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A bibliometric based review on social entrepreneurship and its establishment as a field of research

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SCHUMPETER DISCUSSION PAPERS

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Christine Volkmann**

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Schumpeter School of Business and Economics, Wuppertal University, Germany

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Abstract

This paper provides an overview on the state of art of research on social entrepreneurship and the establishment of this topic in the academic world. It uses scientometric methods, especially bibliometrics, in measuring the maturity of social entrepreneurship research. The empirical part reveals the increasing number of literature, the institutionalization of social entrepreneurship in seven dimensions, the emergence of thematic clusters, and methodological issue. The paper makes concrete suggestions on how to overcome methodological challenges at the boarder of advanced qualitative and early quantitative research designs. Using Harzing's "Publish or Perish" software this article furthermore provides a ranking of the 20 most cited academic contributions in social entrepreneurship. Surprisingly, almost half of the most cited papers have not been published in journals but in books, rising doubts on the current (over-)rating of journal publications.

Keywords

Social entrepreneurship, bibliometric study, citations, review, organizational establishment, academic institutionalization, development of empirical measurement scales

1 Introduction

„As a body of literature develops, it is useful to stop occasionally, take inventory for the work that has been done, and identify new directions and challenges for the future” (Low and MacMillan 1988, p. 139). This famous quote expresses the motivation behind our contribution. Social Entrepreneurship became a highly relevant topic in entrepreneurship research during recent years. In a world that faces many social challenges and with governments that are often unable to provide solutions, motivated social entrepreneurs are often key to improving socially challenging situations. Furthermore in many cases it appears that social entrepreneurs provide innovative social solutions more sustainable and effective than government invention would have been (see Kickul and Lyons 2012 and Volkmann et al. (ed.) 2012 for a contemporary overview on social entrepreneurship). Recognizing the importance of social entrepreneurship, a wide body of research literature and academic activities has occurred and considerable academic progress in the understanding of social entrepreneurship has been made during the last years.

However, some authors have argued that this subsequent field of entrepreneurship research seems to be still in its infant or nascent state (for instance Nicholls 2010, Martin and Osberg 2007, Roberts and Woods 2005). Our goal is to use empirical measures for evaluating whether this assessment is still justified. The aim of this article therefore is to conduct a bibliometric analysis of the literature and the academic structure of the field and to draw conclusions on the advances and the sustainable nature of the field and the expectations for future research. Building on existing work and our bibliometric analyses we will provide concrete recommendations for qualitative methodological progress that would finally allow for more empirical measurement in social entrepreneurship research, a yet underdeveloped area, as we will show in a later section.

Common reviews often are particularly influenced by authors’ perceptions and preferences. Using empirical examinations of the body of literature can reduce such liabilities and can lead towards more systematic approaches on reviewing (see Tranfield, Denyer and Smart 2003). The method used to generate metrics on academic literature is accordingly called “bibliometrics” (Rauter 2006; Ball and Tunger 2005; Garfield 1998; Harsanyi 1993; White and McCain 1989; Solla Price 1981; Solla Price 1976; Garfield 1973; Pritchard 1969; Solla Price 1963; Lotka 1926).

Van Leeuwen (2004, 374) defines bibliometrics as “the field of science that deals with the development and application of quantitative measures and indicators for science and technology based on bibliographic information”. Even though the advantages of bibliometric-based reviews are quite clear, bibliometrics have only rarely been used in the field of entrepreneurship (e.g. Romano and Ratnatunga, 1996; Ratnatunga and Romano, 1997; Grégoire et al. 2002, Sassmannshausen 2009; Sassmannshausen 2010, Sassmannshausen 2012) and the majority of those rather few publications have been encouraged by a special issue on the bibliometrics of entrepreneurship published by *Entrepreneurship Theory & Practice* in 2006 (Cornelius, Landström and Persson 2006; Grégoire et al. 2006, Reader and Watkins, 2006; Schildt, Zahra and Silanpää 2006), edited by three leading scholars (Gartner, Davidsson and Zahra 2006).

A large number of reviews on social entrepreneurship has previously been published (e.g. Chell, Nicolopoulou and Karatas-Özkan 2010; Danko and Brunner 2010; Dacin, Dacin and Matear 2010; Nicholls 2010; Galera and Borzaga 2009; Lyon and Sepulveda 2009; Neck, Brush and Allen 2009; Short, Moss, and Lumpkin 2009; Certo and Miller 2008; Douglas 2008; Thompson 2008; Nicholls and Cho 2006; Peredo and MacLean 2006; Weerawardena and Mort 2006; Haugh 2005; Roberts and Woods 2005; Johnson 2000). Only two of these reviews have been based on bibliometrics, but both used rather small data sets (Desa 2007, Granados et al. 2011). By employing a large scale data set for a bibliometric study, this paper is closing a research gap and thereby generating ‘economies of overview’ on social entrepreneurship as a scholarly field of interest. In the following section, we will provide a brief introduction to bibliometric methods and to sampling issues in the search for publications on social entrepreneurship.

2 Method

Scientometric is the science of measuring and analyzing science. For instance the resources dedicated to one field can be measured quantitatively by counting tenured chairs, professorships and alike or by calculating the accumulated amount of financial resources.

Bibliometrics is a method within the scientometrics approach. Using bibliometrics, for instance the quantitative development of the body of relevant literature can be assessed and the most frequently cited publications can be identified. It seems plausible to assume that authors cite articles and journals they find useful (Romano and Ratnatunga 1996, p. 8; see Nisonger 1994). Therefore a bibliometric based review will focus on the most cited papers, not just on those papers that meet its authors' preferences. It will thus help to identify the most influential scientists and journals by empirical measures. Cluster and/or content analyses based on articles' content and citations can identify 'hot spots' and 'blind spots' in research. However, a full scale co-citation analysis goes beyond the scale of this paper and will be left to future research.

