In a next step a closer look is taken into one increasingly popular form of entrepreneurship, namely social entrepreneurship. A historical and academic review of the development of the concept of social entrepreneurship as well as an empirical investigation show that it is not only difficult to frame entrepreneurship in general but also when looking into specific forms. There it also becomes obviously problematic to define and frame social entrepreneurship when applying the concept in different environmental contexts and applying institutional theory. In a final step, a closer view on the major resource the financial means of social entrepreneurs are taken applying institutional theory.

All four articles follow an explorative research design. The first two articles explore ex-post the major research endeavors undertaken in order to frame the addressed issue. The third and the fourth article take the institutional theory as an anchor point to investigate the very nature of social entrepreneurship in Germany (article 3) and its governmental support mechanism (article 4).

For the purpose of this study we define entrepreneurship as "the process of identifying new entrepreneurial opportunities and converting them into marketable products and services" (Fueglistaller, Müller, Müller, and Volery, 2016). Consequently, a kind of innovation, process, product and/or service innovation and a financially based business model need to be in place.

2.4. Empirical Approach

The thesis starts out with a comprehensive structured literature review of recent scientific work. The first article uses the EBSCO Source Complete database in order to identify relevant articles. The resulting set of 768 peer-reviewed journal articles was analyzed by two researchers. The abstracts were allocated across one or more keywords to reflect all involved network actors across keywords covering entrepreneurship in general and specific forms of entrepreneurship such as social, international and others. To enhance validity, reduce errors and subjective bias, two researchers carried out the allocation. The second article applies the structured literature review approach in order to analyze the classifications used by researchers within the field of entrepreneurship. A content analysis was performed by evaluating the words before and after entrepreneur* in terms of possible classifications. After identifying relevant keywords a cluster analysis was performed.

For both articles bibliometric analysis is used to identify the most influencing authors and articles of the particular sub-fields. Counting the author appearance within the sample is aimed to allocate the contributors and the count of author appearance cited by the sample identifies the influencers of the sub-field. Second, to analyze the most influential articles the total number of cited articles from the sample is counted. The summed citation count analysis is the most simple citation analysis (Tahai and Meyer, 1999), the simple impact method is generally accepted (Sharplin and Mabry, 1985) and became a traditional analysis tool (Kacmar and Whitfield, 2000) used by many researchers (Sharplin and Mabry, 1985; Newman and Cooper, 1993; Tahai and Meyer, 1999; Ramos-Rodriguez and Ruiz-Navarro, 2004).

Article 3 builds on primary data collected through a questionnaire developed according to Gartner's "Policy Delphi" conducted on the definition of entrepreneurship (1990). The same methodology was applied for social entrepreneurship in the case of Germany. The "Policy Delphi" was extended by a factor analysis and examination of the intercorrelations between the factors.

Finally, article 4 uses data that was collected through the Harmonized Start-up Survey 2020. This is a structured and systematic analysis of start-up activities that are connected to universities and universities of applied sciences in Berlin and Brandenburg. The cross-university initiative was headed by the Technische Universität Berlin who coordinated the data analysis. A standardized questionnaire with mainly closed questions was created to obtain and analyze relevant key data. Data from 750 start-ups was collected wherefrom 333 start-ups could be included in the final analysis. The results of the survey show that university incubators play a very important role. 72% of the businesses were set up within the last ten years, wherefrom 35% were founded in the last three years. Berlin-Brandenburg was chosen by 80% of the start-ups as their founding base. In terms of the sector 61% of the companies focus on the knowledge-intensive consultation services, information and communication technologies and the creative industries. 71% of the companies are already achieving a profit. For the first time the SDGs were included in the survey. According to the survey the start-ups believe to contribute to the SDGs.

The most often mentioned SDGs are SDG 8 (Decent Work and Economic Growth), SDG 9 (Industry, Innovation, and Infrastructure) and SDG 4 (Quality Education). Furthermore, the surveyed companies indicate that economic aspects are of importance (92% who state that it is important or very important). This is followed by social aspects (79%) and ecological aspects (69%). Start-ups founded in the last ten years reported high levels of support provided by their university. In total 41% received funding (EXIST, Start-up Grant, programs offered by the Berlin Brandenburg Investitionsbank, Berlin Start-up Stipendium or Agentur für Arbeit) for their start-up. In order to see if there is a difference in allocation between entrepreneurs who follow economic SDGs and social SDGs the study tests corresponding hypotheses on the difference of allocation of the EXIST Start-up Grant. This is done by using logistic regression.

The research design and used methodology of all articles is summarized in Table 1. The following chapters capture the full texts of the referred articles that represent the essence of this doctoral thesis. Each of the following chapters consists of the articles presented in Table 1 in chronological order. The thesis ends with an overall conclusion of the results and implications of the four articles.

	Article 1	Article 2	Article 3	Article 4
Research Questions	Who are the network actors presented in scientific literature? What authors and articles strongly shape the network related literature on entrepreneurship?	What types of entrepreneurship are represented in academic journals? What authors and articles strongly shape the individual entrepreneurship typologies?	What is the underlying meaning of social entrepreneurship practitioners and researchers have? What factors characterize social entrepreneurship?	Is there a difference in allocation of governmental funding for entrepreneurs who follow economic SDGs and those who follow social SDGs?
Theoretical Constructs	-	-	-	Institutional Theory
Empirical Approach	Review	Review	Mixed Methods: Qualitative and Quantitative	Quantitative
Study sample	Articles on Network Actors from EBSCO	Articles on Entrepreneurship from Web of Science	SEND Members and Followers	Start-ups from Universities in the Area of Berlin and Brandenburg
Sample size	n=2.957 (final n=768)	n=21,888 (final n=4,269)	n=120	n=567 (final n=333)
Methods	Structured Literature Review including Content Analysis and Bibliometric Analysis	Structured Literature Review including Bibliometric Analysis	Policy Delphi, Factor Analysis, Intercorrelation	Logistic Regression
Measurement Tools	-	-	Gartner's (1990) Questionnaire for the 1 st Round, Survey Derived from the Results of the 1 st Round	TU Berlin Start Up Questionnaire developed by Kristina Fajga and Michaela Gieseke

Table 1: Scientific Embeddedness and Empirical Methods

2.5 References

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3. ARTICLE 1: Network Actors within Entrepreneurial Networks: The Current State of Research

Authors: Karina Cagarman and Jan Kratzer

Network Actors within Entrepreneurial Networks: The Current State of Research

(accepted manuscript extended by an abstract)

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3.1. Abstract

As all entrepreneurial activities are embedded in social networks it is crucial to know how the networks are set up. Who are network actors actively and passively helping entrepreneurs? The present article analyses network actors present in peer reviewed academic articles. In order to do that a structured literature review on the basis of the abstracts is conducted and all network actors are filtered out. Furthermore, using bibliographic methods the scientific landscape is analyzed. Consequently, the most influential authors and articles as well as contributors with the highest number of articles are identified.

Keywords

Entrepreneurship; Entrepreneurial Process; Network Actors; Social Networks; Social Network Actors

3.2. Glossary

Network Actors – Network actors are individuals, corporates or collective social units of a network (Wasserman and Faust, 2009, p. 17)

Entrepreneurial Networks – Social networks consisting of network actors that are involved in entrepreneurial activities

3.3. Definition

According to Wasserman and Faust (2009) a network analysis is based upon several key concepts, namely: “actors, relational ties, dyads, triads, subgroup, group, relation, and network” (Wasserman and Faust, 2009, p. 17). First, the actors have to be identified and defined. Second, the group and relation have to be defined in order to come to a more explicit definition of the whole social network (Wasserman and Faust, 2009, p. 19). Following the definition of Wasserman and Faust (2009, p. 17) “Actors are discrete individual, corporate, or collective social units.” A social network is referred to as a set of actors including their relations (Wasserman and Faust, 2009). An entrepreneurial network is therefore a network with linkages between actors involved in entrepreneurial activities.

3.4. Introduction

Starting with Granovetter (1973, 1985) researchers conducted studies under the perspective of a social network model of entrepreneurial processes. Granovetter (1985) argued that economic action is embedded in networks of social relations and therefore all market related processes are approachable for sociological analysis. In other words, the entrepreneur and his/her firm is part of an environment consisting of complex relationships, where the entrepreneur interacts with network actors related to his/her needs. Furthermore, the critique of traditional approaches of entrepreneurship by Aldrich and Zimmer (1986) highlights the importance of embeddedness of entrepreneurial behavior in the social context. To present the characteristics of social networks the critical dimensions of density, reachability, and centrality are used. The authors highlight the importance of social resources and their diversity. According to Aldrich and Zimmer (1986) entrepreneurship needs to be seen as a social role and dynamic process in a shifting network.

Many authors discuss the topic of embeddedness, however, the following authors point out the essential role of networks throughout all startup phases. First, Burt (1992) argued that the structure of entrepreneurs' networks determines the chances to successfully identify opportunities. Second, Brüderl and Preisendörfer (1998) state that a personal network supports the entrepreneurial activities in context of survival and growth throughout the startup phase. Finally, Ostgaard and Birley (1996) argue that personal networks of entrepreneurs provide access to critical resources.

According to Borgatti and Foster (2003) the number of social network articles in general has increased exponentially in many disciplines. The co-citation analysis based on literature from 1981 – 2004 by Gregoire, Noel, Dery and Bechard (2006) identified amongst other topics a focus on network research within entrepreneurship between 1987 and 1992. In the years after 1992 research around social networks within entrepreneurship received less attention, however the topic gained more attention in the years between 1999 and 2004. This suggests there is a substantial interest in network-related research topics within the field of entrepreneurship.

3.5. Key Points

Social networks are gaining more attention in research, accordingly, the number of social network related publications in the field of entrepreneurship is rising. Since 1983, the number of published articles averages 55 per year, in the period from 2010-2014 the average number of published articles rose significantly to 72 per year.

The results show that articles from the sample are mostly published in entrepreneurship or small business journals such as *Entrepreneurship: Theory and Practice* and *Journal of Small Business Management*. However, journals not focusing on entrepreneurship or small business such as: *Strategic Management Journal*, *Technovation* or *Research Policy* are represented as well.

Chrisman, Anderson and Wright are the main contributors to network related research within entrepreneurship, where the latter has been the most influential author. Other influencers with more than 100 citing articles from the sample are Aldrich, Zahra, Johannisson, Audretsch and Shepherd.

3.6. Historical Background

In the last 15 years several reviews have been published on network related literature in the field of entrepreneurship and innovation. In the following, the reviews that summarize literature on network related topics within the field of entrepreneurship are presented. First, literature reviews focusing on the construct and methodological approaches are presented. Second, studies emphasizing the roles of networks and elaborating on the process perspective are summarized. Third, articles dealing with networks and elaborating on specific themes are presented.

In the light of the reviews that summarize literature on network related topics within the field of entrepreneurship the following articles deal with the construct and methodological approaches. The paper by O'Donnell, Gilmore, Cummins and Carson (2001) addresses the network as a construct and analyzes its use in academic articles. The authors make a distinction between the two dominant network types in research namely inter-organizational networks and the personal networks of the entrepreneurs and summarize the research background, network actors, type of links, level of analysis, categorization and research areas. Although, network actors are addressed, the authors stay on the general level by distinguishing between organizations and individuals without going into detail. Additionally, the review by Jack (2010) deals with methodological approaches for network research within entrepreneurship. The author analyses the themes and approaches of empirical studies, as well as journals, by analytical approach.

In terms of the process perspective, Hoang and Antončič (2003) analyzed 70 articles with an emphasis on the role of networks in three areas, namely; content, governance, and structure. The authors noticed two major trends: (1) that many studies have been conducted on how networks impact entrepreneurial outcomes and (2) that not many process-oriented studies have been conducted. However, Jack, Dodd and Anderson (2008) addressed the missing process perspective focusing on the change and development of networks within the entrepreneurial activities. Although, the study itself is not a literature review, the article provides a detailed analysis of literature related to entrepreneurial networks and change. In total, twelve articles are identified and analyzed according to the applied theories. The process aspect is addressed by Slotte -Kock and Coviello (2010). As a result, the authors provide a "theoretical foundation for conceptualizing and studying networks as a developmental outcome" (Slotte -Kock and Coviello, 2010, p. 52). The authors extended the review of Hoang and Antončič (2003) by adding 17 more articles and a clear focus on network processes.

The following articles have a specific thematic focus. Thornton (1999) conducted a sociologically based literature review on entrepreneurship with a focus on the supply-side and the demand-side perspectives in order to develop a sociological perspective on entrepreneurship. A further study in form of a systematical review has been done on networking behavior linked to the innovative capacity of firms describing the roles of network partners (Pittaway, Robertson, Munir, Denyer, and Neely, 2004). The authors identify various benefits of networking and reasons for failure within the current literature. The literature review by Witt (2004) concentrates on the network success hypothesis by analyzing empirical studies on networks and related networking activities in terms of start-up success. The author explains how network activities can be measured and elaborates on the indicators for quantifying the success of startups. The paper proposes a new model for the relationship between entrepreneurial networks and the success of start-ups. Furthermore, Trettin and Welter (2011) analyzed 348 articles in terms of the challenges for spatially oriented entrepreneurship research concentrating on the macro level of analysis (local, regional, national).

Birley (1985) made a distinction between formal networks consisting of actors such as banks, accountants, and lawyers and informal networks including family, friends, and other business contacts. According to Ferrary and Granovetter (2009) a minimum of twelve different agents are involved in the process of creating start-ups. These twelve are: universities, large firms, research laboratories, VC firms, law firms, investment banks, commercial banks, certified public accountants (CPA), consulting groups, recruitment agencies, public relation agencies, and media” (Ferrary and Granovetter, 2009, p. 335). Specializing on its own activities, each actor contributes in different ways. Whereas Pittaway et al. (2004) makes a distinction on three levels in context of innovation. On the first level there is the firm itself. On the second level, the network interface of the firm with actors such as suppliers, co-suppliers, distributors, customers, and competition. On the third level there is the network infrastructure of the firm consisting of consultants, professional associations, science partners, trade associations, business clubs, investment networks, clusters, centers for collaboration, industry networks, incubators, and science parks. The present analysis does not distinguish between the phases of the start-up.

A summary of the discussed literature is presented in Table 1.

Article	Author	Year	Approach	Focus	# of articles
The sociology of entrepreneurship	Thornton	1999	contextual analysis of organizational founding	Integrating supply and demand-side perspective	N/A
Networking and innovation: a systematic review of the evidence	Pittaway, Robertson, Munir, Denyer, Neely	2004	systematical review	Networking behavior linked to innovative capacity	174
Entrepreneurs' networks and the success of start-ups	Witt	2004	Analysis of empirical studies	Network success hypothesis	N/A
Approaches to studying networks: Implications and outcomes	Jack	2010	Literature review (themes and approaches)	Methodological approaches for network research	71
Challenges for spatially oriented entrepreneurship research	Trettin and Welter	2011	Review with classification and trend analysis	Main themes at and across geographic scales, sources of data and methodological approaches	348
Network-based research in entrepreneurship: A critical review	Hoang and Antončić	2003	Review and critical examination	Network content, governance and structure	70
Entrepreneurship Research on Network Process: A Review and Ways Forward	Slotte -Kock and Coviello	2010	Conceptual review and development of a theoretical framework	Network process	29
The network construct in entrepreneurship research: a review and critique	O'Donnell, Gilmore, Cummins, Carson	2001	Literature review	Level of analysis	N/A
Change and the development of entrepreneurial networks over time: a processual perspective	Jack, Dodd, Anderson	2008	Case Studies	Processual Perspective	12

Table 1: Articles discussing networks and network actors within the field of entrepreneurship (own presentation)

3.7. Current State of Research on Network Actors published in Academic Articles

This chapter presents the results of the analysis on the publishing activity on network actors within the field of entrepreneurship. First, the schematic for the analysis is explained. Second, a general overview on the number of publications and the most influential journals is given. Third, the number of appearing network actors within the research field is presented. Fourth, a differentiation between the various forms of entrepreneurship is made. Fifth, the most contributing authors are identified. Sixth, the most influential authors are presented. Finally, a list of influencing articles is presented.

Schematic of entrepreneurial networks

To organize the analysis of the different network actors the actors are structured according to the schematic for network actors in innovation processes developed by Pittaway et al. (2004) and expanded by the individual dimension of the entrepreneur as indicated by Birley (1985). Table 2 presents the schematic of the network actors derived from the literature review.

Network Actor	Individual		Organization	
Kind of Network	Personal Network	Personal Network within the Organization	Organizational Networks	Organizational Networks
Who is in Focus	The Entrepreneur with her/his internal Network Actors	The Firm with its internal Network Actors	The Firm and its Primary Network Actors	The Firm and its Support Network Actors
	External	Internal	External	

Table 2: Structure of entrepreneurial networks (own representation)

In order to have a structure for the analysis the network actors are allocated into four levels. Hereby a distinction between the entrepreneur and the firm is made. In addition to that, the schematic distinguishes between two different types of network actors in the firm: Network actors belonging to the personal network of the entrepreneur such as family, pre-employer, or his/her own network and social capital are grouped to the section of individual personal network of the entrepreneur. Network actors dealing with the organization are divided into three sections. The internal network actors of the organization are allocated to the firm. According to the logic of Porter's value chain the firm differentiates between the primary and support activities (Porter and Millar, 1985).

Consequently, a further differentiation between the external network actors of the firm is made: in the primary network dealing with essential network actors for delivering the product or service to the customer; and in the support network actors, who are essential for all activities that make it possible to realize the primary activities. In addition to the network actors organized according to the dimensions of the schematic, a distinction between internal and external network actors is made. However, the

article does not differentiate between the geographical differences. Following local, regional, national, and global network actors are included in the study.

General overview of the publishing activity

The number of articles on networks and network actors within the field of entrepreneurship started and continued to rise beginning in 1983. Figure 1 shows the distribution of the 743 publications in the sample over time. The articles were selected according to prior identified search strings using the Business Source Complete database, followed by a coding procedure allocating the articles to networks and network actors. The search is limited to articles published in English not later than 31/12/2014 in academic and scholarly (peer reviewed) journals. In contrast to other systematic reviews, this review has no restriction to particular journals or disciplines apart from the restriction set by the database itself.

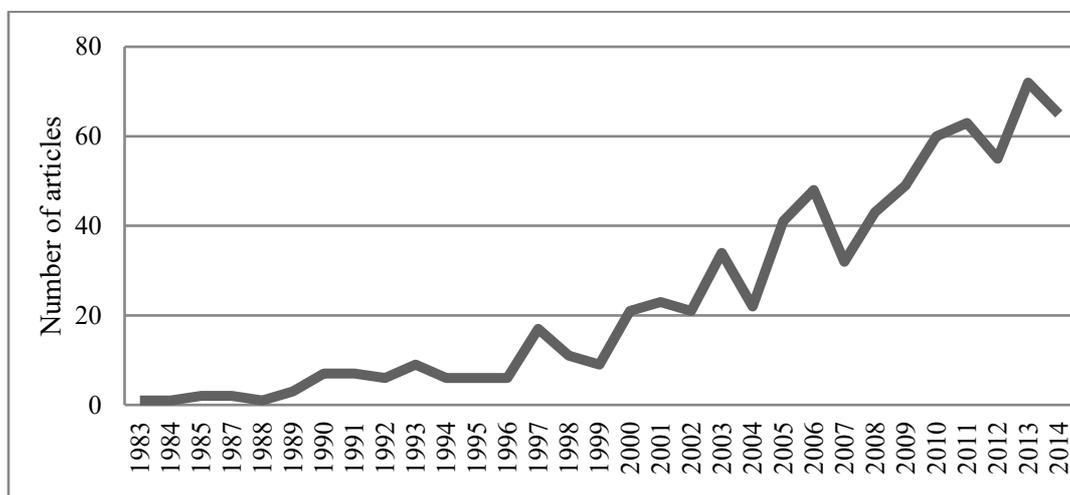


Figure 1: Number of articles per year

As presented in Table 3 53,43 % of articles in the sample are published in the top nine journals. Wherefrom 28,80 % are published in the top three journals namely *Entrepreneurship: Theory and Practice* (10,36 %); *Journal of Business Venturing* (9,69 %); and *Entrepreneurship and Regional Development* (8,75 %). The remaining 24,63 % are shared by six journals as listed in Table 3. The first six journals out of the top nine namely *Entrepreneurship: Theory and Practice*; *Journal of Business Venturing*; *Entrepreneurship and Regional Development*; *Journal of Small Business Management*; *International Small Business Journal*; and *Small Business Economics* publish the highest number of network related articles on entrepreneurship. All six journals have an exclusive focus on entrepreneurship and small businesses. However, journals that do not exclusively centralize the topic of entrepreneurship such as *Strategic Management Journal*, *Technovation* and *Research Policy* are also present in the top nine. The remaining 46,57 % of the total number of articles are published in 99 journals.

Journal	1983- 1989	1990- 1994	1995- 1999	2000- 2004	2005- 2009	2010- 2014	Total	%	Cum. %
Entrepreneurship: T&P	0	5	7	5	26	34	77	10,36	10,36
Journal of Business Venturing	3	6	5	13	15	30	72	9,69	20,05
Entrepreneurship and Regional Development	0	0	4	14	14	33	65	8,75	28,80
Journal of Small Business Management	0	4	5	8	5	14	36	4,85	33,65
International Small Business Journal	0	0	0	1	8	26	35	4,71	38,36
Small Business Economics	0	2	5	8	4	16	35	4,71	43,07
Strategic Management Journal	1	2	0	8	8	8	27	3,63	46,70
Technovation	0	0	1	5	14	6	26	3,50	50,20
Research Policy	0	0	2	7	8	7	24	3,23	53,43
Total	4	19	29	69	102	174			

Table 3: Number of Articles per Journal (Journals with more than 20 Publications)

Network actors within the field of entrepreneurship

As well as the number of articles the variety of the content is rising. In the following the coding of the published articles on network actors within the field of entrepreneurship is presented. The results are based upon the analysis of the abstracts.

As presented in Table 4 280 articles (37,69 %) discuss networks in general. If looking at the four categories, namely: personal network of the entrepreneur; the firm; organizational network – primary network actors; organizational network – support network activities; it can be observed that the network actors for supporting activities have the highest number of allocations of articles namely 481 (64,74 %). The leading keywords with the most amounts of articles in this category are the investment network with 143 articles (19,25 %) and partnerships and alliances with 103 articles (13,86 %). This is mainly due to the founding process, which relies on the support of other actors in order to bring the value in form of a product or service to the customer and build the required infrastructure.

The second category according to the number of articles allocated is the entrepreneur itself with 85 articles (11,44 %), divided into 54 articles (7,27 %) elaborating on entrepreneurs' network in general, 32 articles (4,31 %) on family and three articles (0,40 %) on pre-employer. Less than ten percent of the articles (7,94 %) discuss network actors within the firm. Less than eight percent of the articles (7,13 %) within the sample deal with the network actors on the primary level. Surprisingly, the category of the entrepreneur does not include friends as possible network actors.

Network actor	1983 -1989	1990 -1994	1995 -1999	2000 -2004	2005 -2009	2010 -2014	Total	%
Network in general	2	16	20	46	90	106	280	37,69
Total - Entrepreneur	0	7	4	6	22	46	85	11,44
Entrepreneurs' network	0	5	2	4	13	30	54	7,27
Family	0	2	2	3	8	17	32	4,31
Pre-Employer	0	0	0	0	1	2	3	0,40
Total - The Firm	0	1	2	6	29	21	59	7,94
Founding team	0	0	0	5	16	11	32	4,31
Top-Management	0	1	2	1	4	7	15	2,02
Board members	0	0	0	1	6	7	14	1,88
Employees	0	1	0	0	6	1	8	1,08
Total - 1. Level	1	4	2	11	15	20	53	7,13
Customer/Consumer	1	2	1	8	10	15	37	4,98
Supplier	0	1	1	3	4	10	19	2,56
Competitor	0	1	1	4	4	1	11	1,48
Producers	0	0	0	1	0	0	1	0,13
Distributor	1	0	0	0	0	0	1	0,13
Total - 2. Level	8	15	31	83	141	203	481	64,74
Investment Actors	4	6	13	32	35	53	143	19,25
Partnership and Alliances	4	5	8	24	25	37	103	13,86
Cluster	0	1	2	6	14	22	45	6,06
Science Collaborations/R&D	0	2	2	6	16	17	43	5,79
Community	0	2	2	5	12	22	43	5,79

Third party	1	1	2	6	7	10	27	3,63
Incubator	0	0	0	3	13	9	25	3,36
Stakeholders	0	0	1	1	8	8	18	2,42
Science/Business/Tech Parks	0	0	1	2	9	2	14	1,88
Total – Networks	2	3	7	24	50	77	163	21,94
Cross border	1	0	2	2	15	26	46	6,19
Inter-firm	0	2	2	11	9	10	34	4,58
Government/Political	1	1	1	3	9	18	33	4,44
Institutional	0	0	0	4	9	18	31	4,17
Spatial	0	0	0	2	4	2	8	1,08
Industry	0	0	0	0	5	2	7	0,94
Innovation/Knowledge	0	0	2	1	2	2	7	0,94
Business group/Business	0	0	0	2	2	2	6	0,81

Table 4: Network Actors

Having a closer look at the investment network actors, it can be observed that almost two thirds of the articles that deal with different forms of venture capitalists namely venture capitalist, venture capital firms, and specific forms of venture capitalists divided in corporate and institutional. Furthermore, as shown in Table 5 the results indicate that crowd funding is a new field in network related research within the field of entrepreneurship.

Network actor	1983-1989	1990-1994	1995-1999	2000-2004	2005-2009	2010-2014	Total	%
Investment Actors	4	6	13	32	35	53	143	19,25
Total - Venture Capitalist (VC)	3	5	7	24	30	23	92	12,38
(VCs)	(2)	(4)	(7)	(15)	(22)	(20)	(70)	(9,42)
(VC firms)	(1)	(1)	(0)	(7)	(3)	(3)	(15)	(2,02)
(Corporate VC)	(1)	(0)	(0)	(2)	(6)	(0)	(9)	(1,21)
(Institutional VC)	(0)	(0)	(0)	(1)	(0)	(0)	(1)	(0,13)
Investor/Equity Investor	2	3	2	3	8	16	34	4,58
Banks*	0	0	3	5	4	7	19	2,56
Business angel	0	0	0	3	2	8	13	1,75
FDI/Foreign investor	0	0	0	2	2	3	7	0,94
Government funding/loans	0	0	1	3	0	2	6	0,81
Seed capital (3F's)	0	0	2	2	0	0	4	0,54
Lenders (Loans/ Credit)	0	0	1	0	0	3	4	0,54
Microcredit	0	0	1	1	0	1	3	0,40
Sponsorship	0	0	0	1	0	2	3	0,40
Crowd funding	0	0	0	0	0	2	2	0,27

Table 5: Investment

Differentiating between different forms of entrepreneurship

Table 6 illustrates the evolution of particular forms of entrepreneurship within social network actors related topics. For the first and second time a specific form namely corporate entrepreneurship is discussed in 1985 and in 1993. In 1994 immigrant entrepreneurship is mentioned. In the following period (1995-1999) individual, international, academic/scientific and ethnic entrepreneurship found their way into network related topics. From 2000 to 2004 social entrepreneurship entered the field. In the next period (2005-2009) political, returnee, institutional, and community entrepreneurship are discussed for the first time in the context of social networks and its actors, but do not appear in the following period (2010-2014).

