

Review

Performance Analysis and Science Mapping of Institutional Entrepreneurship Research

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Abstract: Institutional entrepreneurship comprises the activities of agents who disrupt existing social institutions or create new ones, often to enable diffusion, especially of radical innovations, in a market. The increased interest in institutional entrepreneurship has produced a large number of scholarly publications, especially in the last five years. As a consequence, the literature landscape is somewhat complex and scattered. We aim to compile a quantitative overview of the field within business and management research by conducting bibliometric performance analyses and science mappings. We identified the most productive and influential journals, authors, and articles with the highest impact. We found that institutional entrepreneurship has stronger ties to organization studies than to entrepreneurship research. Additionally, a large body of literature at the intersection of institutions and entrepreneurship does not refer to institutional entrepreneurship theory. The science mappings revealed a distinction between theoretical and conceptual research on one hand and applied and empirical research on the other hand. Research clusters reflect the structure–agency problem by focusing on the change agent’s goals and interests, strategies, and specific implementation mechanisms, as well as the relevance of public agents for existing institutions, and a more abstract process rather than agency view.

Keywords: institutional entrepreneurship; entrepreneurship; institutional change; bibliometric analysis; science mapping; co-citation analysis; co-occurrence analysis; business; management

1. Introduction

As a portmanteau, the term institutional entrepreneurship juxtaposes two almost opposing concepts in a paradoxical way (Albertini and Muzzi 2016; Garud et al. 2007): Institutions represent behavioral patterns based on collective beliefs, norms, and practices that are taken for granted (Dacin et al. 2002; Garud et al. 2007) and therefore shape human behavior and social interactions (Greenwood et al. 2017; Hodgson 2006; Seo and Creed 2002). These persisting social phenomena can be analyzed at the societal level by sociologists or—and this is this paper’s focus—at the organizational level (e.g., Garud et al. 2007; Heugens and Lander 2009; Scott 1987; Suddaby 2010; Zucker 1987) by management and, more specifically, organization scholars.

In contrast to the somewhat static conceptualization of institutions, entrepreneurship represents a dynamic perspective as an entrepreneur can be seen as a change agent or, more specifically, an actor who deals with uncertainty and creatively destructs markets with innovations (Hébert and Link 1989; Schumpeter 1934).

Combining both aspects, institutional entrepreneurship addresses the change of social phenomena that usually do not change easily. Institutional entrepreneurship comprises the “activities of actors

who have an interest in particular institutional arrangements and who leverage resources to create new institutions or to transform existing ones” (Maguire et al. 2004, p. 657). In the long-standing paradigmatic debate in sociology and organization studies on the primacy of either structure or agency (Reed 1997), proponents of (neo-)institutional theory argue that structure should be considered the main pillar of reasoning regarding social phenomena (Heugens and Lander 2009). Structure relates to stable social phenomena which constrain agency (Heugens and Lander 2009). Institutional entrepreneurship can be seen as the theoretical attempt to add agency to institutionalism (Battilana et al. 2009). Agency relates to autonomy and free will (Heugens and Lander 2009). In this regard, institutional entrepreneurship can be seen as one of the theories—like structuration theory (Giddens 1991)—that try to bridge the structure–agency dualism and turn it into a duality (Reed 1997), as neither structure fully determines behavior nor is agency limitless.

As change agents, institutional entrepreneurs purposefully disrupt old institutions or form new ones in order to realize interests that they consider important (DiMaggio 1988; Hardy and Maguire 2008; Fligstein 1997; Lawrence and Suddaby 2006). Aldrich (2011, p. 1) defines, “Thus, an institutional entrepreneur would be a person who, alone or with others, is credited with helping to transform an institution: introducing new social or cultural forms/logics into the world (typically embodied in organizations).” The scope of actors is not limited to individuals but also comprises organizations, networks, associations, and social movements (Hardy and Maguire 2008). Aldrich (2011) stresses the collective nature of institutional entrepreneurship, that is, institutions are rarely changed by individuals but rather by groups or organizations.

Institutional entrepreneurs’ agency does not only take place within a structure but it also changes and thus transcends it. In other words, institutional entrepreneurship’s primacy is on agency. Battilana et al. (2009) propose a process model of institutional entrepreneurship that explains the interrelationship between agency and structure. At the core of the model, the institutional entrepreneur creates a vision of divergent institutional change and mobilizes allies who also support this vision. This group of agents then implements the vision which is supposed to lead to the aspired institutional change. However, the agents do not act in a social vacuum. Rather, they are embedded in a structural context comprising field characteristics and the agents’ social position. These structures do not only restrict but specifically enable their actions. Therefore, the structure is both the prerequisite and the outcome of agency—a notion that reminds of structuration theory (Giddens 1991). In that sense, the notion of institutional entrepreneurship also somewhat resembles the concepts of path-breaking and path creation; whereas path-dependent processes lead to stable states, powerful actors might try to break them or create new ones (Tiberius 2011).