The development of the body of literature is examined by the use of online databases including: EBSCO Host's 'Business Source Premier', 'Library, Information Science & Technology Abstracts', 'Philosopher's Index', 'Psychology and Behavioral Sciences Collection', and 'PsycINFO', furthermore 'Emerald', 'ProQuest', 'ScienceDirect', 'Springer link', 'Wiley' and 'Google Scholar'. Search at EBSCO Host, Emerald, ScienceDirect, Springer link and Wiley was limited to peer reviewed and scholarly journal articles, whereas search via Google Scholar and ProQuest does include books, book chapters, trade magazines, and the so called "grey literature" (i.e. working papers, conference proceedings, white papers, research reports, academic theses and the like). This approach allows distinguishing the quantitative development of the body of *scholarly* contributions from the quantitative development of the literature on social entrepreneurship *in general*.

At the time of writing this article, Google Scholar was still available only in its beta-version. Results from Google Scholar are not always reliable. A search for the term "social entrepreneurship" for instances indicated an none-existing article supposedly written by M. Bronfenbrenner and allegedly published 1955 in *The Journal of Economic History*. A working paper on social entrepreneurship authored by D. P. Baron published in 2005 is by mistake mentioned to origin from 1916 and therefor is another

point in case. The mistake probably occurred because the publication has the Number 1916 within the series of the *Stanford GBS Research Papers* (Baron 2005). A work by Bain from 1978 on vocational training (Bain introduced form sheets to assess students learning progress) can hardly be called a scholarly work and for sure has nothing in common with social entrepreneurship at all. But for reasons unknown, Google Scholar listed Bain's form sheets among publications on social entrepreneurship (Bain 1978). Precisely the same can be reported for six papers published in 1977 and for many more publications provided by the ERIC data-base (Education Resources Information Center) as they all do not touch social entrepreneurship. More examples could be added. Therefore, it was necessary to thoroughly double check the list of publications provided by a search using Google Scholar. This article is based on the manually corrected list.

The number of citations (which an article has received) is taken from Google Scholar and from EBSCO Host. EBSCO Host will only provide numbers of citations from peer work, whereas Google Scholar will refer to all references, including those that origin from grey literature and bachelor or master theses etc. (but only as long as those publications are known to Google Scholar, so there is some remaining randomness in the data base). Microsoft EXCEL 2010 was used for creating a unifying database and running descriptive analyses. The creation of a unifying database is necessary because some of the data bases mentioned above are meta-data bases. Therefore a single publication is likely to be included in two or more data bases, e.g. in EBSCO, ScienceDirect, and Google Scholar. Hence, just summing up the total numbers of publications taken from each data base is not a reliable measurement instrument to capture the body of literature, as this approach would lead to massive statistical over-coverage because the same papers would be counted many times over.

3 Results

In this chapter we present our results from scientometric research structured into five key areas of academic and scientific advancements:

- 1) the expansion of the body of literature,
- 2) progress in the institutionalization in the academic world,
- 3) the emergence of thematic clusters,
- 4) advances in research methods,
- 5) impact of literature measured by citations.

3.1 Measuring the Body of Literature on Social Entrepreneurship

It is not exactly known when the term ‘social entrepreneurship’ was used first, but it was likely in an academic publication by William N. Parker in 1954. He reported in an article published by *The Journal of Economic History* about a distinct form of entrepreneurship in Germany: “To the individual German in the mining industry, all three types of activity appeared as outlets for enterprise and ambition. The first is most obviously "economic entrepreneurship" on a job, and contributed clearly to the functioning of the economy and, under other favourable conditions, to its growth. The individual's interest in the second (which may be called "social entrepreneurship") depended on the fluidity of the German social structure, the standards for advancement, and the individual's own restlessness.” (Parker 1954, p. 400). To Parker, social entrepreneurship contributed to an increased social mobility that allowed members of the working class to achieve relatively well-paid, intrapreneurial leadership positions by demonstrating entrepreneurial behavior. Even though the definitions of social entrepreneurship have changed throughout the past decades, contributing to social mobility is still a core objective for many social entrepreneurs. Therefore, Parker’s article could be seen as a starting point in research on social entrepreneurship.

However, for exactly three decades almost nobody touched this subject (except for five isolated publications – isolated in terms of bibliometry means those papers weren’t ever cited) until in 1985 the research topic was picked up by two publications, one from the US, and one from the Netherlands. The number of publications almost continuously increased, but only at very modest rates during the following years until it more than doubled from 1999 to 2000. This is when social entrepreneurship started to become a mega-trend in entrepreneurship research. In the year 2009, the number of new

publications that include the exact search phrase “social entrepreneurship” according to Google Scholar reached more than a thousand, and for 2011 Google Scholar indicates 2370 new publications that include the exact search phrase. So the number of yearly publications more than doubled within only two years. Figure 1 displays the development, displaying a dramatic increase of papers that contain the phrase “social entrepreneurship”.