Kind of Entrepreneurship (E)	1983-1989	1990-1994	1995-2000	2000-2004	2005-2009	2010-2014	Total	% of sample
E in General*	9	33	35	106	153	204	540	72,68
Individual E	0	0	3	3	20	58	84	11,31
International E	0	0	4	1	15	28	48	6,46
Corporate E	1	1	2	3	8	17	32	4,31
Academic/Scientific E	0	0	2	3	8	10	23	3,10
Social E	0	0	0	4	4	9	17	2,29
Ethnic E	0	0	2	1	5	5	13	1,75
Immigrant E	0	1	1	1	1	4	8	1,08
Returnee E	0	0	0	0	2	0	2	0,27
Political E	0	0	0	0	2	0	2	0,27
Institutional E	0	0	0	0	1	0	1	0,13
Community E	0	0	0	0	1	0	1	0,13
Total	10	35	49	122	220	335		

*E in General is an exclusive category and coded only if no other form of entrepreneurship was applicable

Table 6: Articles elaborating on specific forms of entrepreneurship

In total 540 (72,68 %) of the articles are identified as dealing with entrepreneurship in general. In addition to entrepreneurship in general specific forms of entrepreneurship are identified. As shown in Table 6 84 (11.31 %) articles elaborate on individual entrepreneurship, whereby 12 articles are overlapping with specific types of entrepreneurship (four social; four international; two immigrant entrepreneurship; one academic/scientific; one ethnic). International entrepreneurship with 48 (6,46 %) articles is the second form of entrepreneurship that is discussed most often in context of network actors. An overlap in the special forms of entrepreneurship is observed in eleven articles with international entrepreneurship namely four times with corporate, four times with individual as mentioned before, two times with social and once with ethnic entrepreneurship. Due to the obvious importance of social networks and different network actors for international entrepreneurship this form has the highest number of articles in total. 32 (4,31 %) articles discuss corporate entrepreneurship, whereby 13 articles are overlapping with specific types of entrepreneurship (two with social entrepreneurship; seven with academic/scientific entrepreneurship; and four with international entrepreneurship as previously mentioned). Academic/scientific entrepreneurship is represented with 23 articles (3,1 %) and social entrepreneurship with 17 articles (2,29 %). The sample includes 13 articles dealing with ethnic entrepreneurship and 8 with immigrant entrepreneurship. Furthermore, two articles deal with political, two with returnee, one with institutional and one with community entrepreneurship. Following the

results three forms of entrepreneurship are most elaborated on namely individual, international and corporate entrepreneurship.

Contributing authors

To locate the contributors of the topic examined in the present article an analysis in two steps is performed. The appearance of authors in the sample is counted to locate the authors, who have published most often in this field. These authors are identified as contributors.

# articles	# authors	%
10	1	(0,08)
9	0	(0,00)
8	2	(0,15)
7	1	(0,08)
6	3	(0,23)
5	5	(0,38)
4	13	(0,99)
3	51	(3,88)
2	152	(11,55)
1	1088	(82,67)

Table 7: Number of articles

1316 authors wrote a total number of 743 articles. However, 82.67 % (1088) of the authors published only one article, 17.33 % of the authors published more than one article namely 11.55 % (152) of the authors appeared two times, 3,88 % (51) appeared three times as presented in Table 7. Only 1.91 % accounts for authors with more than four articles. Since many articles are written in co-authorship, the adjusted number is calculated. The adjusted number divides the article by the number of co-authors and accounts an equal part to every co-author. This can vary from the actual percentage of co-authorship in reality. Due to reasons of simplification the actual percentage cannot be taken into account in this calculation. The number of articles per author is shown in Table 8. Apart from the rising number of articles in this field a trend in co-authorship becomes visible. As calculated by the mean the number of authors per article is steadily rising starting with 1,6 in years 1983 till 1989 and going to 2,48 for the years 2010 till 2014. This result is in accordance with Acedo, Barroso, Casanueva and Galán (2006) who noticed a growth in co-authorship in the field of management. Following, a similar trend is visible for network related research in entrepreneurship.

# Authors	1983-1989	1990-1994	1995-1999	2000-2004	2005-2009	2010-2014	Total
1	5	14	16	35	45	42	157
2	4	15	27	59	96	119	320
3	1	4	3	19	52	119	198
4		2	2	6	14	27	51
5			1		6	5	12
6						1	1
Total	10	35	49	119	213	313	739
Mean	1,60	1,83	1,88	1,97	2,25	2,48	

Table 8: Number of articles per author

In total 78.75 % of the papers are published by more than one author. More in detail 157 articles (21.24 %) have a single authorship; 320 (43.30 %) articles are written by two authors; 198 (26.79 %) are written by three authors; 51 (6.90 %) have four authors leaving the remaining 1.76 % to publications with five and more authors. Anderson and Jack wrote five in co-authorship and three out of these five together with Dodd. DeClercq wrote two articles with Sapienza and one article in co-authorship with Wright. Following, a trend in co-authorship within the network of most influencing authors is identified. Furrer et. al (2008) point out that the number of publications by authors accumulates with the length of the time being a researcher. Consequently, the analysis does not identify newcomers, which could happen to have an influence on the research community within this field.

As stated above only 1.91 % accounts for authors with more than four articles. In more detail: thirteen authors (0.99 %) published four articles; five authors namely Collewaert, Kenney, Elfring, Presutti and Clarysse (0.38 %) appeared five times; three authors namely Dodd, Jack and Sapienza (0.23 %) published six articles; De Clercq (0.08 %) wrote seven papers; Anderson and Chrisman (0.15 %) respectively published eight articles; and Wright (0.08 %) published ten articles. Therefore, these authors can be seen as the main contributors of network related research within the field of entrepreneurship. An overview for the top contributors sorted by the total number of appearances is presented in Figure 2. Figure 3 illustrates the results by the adjusted number of appearances. The top three contributing authors remain on the top although Wright and Chrisman changed their places. However, the rest of the top contributors namely De Clerq, Dodd, jack and Sapienza had to give way to Hsu, Batjargal and Collewaert.

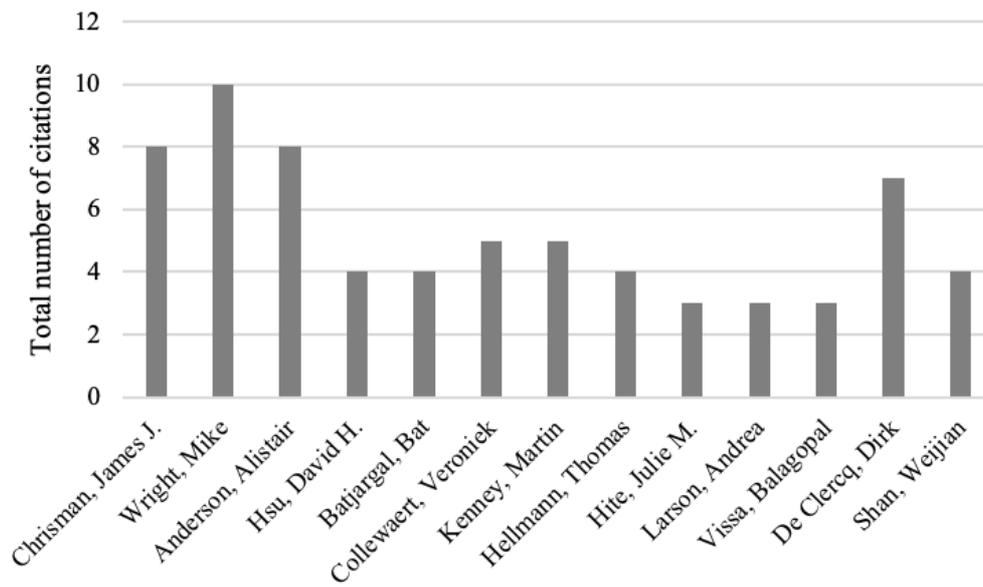


Figure 2: Contributors (sorted by total)

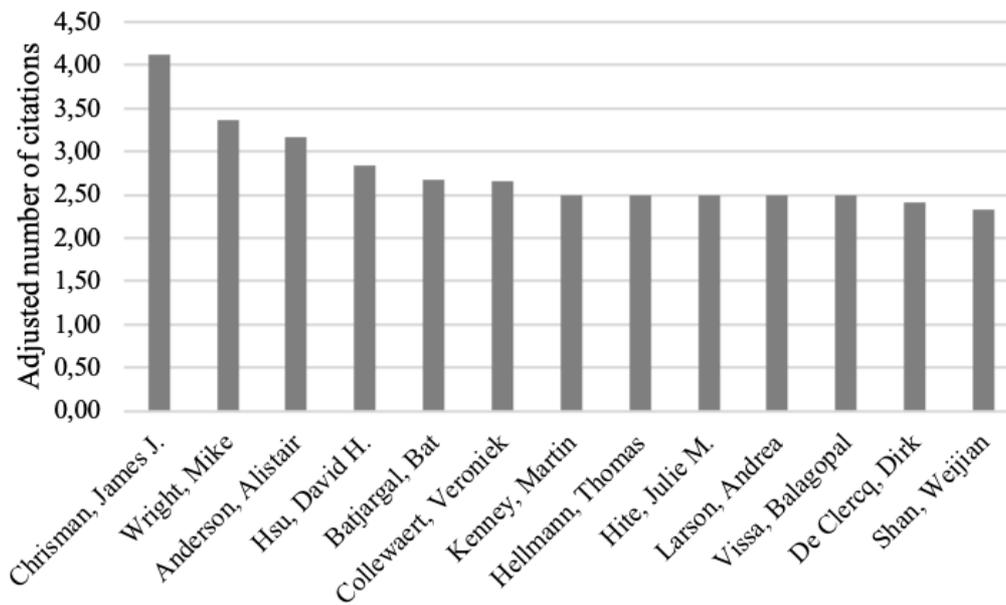


Figure 3: Contributors (sorted by adj.)

Influencing authors

In order to identify the most cited authors a bibliometric analysis is conducted. All citations of the sample are analyzed and counted. Subsequently, the citations of the most influential articles and authors are identified. The cited authors are acknowledged as influencers. The results of the analysis of the most influencing authors are presented in Table 9 for authors with 90 and more citing articles. In total 217 (29.21 %) articles of the sample cited Wright, what makes him the most influential author in this sub-field. Aldrich follows Wright with 158 (21.27 %) and Zahra with 138 (18.57 %) citing articles.

Author	# of articles	% of articles
Wright, M.	217	29,21
Aldrich, H.	158	21,27
Zahra, S.	138	18,57
Johannisson, B.	113	15,21
Audretsch, D.	105	14,13
Shepherd, D.	101	13,59
Sapienza, H.	99	13,32
Shane, S.	99	13,32
Hitt, M.	99	13,32
Autio, E.	95	12,79
Powell, W.	94	12,65
Burt, R.	93	12,52
Lerner, J.	93	12,52
Porter, M.	92	12,38

Table 9: Most cited authors

According to the results of the total appearance and total citations counts in the analysis of the top 30 of influencing and contributing authors Mike Wright is leading both lists by a contribution of ten articles and 230 citing articles. Furthermore four other authors appear on both lists, namely Sapienza H. with six contributing articles and 99 citing articles; Howard Aldrich with four articles and 158 citing articles; Erkkö Autio with four contributing articles and 95 citing articles; and Scott Shane with three articles and 99 citing articles. However, Wright and Sapienza are the only authors, who appear in the top lists namely in the main contributing authors with more than five articles within the sample and main influencers with 90 and more citing articles.

Most cited articles

Table 10 presents the 20 most cited articles by the sample according to the total number of citations. “Economic action and social structure: The problem of embeddedness” (18.02 % of the sample leaving out earlier published articles) followed by the article “The strength of weak ties” are the most cited articles (17.84 % of the sample), “Social structure and competition in interfirm networks: The paradox of embeddedness” (15.37 % of the sample) and the fourth article “Social capital, intellectual capital, and the organizational advantage” (14.76 % of the sample). As shown in Table 10 nine articles out of the top 20 total-ranked articles are in the core contributions-list developed by Landström, Harirchi and Alström (2012). The list includes 135 contributions essential for entrepreneurship research.

year	Article	# citations		rank		
		total	adj.	total	adj.	list
1985	Economic action and social structure: The problem of embeddedness	138	4,45	1	10	87
1973	The strength of weak ties	137	3,19	2	21	
1997	Social structure and competition in interfirm networks: The paradox of embeddedness	109	5,74	3	2	
1998	Social capital intellectual capital and the organizational advantage	102	5,67	4	3	
1965	Social Structure and Organizations	102	2,00	5	78	16
1990	Absorptive capacity: a new perspective on learning and innovation	88	3,38	6	19	35
2000	The promise of entrepreneurship as a field of research	86	5,38	7	5	2
1986	Entrepreneurship through social networks	81	2,70	8	38	
1985	The Role of Networks in the Entrepreneurial Process	78	2,52	9	46	58
1999	Interorganizational endorsements and the performance of entrepreneurial ventures	77	4,53	10	8	91
1991	Firm resources and sustained competitive advantage	74	2,96	11	31	56
2003	The role of social and human capital among nascent entrepreneurs	73	5,62	13	4	
1989	Building theory from case study research	73	2,70	12	37	
2001	The evolution of firm networks: from emergence to early growth of the firm	67	4,47	14	9	
2002	Social capital: Prospects for a new concept	66	4,71	15	6	
1996	Interorganizational Collaboration and the Locus of Innovation: Networks of Learning in Biotechnology	65	3,25	16	20	
1988	Social capital in the creation of human capital	65	2,32	17	68	
1996	The sources and consequences of embeddedness for the economic performance of organizations	62	3,10	18	22	
1992	Network dyads in entrepreneurial settings: A study of the governance of exchange processes	61	2,54	19	45	62

Table 10: Most cited articles

3.8. Key Applications

Researchers can especially use the results of this article in order to identify the most appropriate publishing strategy by focusing on particular journals. The present paper can be seen as a map of existing research and its trends in order to identify research gaps and better position future research. Young researchers can start their research by reading the most influential articles, follow the most influential authors and addressing the gaps identified in this study.

Different forms of entrepreneurship have different needs and rely on specific resources as well as a different kind of network actors to satisfy their needs. This is why researchers should be aware of different network structures for each form of entrepreneurship and should not rush to generalize. Consequently, network related research should stress the entrepreneurship typology under investigation, since the variety of type of entrepreneurship comes with different network actors and networks.

3.9. Future Directions

Research on network actors throughout the entrepreneurial process is missing an overview of the network actors as well as the different network actor constellations according to the process view as well as different entrepreneurship types.

Due to the importance of financial resources there is plenty of research on venture capitalists. However, research on network actors such as pre-employer, employees, producers, or distributors and networks such as business groups/business networks, innovation/knowledge networks, industry networks, and special networks in context of entrepreneurship is still underdeveloped.

In order to understand entrepreneurship in general it is essential to differentiate between the different types of entrepreneurship and their networks. As already concluded by Waldinger, Aldrich and Ward (2000) ethnic entrepreneurs differ from mainstream entrepreneurs in the context of resources they need and opportunities they face. This is not only true for ethnic entrepreneurship. A further detailed analysis could provide more insights and compare different entrepreneurship types and their networks in order to find similarities or differences. Other forms of entrepreneurship such as female, rural, sustainable, family, and lifestyle are not represented at all. This is due to the newness of research on different forms of entrepreneurship. However, these forms of entrepreneurship could gain more attention in future research.

3.10. Supplementary Information

Cross References

Entrepreneurial Networks by Chiesi, A.

Innovator Networks by Tomasello, M., Müller, M., Schweitzer, F.

International Hyperlink Networks by Chung, C., Barnett, G., Park, H.

Inter-organizational Networks by Raab, J.

Intra-Organizational Networks by Wittek, R.

R&D Networks by Kratzer, J.

Spatial Networks by Barthelemy, M.

Supply Chain Networks by van Donk, D.

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3.12. Appendix

Appendix 1 – Study Design

Keywords	<ul style="list-style-type: none">• Self-generated keywords• EBSCO thesaurus
Data set	<ul style="list-style-type: none">• EBSCO search results• Peer Reviewed; English; till 31.12.2014; academic journals
Selection Criteria	<ul style="list-style-type: none">• Impact Factor of 1,600
Unit of Analysis	<ul style="list-style-type: none">• Titles• Abstracts
Keyword Allocation	<ul style="list-style-type: none">• 43 Categories including 1 for not relevant• 10 Entrepreneurship; 32 Networks; 11 Investors
Number of Researchers	<ul style="list-style-type: none">• 2 Researchers
Reliability	<ul style="list-style-type: none">• Index by Perreault and Leigh's (1989)
Citation Analysis	<ul style="list-style-type: none">• Count of citations

4. ARTICLE 2: What Type of Entrepreneurship Do You Mean? It Comes in Different Shapes and Sizes!

Author: Karina Cagarman

(in preparation for publication)

4.1. Abstract

The number of articles in the field of entrepreneurship is growing. Consequently, new constructs and classifications are introduced into the research field. Researchers differentiate between different classifications of entrepreneurship by using attributes. The motivation of the present study is to show the recent trends in entrepreneurship research and overall development in the use of language in terms of attributes to differentiate between different kinds of entrepreneurship. In order to do that, we use a combination of coding and bibliometric methods to find out the classifications, their development in terms of time, journals, authors, and countries. We identify 16 forms of entrepreneurship namely corporate, small, political, policy, institutional, tech, immigrant, local, academic, international, women, ethnic, social, individual, private and nascent. We present the leading journals, authors, countries and most cited articles of each form.

Keywords:

entrepreneurship; classification; bibliometric methodology; entrepreneurship trend; keyword analysis; terminology; taxonomy; typology

4.2. Introduction

Starting with Smith in 1967 who defined the first entrepreneurship typologies more and more researchers have tried to classify entrepreneurship. The field of entrepreneurship is wide, and has been emerging for a while (Busenitz, West, Shepherd, Nelson, Chandler and Zacharakis, 2003). Scholars notice an upward trend in the number of published articles, as confirmed by the essay of Ireland, Reutzel and Webb (2005) in the *Academy of Management Journal*. More recent studies see the presence of entrepreneurship articles in leading management journals as further evidence that entrepreneurship is coming closer to its legitimacy as an academic field (Busenitz, Plummer, Klotz, Shahzad, Rhoads, 2014). In order to classify a research field researchers use language to construct and analyze a field more in depth. To differentiate various constructs in entrepreneurship researchers use attributes such as *social* entrepreneurship, *political* entrepreneurship or other forms of entrepreneurship.

The present paper aims at reflecting on the research field of entrepreneurship with a trend analysis of different classifications. The identification of entrepreneurship forms is useful for a number of reasons: first, to allow for trend analysis; second, to enable classification; and finally, to create proper selection criteria in terms of sample description. VanderWerf and Brush (1989) highlighted the importance of proper formalization of criteria for sample selection. In addition to that, researchers use classifications for definition purposes. The motivation of the present study is to show the recent trends in entrepreneurship research and overall development in the use of language to differentiate between different forms of entrepreneurship. The present article answers the following research questions:

- (1) What forms of entrepreneurship do researchers mostly focus on?
- (2) What is the development of these forms in terms of time, journals, authors, and countries?
- (3) Is there a focus on particular entrepreneurship classifications by journals publishing articles about entrepreneurship?

The present study offers various contributions. First, the paper identifies classifications used by researchers. Second, we quantify the number of articles using classifications of entrepreneurship and present the interest in the particular classifications over time. Third, we show focuses of journals and authors in terms of entrepreneurship classifications.

The article is structured as follows. First, we present the current state of the literature on entrepreneurship classification. Second, we describe the methodologies applied in the study. Third, we lay out the results of the analysis. Fourth, we identify trends of terminologies in entrepreneurship publications. Subsequently, we discuss the findings, present a conclusion of the findings and line out future directions and practical implications.

4.3. Development of Classifications in Entrepreneurship: An Overview

Classifications can be found in many different disciplines and the need for classifications can be seen in eight advantages as summarized by Bailey (1994) namely (1) description, (2) reduction of complexity, (3) identification of differences and similarities, (4) comparison and criteria for measurements, (5) presenting an exhaustive list of dimensions, (6) versatility, (7) inventory and (8) study of relationships. Consequently, the advantages of classification systems can be useful across disciplines.

The present paper works with classifications established through the language use of researchers by addressing specific concepts. Classifications have the characteristic to be either unidimensional or multidimensional (Bailey, 1994). Typologies are specific cases of classification (Bailey, 1994).

Typologies are characterized by being conceptual and descriptive, they help in comparing on a systematic basis but are not necessarily grounded in empirical reality. As a result, typologies are neither exclusive nor mutually exhaustive. According to Filion (2000), typologies are extensively used in humanities and administrative sciences. In contrast to that, taxonomies are based on empirical observable and measurable characteristics of classes.

Figure 1 summarizes and points out the differences between classifications, typologies and taxonomies. Even accounting for the differences, overlaps are possible. The article does not distinguish between typologies such as social or sustainable entrepreneurship based on concepts or taxonomies such as female or male based on empirical entities. Consequently, we consider all classifications.

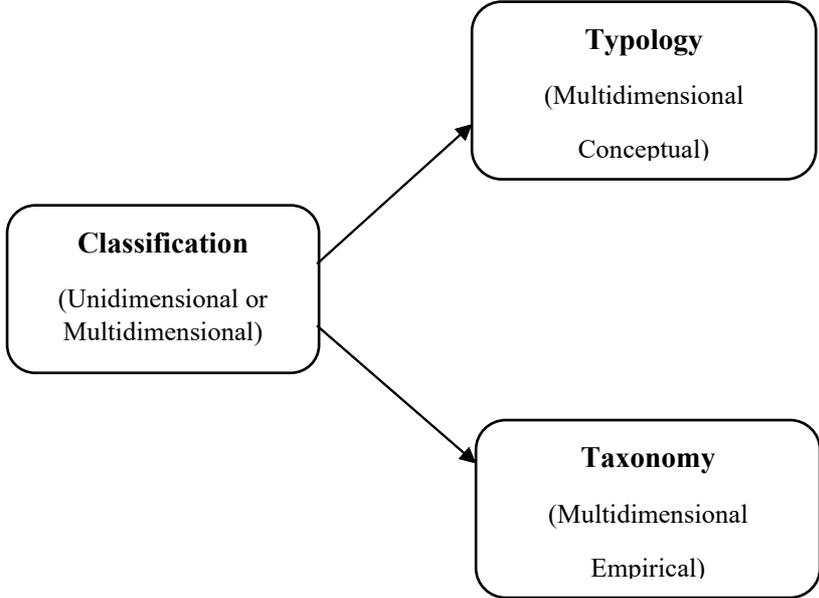


Figure 1: Concepts and their characteristics

It is without question that there are differences in entrepreneurship. The differences are rooted in the type of the entrepreneur as a person, in the type of venture described by size and growth, environment, resources, organizational context or concept with its different types of innovation or business models (Kuratko, Morris and Schindehutte, 2001; Kuratko, Morris and Schindehutte, 2015). In fact, as Woo, Dunkelburg and Cooper (1988, p. 165) recognized “Entrepreneurs are not homogeneous. They come from diverse backgrounds, exhibit different management styles, and are motivated by different factors.” Filion (1998, 2000) for example summarized the characteristics associated with entrepreneurs by behavioral researchers and argued that entrepreneurs represent the characteristics of the time and place they live in.

The desire for classification in entrepreneurship started as early as 1967 when Smith differentiated between the craftsman and the opportunist. Next classification attempts followed with the article by

Collins and Moore (1970) and their classification in administrative and independent entrepreneur. Webster differentiated in 1977 between the venture typology and typology of entrepreneurs and used both frameworks to describe either entrepreneur or venture. Furthermore, Webster (1977) differentiates the venture based on the time horizon between pre-venture, jelling the deal, in production, in market and pay-off. Wortman (1987) developed a unified framework for research typology on entrepreneurship. This framework distinguishes between corporate and individual entrepreneurship. Apart from the macro-environment, which divides entrepreneurship into national, and international Wortman makes a difference on the organizational level dividing into business, government, nonprofit and international entrepreneurship. Welsch (2010) listed as many as 12 different families of entrepreneurship calling them “tribes”, namely woman, family, social, technology, serial, lifestyle, corporate, franchise, immigrant, creative, ambitious and intellectual.

Some studies that reflect upon the trends in entrepreneurship as a research field, in general, describe subfields of entrepreneurship that could be organized into typologies or taxonomies. Cornelius, Landström and Persson (2006), for example, analyzed the research front of entrepreneurship and found beside other subfields two forms of entrepreneurship that are mentioned as subfields, namely ethnic and corporate entrepreneurship. The authors noticed a continuous interest in ethnic entrepreneurship throughout the periods of 1986-1990, 1993-1997 and 2000-2004. Apart from that, corporate entrepreneurship slowly found its way into the research field in the periods of 1993-1997 and 2000-2004. In addition to that, Schild, Zahra and Sillanpaa (2006) identified highly cited groups of entrepreneurship research whereby two groups deal with corporate entrepreneurship. According to Blackburn and Kovalainen (2009) the sub-field of emigrant and ethnic minority research in entrepreneurship is enduring, since it is long-standing, but still not matured to the richness of topics. The same holds true for women as entrepreneurs. Consequently, with the maturation of a research field classifications can become a subfield by focusing on a specific typology.

Inspired by the list of tribes by Welsch (2010) and the curiosity about the trends in entrepreneurship typologies within our society, this paper aims to analyze the use of language in the context of entrepreneurship classifications. Consequently, we identify important classifications as judged by the research community. Furthermore, we perform the first inventory with the objective of bringing the classifications of entrepreneurship currently used together in order to reflect on the research field and initiate a discussion in the scientific community. For this purposes we use a bibliometric analysis, as described in the next chapter.

4.4. Methodology

In order to identify concepts describing specific forms of entrepreneurship the present study analyses the language use of researchers in academic articles written in English. In the assessment of academic language, we give special attention to attributes, which academics use to describe a specific kind of entrepreneur or entrepreneurship and to classify different forms. Finally, we identify and analyze these attributes.

First, a general search in the database Web of Science using entrepreneur* in the titles and topic is conducted. Web of Science is a well-respected scientific database with journals included in the social science citation index (SSCI). The search is limited to a single document type namely articles. As timespan, we selected the whole database from 1945 until the end of 2016. We chose English as the language for the analysis due to its importance for the scientific community and its activity. We did not consider other languages since a terminology analysis has to be carried out in a single language and analyze the original text (Cabr  1998). The analysis is not restricted to a special period since it intends to analyze the evolution of the terminology in the entire field. Consequently, the entire field has to be covered (Cabr  1998). Performed on 19th of January 2017, this search resulted in a total number of 18,662 articles in the database SSCI and 2,994 articles in the database Science Citation Index (SCI). The study does not differentiate between the quality of the journals. However, all journals that are included in the SSCI or in the SCI cover the world's leading academic journals. In total, a sum of 21,888 articles is found including entrepreneur* in the title or topic.