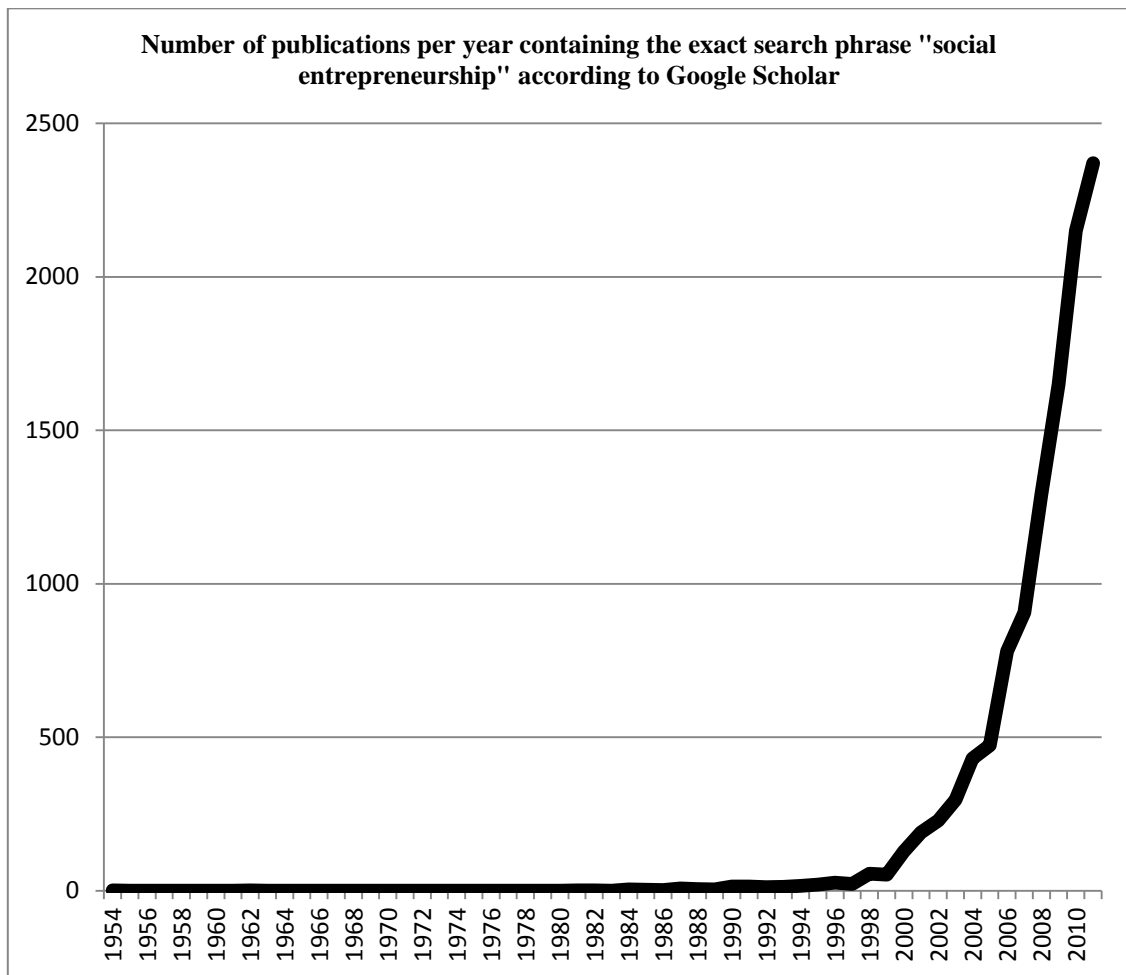


Figure 1: Number of publications on “social entrepreneurship” per year according to Google Scholar (manually corrected for statistical over coverage)

By March 2012, according to Google Scholar the number of publications containing the search term has almost reached 12,300 in total. Scholars in the field of entrepreneurship display a sense for irony by wondering if the number of papers on social entrepreneurship is already exceeding the number of social entrepreneurs in the field (and with our paper we have just added another point to the case).

But publications identified by Google Scholar contain the exact search phrase “social entrepreneurship” somewhere in the heading, the abstract, key words, main text, or even

only in a single footnote or within the list of references. It's not always clear whether such papers really deal on social entrepreneurship, or whether "social entrepreneurship" is only mentioned for marginal reasons.

Other data bases (such like EBSCO) allow limiting the search to the heading, abstract or key words. Thereby it is possible to reduce results to those peer reviewed journal articles that deal with social entrepreneurship at their very core. The results again show a steep increase from the year 2000 on. However, as expected by the data selection method, the number of relevant articles identified by EBSCO Host is much smaller than those numbers provided by Google Scholar. Nevertheless, many academic entrepreneurship journals and especially journals on social entrepreneurship are not covered by EBSCO, so any search result provided by EBSCO does not indicate the total number of relevant publications.

Indeed, the results from EBSCO Host are likely to represent a statistical under-coverage. There are two reasons for this: Firstly some articles on social entrepreneurship may use different but somehow synonymous phrases in their titles, abstracts or key words, such like "social venturing", "social enterprises", and so forth. At least with EBSCO, the search phrase "social entrepreneu*" was used. The use of the asterisk at the end of the term allows for open ended searches; thus articles on "social entrepreneurship", "social entrepreneurs", on a single "social entrepreneur", or even "social entrepreneurial activities" were included in the list of results.ⁱⁱ Secondly, another reason for statistical under-coverage is that even though EBSCO covers most academic journals, it still does not cover all of them. Some journals have no international outreach, only exist for a very limited period of time, or are not featured by a professional publisher. Furthermore, both results (based on EBSCO as well as based on Google Scholar) are limited to those publications which use the English term "social entrepreneurship". Expressions in other languages, like German "soziales Unternehmertum" are not covered by the search algorithm. This limitation especially takes effect for the results provided by EBSCO because the search was limited to titles, abstracts, and key words: Since scholarly publications on social entrepreneurship in other languages than English still are likely to refer to some English literature (and thereby are likely including the term social entrepreneurship at least somewhere throughout the list of references) the effect is much weaker on results from Google Scholar.