Content Analysis

In order to identify the language used by researchers, we analyze the attributes of all articles. To gather all the attributes used by researchers an analysis of the words coming before and after entrepreneur* is conducted. Three words before entrepreneur* and three words after the word entrepreneur* are analyzed by two researchers. The number of three words resulted from the first qualitative analysis where some papers were identified using two forms together such as "social" and "female" entrepreneurship. To ensure that these forms are not excluded, three words before were analyzed. We coded all the words as either relevant or not relevant. Consequently, we selected the keywords relevant for classifications for further analysis. In the next step, we formed clusters for synonyms (such as female and woman entrepreneurship) and keywords with the same root word (for example tech, technology, and technological entrepreneurship). In this step, we developed a final list of entrepreneurship classifications.

Bibliometric Analysis

Bibliometric methods are based on keyword analysis. Researchers apply such analysis to identify the intellectual structure of an academic field as well as to visualize scientific activity. Publication activity allows systematic and quantitative consideration of articles published in the field of entrepreneurship such as the activity of journals, authors, institutions or countries. As a result, the most representative journals for each attribute can be identified. Moreover, the priority of themes described by the attributes counted by the number of published articles over time not only presents the evolution of the field but also the evolution of the directions authors, reviewers, and journal editors are taking (Callon, Law, Rip, 1986).

It is not the aim of this study to develop a new classification system. The methodology of building classification systems is thus not applied. Instead, it is the intention to analyze and structure the use of language in the context of different *existing* entrepreneurship classifications by analyzing the attributes of entrepreneurship used. The following chapter presents the analysis and results of the attribute usage.

4.5. Analysis and Results

The number of articles on entrepreneurship in total is rising and as a result, researchers introduce new forms into the scientific community. The first article on the web of knowledge mentioning *entrepreneur** dates from 1956, the first form of entrepreneurship namely *local* is introduced three years later namely in 1959, followed by *corporate* entrepreneurship in 1969. Figure 2 presents the growth of the number of articles dealing with a specific form in comparison to the growth of all articles on entrepreneurship. Starting in 1992, the number of articles using attributes grew was higher than 12% of the total number of published articles on entrepreneurship. In 2011 and 2012, the percentage grew to over 20%. In 2013, it falls under 20% with 19% and grows in 2014 to 25%. Finally, in 2016 over 34% of the total number of articles published on entrepreneurship mention a specific form of entrepreneurship only counting the 16 most used forms analyzed in the present article. We identified these 16 forms based on the content analysis selected due to the number of their appearance within more than 100 articles. The 16 selected forms for further analysis are (1) academic, (2) corporate, (3) ethnic, (4) immigrant, (5) individual, (6) institutional, (7) international, (8) local, (9) nascent, (10) policy, (11) political, (12) private, (13) small, (14) social, (15) tech and (16) women (female). Consequently, this analysis reduced the number of articles from 21,888 to 4,269 articles. Exactly 247 of them elaborate on more than one form.

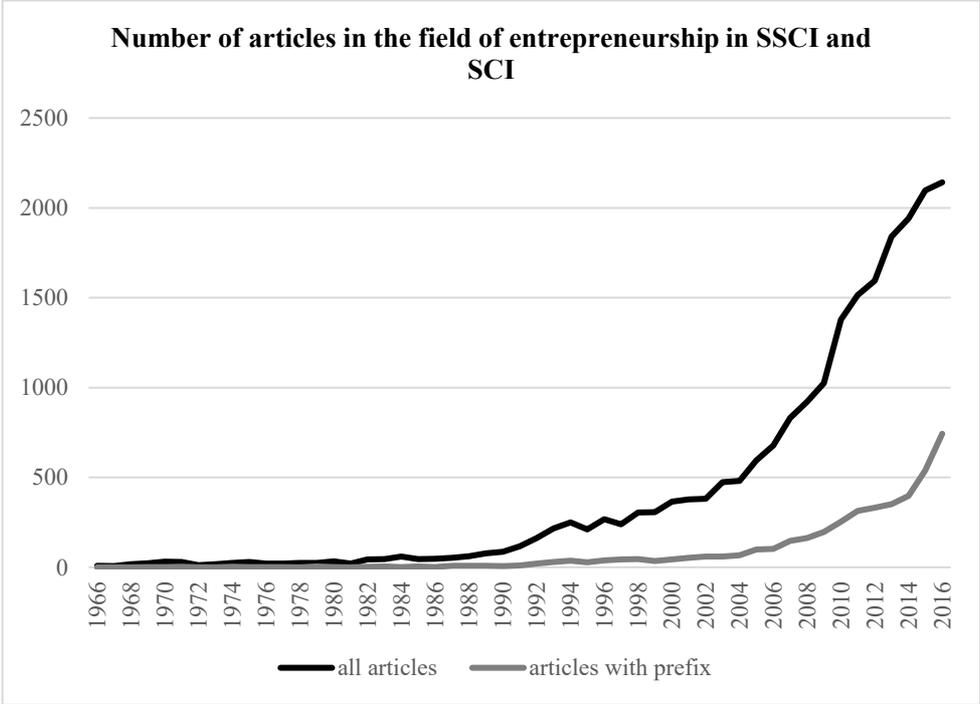


Figure 2: Number of articles in the field of entrepreneurship

Table 1 presents the absolute and relative distribution of articles between the entrepreneurship forms and the corresponding periods of the publication. Corporate entrepreneurship, which was introduced in 1969 into the academic literature, has the highest number of academic articles namely 627 followed by social entrepreneurship with 550 articles in total. When looking at the relative numbers one can see that the number of publications is rising on social, institutional, academic and international entrepreneurship.

Absolute	Academic	Corporate	Ethnic	Immigrant	Individual	Institutional	International	Local	Nascent	Policy	Political	Private	Small	Social	Tech	Women	Total
1959-1971	0	1	0	0	0	0	0	1	0	0	2	0	2	0	0	0	6
1972-1976	0	1	0	0	0	0	0	0	0	0	1	0	3	0	0	1	6
1977-1981	0	2	0	0	0	1	0	0	0	1	0	0	2	0	0	0	6
1982-1986	0	3	0	2	0	0	0	1	0	0	3	0	3	0	3	2	17
1987-1991	3	5	1	7	0	0	2	0	0	6	0	0	3	1	6	7	41
1992-1996	0	20	5	8	11	1	4	11	1	20	8	24	20	3	5	11	152
1997-2001	3	33	19	12	12	5	7	10	2	25	20	14	21	5	12	25	225
2002-2006	19	57	17	22	12	22	29	24	30	30	25	21	27	22	17	24	398
2007-2011	67	177	43	40	38	123	80	45	73	93	43	42	37	106	32	94	1133
2012-2016	173	328	68	79	74	269	178	92	233	169	61	64	57	413	54	229	2541
Total	265	627	153	170	147	421	300	184	339	344	163	165	175	550	129	393	

Relative	Academic	Corporate	Ethnic	Immigrant	Individual	Institutional	International	Local	Nascent	Policy	Political	Private	Small	Social	Tech	Women	Total
1959-1971	0	17	0	0	0	0	0	17	0	0	33	0	33	0	0	0	100
1972-1976	0	17	0	0	0	0	0	0	0	0	17	0	50	0	0	17	100
1977-1981	0	33	0	0	0	17	0	0	0	17	0	0	33	0	0	0	100
1982-1986	0	18	0	12	0	0	0	6	0	0	18	0	18	0	18	12	100
1987-1991	7	12	2	17	0	0	5	0	0	15	0	0	7	2	15	17	100
1992-1996	0	13	3	5	7	1	3	7	1	13	5	16	13	2	3	7	100
1997-2001	1	15	8	5	5	2	3	4	1	11	9	6	9	2	5	11	100
2002-2006	5	14	4	6	3	6	7	6	8	8	6	5	7	6	4	6	100
2007-2011	6	16	4	4	3	11	7	4	6	8	4	4	3	9	3	8	100
2012-2016	7	13	3	3	3	11	7	4	9	7	2	3	2	16	2	9	100

Table 1: Absolute and relative trends in entrepreneurship research regarding the 16 classifications

The top six journals according to the total number of publications on one of the 16 analyzed forms of entrepreneurship are all focusing on entrepreneurship and small businesses as presented in table 2.

Journal of Business Venturing published the highest number of articles namely 158 followed by *Small Business Economics* with 146 articles and *Entrepreneurship: Theory and Practice* with 106 articles all covering 13 forms. *Entrepreneurship And Regional Development* (97) as well as *International Small Business Journal* (77) cover 14 forms in total and are the journals with the widest variety of entrepreneurship forms. The average number of authors per form is varying between 1.48 (political entrepreneurship) and 2.60 (corporate entrepreneurship) as shown in table 3. 13 % of the articles, namely 559, were published in special issues.

Journal	Total number of publications
Journal of Business Venturing	158
Small Business Economics	146
Entrepreneurship Theory and Practice	106
Entrepreneurship and Regional Development	97
Journal of Small Business Management	83
International Entrepreneurship and Management Journal	77
Research Policy	65
International Small Business Journal	63
Journal of Business Research	63
Journal of Business Ethics	62
International Business Review	55

Table 2: Journals with the highest number of publications

Number of Authors	Academic	Corporate	Ethnic	Immigrant	Individual	Institutional	International	Local
1	56	97	62	76	46	96	50	66
2	81	196	52	56	51	167	111	73
3	73	219	30	30	30	120	97	32
4	39	98	7	7	14	24	35	5
5	9	16	1	1	5	11	5	5
6	3	0	0	0	1	1	2	1
7	2	0	0	0	0	2	0	0
8	2	0	0	0	0	0	0	2
9	0	0	0	0	0	0	0	0
10	0	1	0	0	0	1	0	0
Total	265	627	152	170	147	422	300	184
Mean	2,59	2,60	1,90	1,83	2,21	2,30	2,47	2,04

Number of Authors	Nascent	Policy	Political	Private	Small	Social	Tech	Women
1	42	167	100	87	67	138	38	102
2	128	104	53	38	51	186	46	149
3	113	38	7	30	32	152	31	94
4	46	15	2	6	15	44	14	35
5	6	5	0	2	6	21	0	12
6	0	5	0	0	3	4	0	1
7	2	8	1	0	0	0	0	0
8	1	0	0	1	0	1	0	0
9	0	2	0	0	0	0	0	0
10	1	1	0	1	1	4	0	0
Total	339	345	163	165	175	550	129	393
Mean	2,60	1,99	1,48	1,85	2,19	2,40	2,16	2,26

Table 3: Number of Authors per Article

Table 4 presents the publishing productivity by country. The USA is the leading country on all entrepreneurship forms with an average share of 29%. England is following with 11% on an average and second in 11 out of 16 forms. Canada has an average of 6% and Netherlands, Spain, and Germany 5%. Noticeable is that Italy is second on tech entrepreneurship, Spain is second on corporate entrepreneurship, Germany on nascent entrepreneurship, Canada on immigrant entrepreneurship and China on private entrepreneurship as shown in table 5. The bias in terms of the leading countries is due to the fact that only articles published in English were selected. Consequently, all countries with English as a first language are leading the rankings by neglecting publications in other languages.

Country	Total	%
USA	1652	28
England	626	10
Canada	339	6
Germany	283	4
Spain	274	4
Netherlands	266	5
Australia	245	4
Sweden	190	3
China	189	3
Italy	184	4
India	174	2
France	160	3
Finland	113	2

Table 4: Number of articles per country

Country	Academic		Corporate		Ethnic		Immigrant		Individual		Institutional		International		Local	
	Total	%	Total	%	Total	%	Total	%	Total	%	Total	%	Total	%	Total	%
USA	86	21	259	29	58	33	64	35	115	32	124	22	96	20	45	21
England	51	12	59	7	28	16	6	3	26	7	91	16	48	10	28	13
Canada	10	2	30	3	10	6	18	10	25	7	60	11	28	6	9	4
Germany	32	8	39	4	4	2	3	2	11	3	18	3	20	4	6	3
Spain	21	5	63	7	7	4	8	4	15	4	18	3	32	7	5	2
Netherlands	17	4	23	3	17	10	13	7	22	6	43	8	14	3	8	4
Australia	4	1	25	3	8	5	10	5	18	5	25	4	25	5	13	6
Sweden	18	4	34	4	2	1	7	4	14	4	26	5	16	3	9	4
China	6	1	48	5	4	2	4	2	8	2	15	3	18	4	11	5
Italy	32	8	20	2	6	3	10	5	12	3	7	1	13	3	9	4
India	7	2	38	4	1	1	1	1	5	1	5	1	19	4	5	2
France	17	4	24	3	1	1	3	2	8	2	25	4	3	1	5	2
Finland	4	1	18	2	0	0	1	1	6	2	16	3	25	5	3	1

Country	Nascent		Policy		Political		Private		Small		Social		Tech		Women	
	Total	%	Total	%	Total	%	Total	%	Total	%	Total	%	Total	%	Total	%
USA	146	27	113	28	63	37	45	26	43	23	214	30	49	32	132	27
England	40	7	55	14	18	11	12	7	18	10	81	11	14	9	51	11
Canada	13	2	28	7	7	4	5	3	11	6	45	6	8	5	32	7
Germany	69	13	15	4	10	6	4	2	6	3	23	3	7	5	16	3
Spain	38	7	3	1	2	1	1	1	1	1	28	4	3	2	29	6
Netherlands	25	5	21	5	3	2	5	3	13	7	26	4	3	2	13	3
Australia	18	3	30	8	7	4	7	4	0	0	39	5	3	2	13	3
Sweden	15	3	13	3	5	3	6	4	6	3	8	1	1	1	10	2
China	10	2	10	3	0	0	24	14	4	2	15	2	5	3	7	1
Italy	7	1	8	2	7	4	2	1	4	2	15	2	21	14	11	2
India	15	3	8	2	1	1	4	2	11	6	29	4	3	2	22	5
France	15	3	7	2	10	6	1	1	1	1	23	3	9	6	8	2
Finland	9	2	2	1	0	0	3	2	4	2	11	2	1	1	10	2

Table 5: Number of articles per classification per country

Table 6 presents the most cited articles in total within the sample. “The role of social and human capital among nascent entrepreneurs” by Davidsson and Honig (2003) has the highest number of citations namely 906, almost one third of the citations namely 290 come from the sample itself as shown in table 7. Second is an article on corporate entrepreneurship “Entrepreneurship in the large corporation: A longitudinal study of how established firms create breakthrough inventions.” written by Ahuja and Lampert (2001) has 598 citations. It is to mention that the article by Maguire, Hardy, and Lawrence (2004) has 484 citations with 42% coming from the sample itself and the articles by Zahra and Covin

(1995) and by Mair and Marti (2006) with 48% citations by the sample. However, the most cited articles by the sample are more general without focusing on a specific entrepreneurship form. The top three most cited articles were published in journals not focusing on entrepreneurship or small business. Two articles were published in *Academy of Management Review* and one in *Strategic Management Journal*.

Type	Times cited	Article
Nascent	906	Davidsson, P. & Honig, B. (2003). The role of social and human capital among nascent entrepreneurs.
Corporate	598	Ahuja, G. & Lampert, C.M. (2001). Entrepreneurship in the large corporation: A longitudinal study of how established firms create breakthrough inventions.
International	540	Knight, G.A. & Cavusgil, S.T. (2004). Innovation, organizational capabilities, and the born-global firm.
Institutional	484	Maguire, S., Hardy, C. & Lawrence, T.B. (2004). Institutional entrepreneurship in emerging fields: HIV/AIDS treatment advocacy in Canada.
Corporate	464	Zahra, S.A. & Covin, J.G. (1995). Contextual influences on the corporate entrepreneurship performance relationship - a longitudinal analysis.
Corporate	451	Wiklund, J. & Shepherd, D. (2005). Entrepreneurial orientation and small business performance: a configurational approach.
Social	450	Mair, J. & Marti, I. (2006). Social entrepreneurship research: A source of explanation, prediction, and delight.
Corporate/Social	444	Austin, J., Stevenson, H. & Wei-Skillern, J. (2006). Social and commercial entrepreneurship: Same, different, or both?
Individual	430	Alvarez, S.A. & Busenitz, L.W. (2001). The entrepreneurship of resource-based theory.
International	402	McDougall, P.P. & Oviatt, B.M. (2000). International entrepreneurship: The intersection of two research paths.

Table 6: Most cited articles within the sample

Times cited	Article
453	Shane, S. & Venkataraman, S. (2000). A promise of entrepreneurship as a field of research. <i>Academy of Management Review</i> .
399	Lumpkin, G.T. & Dess, G.G. (1996). Clarifying the Entrepreneurial Orientation Construct and Linking It to Performance. <i>Academy of Management Review</i>
293	Covin, J.G. & Slevin, D.P. (1989). Strategic management of small firms in hostile and benign environments. <i>Strategic Manage Journal</i> .
290	Davidsson P. & Honig, B. (2003). The role of social and human capital among nascent entrepreneurs. <i>Journal of Business Venturing</i> .
289	Miller, D., (1983). The Correlates of Entrepreneurship in Three Types of Firms. <i>Management Science</i> .
263	Dimaggio, P.J. & powell, W.W. (1983). The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields. <i>American Sociological Review</i> .
248	Schumpeter, J. (1934). <i>The Theory of Economic Development</i> .
241	Eisenhardt, K.M. (1989). Building Theories from Case Study Research. <i>Academy of Management Review</i> .
241	Barney, J. (1991). Firm Resources and Sustained Competitive Advantage. <i>Journal of Management</i> .
224	Covin, J.G. & Slevin, D.P. (1991). A conceptual Model of Entrepreneurship as Firm Behavior. <i>Entrepreneurship: Theory and Practice</i> .
223	Zahra, S. & Covin, J.G. (1995). Contextual influences on the corporate entrepreneurship performance relationship: a longitudinal analysis. <i>Journal of Business Venturing</i> .
219	Mair, J. & Marti, I. (2006). Social entrepreneurship research: A source of explanation, prediction, and delight. <i>Journal of World Business</i> .
209	Shane, S. (2000). Prior knowledge and the discovery of entrepreneurial opportunities. <i>Organization science</i> .
206	Maguire, S., Hardy, C. & Lawrence, T.B. (2004). Institutional Entrepreneurship in Emerging Fields: HIV/AIDS Treatment Advocacy in Canada. <i>Academy of Management Journal</i> .
202	Podsakoff, P.M., MacKenzie, S.B., Lee, J.-Y.Y & Podsakoff, N.P. (2003). Common Method Biases in Behavioral Research: A Critical Review of the Literature and Recommended Remedies. <i>Journal of Applied Psychology</i> .

Table 7: Most cited articles by the sample

Table 8 presents the co-occurrence of the entrepreneurship forms showing that both international and corporate entrepreneurship appear in more than half of articles that mention more than one form namely in 29 articles. Social and institutional are mentioned in 21 articles together. Women entrepreneurship and nascent entrepreneurship appear in 23 articles together.

	academic	corporate	ethnic	immigrant	individual	institutional	international	local	nascent	policy	political	private	small	social	tech	women
academic	19															
corporate	2	55														
ethnic	0	0	46													
immigrant	0	0	36	45												
individual	1	5	0	1	23											
institutional	0	1	0	0	4	35										
international	0	29	5	2	1	1	52									
local	0	0	0	0	0	0	1	11								
nascent	9	11	0	1	5	1	5	3	59							
policy	0	0	0	0	1	4	0	1	0	14						
political	0	0	1	0	0	2	0	0	0	6	10					
private	1	0	0	0	1	0	0	1	0	0	0	5				
small	0	2	0	2	1	1	1	1	0	0	0	0	12			
social	2	7	0	0	1	21	8	2	5	3	0	1	2	51		
tech	4	1	0	0	2	1	0	1	1	0	1	1	1	1	17	
women	3	1	5	5	3	0	2	1	23	0	0	0	3	5	4	51

Table 8: Co-occurrence Matrix

In the following, we present the profiles of the identified entrepreneurship forms according to their occurrence from the oldest to the newest form.

Local Entrepreneurship Profile

Local entrepreneurship was mentioned for the first time in 1959 and was picked up again in 1992. This form has a total number of 184 articles wherefrom 137 articles were published in the last decade, not exceeding more than 28 publications per year (figure 3). This entrepreneurship form is represented seven times in the journal *Entrepreneurship and Regional Development* and six times in *Regional Studies*, making these journals the leading journals on this topic by the number of published articles (table 9). However, the top five articles by the count of citations are not published in the above-mentioned journals (table 11). The top two articles are published in *Marine Policy* with 114 and 91 citations and the third one in *Review of Economics and Statistics* with 82 citations. As a result, the article “European policies in West Africa: who benefits from fisheries agreements?” by Kaczynski and Fluharty (2002) is the article with the highest influence on local entrepreneurship. In terms of authors Huggins, Sleutjes, Schutjes, Thompson and Brown published three articles each (table 10). Although, local entrepreneurship is the oldest form it is growing very slowly and is widely distributed when looking at the authors and journals active on this topic.

Journal	# of articles	% from total
Entrepreneurship and Regional Development	7	3,80
Regional Studies	6	3,261

Table 9: Top Journals

# of articles	Author
3	Huggins, R
3	Sleutjes, B
3	Schutjes, V
3	Thompson, P
3	Brown, R

Table 10: Top Authors

Times cited	Publication year	Titel (Author)	Journal
114	2002	European policies in West Africa: who benefits from fisheries agreements? (Kaczynski, V.M. & Fluharty, D.L.)	Marine Policy
91	2007	Step zero for fisheries co-management: What precedes implementation (Chuenpagdee, R. & Jentoft, S.)	Marine Policy
82	2007	Why so many local entrepreneurs? (Michelacci, C. & Silva, O.)	Review Of Economics And Statistics
62	2006	Entrepreneurship in the region: Breeding ground for nascent entrepreneurs? (Mueller, P.)	Small Business Economics
59	2009	Multinational firms, fdi flows, and imperfect capital markets (Antras, P., Desai, M.A. & Foley, C.F.)	Quarterly Journal Of Economics

Table 11: Top Articles



Figure 3: Number of articles "local"

Corporate Entrepreneurship Profile

Corporate entrepreneurship has the highest number of publications with 627 articles in total. The first article on corporate entrepreneurship was published in 1969. However, almost 20 years later, in 1988, the field started to grow continuously (figure 4). In the last decade 505 articles were published on this entrepreneurship form. The top two journals publishing the highest number of articles on corporate entrepreneurship are *Journal of Business Venturing* with 46 articles and *Entrepreneurship: Theory and Practice* with 35 publications on the topic (table 12). However, the most influential article on corporate entrepreneurship was published in *Strategic Management Journal* and has 598 citations, followed by two articles published in the *Journal of Business Venturing* with 464 and 451 citations (table 14). Only one article from the top five was published in *Entrepreneurship: Theory and Practice* and has 444 citations. According to the high number of citations “Entrepreneurship in the large corporation: A longitudinal study of how established firms create breakthrough inventions” by Ahuja and Lumpert (2001) has a high influence on the field of corporate entrepreneurship. Zahra is the leading author on corporate entrepreneurship with 22 publications in total followed by Kuratko with 20 articles (table 13). Corporate entrepreneurship has grown its importance within the field of entrepreneurship, which can be seen in the most cited articles where three out of five focus on entrepreneurship itself.

Journal	# of articles	% from total
Journal of Business Venturing	46	7,34
Entrepreneurship Theory and Practice	35	5,58
Journal of Business Research	24	3,83
Small Business Economics	24	3,83

Table 12: Top Journals

# of articles	Author
22	Zahra, SA
20	Kuratko, DF
18	Covin, JG
13	Hornsby, JS
9	Simsek, Z

Table 13: Top Authors

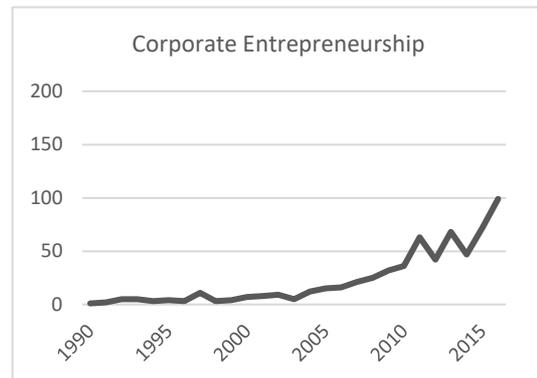


Figure 4: Number of articles “corporate”

Times cited	Publication year	Titel (Author)	Journal
598	2001	Entrepreneurship in the large corporation: A longitudinal study of how established firms create breakthrough inventions (Ahuja, G. & Lampert, C.M.)	Strategic Management Journal
464	1995	Contextual influences on the corporate entrepreneurship performance relationship - a longitudinal analysis (Zahra, S.A. & Covin, J.G.)	Journal Of Business Venturing
451	2005	Entrepreneurial orientation and small business performance: a configurational approach (Wiklund, J. & Shepherd, D.)	Journal Of Business Venturing
444	2006	Social and commercial entrepreneurship: Same, different, or both? (Austin, J., Stevenson, H. & Wei-Skillern, J.)	Entrepreneurship Theory And Practice
335	1996	Governance, ownership, and corporate entrepreneurship: The moderating impact of industry technological opportunities (Zahra, S.A.)	Academy Of Management Journal

Table 14: Top Articles

Small Entrepreneurship Profile

The first article on small entrepreneurship was published in 1970 and since then 175 articles were published on this form with not more than 17 publications per year (figure 5). Out of 175 articles 94 were published during the last decade. The journal *Small Business Economics* is leading the ranking of the highest number of publications namely 8, followed by the *Journal of Small Business Management* (table 15). However, the top five cited articles were not published in these two journals. “The concept of personal initiative: Operationalization, reliability and validity in two German samples” by Frese, Fay, Hilburger, Leng and Tag (1997) published in *Journal of Occupational and Organizational Psychology* is the article with the highest number of citations namely 238, and therefore can be seen as the most influential in this field (table 17). In terms of authors there are Turner, Kristiansen and Reid who published three articles each (table 16). Small entrepreneurship is growing very slowly and is furthermore widely spread when looking on the authors and journals where articles on small entrepreneurship are published.

Journal	# of articles	% from total
Small Business Economics	8	2,32
Journal of Small Business Management	7	2,03
Entrepreneurship and Regional Development	4	1,16
Journal of Business Venturing	4	1,16

Table 15: Top Journals

# of articles	Author
3	Turner, S
3	Kristiansen, S
3	Reid, GC

Table 16: Top Authors

Times cited	Publication year	Titel (Author)	Journal
238	1997	The concept of personal initiative: Operationalization, reliability and validity in two German samples (Frese, M., Fay, D., Hilburger, T., Leng, K. & Tag, A.)	Journal Of Occupational And Organizational Psychology
159	2007	Migration networks and microenterprises in Mexico (Woodruff, C. & Zenteno, R.)	Journal Of Development Economics
147	2004	A strategic approach to internationalization: A traditional versus a "born-global" approach (Chetty, S. & Campbell-Hunt, C.)	Journal Of International Marketing
127	1992	Gaining the upper hand - economic mobility among immigrant and domestic minorities (Portes, A. & Zhou, M.)	Ethnic And Racial Studies
95	2006	Inter-firm R&D partnering in pharmaceutical biotechnology since 1975: Trends, patterns, and networks (Roijsackers, N. & Hagedoorn, J.)	Research Policy

Table 17: Top Articles

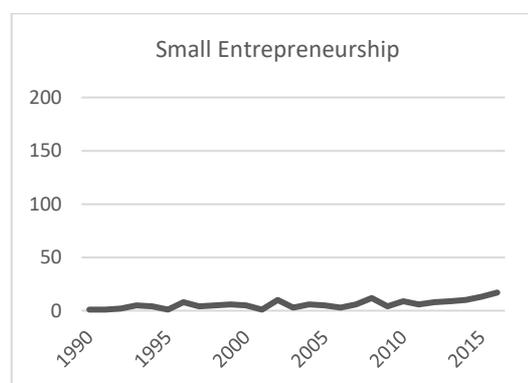


Figure 5: Number of articles "small"

Political Entrepreneurship Profile

Although the first articles on political entrepreneurship were published in 1971 the topic did not get much attention till 1994. In total, 163 articles were published on this entrepreneurship form, wherefrom 104 articles were published in the last decade and a maximum of 22 articles published in a year (figure 6). There is no leading journal in this field since eight journals are sharing the top rank with three published articles (table 18) and none of the eight journals published one of the top five most cited articles (table 20). Most of the eight journals deal with political sciences or public policy. Furthermore, there is no leading author, since 10 authors have published two articles on this form. The article “A new statecraft? Supranational entrepreneurs and international cooperation” by Moravcsik (1999) published in *International Organization* has 152 citations and is therefore the most influential article in the field of political entrepreneurship. There is no leading author on political entrepreneurship since ten authors published two articles each and the rest has published only one article on this form (table 19). Out of the 16 entrepreneurship forms political entrepreneurship is one with the least number of articles. Furthermore, it is widely spread in terms of authors and journals that cover the topic.

Journal	# of articles	% from total
British Journal of Political Science	3	0,87
Democratization	3	0,87
Journal of Entrepreneurship and Public Policy	3	0,87
Journal of European Public Policy	3	0,87
Journal of Modern Italian Studies	3	0,87
Polity	3	0,87
Public Choice	3	0,87
West European Politics	3	0,87

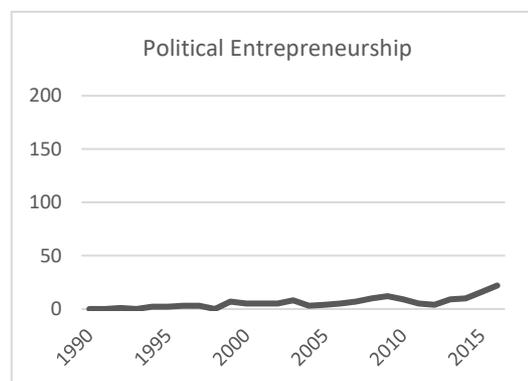


Figure 6: Number of articles “political”

Table 18: Top Journals

# of articles	Author
2	Wilson, K.
2	Wohlgemuth, M.
2	Moore, M.
2	Kosack, S.
2	Krouwel, A.
2	Moravcsik, A.
2	Costalli, S.
2	Joshi, A.
2	Ruggeri, A.
2	Wagner, R.E.

Table 19: Top Authors

Times cited	Publication year	Titel (Author)	Journal
152	1999	A new statecraft? Supranational entrepreneurs and international cooperation (Moravcsik, A.)	International Organization
113	1995	Senators as political entrepreneurs - using bill sponsorship to shape legislative agendas (Schiller, W.J.)	American Journal Of Political Science
88	2001	Institutional theory and accounting rule choice: an analysis of four US state governments' decisions to adopt generally accepted accounting principles (Carpenter, V.L. & Feroz, E.H.)	Accounting Organizations And Society
83	1994	Judicial politics in the european-community - european integration and the pathbreaking cassis-de-dijon decision (Alter, K.J. & Meunieraitsahalia, S.)	Comparative Political Studies
52	2005	Views from inside the net: How websites affect young adults political interest (Lupia, A. & Philpot, T.S.)	Journal Of Politics

Table 20: Top Articles

Policy Entrepreneurship Profile

The first article on policy entrepreneurship was published in 1979. This field has a number of 262 articles that were published only in the last decade and 344 articles in total. Alone in 2016 48 articles were published on policy entrepreneurship (figure 7). The top three journals by the number of published articles are *Policy Studies Journal* with 19 articles, *Journal of European Public Policy* with 13 articles and *Ecology and Society* with 10 articles (table 21). When looking on the articles with the highest number of citations an article published in *Ecology and Society* is ranked fourth with 204 citations (table 23). The top three articles according to the counts of citation were published in *American Journal of Political Science* with 381 citations, *Journal of Marketing* with 260 citations and *Yale Law Journal* with 231 citations. “Policy entrepreneurs and the diffusion of innovation” by Mintrom (1997) is the most influential article in the field of policy entrepreneurship. Furthermore, Mintrom is also the most influential author with seven articles on this form (table 22). Out of the 16 forms policy entrepreneurship is ranked fifth in terms of the number of articles. However, the growth rate of the field is not that high when compared with social, academic, institutional or international entrepreneurship.

Journal	# of articles	% from total
Policy Studies Journal	19	5,51
Journal of European Public Policy	13	3,77
Ecology and Society	10	2,9

Table 21: Top Journals

# of articles	Author
7	Mintrom, M
5	Meijerink, S
4	Zahariadis, N

Table 22: Top Authors

Times cited	Publication year	Titel (Author)	Journal
381	1997	Policy entrepreneurs and the diffusion of innovation (Mintrom, M.)	American Journal Of Political Science
260	1994	Socially responsible organizational buying - environmental concern as a noneconomic buying criterion (Drumwright, M.E.)	Journal Of Marketing
231	2005	The Sarbanes-Oxley Act and the making of quack corporate governance (Romano, R.)	Yale Law Journal
204	2004	Social-ecological transformation for ecosystem management: the development of adaptive co-management of a wetland landscape in southern Sweden (Olsson, P., Folke, C. & Hahn, T.)	Ecology And Society
201	1998	Policy networks and innovation diffusion: The case of state education reforms (Mintrom, M. & Vergari, S.)	Journal Of Politics

Table 23: Top Articles

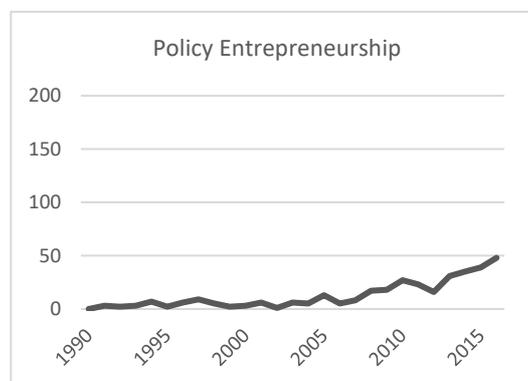


Figure 7: Number of articles “policy”

Institutional Entrepreneurship Profile

Although, institutional entrepreneurship entered the world of research in 1980, it only started to gain continuous attention after 1995. Institutional entrepreneurship counts 421 articles in total, wherefrom 392 articles were published during the last ten years and 63 articles in 2016 (figure 8). The journal *Organizational Studies* published the highest number of articles on institutional entrepreneurship namely 37 followed by *Journal of Business Ethics* with 14 and *Research Policy* with 12 articles (table 24). However, the journals are not represented in the list of the top three most cited articles on institutional entrepreneurship (table 26). The article with the highest number of citations was published in *Academy of Management Journal* with 484 citations followed by a publication in *Academy of Management Annals* with 343 citations and *American Behavioral Scientist* with 331 citations. As a result, the article “Institutional entrepreneurship in emerging fields: HIV/AIDS treatment advocacy in Canada” by Maguire, Hardy and Lawrence (2004) has the highest influence in the field of institutional entrepreneurship. Phillips can be regarded as the most active author with eight publications on institutional entrepreneurship in total (table 25). Finally, institutional entrepreneurship is getting more attention since the number of articles more than doubled from the period of 2007 – 2011 to 2012 – 2016.

Journal	# of articles	% from total
Organization Studies	37	8,767773
Journal of Business Ethics	14	3,317536
Research Policy	12	2,843602

Table 24: Top Journals

# of articles	Author
8	Phillips, N
5	Olsson, P
5	Spicer, A
4	Ansari, S
4	Abrutyn, S

Table 25: Top Authors

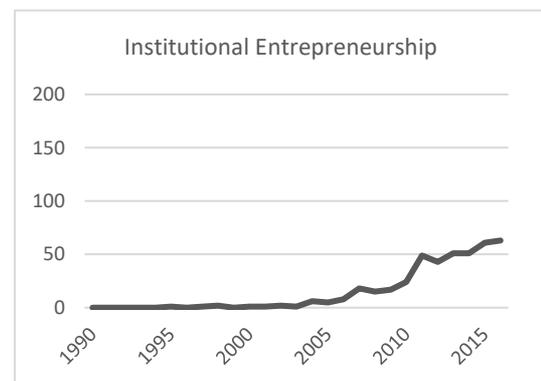


Figure 8: Number of articles “institutional”

Times cited	Publication year	Titel (Author)	Journal
484	2004	Institutional entrepreneurship in emerging fields: HIV/AIDS treatment advocacy in Canada (Maguire, S., Hardy, C. & Lawrence, T.B.)	Academy Of Management Journal
343	2009	How Actors Change Institutions: Towards a Theory of Institutional Entrepreneurship (Battilana, J., Leca, B. & Boxenbaum, E.)	Academy Of Management Annals
331	1997	Social skill and institutional theory (Fligstein, N.)	American Behavioral Scientist
215	2007	New practice creation: An institutional perspective on innovation (Lounsbury, M. & Crumley, E.T.)	Organization Studies
201	2007	Ideologically motivated activism: How activist groups influence corporate social change activities (Den Hond, F. & De Bakker, F.G.A.)	Academy Of Management Review

Table 26: Top Articles

Tech Entrepreneurship Profile

The cluster of entrepreneurship around technology was introduced in 1982 and has a total number of 129 articles not exceeding the number of 14 articles per year (figure 9). Out of the 126 articles 86 were published in the last decade. In terms of journals *Small Business Economics* is the leading journal with 10 articles published on technology entrepreneurship, *Journal of Business Venturing* has eight articles followed by *Technovation* with seven articles (table 27). However, the two most influencing articles on tech entrepreneurship were published in *Research Policy*. “The product market and the market for “ideas”: commercialization strategies for technology entrepreneurs” by Gans and Stern (2003) with 327 citations is the most influential article for tech entrepreneurship (table 29). In terms of authors Grilli and Colombo share the top rank with seven publications on tech entrepreneurship (table 28). According to the relative number of publication tech entrepreneurship is not getting that much attention such as other entrepreneurship forms and has the lowest number of publications in total when compared with the other 15 forms.

Journal	# of articles	% from total
Small Business Economics	10	2,9
Journal of Business Venturing	8	2,32
Technovation	7	2,03

Table 27: Top Journals

# of articles	Author
7	Grilli, L
7	Colombo, MG
4	Zhang, J

Table 28: Top Journals

Times cited	Publication year	Titel (Author)	Journal
327	2003	The product market and the market for "ideas": commercialization strategies for technology entrepreneurs (Gans, J.S. & Stern, S.)	Research Policy
284	2003	The geography of opportunity: spatial heterogeneity in founding rates and the performance of biotechnology firms (Stuart, T. & Sorenson, O.)	Research Policy
114	2004	Regional transformation through technological entrepreneurship (Venkataraman, S.)	Journal Of Business Venturing
96	2005	How governments matter to new industry creation (Spencer, J.W., Murtha, T.P. & Lenway, S.A.)	Academy Of Management Review
71	1995	Flexible re-cycling and high-technology entrepreneurship (Bahrami, H. & Evans, S.)	California Management Review

Table 29: Top Articles

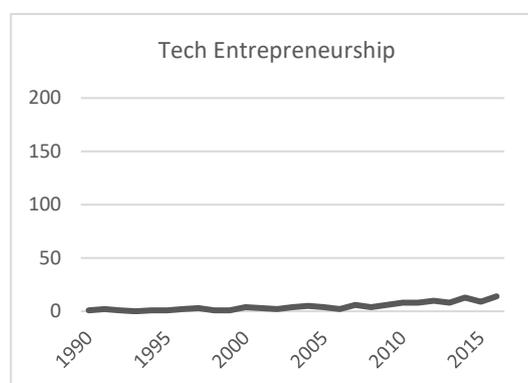


Figure 9: Number of articles “tech”

Immigrant Entrepreneurship Profile

Immigrant entrepreneurship was introduced in 1984 and from there on at least one publication was published on the topic with the exception of three years and a total number of 170 articles (figure 10). Out of 170 articles 119 were published during the last ten years with the highest number of publications in 2016 with 21 articles. The leading journal in this field is *Entrepreneurship and Regional Development* with a total number of 13 articles, followed by *Ethnic and Racial Studies* with nine articles (table 30). Although, *Entrepreneurship and Regional Development* published the highest number of articles in the field it is not represented in the top five cited publications in the field (table 32). On the other side, *International Migration Review* has published only eight articles on immigrant entrepreneurship whereas two of them are the top two of the most cited articles in the field with 281 and 172 citations. Due to the high amount of citations the article “Social remittances: Migration driven local-level forms of cultural diffusion” by Levitt (1998) can be seen as the article with the highest influence in this field. In terms of leading authors Light and Kloosterman are sharing the top rank with four published articles on this form (table 21). The field of immigrant entrepreneurship is growing but in comparison with other forms it is loosing interest and stagnating.

Journal	# of articles	% from total
Entrepreneurship and Regional Development	13	7,65
Ethnic and Racial Studies	9	5,29
International Migration Review	8	4,71

Table 30: Top Journals

# of articles	Author
4	Light, I.
4	Kloosterman, R.C.

Table 31: Top Authors

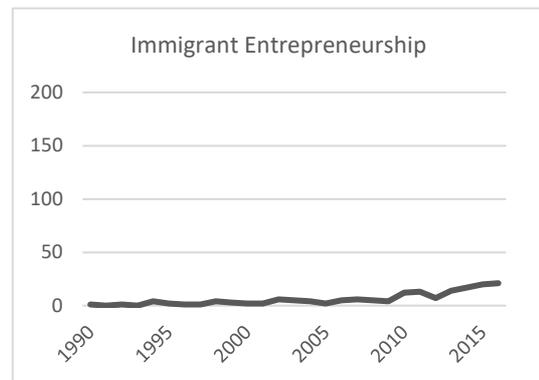


Figure 10: Number of articles “immigrant”

Times cited	Publication year	Titel (Author)	Journal
281	1998	Social remittances: Migration driven local-level forms of cultural diffusion (Levitt, P.)	International Migration Review
172	2004	Revisiting ethnic entrepreneurship: Convergencies, controversies, and conceptual advancements (Zhou, M.)	International Migration Review
87	2002	Silicon valley's new immigrant high-growth entrepreneurs (Saxenian, A.)	Economic Development Quarterly
86	2011	Multilevel Challenges and Opportunities in Social Capital Research (Payne, G.T., Moore, C.B., Griffis, S.E. & Autry, C.W.)	Journal Of Management
86	1994	Social resources generated by group support networks may not be beneficial to asian immigrant-owned small businesses (Bates, T.)	Social Forces
86	1989	Immigrant entrepreneurship - effects of ethnic market-size and isolated labor pool (Evans, M.D.R.)	American Sociological Review

Table 32: Top Articles

Academic Entrepreneurship Profile

The first article on academic entrepreneurship was published in 1987, but only in 2003 academic entrepreneurship started to gain more attention by scholars (figure 11). In total, 265 articles were published on academic entrepreneurship wherefrom 240 were published during the last ten years. *Journal of Technology Transfer* is the leading journal with 42 articles publishing on academic entrepreneurship, whereas *Research Policy* has only 37 articles it is more successful with influencing the field (table 33). Four articles out of the top five most cited articles on academic entrepreneurship were published in *Research Policy*. “Research groups as 'quasi-firms': the invention of the entrepreneurial university” by Etzkowitz (2003) is the article with the highest number of citations and therefore the most influential article in this field (table 35). Furthermore, Wright is with 14 articles the leading author on academic entrepreneurship (table 34). Academic entrepreneurship has the second highest growth rate from 2007 – 2011 to 2012 – 2016 and can be seen as one of the entrepreneurship forms with the most attracted interest during the last years.

Journals	# of articles	% from total
Journal of Technology Transfer	42	15,85
Research Policy	37	13,96
Small Business Economics	16	6,04

Table 33: Top Journals

# of articles	Author
14	Wright, M
9	Rasmussen, E
7	Urbano, D
7	Guerrero, M
6	Knockaert, M
6	Mosey, S
6	Hayter, Cs

Table 34: Top Authors

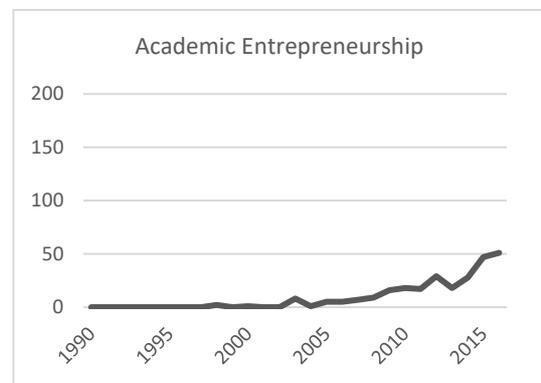


Figure 11: Number of articles “academic”

Times cited	Publication year	Titel (Author)	Journal
317	2003	Research groups as 'quasi-firms': the invention of the entrepreneurial university (Etzkowitz, H.)	Research Policy
238	2005	Entrepreneurial orientation, technology transfer and spinoff performance of US universities (O'Shea, R.P., Allen, T.J., Chevalier, A. & Roche, F.)	Research Policy
205	2008	Academic entrepreneurs: Organizational change at the individual level (Bercovitz, J. & Feldman, M.)	Organization Science
194	2005	Industry funding and university professors' research performance (Gulbrandsen, M. & Smeby, J.C.)	Research Policy
160	2003	Bottom-up versus top-down policies towards the commercialization of university intellectual property (Goldfarb, B. & Henrekson, M.)	Research Policy

Table 35: Top Articles

International Entrepreneurship Profile

The first article on international entrepreneurship was published in 1987. However, starting in 2000, the entrepreneurship form gained continuous attention by scholar reaching a peak in 2016 with 54 publications (figure 12). In total, 300 articles were published out of which 258 were published over the last ten years. The top three journals according to the number of articles published on this topic are: *International Business Review* with 46 articles, *Journal of International Business Studies* with 23 articles and *Journal of Business Venturing* with 18 articles (table 36). In terms of the numbers of citations *Journal of International Business Studies* is leading the ranking with an article that was cited 540 times (table 38). The second article was published in *Academy of Management Journal* with 402 citations, followed by an article published in *Entrepreneurship: Theory and Practice* with 347 citations. Consequently, the article “Innovation, organizational capabilities, and the born-global firm” by Knight and Cavusgli (2004) has the highest influence on the field of international entrepreneurship. Furthermore, Dimitratos has the highest number of articles published on international entrepreneurship namely 14 with seven more than Zahra (table 37). International entrepreneurship is also one of the entrepreneurship forms that got a lot of attention in the last years and was able to more than double the amount of articles from 2007 – 2011 to 2012 – 2016.

Journal	# of articles	% from total
International Business Review	46	15,33
Journal of International Business Studies	23	7,67
Journal of Business Venturing	18	6

Table 36: Top Journals

# of articles	Author
14	Dimitratos, P
7	Zahra, SA
6	De C, D
6	Wright, M
5	Casillas, JC
5	Sapienza, HJ
5	Mcdougall, PP

Table 37: Top Authors

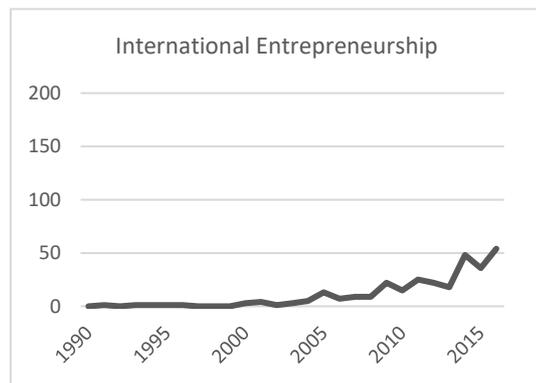


Figure 12: Number of articles “international”

Times cited	Publication year	Titel (Author)	Journal
540	2004	Innovation, organizational capabilities, and the born-global firm (Knight, G.A. & Cavusgil, S.T.)	Journal Of International Business Studies
402	2000	International entrepreneurship: The intersection of two research paths (McDougall, P.P. & Oviatt, B.M.)	Academy Of Management Journal
347	2005	Defining international entrepreneurship and modeling the speed of internationalization (Oviatt, B.M. & McDougall, P.P.)	Entrepreneurship Theory And Practice
288	2005	The phenomenon of early internationalizing firms: what do we know after a decade (1993-2003) of scientific inquiry? (Rialp, A., Rialp, J. & Knight, G.A.)	International Business Review
268	2005	Internationalisation: conceptualising an entrepreneurial process of behaviour in time (Jones, M.V. & Coviello, N.E.)	Journal Of International Business Studies

Table 38: Top Articles

Women Entrepreneurship Profile

The first article on women entrepreneurship was published in 1975, but only one decade later it slowly started to gain attention by scholars. In total 393 were published on women entrepreneurship. In the last ten years the number of publications in this field grew to a total number of 323 articles with 80 articles alone in 2016 (figure 13). *Journal of Business Venturing* with 23 articles is the leading journal and is one of the main journals with a high influence on women entrepreneurship due to the two publications with 170 citations ranked second (table 39, 41). *Small Business Economics* published 20 articles on women entrepreneurship and *International Journal of Gender and Entrepreneurship* is represented in the top journal ranking with 15 articles. Marlow is the leading author with seven publications on women entrepreneurship followed by other authors with only four publications (table 40). “Work and family variables, entrepreneurial career success, and psychological well-being” by Parasuraman, Purohit, Godshalk and Beutell (1996) is the most influential article according to the highest number of citations in the sample namely 238. It is to mention that four out of top five most cited articles focus not on women entrepreneurship solely but on gender in general. This entrepreneurship form needed to be grouped between female and women entrepreneurship. Female entrepreneurship was able to more than double the output on publications from 2007 – 2011 to 2012 – 2016 and even more than triple in the 5 years before that. Consequently, women entrepreneurship is getting into the focus of many researchers.

Journal	# of articles	% from total
Journal of Business Venturing	23	6,67
Small Business Economics	20	5,8
International Journal of Gender And Entrepreneurship	15	4,35

Table 39: Top Journals

# of articles	Author
7	Marlow, S

Table 40: Top Authors

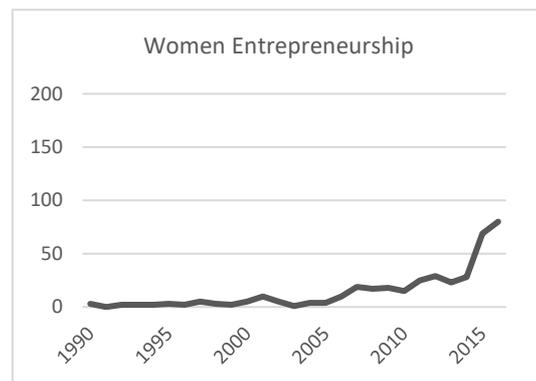


Figure 13: Number of articles “women”

Times cited	Publication year	Titel (Author)	Journal
238	1996	Work and family variables, entrepreneurial career success, and psychological well-being (Parasuraman, S., Purohit, Y.S., Godshalk, V.M. & Beutell, N.J.)	Journal Of Vocational Behavior
170	1998	Does one size fit all? Exploring the relationship between attitudes towards growth, gender, and business size (Cliff, J.E.)	Journal Of Business Venturing
170	1993	A theoretical overview and extension of research on sex, gender, and entrepreneurship (Fischer, E.M., Reuber, A.R. & Dyke, L.S.)	Journal Of Business Venturing
122	2005	All credit to men? Entrepreneurship, finance, and gender (Marlow, S. & Patton, D.)	Entrepreneurship Theory And Practice
113	2001	Start-up capital: "does gender matter?" (Verheul, I. & Thurik, R.)	Small Business Economics

Table 41: Top Articles

Ethnic Entrepreneurship Profile

The first article on ethnic entrepreneurship was published in 1989. In total, 153 articles were published on ethnic entrepreneurship whereas 111 articles were published in the last 10 years (figure 14). The journals *Entrepreneurship and Regional Development* and *Ethnic and Racial Studies* are leading with a number of 11 respectively 10 articles on ethnic entrepreneurship (table 42). However, when looking at the top five cited articles in the field none of the journals leading by the number of publications is presented (table 44). The most cited publication on ethnic entrepreneurship namely “Revisiting ethnic entrepreneurship: Convergencies, controversies, and conceptual advancements” by Zhou (2004) was published in *International Migration Review* and has in total 172 citations. In terms of authors Nijkamp is the leading author on ethnic entrepreneurship with a publication number of 12 (table 43). Ethnic entrepreneurship when compared with other entrepreneurship forms is growing slower and is more spread when looking at top ranked authors not counting Nijkamp.

Journal	# of articles	% from total
Entrepreneurship and Regional Development	11	7,19
Ethnic and Racial Studies	10	6,54
International Business Review	8	5,23

Table 42: Top Journals

# of articles	Author
12	Nijkamp, P
4	Valdez, Z

Table 43: Top Authors

Times cited	Publication year	Titel (Author)	Journal
172	2004	Revisiting ethnic entrepreneurship: Convergencies, controversies, and conceptual advancements (Zhou, M.)	International Migration Review
76	2009	Transnational Entrepreneurship: An Emergent Field of Study (Drori, I., Honig, B. & Wright, M.)	Entrepreneurship Theory And Practice
70	2002	Who are ethnic entrepreneurs? A study of entrepreneurs-ethnic involvement and business characteristics (Chaganti, R. & Greene, P.G.)	Journal Of Small Business Management
55	1995	The presentation of ethnic authenticity - chinese food as a social accomplishment (Lu, S. & Fine, G.A.)	Sociological Quarterly
49	2002	Enclaves, neighbourhood effects and employment outcomes: Ethnic minorities in England and Wales (Clark, K. & Drinkwater, S.)	Journal Of Population Economics

Table 44: Top Articles

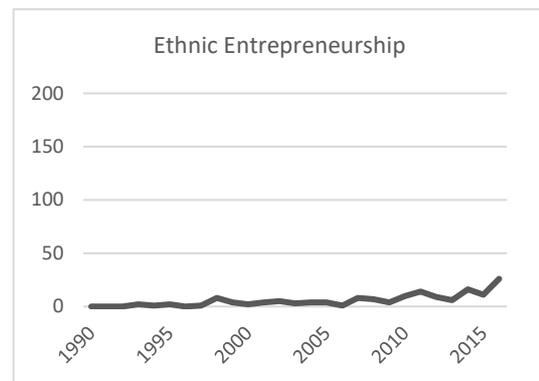


Figure 14: Number of articles “ethnic”

Social Entrepreneurship Profile

Social Entrepreneurship was introduced as recent as 1991 and with only 31 articles being published till 2006 took off slowly over the first fifteen years (figure 15). However, it has gained a lot of interest since then, 519 articles were published over the last decade. Although social entrepreneurship was introduced in 1991 - in total 22 years later than corporate entrepreneurship -, it has gained a lot of attention since then.