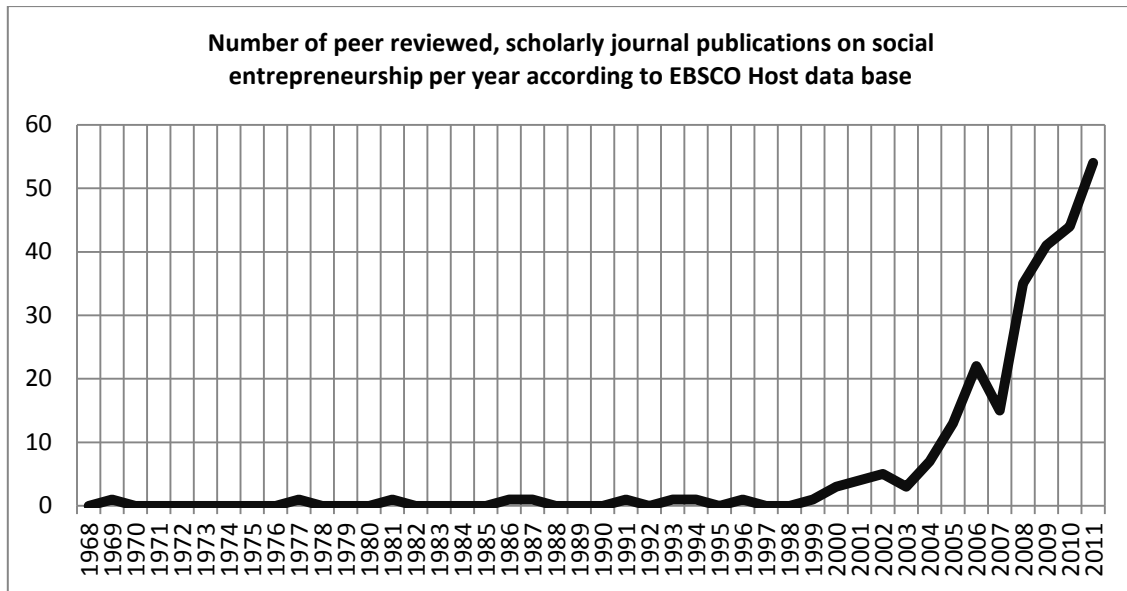


Figure 2: Number of peer reviewed, scholarly journal publications on social entrepreneurship per year according to EBSCO Host data base (a data base that for instance excludes Social Enterprise Journal, Journal of Social Entrepreneurship and Social Innovation Review).

Despite all limitations, both diagrams display an *exponential increase* in literature. In bibliometric science, this is known as a sign for the establishment of either a distinct field of research or a “hot topic” within an existing discipline. The latter would mean that “social entrepreneurship” is only a trend, and the high numbers of publications will fade away sooner or later (negative growth rates in numbers of new publications, finally forming a parabola-like curve in the graphical description of numbers of publications per year). The former would be indicated by finally decreasing but still positive growth rates, finally forming a s-shaped curve with a number of new publications per year on a stable but rather high level. If the academic engagement with social entrepreneurship is institutionalized by the establishment of centers, professorships, doctoral programs and alike, then it can be expected that – due to the durable dedication of academic resources – social entrepreneurship is a topic that will not fade away soon but rather will persist for a longer period of time, with the number of publications finally shaping a s-curve, not a parabola. We will therefore examine the institutionalization of research on social entrepreneurship in the next chapter.

3.2 Institutionalization of Social Entrepreneurship

The establishment of themes in scientific research can be detected by seven indicators for institutionalization. The first six out of the seven indicators can be tested by analyzing literature and hence by the use of bibliometrics. The seven indicators reflect:

1. emergence of specific journals,
2. acceptance of research articles dealing with social entrepreneurship by leading journals that are not particularly dedicated to the field under examination,
3. emergence of edited volumes and monographic books,
4. new annual conferences and dedicated workshops within existing conferences, accordant contributions in conference proceedings,
5. development of teaching materials, such like text books, teaching cases etc.,
6. dedicated tenured professorships, chairs, and centers or institutes (for instance as indicated by the authors' affiliations mentioned in research articles),
7. integration of the topic in accredited curricula as well as in extra-curricular teaching activities, and the emergence of student initiatives promoting social entrepreneurship.

(1) *Emergence of specific social entrepreneurship journals*: Recent years have seen the launch of devoted academic periodicals (beyond those publications which address the non-profit sector in general) including titles like “*Stanford Social Innovation Review*” (2003), “*Social Enterprise Journal*” (2004), “*Social Responsibility Journal*” (2005), “*Journal of Enterprising Communities*” (2007), “*Journal of Social Entrepreneurship*” (2010) and – last but not least – the “*International Journal of Social Entrepreneurship and Innovation*” (2011). One journal, the “*Journal of Developmental Entrepreneurship*” (1995) has always displayed a strong focus on social entrepreneurship, even before this term became well-known, but does also address commercial entrepreneurship, especially in context of developmental challenges. Likewise some journals have developed a focus on social entrepreneurship, e.g. the *Journal of World Business*. The number of academic journals is joined by new trade magazines which address social entrepreneurship practitioners' needs for information, inspiration, and communication, e.g. the trade magazine “*enorm: Wirtschaft und Mensch*” in Germany.

(2) *Acceptance by leading journals*: If leading journals (those which have no special dedication towards social entrepreneurship) accept articles on a certain research topic, this topic consequently gains both reputation and exposure. Like new businesses, new

research topics face liabilities of newness and smallness. New research topics always face the risk of not getting enough attention or reputation; they rather stay in a small niche. A positive attitude displayed by leading editorial boards can encourage scientists to join those first movers who already do research on a young area of interest.

If a young field of research is structured like a subdivision of an established field (in the case of social entrepreneurship as a subsequent field to entrepreneurship in general), there are two groups of leading journals: Journals which are leading within the superordinate field and journals which are leading within the wider scientific community around that superordinate field. Two leading entrepreneurship research journals have picked up social entrepreneurship just recently: *Entrepreneurship Theory & Practice* published its first article on social entrepreneurship in 2006 (Austin, Stevenson and Wei-Skillern 2006), and the *Journal of Business Venturing* only followed in late 2009 (Mair and Martí 2009; Zahra et al. 2009).

Leading journals in general (like *Academy of Management Journal*, *Academy of Management Review*, *Administrative Science Quarterly*, *Management Science*, *Organization Science*, *RAND*, *Research Policy*, or *Strategic Management Journal*) have yet (until 2011) not published reviewed articles on social entrepreneurship. However, Academy of Management has at least accepted presentations and workshops on social entrepreneurship at its annual meeting and papers have been published in *Academy of Management Learning & Education* and *Academy of Management Perspectives*. Furthermore *Administrative Science Quarterly* has featured a two page book review on social entrepreneurship, thereby at least acknowledging the existence of this research topic. If research on social entrepreneurship is to sustain its current academic hype, it urgently needs to get published in leading journals. To this end, the character of articles (currently mainly phenomenological and theoretical reflections, definitions, conceptualizations, and good practice reports) as well as methods (mainly – single – case based or grounded on – single – narratives) certainly needs improvement. The issue will be addressed more deeply in our conclusion.

(3) *Emergence of monographic books and edited volumes*: A larger number of edited volumes and monographic books have been published on social entrepreneurship, a movement that started in the 1990th and became most visible since 2004 (e.g. Leadbeater 1997; Bornstein 2004; Mair, Robinson and Hockerts (ed.) 2006; Nicholls (ed.) 2006; Perrini (ed.) 2006; Shockley, Frank, and Stough (ed.) 2008; Ziegler (ed.)