With 32 published articles *Journal of Business Ethics* is ranked first in terms of the amount of publications on social entrepreneurship. *Entrepreneurship and Regional Development* is second with 23 articles, and *Entrepreneurship: Theory and Practice* is third with 18 articles (table 45). However, the most cited article on social entrepreneurship namely “Social entrepreneurship research: A source of explanation, prediction, and delight” by Mair and Marti (2006) was published in the *Journal of World Business* and has 450 citations. That article is closely followed by “Social and commercial entrepreneurship: Same, different, or both?” by Austin, Stevenson and Wei-Skillern (2006) with 444 citations published in *Entrepreneurship: Theory and Practice* and “A typology of social entrepreneurs: Motives, search processes and ethical challenges” by Zahra, Gedajlovic, Neubaum and Shulman (2009) with 274 published in the *Journal of Business Venturing* (table 47). In terms of authors Mair and Meyskens share the top rank with five published articles on social entrepreneurship (table 46). In total, social entrepreneurship had an enormous push in the years from 2011 – 2016 by a publishing activity of 403 articles compared to the five year period before that with 106 articles.

Journal	# of articles	% from total
Journal of Business Ethics	32	9,28
Entrepreneurship and Regional Development	23	6,67
Entrepreneurship Theory and Practice	18	5,22

Table 45: Top Journals

# of articles	Author
5	Mair, J
5	Meyskens, M
4	Dey, P
4	Zahra, SA
4	Ribeiro-Soriano, D

Table 46: Top Authors

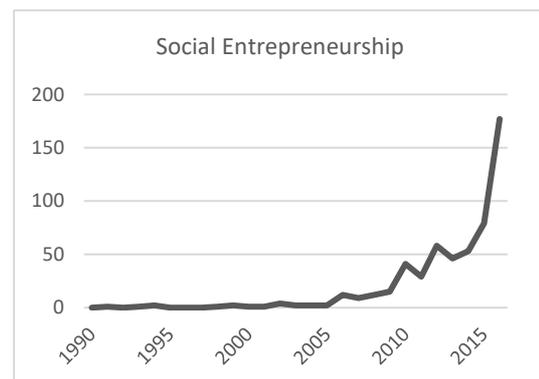


Figure 15: Number of articles “social”

Times cited	Publication year	Titel (Author)	Journal
450	2006	Social entrepreneurship research: A source of explanation, prediction, and delight (Mair, J. & Marti, I.)	Journal Of World Business
444	2006	Social and commercial entrepreneurship: Same, different, or both? (Austin, J., Stevenson, H. & Wei-Skillern, J.)	Entrepreneurship Theory And Practice
274	2009	A typology of social entrepreneurs: Motives, search processes and ethical challenges (Zahra, S.A., Gedajlovic, E., Neubaum, D.O. & Shulman, J.M.)	Journal Of Business Venturing
238	2006	Social entrepreneurship: A critical review of the concept (Peredo, A.M. & McLean, M.)	Journal Of World Business
220	2004	The marketization of the nonprofit sector: Civil society at risk? (Eikenberry, A.M. & Kluver, J.D.)	Public Administration Review

Table 47: Top Articles

Individual Entrepreneurship Profile

Individual entrepreneurship was mentioned in 1992 for the first time and with an exception of three years the form was represented yearly since then (figure 16). The total number of articles on individual entrepreneurship is 147. However, most of them namely 112 were published in the last decade. In terms of journals *Journal of Business Venturing* has the highest number of articles namely 11, followed by *International Entrepreneurship and Management Journal* with nine articles (table 48). However, the most cited article mentioning individual entrepreneurship was published in the *Journal of Management* with 430 citations (table 50). Consequently, “The entrepreneurship of resource-based theory” by Alvarez and Busenitz (2001) is the most influential article on individual entrepreneurship. There are four authors who published three articles namely Sternberg, Martinez-Fernandez, Baron and Molina-Morales, but there is no leading author with a high number of publications (table 49). Nevertheless, it is worth to mention that *Journal of Business Venturing* has three articles in the top five most influential ranking. When compared to other entrepreneurship forms discussed in this paper individual entrepreneurship has the second lowest number of publications and was not able to double the number of articles from 2007 – 2011 to 2012 – 2016 but came close to that.

Journal	# of articles	% from total
Journal of Business Venturing	11	7,48
Intern. Entrepreneurship and Management J.	9	6,12
Entrepreneurship Theory and Practice	5	3,40

Table 48: Top Journals

# of articles	Author
3	Sternberg, R
3	Martinez-Fernandez, MT
3	Baron, RA
3	Molina-Morales, FX

Table 49: Top Authors

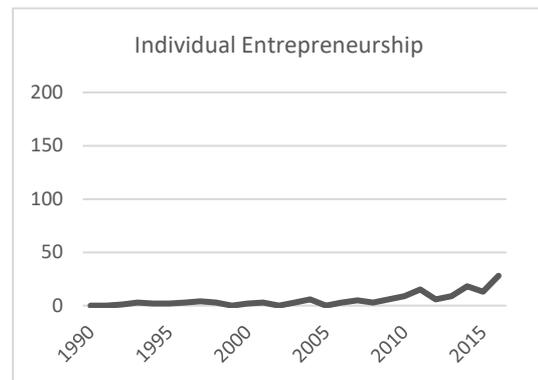


Figure 16: Number of articles “individual”

Times cited	Publication year	Titel (Author)	Journal
430	2001	The entrepreneurship of resource-based theory (Alvarez, S.A. & Busenitz, L.W.)	Journal Of Management
143	2000	Beyond social capital: How social skills can enhance entrepreneurs' success (Baron, R.A. & Markman, G.D.)	Academy Of Management Executive
140	1994	The effect of education and experience on self-employment success (Robinson, P.B. & Sexton, E.A.)	Journal Of Business Venturing
135	2006	Entrepreneurship as the nexus of individual and opportunity: A structuration view (Sarason, Y., Dean, T. & Dillard, J.F.)	Journal Of Business Venturing
123	1993	The development of an infrastructure for entrepreneurship (Vandeven, A. H.)	Journal Of Business Venturing

Table 50: Top Articles

Private Entrepreneurship Profile

Private entrepreneurship was mentioned in 1992 for the first time and is thereafter represented yearly with only one exception and a total number of 165 articles (figure 17). Out of the 165 articles 106 were published over the last ten years. There is no leading journal on the topic of private entrepreneurship, since the highest number of publications in one journal is five articles in *China Quarterly*. The journals *Issues & Studies* as well as *World Development* published both four articles in this field (table 51). The most cited article is “Political connections, financing and firm performance: Evidence from Chinese private firms” by Li, Meng, Wang and Zhou (2008) that was cited 235 times and published in *Journal of Developmental Economics* (table 53). In terms of authors Walder is leading the ranking with three publications on private entrepreneurship. (table 52) Private entrepreneurship is predominately studied in the United States of America and China. Three out of the top five most cited articles are based on evidence from China. Therefore, it is not surprising that China Quarterly is leading the top journal ranking.

Journal	# of articles	% from total
China Quarterly	5	1,45
Issues & Studies	4	1,16
World Development	4	1,16

Table 51: Top Journals

# of articles	Author
3	Walder, AG

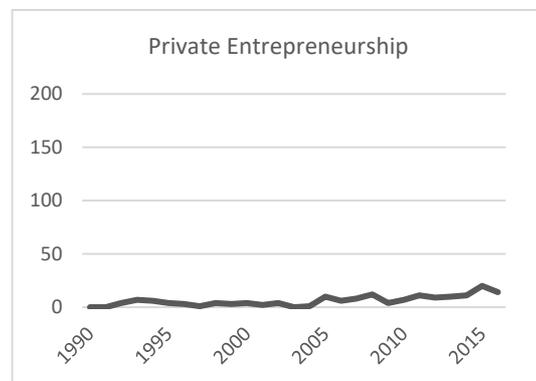


Figure 17: Number of articles “private”

Table 52: Top Authors

Times cited	Publication year	Titel (Author)	Journal
235	2008	Political connections, financing and firm performance: Evidence from Chinese private firms (Li, H.B., Meng, L.S., Wang, Q. & Zhou, L.A.)	Journal Of Development Economics
128	2007	Social enterprise and entrepreneurship - Towards a convergent theory of the entrepreneurial process (Chell, E.)	International Small Business Journal
123	1993	The development of an infrastructure for entrepreneurship (Vandeven, A.H.)	Journal Of Business Venturing
116	2004	Kinship networks and entrepreneurs in China's transitional economy (Peng, Y.S.)	American Journal Of Sociology
93	2006	Why do entrepreneurs enter politics? Evidence from China (Li, H.B., Meng, L.S. & Zhang, J.S.)	Economic Inquiry

Table 53: Top Articles

Nascent Entrepreneurship Profile

In 1996, nascent entrepreneurship entered the field of entrepreneurship and gained continuous attention after 2001. Over the last ten years 306 articles were published whereas the total number of articles on nascent entrepreneurship counts 339, wherefrom 72 articles were published in 2016 (figure 18). Consequently, before 2005 only 33 articles were published on nascent entrepreneurship. The leading journals on nascent entrepreneurship are *Small Business Economics* with 55 articles, *Journal of Business Venturing* with 26 articles and *Journal of Small Business Management* with 21 articles (table 54). Consequently two of them focus on small businesses. The top two journals are also leading in the top five most cited articles (table 56). *Journal of Business Venturing* published the top two articles with 906 and 240 citations followed by three articles published in *Small Business Economics* with 230, 226 and 206 citations. Consequently, “The role of social and human capital among nascent entrepreneurs” by Davidsson and Honig (2003) is the most influential article in the field of nascent entrepreneurship and in the most cited article by all 16 entrepreneurship forms. In terms of authors Urbano is the leading author with 11 publications on nascent entrepreneurship (table 55). Apart from corporate entrepreneurship authors on nascent entrepreneurship tend to do research in groups since two or more authors wrote 297 articles from the total number of 339 articles on nascent entrepreneurship.

Journal	# of articles	% from total
Small Business Economics	55	16,22
Journal of Business Venturing	26	7,67
Journal of Small Business Management	21	6,19

Table 54: Top Journals

# of articles	Author
11	Urbano, D
9	Thurik, R
8	Alvarez, C
7	Gartner, WB
7	Manolova, TS
7	Stuetzer, M

Table 55: Top Authors

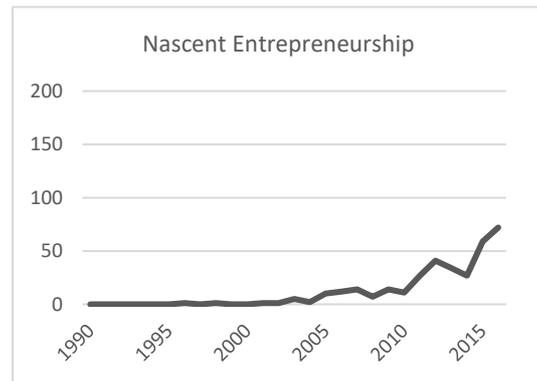


Figure 18: Number of articles “nascent”

Times cited	Publication year	Titel (Author)	Journal
906	2003	The role of social and human capital among nascent entrepreneurs (Davidsson, P. & Honig, B.)	Journal Of Business Venturing
240	1996	Exploring start-up event sequences (Carter, N.M., Gartner, W.B. & Reynolds, P.D.)	Journal Of Business Venturing
230	2005	Nascent entrepreneurship and the level of economic development (Wennekers, S. van Stel, A; Thurik, R; Reynolds, P;)	Small Business Economics
226	2005	Perceptual variables and nascent entrepreneurship (Arenius, P. & Minniti, M.)	Small Business Economics
206	2005	The effect of entrepreneurial activity on national economic growth (van Stel, A., Carree, M. & Thurik, R.)	Small Business Economics

Table 56: Top Articles

4.6. Conclusion

The intention of this article was to provide an overview of the variety of entrepreneurship forms, based on language use, within the field of entrepreneurship in order to lead future research and present the tendencies. First of all, this study shows the growth of articles on entrepreneurship. Second, the present analysis identified the main research trends in terms of entrepreneurship forms, respective key authors, most influential articles and geographical contributions. In total, 4,269 articles were analyzed, and 16 entrepreneurship forms identified namely corporate, small, political, policy, institutional, tech, immigrant, local, academic, international, women, ethnic, social, individual, private and nascent. Third, the growing number of articles on particular entrepreneurship forms shows that entrepreneurship scholars appear to be increasingly interested in making a distinction between the different forms. The interest in research on various entrepreneurship forms is geographically well distributed, since scholars in America, Asia, Australia and Europe seem to see a benefit in dividing the field of entrepreneurship into more specific niches. Fourth, the number of articles using classifications of entrepreneurship is assessed, and the rising interest in particular forms of entrepreneurship over time is presented. Fifth, the study focuses on journals and key authors in terms of entrepreneurship classifications. Researchers can benefit from the upwards and downward trends presented and identify entrepreneurship forms that are in the current focus and thus publishable as well as select a suitable journal for publication. Finally, the results indicate that entrepreneurship scholars need to pay attention to the variety of entrepreneurship forms and need to be increasingly specific when describing their sample.

The analyzed entrepreneurship articles are published in different journals including high ranked management journals. However, the journals with the highest number of publications are all focusing on entrepreneurship and small businesses. Only a small number of articles on particular entrepreneurship forms are published in general management journals. However, forms such as policy entrepreneurship or political entrepreneurship are mainly published in topic related journals dealing with policy and political sciences. Private entrepreneurship is widely spread between the journals with 106 articles in total and the highest number of five articles in one journal namely *China Quarterly*. In contrast to that, the two leading journals with the highest number of international entrepreneurship articles (43 and 26) have a clear focus on international topics. Institutional entrepreneurship however is represented in *Organization Studies*, *Journal of Business Ethics* and *Research Policy*, which indicates the complexity of the form and influence on different fields of research. The journal *Entrepreneurship and Regional Development* is the leading journal on local, ethnic and immigrant entrepreneurship and second on social entrepreneurship. Consequently, this journal shows the importance of ethnic, immigrant, local and social entrepreneurship in terms of regional development. Academic entrepreneurship is represented in *Journal of Technology Transfer*, *Research Policy* and *Small Business Economics*. This distribution indicates an importance in technology transfer from the university and policies in order to support universities and researchers to find commercial applications for their research.

When analyzing the forms chosen by the journals some differences as well as similarities become visible. On the one hand, top five journals publishing the highest number of articles on corporate entrepreneurship are the same as for individual entrepreneurship, only the order is different. This is due to articles comparing the contradicting forms. This can be also observed in the top cited articles of social and corporate entrepreneurship with one and the same article identified as one of the most influential ones in both fields. Furthermore, four top journals of nascent entrepreneurship overlap with the top five of corporate and individual entrepreneurship. On the other hand, four journals from nascent entrepreneurship overlap with the top five journals publishing the highest number of articles on the topic of women entrepreneurship. Consequently, it can be assumed that nascent and women

entrepreneurship belong in one cluster. Furthermore, immigrant entrepreneurship and ethnic entrepreneurship have the same top two journals namely *Entrepreneurship and Regional Development* and *Ethnic and Racial Studies* as well as one influential article in the top five of most cited articles in both fields namely “Revisiting ethnic entrepreneurship: Convergencies, controversies, and conceptual advancements” by Zhou (2004). As a result, ethnic and immigrant entrepreneurship seem to be closely related.

Journals mostly publish articles in their main field of focus. However, some journals are more widespread such as *International Small Business Journal* that has only one article on international entrepreneurship but seven on female entrepreneurship, followed by three articles on academic, nascent, corporate and ethnic entrepreneurship. Consequently, the name of the journal can be misleading when assuming that the journal is focusing on one or few particular forms. The results of the present analysis show that the journal focus can be a different one and easily be misinterpreted when only paying attention to the title of the journal. When looking at the top ranked journals in each group it can be seen that some groups are widely spread and others are more focused. *Journal of Business Venturing* for example is present in the top journals list of seven entrepreneurship forms; *Small Business Economics* is present in six; and *Entrepreneurship and Regional Development* in five of the entrepreneurship forms discussed in this paper.

Similarly to the journals a broad focus of some authors was identified. Zahra for example is present in the top rankings of three entrepreneurship forms namely corporate, international and social entrepreneurship. Another author namely Wright is in the top rankings of international and academic entrepreneurship.

This paper shows clearly the wide use of attributes to describe different forms of entrepreneurship. Future research is needed to define, build and categorize the identified forms. Further research should be done in order to define a proper lexicon of terminologies within entrepreneurship. In a next step, for instance, the concepts might be organized into different concept classes that share common characteristics in order to build typologies and taxonomies of entrepreneurship. In addition, a closer investigation could be useful for the development of sample selection criteria. Further research can be done on the theories, topic areas, research approaches, methodologies, samples, industries and implications of the different forms.

The present paper has clear limitations. Due to the fact, that only the attributes were analyzed some articles might have been misallocated. An analysis including the definitions would probably show different results. Second, the data collection was limited to a single database (Web of Knowledge), restricting the number of journals. Finally, English is chosen as the language of analysis, the same analysis using a different language will result in a different picture.

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5. ARTICLE 3: Social Entrepreneurship: Dissection of a Phenomenon through a German Lens

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5.1. Abstract

The occurrence and scientific investigation of the phenomenon of social entrepreneurship are rather new. The term is very popular among politicians and is reflected in a lot of the political demands and willingness that they express. However, a review of the literature about it shows that there is no common ground or frame, and the historical developments are different in different countries and economies. Based on a study of the literature, a two-phase survey following the ‘Policy Delphi’ approach was conducted in Germany in order to enlighten this frameless picture of social entrepreneurship. Our results indicate five dimensions that extend the core term: ‘social’, namely ‘Societal–Visionary’, ‘Ecological’, ‘Societal–Entrepreneurial’, ‘Economic’, and ‘Innovative–Entrepreneurial’. The degree of intercorrelation among the five dimensions shows that four factors, namely ‘Societal–Visionary’, ‘Societal–Entrepreneurial’, ‘Economic’, and ‘Innovative–Entrepreneurial’, have low to medium-high correlations. The fifth factor, ‘Ecological’, has the weakest correlation with all other factors.

Keywords:

social entrepreneurship; definition; Policy Delphi; Germany; dimensions

5.2. Introduction

“Social entrepreneurship plays an increasingly important role in solving current societal and social challenges” (German Government, Bundesregierung, 2018).

This statement, amongst others, conveys the impression that social entrepreneurship and its importance for the systemic solutions to current social challenges have been understood. So far, however, these and similar declarations of intent have hardly been reflected in the actions of states, alliances, or politicians. Initiatives such as the High-Tech Strategy 2025 launched by the European Union show that the importance of innovations and digitization is emphasized, but without any references or tendencies towards social entrepreneurship.

The 21st century is loaded with social challenges for which innovative solutions are urgently needed. To this end, the United Nations adopted the 17 Sustainable Development Goals in 2015 as part of the 2030 Agenda (United Nations 2015). It could be assumed that the states’ commitment to achieving these essential projects for humanity represents the greatest and most important thing to do right now. However, recent studies show that neither national governments nor the United Nations itself have the power to implement these goals. In addition to non-governmental organizations (NGOs), social entrepreneurs are, in fact, the driving force when it comes to achieving the 17 goals for sustainable development (Horne et al. 2020). Without solving the social challenges, purely environmental solutions are meaningless (Alvord, Brown, and Letts 2004). Apart from having a positive impact on the global society as such, social entrepreneurship can enfold its benefits in many smaller observable developments. For example, institutions of social entrepreneurship have significantly more female founders than traditional companies (e.g., SDG 5—gender equality), and the generation over 50 is also comparatively strongly represented (e.g., SDG 3—good health) (Metzger, 2019; Social Entrepreneurship Netzwerk Germany 2018; United Nations 2015). Although many other factors might add to SDGs 3 and 5 (gender equality and good health), social entrepreneurship is certainly a driver for reaching them. Therefore, the question arises: Why has social entrepreneurship received so little attention in policy actions and government institutions despite its recognized vital importance for the human future?

One reason might be that there is currently no uniformly recognized view, comprehension, vision, or definition of social entrepreneurship. Among scientists, entrepreneurs, and politicians, among others, there are seemingly very different pictures about what social entrepreneurship means and addresses. However, without having that, creating, establishing, supporting, and measuring the impact of social entrepreneurship activities are fuzzy and largely meaningless. The present paper aims to investigate the very nature of social entrepreneurship in order to make it less fuzzy and to make it easier to find common ground in defining it. First, a literature review explains the classic concept of entrepreneurship, followed by insights about social entrepreneurship. Second, we look at the history of social entrepreneurship and explain the development in the United States and Europe, and consider special features in Germany. Third, we describe a two-phase survey following the ‘Policy Delphi’ approach that was conducted in Germany, followed by a factor analysis as well as intercorrelation between the identified factors. Finally, the results are presented. The novelty of this article lies in the focus on Germany and the application of the ‘Policy Delphi’.

5.3. Literature Review

Entrepreneurship

Since ‘social entrepreneurship’ represents a subcategory of ‘entrepreneurship’, a major part of it refers back to the classical term of entrepreneurship (Certo and Miller 2008; Mort and Weerawardena 2006). Richard Cantillon (Hébert and Link 2006; Long 1983) was the first to introduce the conceptual

framework of ‘entrepreneurship’, based on the French word ‘entreprendre’, in the 18th century. The entrepreneurs of that time—especially traders, artisans, and farmers—were characterized by their striving for a ‘big business adventure’. In contrast to professions where a fixed salary was to be expected, entrepreneurs had to take the risk associated with the nature of the markets (Holcombe 1999). Later, Schumpeter (1934) introduced his idea of the entrepreneur as the change agent in the creative destruction of an equilibrium. Drucker (1985), on the other hand, argued that entrepreneurs can also be found in existing organizations and governmental institutions.

The approach proposed by Shane and Venkataramans (2000) is often used as a basis for describing entrepreneurship research as ‘the scholarly examination of how, by whom, and with what effects opportunities to create future goods and services are discovered, evaluated, and exploited.’ For this study, we will use a definition according to which entrepreneurship is ‘the process of identifying new entrepreneurial opportunities and converting them into marketable products and services’ (Fueglistaller, Müller, Müller, and Volery, 2016).

Social Entrepreneurship

The phenomenon of social entrepreneurship was always around, but it was not labeled as such (Dees 1998). Nevertheless, the introduction of this concept is essential in order to come closer to a more specific understanding of the concept. Social entrepreneurship is a rather young research area that is a subcategory of classic entrepreneurship research (Cbhherto and Miller 2008; Mort and Weerawardena 2006). Researchers on social entrepreneurship come from a variety of disciplines, such as management, entrepreneurship, political science, economics, marketing, sociology, and education (Short, Moss, and Lumpkin 2009). This plethora of perspectives makes it difficult to find a common ground. Although the term has been used in scientific discourse for several decades and the number of published papers has increased tremendously, there is, as yet, no generally applicable definition (Mort, Weerawardena, and Carnegie 2003a; Mort and Weerawardena 2006). This is due to the fact that researchers as well as practitioners understand the concept in different ways; ‘it means different things to different people’ (Dees 1998, 1). Consequently, it has not yet been possible to agree on a definition of the term (Thompson, Kiefer, and York 2011).

Previous research can be roughly divided into two areas. On the one hand, there are researchers who focus on the character traits of social entrepreneurs, as discussed before. On the other hand, there are a large number of publications that define the discipline itself (see Table 1). The most comprehensive attempt to analyze the existing literature and work out commonalities can be found in the article written by Aliaga-Isla and Huybrechts (2018).

Table 1. Definitions of the term ‘social entrepreneurship’.

Authors	Year	Definition	#Citations
Austin, J.; Stevenson, H.; Wei-Skillern, J.	2006	We define social entrepreneurship as an innovative, social-value-creating activity that can occur within or across the non-profit, business, or government sectors.	3187
Abu-Saifan, S.	2012	The social entrepreneur is a mission-driven individual who uses a set of entrepreneurial behaviors to deliver a social value to the less privileged, all through an entrepreneurially oriented entity that is financially independent, self-sufficient, or sustainable.	338
Certo, S. T.; Miller, T.	2008	Social entrepreneurship involves the recognition, evaluation, and exploitation of opportunities that result in social value—the basic and long-standing needs of society—as opposed to personal or shareholder wealth.	489
Cho, A. H.	2006	(...) a set of institutional practices combining the pursuit of financial objectives with the pursuit and promotion of substantive and terminal values. (...) we believe the definition that holds the most potential for building a unique understanding of social entrepreneurship and developing actionable implications is one that focuses on the social value creation mission and outcomes, both positive and negative, of undertakings aimed at creating social value.	231
Dacin, P.A.; Dacin, M.T.; Matear, M.	2010	(...) they are orthodox businesses with social objectives ‘whose surpluses are principally re-invested for that purpose in the business or in the community, rather than being driven by the need to maximize profit for shareholders and owners.’	1095
Harding, R.	2004	Social entrepreneurs are defined as individuals or private organizations that take the initiative to identify and address important social problems in their communities.	332
Korosec, R. L.; Berman, E. M.	2006	For the purposes of this paper, social entrepreneurship means non-profit organizations that apply entrepreneurial strategies to sustain themselves financially while having a greater impact on their social mission (i.e., the ‘double bottom line’).	235
Lasprogata, G. A.; Cotten, M. N.	2003	(...) a process involving the innovative use and combination of resources to pursue opportunities to catalyze social change and/or address social needs.	215
Mair, J.; Martí, I.	2006a	We define social entrepreneurship as having the following three components: (1) identifying a stable but inherently unjust equilibrium that causes the exclusion, marginalization, or suffering of a segment of humanity that lacks the financial means or political clout to achieve any transformative benefit on its own;	3010
Martin, R. J.; Osberg, S.	2007	(2) identifying an opportunity in this unjust equilibrium, developing a social value proposition, and bringing to bear inspiration, creativity, direct action, courage, and fortitude, thereby challenging the stable state’s hegemony; and (3) forging a new, stable equilibrium that releases trapped potential or alleviates the suffering of the targeted group, and through imitation and the creation of a stable ecosystem around the new equilibrium, ensuring a better future for the targeted group and even society at large.	1729
Massetti, B. L.	2008	Based on whether a business has a more market- or socially driven mission and whether or not it requires profits, the Social Entrepreneurship Matrix combines those factors that most clearly differentiate social entrepreneurship from traditional entrepreneurship.	160
Roberts, D.; Woods, C.	2005	Social entrepreneurship is the construction, evaluation, and pursuit of opportunities for transformative social change carried out by visionary, passionately dedicated individuals.	403

Robinson, J.	2006	I define social entrepreneurship (SE) as a process (...) that includes: the identification of a specific social problem and a specific solution (or set of solutions) to address it; the evaluation of the social impact, the business model, and the sustainability of the venture; and the creation of a social mission-oriented for-profit or a business-oriented non-profit entity that pursues the double (or triple) bottom line.	248
Schneiders, K.	2017	(...). mainly includes those companies (start-ups) that claim to solve ecological and social problems with the help of economic instruments. Whether for-profit or non-profit, whether working in education, healthcare, or employment, social enterprises all share certain characteristics. The rest is innovation. The innovation can take the form of new products and services, new production and distribution methods, or new organizational models. (...)	1
Schwab Stiftung	Stand 2019	Creating the greatest impact requires leveraging market forces and business practices wherever possible. That means generating income from the sale of your products or services, yes, but it also means driving a relentless results-based focus throughout the organization, just as any commercial enterprise would.	-
Seelos, C.; Mair, J.	2005	Social entrepreneurship combines the resourcefulness of traditional entrepreneurship with a mission to change society.	940
Skoll Stiftung	Stand 2019	(...) society's change agent: a pioneer of innovation that benefits humanity.	-
Tan, W. L.; Williams, J., and Tan, T. M.	2005	A legal person is a social entrepreneur from t1 to t2 just in case that person attempts, from t1 to t2, to make profits for society or a segment of it by innovation in the face of risk, in a way that involves that society or a segment of it.	356
Thompson, J., & Doherty, B.	2006	Social enterprises—defined simply—are organizations seeking business solutions to social problems. They need to be distinguished from other socially oriented organizations and initiatives that bring (sometimes significant) benefits to communities but which are not wanting or seeking to be 'businesses'.	392
Thompson, J.; Alvy, G., Lees, A.	2000	(...) social entrepreneurs, people who realize where there is an opportunity to satisfy some unmet need that the state welfare system will not or cannot meet, and who gather together the necessary resources (generally people, often volunteers, money, and premises) and use these to 'make a difference'. [T]he notion of trading for a social purpose is at the core of social entrepreneurship, requiring that social entrepreneurs identify and exploit market opportunities, and assemble the necessary resources, in order to develop products and/or services that allow them to generate "entrepreneurial profit" for a given social project.	776
Tracey, P.; Jarvis, O.	2007		291
Zahra, S. E.; Gedajlovic, E.; Neubaum, D. O.; Shulman, J. M.	2009	Social entrepreneurship encompasses the activities and processes undertaken to discover, define, and exploit opportunities in order to enhance social wealth by creating new ventures or managing existing organizations in an innovative manner.	1739

As Table 1 demonstrates, there is a variety of social entrepreneurship definitions. Furthermore, the degree of specification of the definitions varies (Austin, Stevenson, and Wei-Skillern 2006).

The study by Wilkinson, Medhurst, Henry, Wihlborg, and Braithwaite (2014) splits social entrepreneurship into three dimensions, namely the social, entrepreneurial, and governance dimensions. We use this scheme to systematically cluster the current literature. However, this view very obviously contradicts the realities of business life. Firstly, the limitation to the three entrepreneurial dimensions, which neglects the need to achieve financial surpluses as an endeavor towards investments into future innovations and as the primary source of income, as well as the need for innovation as a driving factor for social impact (Kratzer 2020). Having a primary source of income represents a basic function of social businesses, according to Wilkinson et al. (2014). Thus, social entrepreneurship might likewise

be very much directed towards economic profitability, investments in innovative problem solutions, and creating and finding innovative solutions for itself. Weber and Kratzer (2013) present a model of social entrepreneurship in which economic activities reach from charities to profit-driven enterprises. Table 1 shows a relative consensus between researchers on the social and entrepreneurial dimensions. On the one hand, there is agreement that social entrepreneurship includes entrepreneurial action (Hibbert, Hogg, and Quinn 2005; Seelos and Mair 2005). We remember that we defined entrepreneurship as ‘the process of identifying new business opportunities and transforming them into marketable products and services’ (Fueglistaller et al. 2016). However, this is not used for the purpose of maximizing profits for shareholders (Certo and Miller 2008; Harding 2004), but as a means for the purpose of an overarching mission. Social entrepreneurship always means primarily creating social or societal added value (Korosec and Berman 2006; Massetti 2009; Mort et al. 2003b) or providing a solution to social problems (Mair and Martí 2006a; Schneiders 2017; Thompson and Doherty 2006). The elementary part of the entrepreneurial dimension is the discovery and exploitation of opportunities (Mort et al. 2003a). Opportunities may arise due to failure of existing actors, both from conventional companies (Austin et al. 2006) and from established organizations in the welfare sector (Thompson, Alvy, and Lees 2000). This market failure results in a variety of opportunities, which Austin et al. (2006) define as follows: ‘Opportunity is defined as the desired future state that is different from the present and the belief that the achievement of that state is possible’ (Austin et al. 2006). These opportunities must be recognized and exploited (Zahra et al. 2009); the challenge of acquiring the resources required for implementation is much greater (Austin et al. 2006; Thompson et al. 2000). Mair, Bal Battilana, and Cardenas (2012) provide a detailed consideration of the identification of fields of action and implementation options.

It becomes clear that the agreement on social or societal added value and entrepreneurial action as core elements of social entrepreneurship leads to special challenges in practice. While the needs of shareholders are primarily taken into account in classic companies, social enterprises have to serve other stakeholder interests (Mort et al. 2003a). Since they often have to weigh financial or operational goals against their social mission, they are often referred to as hybrid organizations (Hartigan 2006).

From Table 1, we also see that the components that should be assigned to the governance dimension are particularly controversial, which could be due to a lack of research in this area (Mair, Robinson, and Hockerts 2006b). This describes how the organization formally defines its social goals. ‘Good governance’ together with well-thought-out control mechanisms can thus help prevent a mission drift, since the motivation to create added value is not only borne ideologically, but can also be found in formal rules and structures (Bacq et al. 2016a). These relate to, among others, the opportunities for participation, the participation rights of employees, and the question of how profits are used (Wilkinson et al., 2014). The latter is often discussed in research, and contains approaches that require the full reinvestment of all profits, but also the opinion that their distribution is a necessary personal incentive (Hartigan 2006; Rummel 2011). Closely related to this is also the question of the legal form, which arises in view of the fact that there is no separate legal form for organizations operating with social entrepreneurship (Harding 2004; Lasprogata and Cotten 2003).

The triad of the social, entrepreneurial, and governance dimensions can also be found in the article by Aliaga-Isla and Huybrechts (2018) published in ‘Cleaner Production’. Aliaga-Isl and Hybrechts (2018) carry out a mimetic analysis of all 45 definitions found, among which they check for commonalities. There are three main categories: (1) intent or promise, (2) the entrepreneurial opportunity, and (3) the type of organization. In terms of intent or promise (1), almost all definitions include goals that address people, social aspects, financial goals, or contextual problems. However, according to the authors, the social aspect in particular should be researched even more, since its content has so far been vague. From the direct help of disadvantaged people to the view that all organizations are social through the employment of employees or the payment of taxes, there are many different views on this point. This

category is similar to the social dimension. The entrepreneurial opportunity (2) is adopted from entrepreneurship research, whereby the actions based on it in social entrepreneurship should solve social challenges. Here, we find the entrepreneurial dimension again. The type of organization (3), according to the definitions examined, is only of importance insofar as it allows the organization concerned to carry out its actions (Aliaga-Isla and Huybrechts 2018). The question of the legal form is an essential part of the governance dimension, although it also includes other aspects.

The article from Aliaga-Isla and Huybrechts (2018) was not coincidentally published in an academic journal mainly addressing the term sustainable entrepreneurship. According to much research, 'social entrepreneurship' is part of 'sustainable entrepreneurship' (i.e., Cornuel and Letz 2017). As Shepherd and Patzeld (2011, 151) put it, 'Sustainable entrepreneurship is focused on the preservation of nature, life support, and community in the pursuit of perceived opportunities to bring into existence future products, processes, and services for gain.' This definition indicates that 'social entrepreneurship' is inevitably part of 'sustainable entrepreneurship', or, in other words, the preservation of nature is as much 'social entrepreneurship' as the focus on 'social issues' serves the preservation of nature. The interlink between the solution of environmental protection issues and social issues also becomes obvious when looking at the different typologies of entrepreneurs, as sketched above. The link between 'social entrepreneurship' and 'sustainable entrepreneurship' widely neglected in research until now.

5.4. The Historical Development and Recognition of Social Entrepreneurship in Different Economies

USA

In the United States, nonprofit organizations (NPOs) receive far less government support than in most European countries, and consequently have to rely on their own economic activities. This tradition, deeply rooted in US history, became increasingly important in the 1970s against the backdrop of an economy weakening due to the oil crisis (Kerlin 2006). With further cuts in the charitable sector, many NPOs were forced to expand their economic activities, and began to sell products and services that were often not linked to their charitable work (Lasprogata and Cotten 2003). This development laid the foundation for the emergence of two different social entrepreneurship streams. On the one hand, there is the 'Social Enterprise School of Thought', which, as the name suggests, focuses on the executive organization. One of the most famous examples is the Grameen Bank founded by Muhammad Yunus, which is based on the principle that investors provide their money free of interest and without a dividend in return (Yunus, Moingeon, and Lehmann-Ortega 2010, 311). The NPO Ashoka represents the second stream. In this approach, the legal form of the organization concerned is of secondary importance; the focus is much more on the individuals who create social innovations (Bornstein 2004). This school also refers to both Peter Drucker's concept of an innovator and the reformation or revolution of the social value chain demanded by Schumpeter (Dees and Anderson 2006). To this day, Ashoka supports suitable candidates within the framework of its Fellowship Programs.

Europe

After the end of World War II, Europe faced acute problems, such as poverty and housing shortages. In the 1970s and 1980s, challenges such as persistently high unemployment and an urgently needed reduction in public debt were added. At the same time, it became clear that the existing government instruments were insufficient to develop functioning solutions for the society (Defourny and Nyssens 2010). Against this background, the third sector gained great importance, which includes organizational forms such as non-profits and cooperatives that do not belong to either the public or the private sector (National Audit Office 2010). These began to deal with former government tasks (Defourny 2001). The nature and form of the involvement of organizations in this sector varied widely in Europe, which was

mainly due to the different welfare state models in the individual countries (Defourny and Marthe 2012). In the following, we briefly summarize the underlying theoretical approaches.

A common approach is to differentiate between the systems of Bismarck and Beveridge. The model based on Otto von Bismarck aims at income-dependent and social-security-financed coverage for employees. This concept enjoyed great popularity in many European countries until the 1980s. The contrasting approach by William Beveridge focuses on basic security for everyone, including women and children, which is financed by tax revenues (Rohwer 2008). Due to the challenges of the 1980s, this approach was frequently seen as a solution for the state (Kolmar 2007).

Esping-Andersen (1990) schematized the European countries in the 1990s and developed the theory of the welfare regime. The distinguishing feature is the relationship between the state and the market with regard to the provision of social benefits. In the following, the quality and impact of social policy on society, such as redistribution issues, are examined. For a closer look, the following classification based on Esping-Anderson (1990) can be made: (1) Nordic countries, (2) United Kingdom, (3) countries that are closest to the Bismarckian model, i.e., Belgium, France, Germany, and Ireland, and (4) southern countries (Oschmiansky and Kühl 2010).

(1) The Nordic countries are characterized by the fact that, until the 1980s, all social expenditure was state-owned, and they had some of the highest in the world (Blomqvist 2004). It was only because of the weak economic performance in the 1990s, which many attributed to the cost-intensive welfare system, that the limits of the strict division of tasks began to dissolve (Stephens 1995). This also encouraged the emergence of new third-sector cooperatives (Defourny and Nyssens 2010).

(2) In contrast to that, the situation looked different in the United Kingdom, where government social spending was very low and the social sector was made up of a relatively large voluntary sector financed by private resources. Only after the end of World War II, a basic security system based on the Beveridge model was established. The third sector began to benefit from this in the 1980s when the state opened the possibility of social benefit offerings for a variety of organizational forms (The Secretary of State for Health and Social Care 2016; Thompson 2002).

(3) In the Bismarck countries, mediating organizations have always played a major role, especially with regard to social services and social security. In the 1980s, associations (Verbände) were increasingly used to support the collaboration of public institutions and non-profit organizations (NPOs) (Defourny 2001). This type of economy became very popular in France and Belgium, and continues to this day under the terms social economy (*économie sociale*) or solidarity economy (*économie solidaire*) (Moulaert and Ailenei 2005).

(4) In the southern countries of Europe, government spending on welfare and social benefits has always been significantly lower than in other European countries. Characteristic was the particularly important role of the family and, at least until the state restricted it in the 20th century, the charity of the Christian Church (Martin 1996). Accordingly, there were few NPOs in the region, but a strong cooperative movement. When the existing social security network threatened to fail in the 1980s against the background of an aging population and changing family structures, new cooperatives were created in Italy. Unlike before, these focused on the interests of society as a whole and involved a number of stakeholders. Against this background, the article 'Impresa Sociale' was published in 1990, which concretized the concept of the 'Social Enterprise' for the first time and tried to formally capture the movement described above (Defourny and Nyssens 2010). Italy's parliament responded by drafting the legal form of the social cooperative (Law No. 381) within one year, which is now considered the origin of the social entrepreneurship movement in Europe (Mancino and Thomas 2005).

The aforementioned problems of the 1980s and the emergence of various new forms of organization in the third sector, which previously took on government tasks, led many governments to follow the Italian model and to begin to create their own legal forms for social entrepreneurs. Later, the 'social purpose

company' was created in Belgium, and in the United Kingdom, the 'community interest company' was created (Defourny and Marthe 2012; Wilkinson et al., 2014).

Germany

The generally very young research area of social entrepreneurship has received little attention in Germany for a long time. Although there were first movements already at the end of the 19th century that could be assigned to the sector from today's perspective, such as the cooperative Raiffeisenbank, until recently, the term was hardly represented in theory and practice. This is due to a number of framework conditions in Germany that have led to very special challenges (Schwarz 2014).

First, there are a variety of organizations associated with social entrepreneurship. Vincze, Birkhölzer, Kaepplinger, Gollan, and Richter summarized them as social enterprise families that are divided into cooperatives, welfare organizations, operational foundations, traditional associations, volunteer agencies, socio-cultural centers, self-help enterprises, self-managed alternative enterprises, neighborhood and community enterprises, integration enterprises, work integration enterprises, and new-style social enterprises (2014).

Secondly, there is a language barrier with the difficulties in transferring and translating the term 'social entrepreneurship' into the German language. Firstly, terms such as 'soziales Unternehmertum' have an almost negative connotation, since they are associated with traditional companies that often generated their profits at the expense of disadvantaged people (Schwarz 2014). Second, the translation of 'social' as 'sozial' is not complete, since the Anglo-American term 'social' is more comprehensive and includes ecological aspects. It is therefore suggested that 'gesellschaftlich' would be a more appropriate expression (Gebauer and Schirmer 2013).

In addition to the translation problems described above, there are also a number of practical challenges that social enterprises in Germany have to face. The study 'Fostering Social Entrepreneurship' by Linklaters (2006) compares the structures of opportunities for social entrepreneurship in different countries, and the author comes to the conclusion that the traditionally strong welfare state and its interdependencies with the (church) welfare organizations are a hindrance. This is due to the fact that they suggest the superfluousness of social entrepreneurship at different social levels (Leppert 2008; Linklaters 2006). In fact, the classic players seem to see social enterprises as competition (Wilkinson et al., 2016).

Another challenge is the poor ability to raise capital to set up social enterprises; this is closely linked to the lack of a legal form. Organizations that choose to be a non-profit are not allowed to make a profit and are excluded from start-up funding options, such as the EXIST grants (Federal Ministry for Economic Affairs and Energy 2016). At the same time, a lack of a charitable purpose leads to the exclusion of funding from foundations (Stiftungen). These challenges are also typical for social enterprises outside of Germany, which is why they are also referred to as hybrid organizations (Mort et al. 2003a).

Since the beginning of the 21st century, however, the scene has also started to gain importance. Ashoka opened its headquarters in Germany in 2003 (Ashoka Germany) and, at the latest, when Muhammad Yunus was awarded the Nobel Peace Prize in 2006, the topic finally reached the center of society (Huybrechts and Nicholls 2012). This can also be seen in the number of start-ups of social enterprises: According to a study by Kreditanstalt für Wirtschaft (KfW), there were 154,000 young entrepreneurs in 2017 who described themselves as social entrepreneurs, which corresponds to a share of 9% (Metzger, 2019). The area is also gaining relevance in research and teaching, which is reflected in an increase of programs and courses on social entrepreneurship. Furthermore, the Social Entrepreneurship Netzwerk Germany e.V. (SEND e.V.) founded in 2017 tries to represent the interests of social enterprises in politics in order to create better framework conditions (Social Entrepreneurship Netzwerk Deutschland e.V. 2017). These efforts seem to pay off, since the topic is not only taken up in the current

coalition agreement of the federal government (Federal Government 2018), but can also be found at the level of state policy (Coalition agreement, State Government of Bavaria 2018). The Center for Social Innovations and Investments, for example, also predicts improvement in the competitive situation with welfare, as they are interested in innovative approaches due to the large amount of competition in the market (Center for Social Investments and Innovations and University Heidelberg 2013). Joint publications like ‘Social Progress Needs Social Innovation’, a position paper of all major charities (Wohlfahrtverbände), as well as the Federal Association of German Startups and SEND, indicate an increasing willingness to cooperate in solving social challenges (Arbeiterwohlfahrt et al. 2019).

This development is supported by the establishment of organizations that focus on demonstrating the effectiveness of solutions through impact measurement and, thereby, making them more tangible for business, welfare, and politics (Kurz and Kubek 2018). To show that social entrepreneurs also have enormous economic potential in which they not only fight symptoms, but also work on systemic change, Ashoka Germany published a study together with McKinsey (2019) in which the financial effect was measured. Four Ashoka Fellows, organizations whose work Ashoka considers particularly worthy of funding, were examined for their financial potential. The researchers come to the conclusion that the 72 German Ashoka Fellows alone save the state 18 billion EUR in costs through their work in health, care, or education (Ashoka Germany and McKinsey and Company 2019).

However, there are large differences in the development of social and entrepreneurial activities in the USA, Europe, and, particularly, Germany, as our short synthesis shows. These differences stay next to large differences in views on entrepreneurship among and between academics, politicians, and entrepreneurs. In order to lighten this tension at least in parts, we conducted a survey following the ‘Policy Delphi’ approach in Germany based on our literature study addressing this multifaceted issue.

5.5. Method

In order to address the aforementioned issues about the nature of social entrepreneurship, a stepwise research approach was chosen. In the first phase, an extensive literature review was conducted in order to identify attributes used by researchers to define social entrepreneurship. In the second phase, the Policy Delphi method was carried out to determine themes used by researchers and practitioners.

Literature Review

For the structured literature review, the following keywords with the OR function are used: ‘Social Entrepreneurship’, ‘Social Enterprise’, ‘Social Entrepreneur’, ‘Social Start-up’, ‘Sozialunternehmen’, ‘soziales Unternehmen’, and ‘Social Business’. In order to ensure high academic relevance, only available full texts that were published in peer-reviewed academic journals were taken into account. Furthermore, only articles in English were considered in the first step. The keyword search in the database Business Source Complete resulted in 1120 articles; of these, 90 articles were identified as relevant. All articles that discussed social entrepreneurship as a phenomenon or deal with the origin or definition of social entrepreneurship were considered relevant. In addition to peer-reviewed journal articles, other publications with a special focus on Germany were included in the literature review. The definitions of the articles and publications were analyzed and key attributes were filtered out.

Policy Delphi

This approach, developed by Helmer and Dalkey for the Rand Corporation in the 1960s, is intended to enable a group of experts to find consensus and uses both qualitative and quantitative elements (Gupta and Clarke 1996, 185). This method is particularly suitable for our research project because it gives us the opportunity to question the multidisciplinary views of as many stakeholders as possible regarding their views of social entrepreneurship and helps us to find consensus. In addition, this approach supports the filtering out of less important subtopics, and is very suitable for newly emergent patterns and

structures. In this way, the Policy Delphi is particularly suited in the current context. Furthermore, aspects specific to Germany would be lost due to the lack of necessary scientific publications from which we would derive the survey have so far been missing. The combination of qualitative and quantitative methodology is the most comprehensive and deepest approach, and contributes to a high validity of the results.

Following Gartner and his article on the definition of entrepreneurship (1990), the Policy Delphi method was used. The versatility of the Policy Delphi (Turoff 1975) allowed the researchers to start with a qualitative approach in the first questionnaire in order to ensure objectivity when identifying attributes. The qualitative approach is enriched by the quantitative nature of the second questionnaire. A purely quantitative approach would require the previous selection and weighting of all the different sub-aspects of current research on this topic and, thus, influence the objectivity of the survey..

The respondents were asked to fill in their age, gender, nationality, job sector (politics, social entrepreneurship, private industry, research, science, welfare), and e-mail address for the second round. The questionnaire was sent to the network members of the Social Entrepreneurship Netzwerk Deutschland eingetragener Verein (SEND e.V.). SEND is the German Association for Social Entrepreneurship. All applicants for SEND membership are checked by the association before becoming a member. In order to become a member of SEND, the company needs to create social added value, provide information on the usage of their profit, and have a secure financing. Apart from that cooperation partners from the sectors of welfare, politics, science and other organizations are welcome if they can proof that they are, in some way, connected to the goals of SEND and its work. At the time of the survey's distribution, most of the members were social entrepreneurs or had worked for social enterprises. Consequently, only people who were familiar with the topic of social entrepreneurship were included in the survey. In addition to reaching the network members, the survey was spread through the social media channels of SEND e.V. (newsletter, Facebook, Twitter). By choosing these particular channels, the communication was directed toward people that are informed and knowledgeable in the field. Furthermore, the open question style asks for a high cognitive and temporal investment of the participants, making sure that only people with background knowledge are participating (Engartner and Ullrich 2006).

The first round resulted in 122 responses. A total of 70.49% of the responses came from SEND members, and 29.51% from non-members. As expected, most of the responses from SEND members came from social entrepreneurs or people who worked for social enterprises. The most common occupational groups to which the participants were assigned were social entrepreneurship (62.21%), science (9.84%), and the private sector (9.02). A total of 53.28% stated that they were male, 45.08% stated that they were female, and 1.64% did not disclose their gender identity.

Two coders coded the definitions from the first questionnaire independently. The coding procedure resulted in 620 codes including duplicates. An example of the coding procedure is demonstrated with the following definition. 'To work with entrepreneurial means on positive social change' resulted in two codes, namely 'Entrepreneurial means' and 'Positive social change'.

In a next step, the coders clustered the initial 620 codes, which resulted in 158 codes. All codes that are mentioned more than one time (72) were included in the second survey. The comparison with the attributes found in the first phase of this research resulted in nine additional attributes from the literature review that are included in the main survey. Codes that were mentioned one time fell into two categories: (1) important enough to include in the questionnaire or (2) not important and shortlisted. Finally, two additional questions with each of the 16 attributes were added to the end of the questionnaire.

The second questionnaire of the Policy Delphi was sent to the participants of the first round; four emails came back due to mistakes in the email address, leaving 118 participants. The questionnaire asked the

122 participants to rate the identified attributes from the first questionnaire and the literature review on a Likert scale from 1 to 4 in terms of their importance for the definition of social entrepreneurship.

- | | |
|-------------------------|--|
| [4] Very important: | A most relevant point. First-order priority. Has direct bearing on major issues. |
| [3] Important: | Relevant to the issue. Second-order priority. Significant impact, but not until other items are treated. |
| [2] Slightly important: | Insignificantly relevant. Third-order priority. Has little impact. |
| [1] Unimportant: | No relevance. No priority. No measurable effect. Should be dropped as an item to consider. |

The response rate for the second round of the Policy Delphi was 63.56% (75 out of 118 respondents). A total of 69.33% were SEND members, leaving 30.67% for non-members. More than half of those involved identified with the male gender (52.00%), 45.33% said they were female, and 2.67% did not want to give any information. When asked about the professional group, which allowed multiple answers, most of the participants stated that they worked in the fields of social entrepreneurship (74.67%), the private sector (26.67%), and science (14.67%).

5.6. Analysis

For our analyses, we used the data of the second survey of the Policy Delphi. In the first step, the importance of the identified attributes (from the first survey of the Policy Delphi) were ranked. In the second step, the importance of the identified attributes was analyzed by applying a factor analysis. For the factor analyses, only attributes that fulfill the Kaiser–Meyer–Olkin criteria and that subsequently show moderate or low correlations with other attributes were entered. The factor analysis used principal component analyses as an extraction method and a varimax rotation with Kaiser normalization. The factor analysis resulted in a five-factor solution, which explains 55% of variance. In the third step, these five factors were correlated using a Spearman correlation.

5.7. Results

Table 1 provides an overview of some of the best-known attempts to define the expression. Only definitions that focus on social entrepreneurship, but not the character traits of social entrepreneurs, were taken into account. Furthermore, definitions specific to Germany are included in the table. According to the second questionnaire, the ten most important attributes for the definition of social entrepreneurship are shown in Table 2, and the least important ones are presented in Table 3.

Table 2. Elements that are most important.

Variable	Mean
Positive influence on the society	3.96
Solution to a problem	3.65
Meaning	3.65
Impact as a goal	3.60
Social impact	3.60
Oriented to the common good	3.59
Social added value	3.59
Social and ecological impact	3.51
Social improvement	3.51
Social improvement	3.49

Table 3. Elements that are the least important.

Variable	Mean
Entrepreneurial legal form	2.15
Public funding and donations	2.13
No specified legal form	2.13
Institutional practices	2.13
Management of an existing company	2.13
Focus on shareholder	1.84
Non-profit legal form	1.75
No public funding and donations	1.72
Profit orientation in the foreground	1.63
No orientation on the market	1.56

The conducted factor analysis resulted in a five-factor solution, as illustrated in Figure 2. The common ground of all factors is the reference to 'social'. From this common ground, the attributes branch out into factor A: 'Societal-Visionary', factor B: 'Ecological', factor C: 'Societal-Entrepreneurial', factor D: 'Economic', and factor E: 'Innovative-Entrepreneurial'. The five factors were named after thoroughly considering all attributes belonging to each factor. For factor A, the majority of attributes refer to societal changes, societal values, cooperation, human demands, human wishes, visions, new structures, and future opportunities. For factor B, all attributes refer to ecological changes and improvements. Behind factor C, there are attributes referring to societal impact, changes,

and improvements, as well as business models and start-ups. Factor D is backed up with attributes such as enterprises, resources, economic sustainability, products, services, and business means. Finally, factor E consists of attributes such as innovative methods, creativity, systematic change, and inclusion of stakeholders and means.