2009; Fayolle and Matlay (ed.) 2010; Seymour (ed.) 2011; Volkmann, Tokarski and Ernst (ed.) 2012). Furthermore, publications on closely related topics have been widely published and circulated including titles like *Microfinance: Emerging Trends and Challenges* (Sundaresan (ed.), 2008) or the *Handbook of Microcredit in Europe* (Carboni et al. (ed.), 2010).

(4) *Conferences*: Social entrepreneurship has long been included in leading entrepreneurship conferences like Babson's *BECER*, Australia's *AGSE ERE* (now *ACERE*), *ICSB WorldConference*, European's *RENT* or German speaking countries' *G-Forum*. The Entrepreneurship Division has accepted papers for presentation at the *Academy of Management Annual Meeting* and a 'Personal Development Workshop' focusing on social entrepreneurship has been included in the meeting's program (2010). The *Satter Conference on Social Entrepreneurship* was launched in 2004 and is likely the first annual academic conference on social entrepreneurship, nowadays known as the annual *NYU-Stern Conference on Social Entrepreneurship*, hosted by Jill Kickul.

(5) *Development of teaching materials, such like text books, teaching cases etc.:* Leading business schools around the globe (including Harvard Business School, IESE, Kellogg School of Management, Richard Ivey School of Business, Stanford Graduate School of Business and University of Hong Kong) have published *social entrepreneurship case studies and other teaching materials*. First dedicated *text books* have been published recently, for instance "Understanding Social Entrepreneurship", authored by Jill Kickul and Thomas S. Lyons (Routledge, 2012) and "Social Entrepreneurship and Social Business" edited by Volkmann, Tokarski and Ernst (Springer Gabler 2012).

(6) *Academic institutionalization by dedicated centers and tenured or fully endowed professorships or chairs*: Centers for social entrepreneurship spread out across many continents and include for instance (in alphabetical order)

- the *Ashoka McKinsey Center for Social Entrepreneurship (CSE)*,
- the *Canadian Centre for Social Entrepreneurship* at the University of Alberta,
- the *Center for Social Entrepreneurship* at Miami University,
- the *Center for the Advancement of Social Entrepreneurship (CASE)* at Duke,
- the *Competence Center for Social Innovation and Social Entrepreneurship* at European Business School, Germany,
- the *Genesis Institute for Social Business and Impact Strategies* in Berlin, Germany,

- the *Global Center for Social Entrepreneurship* at the University of the Pacific, California,
- the *INSEAD Social Innovation Center* in France,
- the US based *National Center for Social Entrepreneurship*,
- the *New Zealand Social Innovation and Entrepreneurship Research Centre*, Massey University,
- the *School for Social Entrepreneurs*, University of Geneva, Switzerland,
- the *Schwab Foundation for Social Entrepreneurship* in Geneva, Switzerland,
- the *Skoll Centre for Social Entrepreneurship* at Oxford University, UK,
- the *Social Enterprise Knowledge Network* at Harvard University's David Rockefeller Center,
- the Social Entrepreneurship Department at the *Strascheg Center for Entrepreneurship* in Munich, Germany, and
- the *Wilson Center for Social Entrepreneurship* at Pace University, New York.

Besides these fifteen globally prominent examples the number of centres and endowments is rapidly increasing, furnishing proof on a globally successful institutionalization. One reason for this rapid development might be that the topic seems to be very appealing not only to students but also to many donors all over the world.

Chairs and Professorships have been institutionalized in many countries; besides aforementioned centres further examples for chairs and professorships include universities around the globe. According to Volkmann, Tokarski and Ernst (2012, p. 11) professorships and chairs are located for instance in:

- Belgium: Vlerick Leuven Gent Management School,
- Canada: University of Calgary,
- Denmark: Copenhagen Business School,
- France: IESE Business School,
- Germany: the Leuphana University Lüneburg,
- India: Tata Institute of Social Sciences,
- Philippines: Asian Institute of Management,
- The Netherlands: Rotterdam School of Management,
- United Kingdom: University of Cambridge, University of Nottingham,

- United States of America: Portland State University, Babson College, Stanford Graduate School of Business.

From the amount of resources dedicated to social entrepreneurship by centres, chairs and professorships it can be assumed that the topic will have a sustainable and productive future in academia.

(7) *Extracurricular and curricular teaching activities, student initiatives:* The *SIFE organization* (Students in Free Enterprises, now re-named ‘Enactus’) is one globally known example for extra-curricular social entrepreneurship education and at the same time a student initiative for social entrepreneurship. Just another example for a competition-based extra-curricular activity is the ‘*Annual Global Social Entrepreneurship Competition*’, launched in 2005 by the Foster School of Business at the University of Washington, WA. Teams from all over the world compete for the best entrepreneurial social opportunity. In the ‘*Sustainable Innovation Summit*’, introduced by Robert Hisrich at *Thunderbird School of Global Management*, students craft social innovations whereby the planned initiatives need to be embedded in free market activities. ‘*The Stewart Satter Program in Social Entrepreneurship*’ combines extracurricular and curricular efforts at NYU Stern School of Business. Curricular embeddedness of social entrepreneurship education indicates that the topic is not just a trend but will persist, especially if the teaching activities are fully accredited. Progress is still needed in the area of fully accredited curricular programs on social entrepreneurship, as the number of modules and programs remains limited, while most curricular teaching activities is still based on single courses.

Examining the seven areas of institutionalization in academia reveals that social entrepreneurship has left its infant state and is more and more gaining maturity. The adolescence of a field is typically marked by a diversification of research topics and methods. The next paragraphs will therefore examine these criteria based on bibliometric analyses. Findings will be compared with previous research to identify dynamic developments.

3.3 Identifying Thematic Clusters

Analyzing titles, key words and abstracts of publications, it becomes obviously that literature on social entrepreneurship focuses on a limited variety of topics. As a result of a content analysis of 124 research articles we suggest that most contributions can be classified by use of the following list displayed by table 1. The column on the right shows the frequency of according articles in our sample (in percent). Research into more detailed analysis of aspects of social entrepreneurship seems to be underrepresented, compared with more general studies which try to describe or define the phenomenon, sometimes with rather conflicting results (for instance compare Santos (2009) with Schramm (2010); see Dacin et al. (2010) for an overview and Huybrechts and Nicholls (2012) for an up-to-date reflection on social entrepreneurship definitions).