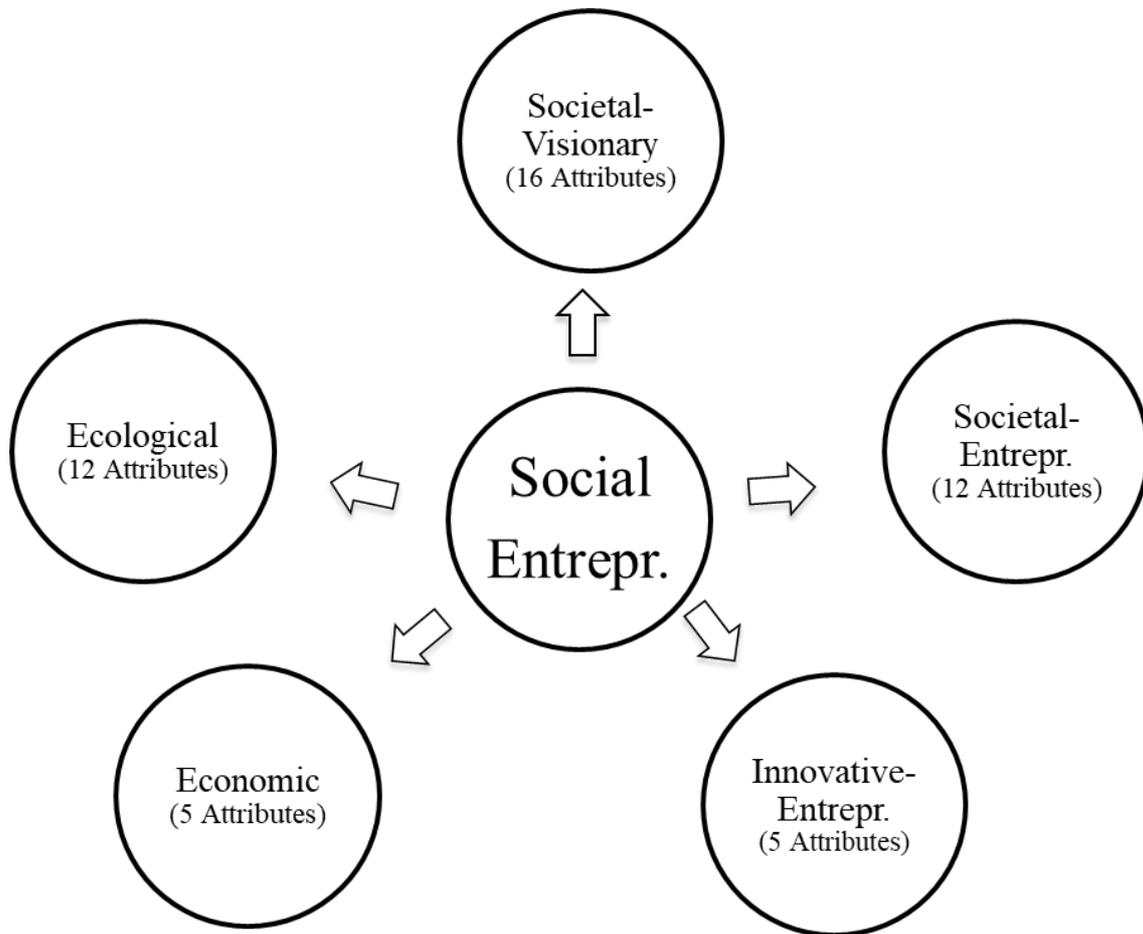


Figure 1. The five dimensions around ‘social entrepreneurship’.

After identifying the five dimensions of ‘social entrepreneurship’ based on the Policy Delphi, we looked at the degree of intercorrelation among these dimensions. As Figure 2 shows, four out of the five factors have low to medium-high correlations on a statistically significant level. One dimension appears to be more weakly linked to the other attributional factors, that is, the dimension ‘Ecological’ has the weakest correlations with all other factors. Seemingly, attributes referring to societal, economic, entrepreneurial, and innovation issues are considered as close together, whereas ecological attributes of ‘social entrepreneurship’ exist mainly unconnected. This finding is surprising, as the ecological, economic, and social concepts are thought of as a basis for such terms as ‘sustainable entrepreneurship’.

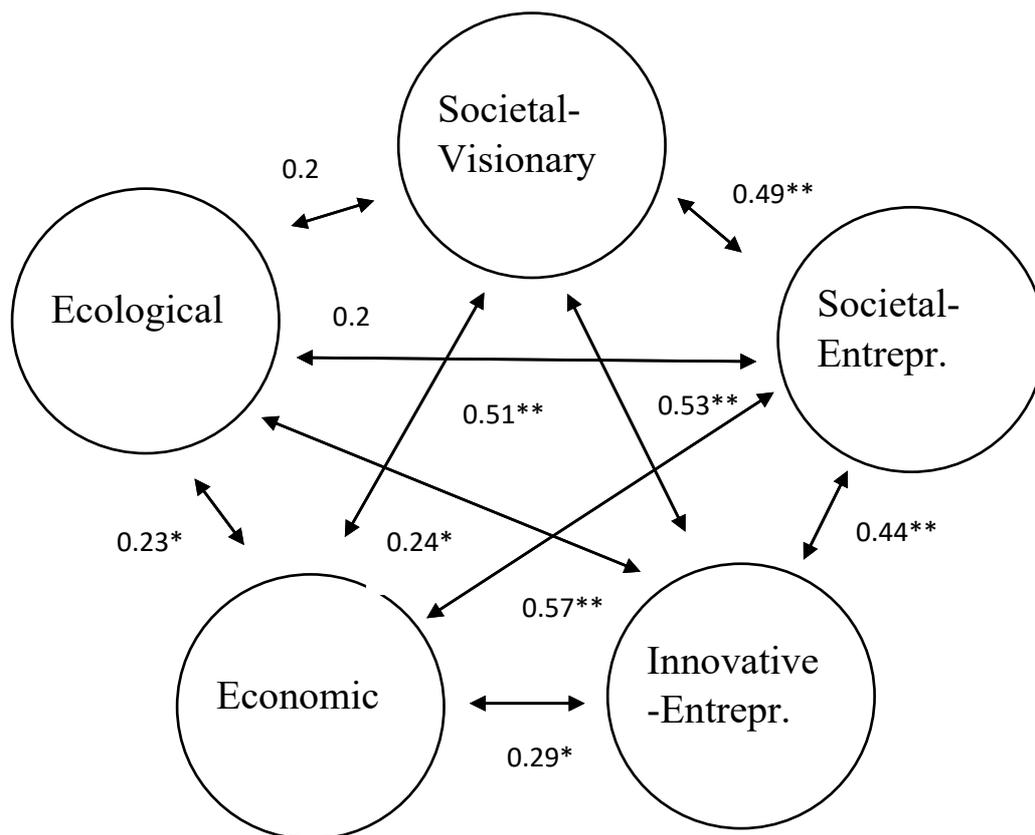


Figure 2. The degree of intercorrelation among the five dimensions around ‘social’ (** < 0.01; * < 0.05).

5.8. Discussion and Conclusions

In addition, as our historical flashback shows, the development of a public or private business sector that is nowadays labeled as ‘social’ has been very different in the leading economies of the USA and Europe. These differences are backed up in the scientific literature (i.e., Bacq and Janssen, 2011), particularly when including the geographical context as a dimension (Dees and Anderson, 2006; Defourny and Nyssens, 2010). Even within Europe, there are still differences. In Great Britain, the concept of social enterprises that mix social purposes with market methods is the usual case, whereas this conceptualization is less prominent in other parts of Europe. However, this mixed nature of social enterprises has gained increasing prominence in a number of European countries, such as France and Germany (Salamon and Sokolowski, 2014). In order to create a bit more clarity on what ‘social entrepreneurship’ might be in the view of experts, we conducted a Policy Delphi survey in Germany. The choice of one European country was made in order to contrast it with other countries and regions. An entire comparison is less useful in this case, since the conceptualizations are significantly different, and an enterprise considered in one country as social would be not in another country. After a structured literature analysis, German experts were asked to define the term ‘social entrepreneurship’ and, in a second step, the same experts were asked to rank the attributes according to their importance. The results partly support current interpretations and conceptualizations, but also contradict parts of them, as expected in this special German case. As the results show, the legal status and governance do

not seem to have any importance in framing social entrepreneurship. This result can be explained by the diverse set of legal constructions for charitable organizations in Germany, which could profit from allowing legal forms of organizations to be characterized as ‘social’. In addition, independently of the legal form, the ways and processes of organizing and governing social entrepreneurship activities are also very diverse and heavily depend on concrete action. This might make it almost impossible to set legal or governmental issues as being generally important for social entrepreneurship. The situation in Germany is not very different compared to other countries, so it might be that conceptualizing the legal status or governance of social enterprises as a major framing condition for ‘social entrepreneurship’ might be exaggerated. This finding could also be a result of the dynamically changing consideration and conceptualization of social enterprises as the focus globally shifts more toward hybrid forms. This should at least be a central point of future research.

Second, our analyses illustrate that there are five dimensions that add to the term ‘social’ in characterizing social entrepreneurship, namely ‘Societal–Visionary’, ‘Ecological’, ‘Societal–Entrepreneurial’, ‘Economic’, and ‘Innovative–Entrepreneurial’. The entrepreneurial dimension is obvious, but the ecological, societal, and economic dimensions are partly included and partly neglected in existing conceptualizations; in addition, other dimensions are added. As discussed earlier, the need to achieve financial surpluses as an endeavor toward investments in future innovations and the need for innovation as a driving factor for social impact are clearly indicated as important by experts. Moreover, the ecological dimension also turns out to be one important addition to the social dimension, as discussed earlier. In sum, social entrepreneurship might be framed as being ‘social’ in its core, and expands into the ‘societal’, ‘entrepreneurial’, ‘economic’, and ‘ecological’ dimensions. The popular phenomenon of social entrepreneurship is rather a multi-dimensional construct, which probably has various patterns and has the concept of ‘social’ at its ‘core’.

The last finding of this study is the position of the ‘ecological’ dimension within the multi-dimensional frame of social entrepreneurship. Although four of the dimensions seem to have something in common, the ecological dimension is isolated by mainly staying apart from the other dimensions. This finding questions the state-of-the-art framing of sustainable entrepreneurship, which is supposed to represent the overlap of economic, social, and ecological entrepreneurship. However, the presented study only gives a weak indication, and this result should not be overinterpreted. Another fact is that the study took place in Germany. Whereas in the Anglo-American culture, the term ‘social’ includes ecological aspects, that is not the case in Germany. This would be another explanation for why the core term ‘social’ has an isolated ecological dimension in this study.

This also refers to the limitations of this contribution. First, the bulk of the reviewed literature already indicates the variety of views, perspectives, definitions, and historical developments. Certainly, there are publications that we have missed. Second, the focus was (for a large part) on Germany as an example. The results found cannot be transferred to other countries or economies. The idea behind taking Germany was to at least focus on a largely homogenous population of experts as a sample who act and live with common legal regulations, a common history, and common cultural norms. Future research might take this study as a starting point to investigate the frameworks of social entrepreneurship in other countries and economies. When investigating ‘social entrepreneurship’, the very nature of the core term ‘social’ should be even more of a focus, as suggested by others as well. In our view, it is necessary to dissolve the confusion about the very nature of social entrepreneurship (and also terms such as sustainable entrepreneurship) in academia as soon as possible to go forward in researching this phenomenon. Only when we act on a common ground in research can future policy be supported and made towards an increasing share of social entrepreneurship activities in societies and economies. We think that our study makes a contribution in getting to a better overall picture of social entrepreneurship as a discipline (Cieslik, 2018) and as an important inquiry (Mair and Marti, 2006).

5.9. Supplementary Information

Author Contributions:

Conceptualization, K.C. and K.O.; data curation, K.C., J.K., and K.O.; formal analysis, K.C., J.K., and K.O.; investigation, K.C. and K.O.; methodology, K.C. and J.K.; project administration, K.C.; resources, K.O.; supervision, J.K.; validation, K.C., J.K., and K.O.; visualization, K.O. and J.K.; writing—original draft, K.C., J.K., and K.O.; writing—review and editing, K.C., J.K., and K.O. All authors have read and agreed to the published version of the manuscript.

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Conflicts of Interest

The authors declare no conflict of interest.

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6. ARTICLE 4: Social Entrepreneurship on its way to significance: The case of Germany

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6.1. Abstract

The environmental context plays a very important role in the success of entrepreneurial behaviour. Governments used this opportunity by introducing specific programmes. But do social entrepreneurs have a comparable chance of getting governmental support as commercial entrepreneurs in these programmes? We analyse the EXIST Start-up Grant in terms of the likelihood to receive it between entrepreneurs following economic and social sustainable development goals (SDGs). Our results indicate that there is a decreased probability to get the EXIST Start-up Grant when following social SDGs. We argue that it is about time to introduce specific programmes for social innovation and/or reassess existing programmes in terms of their openness to social entrepreneurs.

Keywords

Social Entrepreneurship; Government Support; Sustainable Development Goals; Funding

6.2. Introduction

In contrast to commercial entrepreneurship social entrepreneurs pursue the goal of creating societal or social added value (Korosec & Berman, 2006; Massetti, 2009; Mort, Weerawardena, & Carnegie, 2003) or finding solutions to social challenges (Mair, J. & Marti, 2006; Thompson & Doherty, 2006). Mair and Marti argue that social entrepreneurship is accompanied by economic outcomes alongside its social mission by defining social entrepreneurship as “*a process involving the innovative use and combination of resources to pursue opportunities to catalyze social change and/or address social needs*” (Mair & Marti, 2006, p. 37). The element of social entrepreneurs acting as a catalyst for social change is also pointed out by other researchers (Barberá-Tomás, Castelló, de Bakker, & Zietsma, 2019, Apostolopoulos et al., 2018). Therefore, social entrepreneurship is one of the driving forces for achieving the Sustainable Development Goals (SDGs). However, social entrepreneurs have a two-sided model since they follow their business activities besides pursuing their social mission (Smith, Gonin and Besharov, 2013) which means that they have to satisfy more stakeholders than commercial entrepreneurs. According to the Deutscher Social Entrepreneurship Monitor (Scharpe & Wunsch, 2019) 96.7% of social start-ups declare that the social impact is at least equivalent with financial return but in the most cases even more important.

After the conceptual understanding of the phenomena, and the topic of social impact and value creation, resources supporting and financing social entrepreneurship and decision making by social investors is the third most addressed research area within social entrepreneurship (Sassmannshausen, & Volkmann, 2018). Consequently, it seems to be one of the most sensitive matters within this research field after understanding the concept and its impact on society. The structured literature review conducted by Gupta, Chauhan, Paul and Jaiswal (2020) showed that social entrepreneurs face a variety of challenges. The greatest four are gain access to funds, a lack of a legal framework, scarcity of support structures and absence of special training programmes. Social entrepreneurs have to proof that they are foremost creating social value and moreover act upon a profitable business model.

Research shows that the introduction of specific programmes targeted at self-employment affect entrepreneurship activities (Casper, 2000; Verheul et al., 2002). Therefore, the number of organizations can be boosted by providing additional funding to a specific sector as shown in the case of voluntary social service organizations in Toronto by Singh, Tucker and House (1989). Consequently, “the institutional factors impacting entrepreneurial efforts include the direct action of governments in constructing and maintaining an environment supportive of entrepreneurship as well as societal norms toward entrepreneurship” (Bruton, Ahlstrom, & Li, 2010, p. 426). An active government is able to enhance social entrepreneurship by supporting it (Evans, 1996; Korosec & Berman, 2006; Zahra & Wright, 2011). Although, the German government confirms the importance of social entrepreneurs for the economy and society (Bundesregierung, 2019) governmental support for this type of entrepreneurship still needs to be improved. This is due to the ambiguous model which makes it very difficult to create governmental programmes that support social entrepreneurs. The usual programmes are mainly focused on innovation and economical sustainability without taking social impact into consideration.

The number of academic articles on the impact of context on social entrepreneurship is growing however research on governmental support has not been satisfactorily discussed. This is especially true for the comparison of governmental support for commercial and social entrepreneurs. Our research follows recent calls for more consideration of the influence of context on social entrepreneurship by analysing the contextual settings in terms of country specific features such as institutional and regulatory environments (Gupta, et al., 2020). We apply the framework of institutional theory to

compare the support of commercial and social entrepreneurship in Germany. Plenty of studies compare countries (e.g. Middermann & Rashid, 2019; Pinho, 2017), but we argue that there are as well differences when comparing two different types of entrepreneurship within the same regional context.

The paper is structured as follows: First, the theoretical framework is presented and the situation in Germany is described. Based upon theory and insides about the current state in Germany the hypotheses are derived. Second, we discuss the data set, present the measures, the research design and conduct the statistical analysis. Finally, we discuss the results that indicate a lower chance of getting an EXIST Start-up Grant for social entrepreneurs and a higher chance for commercial entrepreneurs, provide suggestions for future research as well as practical implications and conclude by the limitations of this study.

6.2. Literature Review

Entrepreneurship in Germany

Van Praag and Versloot (2007) show that there are several benefits economies draw from entrepreneurship such as creation of employment, contribution to productivity growth, and produce, and moreover commercialization of high-quality innovations. The benefits make it very attractive for governments to invest in entrepreneurship. However, there are national differences in the importance and support of entrepreneurship. In contrast to entrepreneurial societies such as the United States or Australia, Germany had to place entrepreneurship on its political agenda. “Start-ups became a hot topic in politics partly out of conviction (ambitions to create an “entrepreneurial society”) and partly out of necessity (the realisation that large companies in the past have made job cuts, while start-ups really can only grow)” (Bergmann & Sternberg, 2007, p. 205).

Starting in 1950 the number of entrepreneurs in Germany declined steadily from 15% (Bittorf, 2013). The decrease was heavily associated with the declining numbers of farmers especially in the 1950s and 1960s. In 1997 the president of Germany Roman Herzog addressed the stagnating economy and the loss of its dynamic in his speech by pointing out that a climate has to be created where people see a career perspective in creating businesses (Herzog, 1997). From this point on it was on the agenda of the politicians even if it was not in the primary focus. In the coming years, a variety of initiatives and programmes have been created to improve the entrepreneurial framework conditions. Special programmes were introduced to encourage female founders, high school students, as well as initiatives for founders with a migration background. These interventions by the German government played an essential role in the development of an entrepreneurial culture within the country (Bergmann & Sternberg, 2007).

According to the Global Entrepreneurship Monitor (GEM) report 2019, Germany reached the highest level of Total early-stage Entrepreneurial Activity (TEA) in 2019 namely 7,6% (GEM, 2019). The report from the Kreditanstalt für Wiederaufbau (KfW) estimates 605.000 newly founded businesses in 2019 which account for 1,17 % (Metzger, 2020). When adding employed people (6.4 %) with plans to set up a business in the near future as reported by Metzger (2020) the numbers round up with the numbers on TEA from GEM since the TEA indicator not only includes the people who have started their entrepreneurial activity but also people who are about to start an entrepreneurial activity. However, in the comparison with other “high-income countries” on their TEA scale Germany is amongst the last ranked 28th out of 33 (GEM, 2019).

In terms of environmental conditions, the National Entrepreneurship Context Index (NECI) introduced by GEM can be used to compare countries worldwide. NECI is an assessment method that includes twelve indicators to evaluate external context factors that have an influence on entrepreneurship (GERA, 2019). According to the NECI Germany is ranked 15th in the GEM report from 2018/2019 and 16th in the GEM report 2019/2020 (Bosma, Hill, Ionescu-Somers, Kelley, Levie, and Tarnawa, 2020; Bosma, and Kelley, 2019). Besides the weaknesses on the *basic school entrepreneurial education and training*, experts assess the *labour market* as rather unfavourable for start-up activities. As Metzger (2020) shows entrepreneurial activities are strongly correlated with the number of job vacancies. Following, a high number of job vacancies leads to less entrepreneurial activity. Furthermore, experts do not see a *prioritization of entrepreneurship and engagement in politics* as well as benefits from the *regulation and taxation* side (Sternberg, Gorynia-Pfeffer, Wallisch, Baharian, Stolz & von Bloh, 2019/2020).

Social entrepreneurship in Germany

Although, the concept of social entrepreneurship was always around (Dees, 1998) it was introduced into the academic literature as such in 1991. In the beginning it did not get a lot of attention. After Muhammad Yunus and Grameen Bank were awarded the Nobel prize in 2006 social entrepreneurship as a research field started to get more attention and grew exponentially. The Sustainable Development Goals that were adopted by all United Nations Member States in 2015 contributed to the growth of interest in this field. Indicators such as the exponential growth of publications, emergence of new specific journals, new conferences, dedicated professorships and others show that social entrepreneurship started to establish itself as a distinct research field (Sassmannshausen, & Volkmann, 2018). Consequently, the concept of social entrepreneurship became an essential part of entrepreneurship and besides corporate entrepreneurship one of the most studied typologies of entrepreneurship in the last decades.

From a historical point of view social entrepreneurship gained great importance after the World War II when existing government support was not able to offer solutions to the society (Defourny & Nyssens, 2010). Consequently, social entrepreneurs were the initiators who took over previous government tasks (Defourny, 2001). According to Esping-Anderson (1990) Germany is a country close to the Bismarckian model, where non-profit organizations that are predominantly publicly funded and regulated play a significant role in the delivery of social services (Salamon, Sokolowski, et al. 2004). However, Germany has not taken advantage of the resources and potential that social entrepreneurs can bring to society (Schwarz, 2014). Germany is ranked 125th out of 190 countries on its difficulty to start a business (World Bank, 2020). For non-profit organizations there is an additional hurdle since they have to prove their charitable cause to get some tax incentives. Apart from this the strong German welfare state and its interdependencies with welfare organizations, mostly connected to the church (Leppert, 2008) as well as the lacking start-up culture in Germany create potential barriers for social entrepreneurship. As social entrepreneurs focus firstly on their social mission the profitability is usually lower when comparing it to commercial entrepreneurship. Consequently, this limits the accessibility of financing opportunities from private investors. There are several public funding programmes available however there is no programme with a specific focus on social innovation/entrepreneurship. This discrepancy is also recognized by the European Union and its Commission Expert Group on Social Entrepreneurship (CEGSE, 2016) who have published a call for action where concrete policy recommendations are provided and two out of four topics are improving access to funding as well as improving the legal environment.

In the special issue from GEM on social entrepreneurship in 2015 Germany is ranked 21st for its prevalence of nascent social entrepreneurial activity in the cluster of innovation-driven economies

(0.8%) and 19th on its prevalence of individuals in operational post-start-up social entrepreneurial activity (1.5%). In contrast to that, 41,9% of start-ups surveyed for the Deutscher Startup Monitor agrees or strongly agree to the statement that their products/services can be assigned to social entrepreneurship (Kollmann, Hensellek, Benedikt & Kleine-Stegemann, 2019). In terms of the environmental conditions the Thomson Reuters Foundation evaluated a set of countries by assessing the environment for social entrepreneurs (2019). In their survey of “the best country to be a social entrepreneur” Germany fell from rank 12 in 2016 to rank 21 in 2019. Nevertheless, Berlin has confirmed its position as the world’s hotspot for social entrepreneurship. This can be attributed to its historical and cultural background as well as its rich infrastructure including co-working spaces, incubators, and accelerators.

6.3. Theoretical Background and Hypothesis

Institutional Theory

Entrepreneurship literature shows clearly that the context including the legal environment, culture, history of an industry and provided economic incentives can impact an industry and consequently entrepreneurial success (Baumol, Litan & Schramm, 2009). Institutional theory proved to be a valid theoretical lens for entrepreneurship research that is described as “*concerned with regulatory, social, and cultural influences that promote survival and legitimacy of an organization*” (Bruton, et al., 2010). This conceptual framework is reliable and suitable to analyse the impact of environmental factors on entrepreneurship (Veciana, 2007).

Institutions are restrictions developed by human beings to structure political, economic and social interactions with the goal to establish order and decrease uncertainty (North, 1990). North recognizes two forms of institutions namely formal and informal ones. Formal institutions are seen as the reasons of economic progress of Western developed economies, whereas developed countries are lacking behind despite of their powerful informal institutions (North, 1991). Scott (2007) summarized the three categories of the institutional theory namely the regulative, normative and cognitive pillar. The regulative pillar refers to the formal institutions comprises of governmental regulations and industry standards and agreements. Whereas the normative pillar consists of values and norms that people confirm to. Finally, the cognitive pillar covers rules and meanings that guide beliefs and behaviour (DiMaggio & Powell, 1991). The normative and cognitive pillars represent informal institutions.

As Baumol et. al (2009) showed the degree of entrepreneurship that occurs within a society is directly linked to regulations and policies regulating the allocation of rewards within this society. Kostova (1997) highlights the importance of a more pro-active role of the government by investing in the three pillars (regulatory, normative and cognitive) to facilitate certain behaviours. Since newly founded enterprises need to seek legitimacy (Bruton, et al., 2010) whereas the term legitimacy described in an easy way is the right to exist and undertake an activity in a particular way (Suchman, 1995) the government can support this process by introducing specific programmes. Therefore, the government plays a vital role in the formation of new forms of organizations with increased legitimacy, by stimulating demand or direct subsidies (Aldrich, 1990). Institutional theory helps to understand how entrepreneurs must seek for the legitimacy of the ventures they newly created (Ahlstrom, & Bruton, 2001).

This article is based upon institutional theory whereby the focus lies on formal institutions and its regulatory dimension that is represented by public policies and provided support to entrepreneurs in the first phases of their entrepreneurial activity.

Economical SDGs and the likelihood of institutional support in Germany

The strong entrepreneurial framework conditions in Germany are *protection of intellectual property, appreciation of new products/services from a consumer perspective, public funding programmes and physical infrastructure* (Sternberg, Gorynia-Pfeffer, Wallisch, Baharian, Stolz & von Bloh, 2019/2020). According to the GEM report Germany's *public funding programmes* are counted to one of the comparative strengths as an entrepreneurial framework condition globally (GERA, 2020 and previous). In terms of *public funding programmes* Germany was ranked amongst the top six countries wherefrom it was ranked first seven times in the twenty years of the GEM data collection. This is due to a range of funding instruments that the German government offers for start-ups as well as companies in their growth phase (BMW, 2019). There are different loan and grant programmes such as ERP Start-up Loan, ERP Capital, ERP Innovation financing, High-tech Start-up Fund, INVEST, EXIST Start-up Grant, Micro-Mezzanine Fund and others. Micro-Mezzanine Fund is the only programme that mentions social entrepreneurs as eligible applicants. However, EXIST is the only programme providing funding for the idea development phase and therefore encouraging entrepreneurs to work on their business ideas and writing a business plan.

The EXIST Start-up Grant supports students, scientists and graduates from universities or research institutions and provides funding for the individual team members (up to 3 people) to give them time to work on their business idea and write a business plan. In order to be eligible for the grant the idea should be innovative in nature and can be a technology or a knowledge-based project. From the start of the programme in 2007 in total 3,982 founders applied for the EXIST Start-up Grant and 2,214 were successful (BMW, 2020). According to a report from 2013 out of 752 supported start-up projects 585 were registered as a business and 84% of the registered businesses were still active in 2013 at the time of the data collection (5 years of running EXIST).

In an additional survey from the KfW-Gründungsmonitor (Metzger, 2020) founders themselves were asked to rank the environmental conditions as opposed to the NECI results based upon expert interviews conducted for the GEM. According to this ranking *free market access, founder image, quality of the infrastructure, protection of intellectual property and advisory services* are ranked at the top whereas free market access is ranked as "good" and the other conditions as "satisfactory". *Taxation, credit availability, political commitment and the education system* in terms of an entrepreneurial education are here ranked as sufficient comparable to the results of the expert interview from GEM.

Although experts rate government entrepreneurship programmes as quite high entrepreneurs rank the access to public funding as rather satisfactory. However, only 6% see access to public funding as a perception of obstacles and only 13% see it as an obstacle from the people who abandoned their entrepreneurial plans (Metzger, 2020). Even though, entrepreneurs rank public funding as satisfactory in general it can be said that the conditions are quite good, since Germany has many programmes that can be used by entrepreneurs. Apart from that, the environmental condition in terms of public funding is ranked very high in a worldwide comparison. Furthermore, EXIST is addressed to entrepreneurs with an innovative technology or knowledge-based idea and economical sustainability is one of the selection criteria and therefore we propose:

Hypothesis 1: *Addressing economic SDGs increase the probability of getting the EXIST Start-up Grant.*

Social SDGs and the likelihood of institutional support in Germany

According to a survey by DSEM (2019) social entrepreneurs in Germany in most cases (73.1%) use their own money, make use of financial support from family and friends (30.7%) and in some cases

(23.1%) have the possibility of using public funds. Whereas the support by the German government is evaluated as sufficient to deficient. Even in Berlin that is labelled as the hotspot for social entrepreneurs the governmental support is rated with 4,3 (on a scale from 1 = very good to 6 = insufficient). One of the barriers for social entrepreneurs is the difficulty of understanding how public funds are allocated (60.8%).

In total 50.5% of the sample did not take advantage of any support programmes. Some social entrepreneurs made use of the Social Impact Lab (22.2%), followed by Ashoka (15.1%) and startsocial (12.3%). EXIST was only used by 2.4% of the surveyed social entrepreneurs. 32.7% of the surveyed social entrepreneurs who got public funding indicated that it is rather difficult or very difficult to get it.¹ In terms of EXIST German government states that 12% of EXIST funding is allocated to social entrepreneurs (Bundesregierung, 2019). This is not surprising since the competition with commercial entrepreneurs makes it difficult for social entrepreneurs. Commercial entrepreneurs stand a better chance due to their economical sustainability and higher chances of scalability. As mentioned before, the German government admits that the framework conditions for social entrepreneurs are not ideal and that “the consulting and supportive services are being reviewed, further developed and more visibly communicated with a view to their possible use by social entrepreneurs” (Bundesregierung, 2019). Thus, it might be assumed that following social SDGs is rather a hindrance to get access to public funding (in this case EXIST). Consequently, we propose:

Hypothesis 2: *Addressing social SDGs decrease the probability of getting the EXIST Start-up Grant.*

6.4. Methodology

Data

For this study, we use data that was collected in a harmonized start-up survey. This survey is a structured and systematic analysis of start-up activities with a connection to public universities in the Berlin-Brandenburg metropolitan region (Germany). For the third time these start-up activities have been thoroughly and uniformly surveyed as part of a cross-university initiative. A standardized questionnaire was created to obtain and analyze relevant key data from the founders and companies. The online survey has been set up in English and German. The target group were self-employed individuals/start-up entrepreneurs with a connection to the ten participating universities – may it as alumni, student or scientific staff. The period of survey has been 01.02.2020 – 15.03.2020. The data were obtained prior to the outbreak of the coronavirus pandemic in Germany and refer mostly to 2019. The online survey reached out to a total of 5,120 companies and self-employed individuals, of whom 750 took part. This responds to a completion rate of 20%. The number of companies targeted provides an indicator of the total number of start-ups with a connection to the ten participating universities. The following universities have been participated in the Harmonized Start-up Survey: Beuth University of Applied Sciences Berlin, University of Applied Sciences Potsdam, Freie Universität Berlin, Hochschule für Schauspielkunst Ernst Busch, Hochschule für Technik und Wirtschaft Berlin, Berlin School of Economics and Law, Humboldt-Universität zu Berlin, Technische Universität Berlin, Berlin University of the Arts, University of Potsdam. The collection and analysis of data was coordinated by the Centre for Entrepreneurship at Technische Universität Berlin. Out of the 750 responses 567 were relevant for the matter of this article, whereas 333 had to be withdrawn due to the founding time of their businesses. Since the EXIST Start-up Grant was introduced in 2007, we had to remove all entrepreneurs who set up their business before that date.

¹ Question about the difficulty is based on a small sample of 49 entrepreneurs.

Measures

In this article we use EXIST funding as the dependent variable. This binary variable indicates a value of yes = 1 if the entrepreneur received funding from EXIST and no = 0 if the entrepreneur did not get funding from EXIST. For the independent variables, the authors clustered the SDGs according to their contribution to economic and social goals. The economical SDG variable includes SDG 8 (decent work and economic growth) and SDG 9 (industry, innovation and infrastructure). The Social SDG variable sums up the following SDGs: SDG 1 (no poverty), SDG 2 (zero hunger), SDG 3 (good health and well-being), SDG 4 (quality education), SDG 5 (gender equality), SDG 10 (reduced inequalities), SDG 11 (sustainable cities and communities), SDG 12 (responsible consumption and production), SDG 16 (peace, justice and strong institutions), SDG 17 (partnerships for the goals). Furthermore, we used employee number in 2019 and sales volume in 2019 as control variables.

Descriptive Statistics

Descriptive statistics and correlations are presented in Table 1 and show that 43% of the respondents get EXIST support. Furthermore, the correlation matrix presents that social SDGs are negatively related to EXIST support, while economical SDGs are positively related to EXIST support. This might be a first indicator that entrepreneurs who follow economical SDG's are more likely to get EXIST funding than entrepreneurs who follow social SDGs. The correlation matrix does not show values higher .513 and the variation inflation factors are below the value of 1 with a tolerance greater 0.1 which indicates that multicollinearity does not bias the results (Field, 2009; Midi, Sarkar, & Rana, 2010).

	Variables	Mean	SD	N	(1)	(2)	(3)	(4)	(5)
<i>Dependent variable</i>	(1) EXIST funding	0.43	0.50	239	1	.083	-.067	.135*	.143
							.266**	*	*
<i>Control variables</i>	(2) No. of employees	2.04	2.13	549	.083	1	*	-.009	.030
	(3) Sales volume	3.64	2.25	543	-.067	*	1	.013	.054
<i>Independent variables</i>	(4) Social SDGs	1.70	1.60	523	-.009	.013	.013	1	.079
	(5) Economical SDGs	0.68	0.75	523	.143*	.030	.054	.079	1

Note: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$; n.s. $p > 0.05$ (two-tailed-test)

Table 1. Descriptive Statistics and Correlations

Logistic Regression Analysis

Logistic regression analysis (Table 2) was used to test the research hypotheses between the likelihood of receiving EXIST funding and the pursuit of social and economic SDGs. The regression model shows good validity as the Wald test ($p < .01$) is significant and provides a better fit to the data than the null model (Peng, Lee, & Ingersoll, 2002). Furthermore, the Hosmer & Lemeshow test is insignificant ($p > .05$) indicating a reliable fit between the model and data (Field, 2009). As Hosmer-Lemeshow is a more useful evaluation indicator than the R^2 indicators (Peng et al., 2002), we do not explicitly discuss the values of Cox and Snell R^2 and Nagelkerke R^2 .

The regression results show that the pursuit of economic SDGs has a significant ($p < .01$) and positive effect on the likelihood to receive EXIST funding. Thus, entrepreneurs who follow economic SDGs are more likely ($Exp(B) = 1.499$) to get EXIST funding which confirms our Hypothesis 1. On the contrary, we could find that the pursuit of social SDGs significantly ($p < .05$) reduce the likelihood of receiving EXIST support ($Exp(B) = .826$) which supports our Hypothesis 2.

Variablen	β	Exp(β)
<i>Controls</i>		
No. Of employees	.124	1.132
Sales Volume	-.097	.147
<i>Independent variables</i>		
Economical SDGs	.405**	1.499
Social SDGs	-.191*	.826
<i>Model evaluation</i>		
Wald test	4.905*	
<i>Goodness-of-fit test</i>		
Hosmer & Lemeshow	10.05 (n.s.)	
Cox and Snell R ²	.056	
Nagelkerke R ²	.075	

Note: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$; n.s. $p > 0.05$ (two-tailed-test)

Table 2. Logistic Regression Analysis

6.5. Discussion and Conclusion

The likelihood for getting university/applied university based EXIST funding when following economic goals can be explained in the requirements and goal of the programme that is focusing on technological innovations and requires economic sustainability. As the programme is not aiming at social innovation the decreased likelihood for social entrepreneurs is plausible. In addition, the program is strongly focussing on technology, which only addresses a small fraction of social entrepreneurs. The reason for social entrepreneurs to not apply for EXIST can lie in the description of the programme where most social entrepreneurs do not see a fit of their venture to the described requirements. Nevertheless, the programme receives applications from social entrepreneurs and there is a possibility to get EXIST Grant as 12% of EXIST Grants are given to social entrepreneurs (Bundesregierung, 2019).

Although you can find special offers for female or migrant entrepreneurship, social entrepreneurship as vision-driven content, however, is lacking the attention. Therefore, it can be argued that there is still a long way to institutionalize social entrepreneurship and even a longer way to create comparable environmental conditions to the ones commercial entrepreneurs are enjoying. For politicians it is not easy to initiate start-up activities but initiating programs to propel social entrepreneurship would be one step (Wagner & Sternberg, 2004). Since there is interest in social entrepreneurship and the environmental conditions in Germany are not as poor, the logical step would be to promote and support

social entrepreneurial activities by developing new programmes focusing on social entrepreneurs or adding to existing programmes to make them more appealing for social entrepreneurship.

Social entrepreneurs are mostly regarded as charitable organizations. However, already a study from Schwab-Foundation (Weber & Kratzer, 2013) has shown that social entrepreneurship covers the whole range from profit driven enterprises to charities. Therefore, a change in the set of applied selection criteria towards sustainability is needed. In turn, having this change would also make it much more attractive for start-ups to investigate in social and environmental problems. Moreover, changing the judgement of start-ups away from purely profit-driven to impact driven (social, ecological and economical) would probably create a much stronger foundation of the economic and societal changes ahead.

From a global perspective the developed countries just as Germany are supposed to go ahead when it comes to the promised global changes. The SDGs witness the global intentions. However, the developed countries still stick to old paradigm as economic growth and profit manifesting the overuse of many resources. Also, in these points Germany could invest more in the development, missions and visions of future enterprises by fostering social impact the same way as economic success.

The purpose of this article was to unfold differences in access to funding for commercial and social entrepreneurs in Germany. We collected data on entrepreneurs who were supported in the process of EXIST Start-up Grant application. Our research results revealed a difference in likelihood of getting the EXIST funding in terms of economic and social SDGs. Concerning contributions to practice, we suggest policymakers should draw more attention to social entrepreneurs by creating new programmes or redefining the criteria of existing programmes. Improving the conditions and creating incentives for social entrepreneurs could help social entrepreneurs fighting social challenges and contribute to sustainable development.

Key limitations include the fact that the data is self-reported meaning that there is a tendency for biased results since entrepreneurs might overestimate their competence in targeting the SDGs. The application of the SDGs in self-reports is difficult due to the very general definition of the SDGs themselves, which leave space for different interpretations. Future research should maybe reformulate the SDGs into use-cases. In addition, the separation into economical, ecological and social aiming SDGs can only be made with experts who sort them. However, the SDGs themselves slightly overlap in this categorization. Furthermore, the study was drawn from a broad sample in Berlin and Brandenburg and we cannot statistically account for a nested structure (Field, 2009). Thus, it might be that entrepreneurs belonging to the same incubator, university or city are more homogeneous related to entrepreneurs belonging to other clusters.

Despite the limitations this article adds a new perspective on formal institutions by analysing two different forms of entrepreneurship within one national context. Further research can complement and verify the results by replicating the study in other contexts and countries to avoid generalization of (nation specific) results (Terjesen, Hessels, & Li, 2016). Adding the normative and cognitive dimensions could help in understanding the more complex environment that influences social entrepreneurship (Meek, Pacheco, & York, 2010; Middermann, Kratzer, & Perner, 2020). As mentioned above the Micro-Mezzanine Fund is the only program that addresses also social entrepreneurs. Therefore, the Micro-Mezzanine Fund can be analysed on its difference in terms of its availability for commercial and social entrepreneurs. Moreover, qualitative follow up studies could be conducted to clarify the findings. Finally, we propose to apply the NECI to social entrepreneurship in order to analyse the environmental framework conditions for social entrepreneurs on the country level. This might help

to reveal the difference between commercial and social entrepreneurship, inform political decisions and boost social entrepreneurship with its contribution to have a higher chance of reaching the SDGs.

6.6. Supplementary Information

Author contributions

Conceptualization, Karina Cagarman and Jan Kratzer; Data curation, Kristina Fajga and Michaela Jacqueline Gieseke; Formal analysis, Karina Cagarman, Jan Kratzer and Laura Helen von Arnim; Investigation, Kristina Fajga and Michaela Jacqueline Gieseke; Methodology, Jan Kratzer and Laura Helen von Arnim; Project administration, Karina Cagarman; Supervision, Jan Kratzer; Writing – original draft, Karina Cagarman and Laura Helen von Arnim; Writing – review & editing, Karina Cagarman, Jan Kratzer, Laura Helen von Arnim, Kristina Fajga and Michaela Jacqueline Gieseke.

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Conflicts of Interest

The authors declare no conflict of interest.

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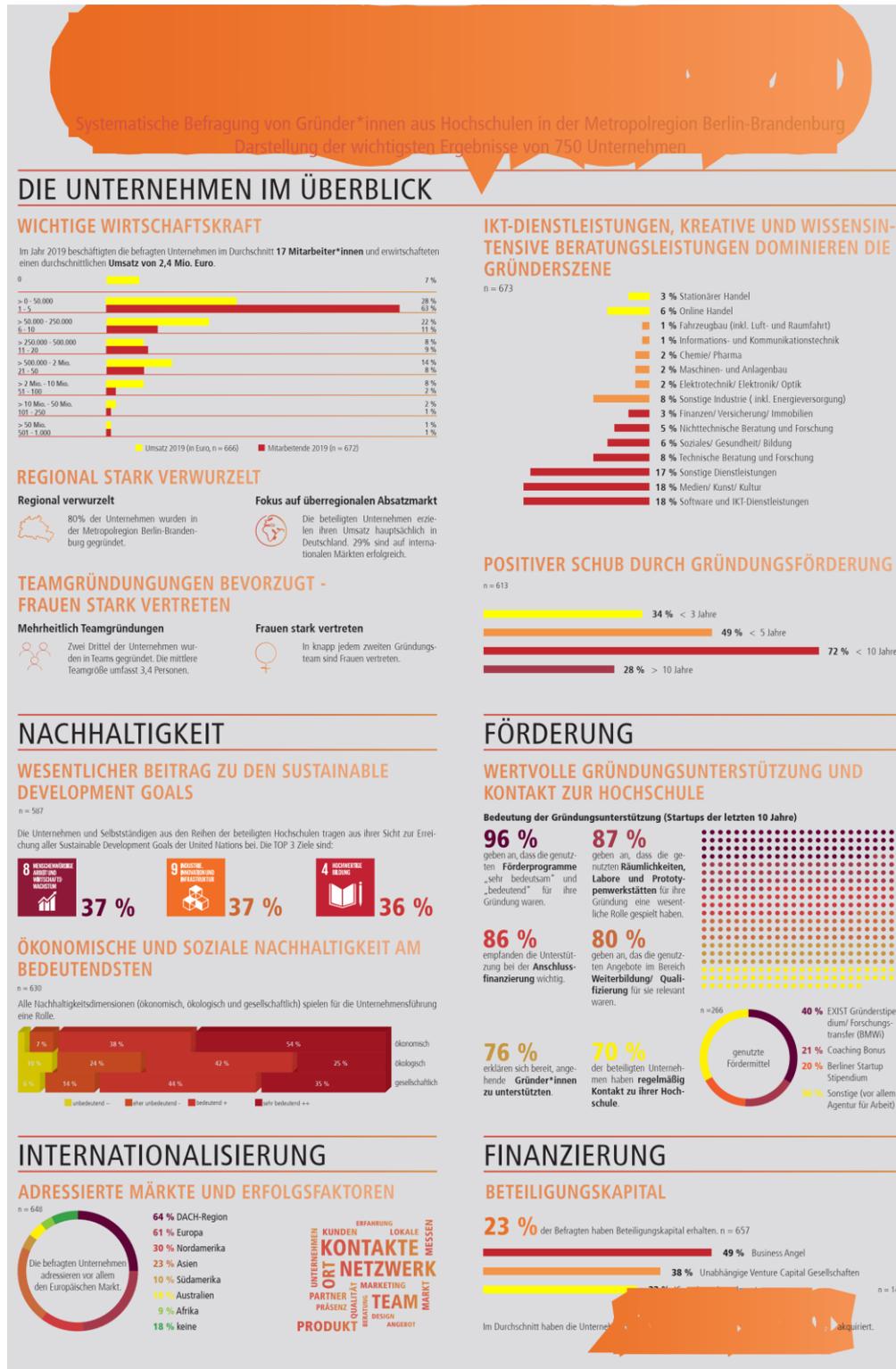
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6.8. Appendix

Appendix 1 – Descriptive Statistics from the TU Berlin Start-up Survey



7. OVERALL CONCLUSIONS

7.1. Results of the Thesis

The present thesis highlights the multi-faceted nature of entrepreneurship with a focus on one of its sub-fields namely social entrepreneurship. The first article investigates entrepreneurial networks, network actors and entrepreneurship typologies and why particularly this variety should be taken into consideration when studying the phenomenon of entrepreneurship. The second article illustrates the multi-dimensional character of entrepreneurship by presenting the most studied typologies. The third article contributes to the discussion of social entrepreneurship history and definition and shows that even when looking into one specific form of entrepreneurship namely social entrepreneurship it becomes clear that the concept is versatile and consequently difficult to frame and define. The fourth article sheds light upon the allocation of governmental grants as the dominating first kind of financial resource for academic entrepreneurs. The analysis reveals that the EXIST Start-up Grant in Germany is particularly given to entrepreneurs who follow economic SDGs in contrast to those who pursue social SDGs. In the following the results to the research questions are presented and a summary of the results can be found in table 2.

Research Questions Article 1:

Who are the network actors presented in scientific literature? What authors and articles strongly shape the network related literature on entrepreneurship?

All network actors from the selected sample of articles are summarized in schematic for network actors developed by the author. Furthermore, mentioned entrepreneurship typologies are presented wherefrom 17 articles are identified discussing network actors within the context of social entrepreneurship. Chrisman, Wright and Anderson are identified as the most contributing authors within the topic of social networks in entrepreneurship. In terms of the most influential authors Wright, Aldrich and Zahra are identified with the highest number of articles citing their work. The two most cited articles from this sample are “Economic action and social structure: The problem of embeddedness” (1985) and “The strength of weak ties” (1973) both by Granovetter followed by “Social structure and competition in interfirm networks: The paradox of embeddedness” by Uzzi (1997). With the multi-level perspective on entrepreneurship this article shows how complex network structures within the entrepreneurial process are. Furthermore, the article concludes that the entrepreneurial process is embedded in social networks and that the same mechanisms apply to specific forms of entrepreneurship such as social entrepreneurship.

Research Questions Article 2:

What types of entrepreneurship are represented in academic journals? What authors and articles strongly shape the individual entrepreneurship typologies?

The second article identifies 16 forms of entrepreneurship that are discussed in peer reviewed journal articles. The 16 forms are corporate, small, political, policy, institutional, tech, immigrant, local, academic, international, women, ethnic, social, individual, private and nascent entrepreneurship. All 16 profiles are presented in the article. In the following the results of the social entrepreneurship profile are summarized. From 1991 to 2016 in total 519 articles on social entrepreneurship were published. *Journal of Business Ethics* is the leading journal measured by the number of published articles on social entrepreneurship. The most cited article on this typology is “Social entrepreneurship research: A source

of explanation, prediction, and delight” by Mair and Marti (2006). Mair and Meyskens are the leading contributors with five articles on social entrepreneurship. This article provides an interdisciplinary view on entrepreneurship by analyzing a huge variety of entrepreneurial forms that cannot be observed purely from a business perspective. Furthermore, the study shows how fuzzy and multi-faceted the concept of entrepreneurship is by showing the breadth and existing overlaps of the terms applied in this research field.

Research Questions Article 3:

What factors characterize social entrepreneurship?

Article three identifies the most and least important elements described by scientists and practitioners. The three most important elements are ‘positive influence on the society’, ‘solution to a problem’ and ‘meaning’ whereas the three least important elements are ‘entrepreneurial legal form’, ‘public funding and donations’ and ‘no specified legal form’. Furthermore, this article presents the five dimensions of the term ‘social’ that researchers and practitioners agree on, namely ‘Societal–Visionary’, ‘Ecological’, ‘Societal–Entrepreneurial’, ‘Economic’, and ‘Innovative–Entrepreneurial’. The intercorrelation shows that four out of these five factors are low to medium high correlated. The fourth factor namely ‘Ecological’ however has the weakest correlation with the other factors. The identified factors shed more light upon the multi-faceted phenomenon of social entrepreneurship and confirm the conclusion made by Saebi, Foss and Linder (2019) that social entrepreneurship is a multilevel phenomenon. The historical flashback shows that the concept of social entrepreneurship is influenced by its environmental context.

Research Questions Article 4:

Is there a difference in terms of governmental funding for entrepreneurs following economic SDGs in contrast to entrepreneurs who follow social SDGs?

A correlation matrix shows that economic SDGs are positively related to the Start-up Grant whereas social SDGs are negatively related. The logistic regression confirms the results and shows that pursuing economic SDGs has a positive effect on the likelihood to receive the EXIST Start-up Grant. In contrast to that, the likelihood of getting the EXIST Start-up Grant is reduced when pursuing social SDGs. This article shows that the government prioritizes traditional profit-driven start-ups over new forms of entrepreneurship that focus on social benefits instead of profit. Consequently, it can be assumed that the achievement of SDGs is slowed down since social entrepreneurs are the driving force that contributes to the achievement of the SDGs (Horne, Recker, Michelfelder, Jay & Kratzer, 2020).

	Article 1	Article 2	Article 3	Article 4
Research Questions	<p>Who are the network actors presented in scientific literature?</p> <p>What authors and articles strongly shape the network related literature on entrepreneurship?</p>	<p>What types of entrepreneurship are represented in academic journals?</p> <p>What authors and articles strongly shape the individual entrepreneurship typologies?</p>	<p>What are the elements describing social entrepreneurship?</p> <p>What factors characterize social entrepreneurship?</p>	<p>Is there a difference in terms of governmental funding for entrepreneurs following economic SDGs in contrast to entrepreneurs who follow social SDGs?</p>
Empirical Results	<p>RQ1: Identified network actors are listed in a schematic developed by the authors.</p> <p>RQ2: Chrisman, Wright and Anderson are the most influential contributors; Wright, Aldrich and Zahra are the most cited authors; The most cited articles are: “Economic action and social structure: The problem of embeddedness” and “The strength of weak ties” both by Granovetter</p>	<p>RQ1: 16 forms of entrepreneurship are identified.</p> <p>RQ2: Social entrepreneurship is represented with 519 articles. Leading journal is <i>Journal of Business Ethics</i>. Most cited article on social entrepreneurship is “Social entrepreneurship research: A source of explanation, prediction, and delight” by Mair and Marti (2006). Leading contributors are: Mair and Meyskens.</p>	<p>RQ1: Most important elements are ‘positive influence on the society’, ‘solution to a problem’ and ‘meaning’. The least important elements are ‘entrepreneurial legal form’, ‘public funding and donations’ and ‘no specified legal form’.</p> <p>RQ2: The results indicate five dimensions of social entrepreneurship: ‘Societal-Visionary’, ‘Ecological’, ‘Societal-Entrepreneurial’, ‘Economic’ and ‘Innovative-Entrepreneurial’. Four factors are low to medium high correlated and the fifth factor namely ‘Ecological’ has the weakest correlation with all other factors.</p>	<p>There is a decreased probability to get the EXIST Start-up Grant when following social SDGs instead and a positive effect on the likelihood when pursuing economic SDGs.</p>

Table 2: Summary of the Results

7.2. Implications for theory and practice

The present thesis as overall contribution follows a “funnel-concept” by starting with the first to articles broadly on the topic entrepreneurship in general, its actors, networks and typologies. The third and fourth article increasingly narrow the theme down to social entrepreneurship by presenting a historical flashback, empirically examining the concept of social entrepreneurship and the availability of one major resource for starting social entrepreneurs. Altogether, the four articles contribute to theory and practice in many ways.

The first and second article provide a road map for researchers and support them to identify the most suitable publishing strategy by focusing on certain journals, discussing the most influential authors and articles, and considering the most contributing authors. Furthermore, both articles assist in identifying research gaps by analyzing the presented trends and therefore position their future research. But most importantly the first and second article highlight the importance in distinguishing between the different forms of entrepreneurship, show the intertwined character of entrepreneurship even within existing typologies and provide the conceptual ground for future research. Furthermore, the second article extends the venture typology framework developed by Kuratko et. al (2001; 2015) by the origin (e.g. academic, immigrant, corporate, etc.) and purpose (e.g. social or political entrepreneurship) of the venture.

The third article contributes to entrepreneurship research threefold. First by presenting a historical flashback highlighting the different developments of social entrepreneurship in US and Europe and within Europe. Second in terms of the chosen methodology by applying the Policy Delphi for finding the core elements of the social entrepreneurship definition. And finally third, the article includes an empirical examination and its results on the nature of defining social entrepreneurship in Germany. Moreover, it shows that definitions can vary from one national context to another. This article invites researchers to share insights on the environment when analyzing entrepreneurs and be careful when generalizing results.

The fourth article looks at the regulative dimension within institutional theory, namely the underlying provision with financial resources for starting social entrepreneurs. This regulative dimension becomes increasingly important since social entrepreneurship is considered as one important driver of sustainable transformation. Future research is demanded to also investigate into the remaining two dimensions of institutional impact, the normative and cognitive dimension. This could help to more thoroughly and comprehensively analyze the complex environmental context social entrepreneurship is embedded in (i.e., Middermann, Kratzer, & Perner, 2020).

The last two articles contribute to the understanding of the phenomena of social entrepreneurship as a discipline and the embeddedness with its environment. Future research could replicate the results in more national and international contexts in order to increase the breadth of generalizations (Terjesen, Hessels, & Li, 2016) and open discussion for comparative research.

Finally, this thesis is of practical relevance for public policy makers as well as the industry. When introducing new support programs policy makers should keep in mind that different forms of entrepreneurship need different support systems. By analyzing the landscape and especially the target group more suitable programs can be introduced. Moreover, policy makers can analyze their current support program portfolio and check if all entrepreneurial forms are getting enough and the right support. Furthermore, evaluation criteria can be re-evaluated upon the target group of entrepreneurs. In terms of industry, this thesis helps to understand the variety of entrepreneurial forms and raises awareness when establishing incubators or accelerators. Moreover, the variety of entrepreneurial forms

can be used for promotional reasons in order to encourage more people to start-up their own business. Lastly, educators should take the variety of entrepreneurial facets into the curriculum in order to make their students aware of all the possibilities entrepreneurship entails. And finally, the EU policy with an increasing focus on sustainable developments should take the very differences in defining and recognizing this theme within Europe very seriously as this thesis shows. The publication and presentation records of this thesis are summarized in table 3.

	Article 1	Article 2	Article 3	Article 4
Record of Publication	<p>Presented at:</p> <ol style="list-style-type: none"> 1. European Summer University 2014 2. International Sunbelt Social Network Conference 2015 3. European Conference on Social Networks 2016 <p>Published by: Encyclopaedia of Social Network Analysis and Mining.</p>	<p>Presented at:</p> <ol style="list-style-type: none"> 1. International Conference Innovation Management, Entrepreneurship and Sustainability (IMES) 2015 2. Academy of Innovation and Entrepreneurship (AIE) 2015 3. Sustainability, Ethics, Entrepreneurship (SEE) 2018 	<p>Accepted for Presentation and Best Paper Award Nominated:</p> <p>G-Forum, 24th Annual Interdisciplinary Conference on Entrepreneurship, Innovation and SMEs 2020</p> <p>Published by: Sustainability</p>	<p>Under review by: Sustainability</p>

Table 3: Summary of Publication & Presentation Records

7.3. References

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