Previous bibliometric research on social entrepreneurship had identified only four major thematic streams: (a) definitional, (b) resource constrained environments, (c) governance regulations, and (d) performance metrics (Desa 2007). Our research has identified more distinct clusters (table 1) and offers therefore an extension of previous research. This indicates that research on social entrepreneurship has widely expanded its scope during the past six years, demonstrating the dynamic development of the field. Due to the use of a different coding systematic, our findings did not reproduce thematic streams (b) and (c) as suggested by Desa (2007), even though that without doubt both topics had gained some attention from researchers. Articles on definitions, typologies, conceptualization, and describing phenomena still form the dominant cluster. To develop the field of social entrepreneurship less emphasis should be placed on such topics in future. Instead, research should build on existing definitions and conceptualizations and should put more weight on other themes, deepening our understanding of topics 2 to 10 in table 1 and even adding new topics to the list by further diversifying social entrepreneurship research.

#	Research topics, areas addressed by articles	Freq.
1	definitions, theoretical constructs or frameworks for social entrepreneurship, description or understanding of phenomenon, typologies, taxonomies	54%
2	measuring social impact, social value creation, performance and other consequences of social enterprise or social entrepreneurship	12%
3	networks and communities in social entrepreneurship	9%
4	processes in social entrepreneurship	17%
5	reviews on social entrepreneurship research	12%
6	resources, supporting and financing social entrepreneurship, and decision making by social investors	6%
7	social entrepreneurs and their motives, methods and psychology	6%
8	social innovation	5%
9	social opportunity recognition and development	9%
10	social enterprises from an organizational theory perspective	8%
11	Reports and narratives or interviews on (single) projects in social entrepreneurship	6%
12	social entrepreneurship education (i.e. education for and about social entrepreneurs(hip))	8%
13	interviews, forum contributions, comments, notes (no original scientific research but expression of opinion, mind teasers etc.)	4%
14	(single) book reviews	12%

Note: The sum of percentage exceeds 100% because some articles cover two or more areas, percentage rounded to full numbers.

Table 1: Research topics of articles on social entrepreneurship

3.4 Methods in Research on Social Entrepreneurship and Future Directions

By and large our findings on methods employed in social entrepreneurship research replicate previous findings (e.g. Granados 2011). This indicates that many articles lack an empirical part while those which do present empirical findings are predominately based on qualitative methods. (Single) case studies and exemplary cases or (single) narratives as well as good practice reports are the most often used forms of empirical research. Cases and narratives are often simply used to exemplify theoretical concepts of social entrepreneurship. There is no doubt that narratives and other forms of qualitative research are important tools to enhance our understanding of the field (Gartner 2007, Gartner and Birley 2002, Hindle 2004, Neergard and Ulhøi (ed.) 2007), *when applied properly*. So more comparative or contrastive cases, theoretical sampling instead of single cases or a random number of cases, thorough theory building from cases (Eisenhardt 1988, Eisenhardt, Graebner 2007), and a methodologically advanced use of narratives would improve the field.

Sampling often seems to be opportunity driven (easy or convenient access to cases is the starting point, for instance sampling via social networks of the researcher). Instead, a theoretical approach to sampling should be observed. By theoretical sampling data is gathered that is “driven by concepts derived from the evolving theory and based on the concept of “making comparisons,” whose purpose is to go to places, people, or events that will maximize opportunities to discover variations among concepts and to densify categories in terms of their properties and dimensions” (Strauss & Corbin, 1998, p. 201). Collection of cases would continue until the point is reached at which no new insights emerge from additional interviews—that is what Strauss and Corbin (1998) referred to as *theoretical saturation* (Fauchart and Gruber 2011, p. 939). This approach – when applied to social entrepreneurship research more often – would increase the probability that research would collect different and varied data on identities and actions of social entrepreneurs and would better allow determining the range of variability (Glaser & Strauss, 2006; Miles & Huberman, 1994, see Fauchart and Gruber 2011, p. 939). However, no such studies were identified within our sample of articles, indicating that qualitative approaches in future social entrepreneurship research should improve theoretical quality and exploratory power by investing more efforts in methodology than current approaches did.

Quantitative research on social entrepreneurship is very limited in extent and mainly focusses on measuring social impact (see Mair and Sharma 2012 for an introduction) or assessing social venture financing (see Spiess-Knafl and Achleitner 2012 for a brief overview). Thus, developing quantitative measurement instruments in social entrepreneurship is one of the most current research challenges (Short et al. 2009). So far, scales and score cards have been developed to assess the *impact* or the *financing* of social ventures. It’s about time to develop a scale to test for social entrepreneurship *itself*.

Measuring something prerequisites a definite understanding of the special characteristics and the boundaries of the phenomenon. The use of qualitative research is the common way in social science to achieve such an understanding. This might partly explain the dominance of qualitative methods in the beginning of social entrepreneurship research. Then for quantitative research that goes beyond descriptive approaches a clear theoretical construct is needed, based on items that can be object to objective empirical measurements on defined scales. Regarding the debate over

definitions of social entrepreneurship and on exploratory power of qualitative studies, it is understandable that such a scale has not been developed so far. In the literature it is suggested to use an approach based on a continuum (for instance Dees & Elias 1998, Tan et al. 2005, Austin et al. 2006, Massetti 2008). It can be assumed that commercial entrepreneurship and social entrepreneurship are not totally dissimilar, but rather activities within the same continuum of entrepreneurship. Thus the approach could be based on distinguishing commercial and social entrepreneurship as the two ends of the continuum. The ‘ideal typical’ extreme ends of the continuum would clearly distinguish solely commercial activities from solely social activities, while commercial and social activities merge and intertwine in the ‘real typical’ center of the continuum (see Schramm (2010) on the argument that all entrepreneurship has a social function, a point of view already mentioned by Bygrave and Minniti (2000) and others; furthermore see a widely overlooked article by Zafirovski (1999) for arguments that – when transferred to the debate on social entrepreneurship – can explain how our neoclassical economic preconceptions shape the distinction between social and commercial entrepreneurship in the first place). Spear (2006) has suggested a different continuum approach, assessing the social innovativeness in order to distinguish social entrepreneurship from other social business activities. This attempt probably could be integrated by adding a dimension on social innovativeness to the former constructs.

In case such a continuum does exist, it should be possible to define dimensions of that continuum and to develop testable scales for each dimension which can be used to measure whether the nature of an entrepreneurial activity is more commercially or more socially related. Different dimensions of such a continuum could reflect different level of analyses (see Davidsson and Wiklund 2001). Such measurement scales would for instance use Likert scales and factor analyses and would function similar to those used in the context of entrepreneurial orientation (for instance Covin and Slevin 1986) or entrepreneurial management (Stevenson 1983; Stevenson and Gumpert 1985; Stevenson and Jarillo 1990; Brown, Davidsson and Wicklund (2001); Kuhn, Sassmannshausen and Zollin 2010). However, even though the idea for such an empirical approach in social entrepreneurship based on a continuum is more than ten years old now, to our knowledge the application of the concept has yet not been successfully carried out in empirical field work. Neither has any measurement scale been derived from qualitative research and/or theory. We suggest that this should be a major focus of future research on social entrepreneurship. A breakthrough would then

allow to incorporate contextual variables or even to contextualize empirical social entrepreneurship research in a second step, as context might play an important role especially in social entrepreneurship, as activities of social entrepreneurs often seem to be inspired by certain contexts (see Welter 2011 and Zahra and Wright 2011 on contextualization of entrepreneurship research in general).

3.5 Impact of Social Entrepreneurship Research: Identifying the Most Influential Authors and Contributions

Assessing the impact of authors and contributions, it can be assumed that citing an article or another publication indicates that this publication has influenced the author in preparing his (or her) contribution. Even if the author expresses disagreement with previous work, it has still caused him (or her) to reason about its content. Hence it is argued that “impact” of one author on other authors can be measured by the number of citations he or she receives for his or her work. Likewise, measuring the impact of a single article can be done in the same way by measuring the number of citations that refer to it.

In doing so, many bibliometric articles have limited themselves to rather narrow data bases, for instance Thomson Reuter’s ISI Web of Science. However, this means to exclude many leading publications (and of course creating a self-reinforcing circle around journals covered by the Social Citation Index), as for instance the Thomson Reuter’s Social Citation Index does not cover most of those journals that are published by Emerald, including Social Enterprise Journal which has been central to the development of research in Social Entrepreneurship. The Journal of Social Entrepreneurship is also not included in this index. The ISI Web of Science does only cover 15 out of 99 internationally relevant entrepreneurship journals (Sassmannshausen 2012b), meaning that articles on social entrepreneurship published in general entrepreneurship journals might also been neglected by this data base. Similar criticism can be put on the use of “EBSCO Business Source Complete” and “Science Direct”, as they too don’t cover many entrepreneurship journals. Therefore we use Google Scholar as a more complete data base (see figure 1 and 2 for comparison of results when using different infometric data sources). Hence our study goes far beyond the data used by Granados et al. (2011). Other, more general methodological reasons to use Google Scholar in bibliometric studies on impact in science have been elaborated by Harzing

(2011) and Harzing and van der Wal (2008a, 2008b and 2009). We follow their argument when empirically identifying the most influential contributions and contributors by using Google Scholar as our data source.

Cites	Authors	Title	Year	Journal?
644	Dees	The meaning of social entrepreneurship	1998	No
632	Bornstein	How to change the world: Social entrepreneurs and the power of new ideas	2007	No
486	Borzaga	The emergence of social enterprise	2004	No
478	Deakins & Freel	Entrepreneurship and small firms	1996	No
450	Leadbeater	The rise of the social entrepreneur	1997	No
446	Mair & Martí	Social entrepreneurship research: A source of explanation, prediction, and delight	2006	Yes
430	Austin, Stevenson & Wei-Skillern	Social and commercial entrepreneurship: same, different, or both?	2006	Yes
345	Yunus	Creating a world without poverty: Social business and the future of capitalism	2009	No
289	Peredo & McLean	Social entrepreneurship: A critical review of the concept	2006	No
254	Eikenberry	The marketization of the nonprofit sector: civil society at risk?	2004	Yes
251	Dees & Emerson	Enterprising nonprofits: A toolkit for social entrepreneurs	2001	No
250	Alvord & Brown	Social entrepreneurship and societal transformation	2004	Yes
242	Dart	The legitimacy of social enterprise	2004	Yes
238	Martin & Osberg	Social entrepreneurship: the case for definition	2007	Yes
227	Thompson & Alvy	Social entrepreneurship—a new look at the people and the potential	2000	Yes
226	Mort & Weerawardena	Social entrepreneurship: Towards conceptualisation	2003	Yes
214	Thompson	The world of the social entrepreneur	2002	Yes
204	Weerawardena & Mort	Investigating social entrepreneurship: A multidimensional model	2006	Yes
199	Defourny	From third sector to social enterprise	2001	No
192	Nicholls	Social entrepreneurship: new models of sustainable social change	2006	No

Table 2: 20 most cited contributions on social entrepreneurship by March 2012 (according to our research using data from Google Scholar and Harzing’s “Publish or Perish” software)

Accordingly, we use Harzing’s (2007) “Publish or Perish” software (version 3.6 from 2012) with the search term “social entrepreneurship” (exact phrase) to execute our research. “Publish or Perish” software tracks more than 1000 results for that particular search phrase and automatically limits its report to the 1000 most cited articles. Anyway, since citation frequencies in general are not that high in entrepreneurship

research in general (Sassmannshausen 2010, 2012) and in social entrepreneurship research in special, limiting the data set to the ‘most cited’ papers means in case of our research that even one quote is enough to be included in the list of the 1,000 most cited papers. Thus no influential paper was left out, at least when ‘influence’ is operationalized by citations. 820 articles remain after correcting the search results manually for statistical over-coverage (excluding articles that may include the term “social entrepreneurship” somewhere but do not present research relevant in this area).

This number of indicated articles on social entrepreneurship by far excels the number of papers reported by previous bibliometric studies on social entrepreneurship (Desa 2007: 70 papers, Granados 2011: 286 papers). This is due to the different data base that was used in our study and due to the fact that our search has not been limited to those articles that include the search term in titles or key words. Furthermore we included articles not only in English but in all languages that the authors master at least to the extent that allows to check title and abstract for whether the article is on social entrepreneurship or not (English, French, German, Danish, Norwegian, Swedish, Spanish, Italian, Dutch). However, articles in languages other than English remain rather small in numbers, with German contributions making the biggest portion of that very small share.

The most cited publication on social entrepreneurship received 644 citations. The average number of citations for those papers that ever became cited at least once is 26.39. Unfortunately due to limitations of “Publish or Perish” software and Google Scholar as data source, it is not possible to calculate the average number of citations for all papers on social entrepreneurship (including those which have yet not been cited). The median number of citations for papers that ever have been cited at least once is 7. The huge difference between average and median reveals a heavily left twisted distribution of citations, a common phenomenon in bibliometrics, explained by the so called “Matthew effect” (Merton 1968). The fact that the distribution of citation follows common bibliometric laws (like the Matthew effect) indicates that research on social entrepreneurship is entering a more mature state. Table 2 also shows that ten out of the 20 most cited papers are not published by peer reviewed journals but represent other types of publications, namely books or book chapters in edited volumes. To many researchers, this seems to be uncommon for a mature field.

However, Sassmannshausen (2009, 2010, 2012) has shown that the most cited paper on networks and entrepreneurship was a book publication too. He furthermore demonstrated that in the research area he examined was no significant difference in the number of citations for journal papers or for book chapters, at least when citations from within an academic field are analyzed by the use of a co-citation matrix. By and large, our findings for literature on social entrepreneurship seem to reproduce those findings presented by Sassmannshausen (2009, 2010, 2012) for literature on entrepreneurship and networks. This raises the question whether we overestimate journal articles in their impact and in their importance for ‘track records’, compared with book publications?

The last measure we examine in our bibliometric study is the H-Index for publications on social entrepreneurship. The H-Index is 72 for papers on social entrepreneurship, and that is fairly high. An H-Index of 72 means that 72 publications on social entrepreneurship have been cited at least 72 times. For comparison: the H-Index for entrepreneurship in general is 218, according to results from the ‘Publish or Perish’ software, meaning that 218 papers on entrepreneurship have been cited at least 218 times.

The *H-Index* was initially developed by *Jorge E. Hirsch* to assess the individual impact of scientists. Hirsch (2005) defines the H-Index as follows: “A scientist has index h if h of his/her N_p papers have at least h citations each, and the other $(N_p - h)$ papers have no more than h citations each”. For instance a scientist with an H-Index of 14 has published 14 papers that have been cited at least 14 times each. Thus, the H-Index reflects both the number of publications and the number of citations per publication. The same scientist might have published 100 other papers that have never been cited, however, those contributions do not improve the H-Index because of their relative irrelevance, but neither do they have a negative impact. So younger papers which have remained uncited due to their newness do not harm the H-Index but rather offer future opportunities for improvement.

One of the limitations of the H-Index is that it can only be used to compare scientists working on the very same field, as citation conventions may differ between fields. Harzing and van der Wal (2008a, 2008b, and 2009) build on that limitation by suggesting the use of the H-Index to collectively assess the overall impact of journals dedicated to the same field. In this article we suggest the use of the H-Index in assessing the development of a field, here: social entrepreneurship.

Box 1: The H-Index and HC Index (Box 1 is adopted from Sassmannshausen 2012b)

4 Conclusion

We have found considerable amount of evidence for the establishment of “social entrepreneurship” as an important domain of entrepreneurship research. This is not only documented by the cumulated number of publications and the growth rate of publication frequency. The domain has made significant progress in the variety of its research topics (table 1). The number of citations (see table 2 for the top 20 of the most cited papers) and the substantial level of H-index for papers on social entrepreneurship have reached formidable heights. Special conferences and journals hosted by well-known institutes like Stanford and publishers like Emerald have emerged. All this bibliometric evidence indicates that social entrepreneurship has reached maturity.

The sustainable organizational and institutional establishment of the field was examined too. We found many fully endowed, tenured professors, chairs and research centers. This indicates that ‘social entrepreneurship’ will be more than just a trend that soon would fade away, as these professors, centers and chairs represent a strong and durable resource of (wo)men power for future development of the field. Demand for curricular and extra-curricular teaching, embeddedness in accredited teaching programs, and PhD students focusing on social entrepreneurship indicate students’ interest in social entrepreneurship and ensure future supply with talented and dedicated researchers.

However, when it comes to research methods and content of research, future progress is needed. We elaborated this in the previous chapter where we highlighted some shortcomings of the current state of the art and have made suggestions on how qualitative, case based explorative research designs could be improved. This could also finally allow developing empirical measurement scales. Such scales could be introduced by recombining theory of social entrepreneurship with measurements constructs and scales that are already well developed in general entrepreneurship research. Reliability tests and factor analyses would then mark a next step in the advancement of the field.

The next step in our research will be the concrete development of an empirically testable social entrepreneurship measurement scale as outlined in more detail in the previous chapter.

Our research is limited by the fact that we did not balance the list of the most cited publications for the age of the publication. Older publications have had more time to get cited and thus have a competitive advantage over younger publications. It would need

an additional methodological approach—the so called response analysis—to outweigh this effect. Due to the limited space and to the focus of our publication we did not present such a weighed list here, as the results of a response analysis would not add evidence to the question how well social entrepreneurship is established.

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- ⁱ The authors are grateful to comments made by the audience of the "G-Forum" entrepreneurship research conference in Zurich, Switzerland, where a previous version of this paper was presented in November 2011.
- ⁱⁱ The same argument would hold true for results presented by Google Scholar, but it is likely that the term "social entrepreneurship" would be included somewhere throughout the article, even if it wasn't used in the heading and thus Google Scholar would make up for the under-coverage, but on the other hand produce over-coverage as explained above.