Diffusion, especially of radical innovations in a market, often also requires an institutional change (Albertini and Muzzi 2016; Tiberius et al. 2020) including a change of meanings (Garud et al. 2002), making institutional entrepreneurship also a relevant theory for entrepreneurship scholars. For Battilana et al. (2009), an overlap between the concepts of entrepreneurs and institutional entrepreneurs exists, when a firm employs a new business model because this might influence how other entrepreneurs have to do their businesses in the future. However, not only for-profit ventures are subject to institutional entrepreneurship but also social, cultural, and environmental ones. Therefore, an intersection of institutional entrepreneurship and social entrepreneurship can be seen in the literature (Dacin et al. 2010, 2011; Pacut 2020).

Due to its relevance in sociology, management, and entrepreneurship, institutional entrepreneurship theory has drawn much attention from researchers who generated a large number of scholarly publications, especially in the last 10 years. This information overload (Castillo-Vergara et al. 2018) makes the necessity of structuring obvious.

Against this background, our research objective is to compile a quantitative overview of the institutional entrepreneurship literature within business and management research. More specifically, we aim to analyze performance indicators such as the productivity and impact of journals and authors as well as the impact of the most cited publications. Additionally, we map the field by using bibliographic

methods. Bibliometrics has recently become increasingly popular in business and management research (e.g., Batistič and Laken 2019; Castillo-Vergara et al. 2018; Danvila-del-Valle et al. 2019; Fetscherin and Heinrich 2015; Filser et al. 2020a, 2020b; Gaviria-Marin et al. 2019; Kraus et al. 2020b; Kruggel et al. 2020; Luther et al. 2020; Randhawa et al. 2016; Vogel and Güttel 2012).

The literature reviews by Hardy and Maguire (2008) and Battilana et al. (2009) are somewhat outdated, as they cannot cover the dynamic research which started shortly after their publication dates (cf. 3.1.1). In contrast to their endeavors of reviewing the literature qualitatively and thus potentially subjectively (Tranfield et al. 2003; Kraus et al. 2020a; Rowley and Slack 2004), we conducted a bibliometric analysis. This procedure is adequate, as the body of literature has grown rapidly in the last decade. Bibliometrics, as a statistical approach of structuring a research field, can handle large data sets of publications better than literature reviews (Van Eck and Waltman 2010; Yin et al. 2018). Additionally, institutional entrepreneurship is a multi-disciplinary field, which makes a content-based, in-depth analysis more difficult. However, it has to be stressed that bibliometric analyses cannot supersede but only complement systematic literature reviews (Luther et al. 2020). In other words, our endeavor aims at a pre-structuring of the field, which can form the foundation for future in-depth reviews of identified research themes.

Our findings contribute to the institutional entrepreneurship literature by preparing a systematic and quantitative overview of the research field. The findings are relevant for sociologists, management scholars, and entrepreneurship researchers who study the change of extant institutions.

The paper is structured as follows: In the next section, we explain which bibliometric analysis we employed. We then present and discuss our findings. We conclude with a comprehensive review of the topic, limitations of the study, and suggestions for future research.

2. Methodology

2.1. Bibliometrics

Bibliometrics statistically analyzes publication and citation numbers as well as links between publications to systematize a research field (Ellegaard and Wallin 2015; Kücher and Feldbauer-Durstmüller 2019; Liao et al. 2018; Rey-Martí et al. 2016; Zupic and Čater 2015).

Following Noyons et al. (1999), we distinguished between performance analyses and science mappings (Noyons et al. 1999). The performance analyses we conducted assess the temporal distribution of publications and citations, the productivity and impact of journals and authors, and the impact of the most cited publications. Productivity is measured by the number of publications, whereas the number of citations is seen as an indicator of impact, importance, relevance (Garfield 1979), or even quality (Bernstam et al. 2006). Therefore, such bibliometric data are also highly career-relevant in science (Jensen et al. 2009; Kelly and Jennions 2006). The gained insights are helpful to find relevant literature and to support decision-making regarding where to publish.

Science mappings, as a bibliographic method, visually depict statistically significant links between publications to draw content-related conclusions. We applied two mappings. First, we conducted an article co-citation mapping as an effective method to capture in detail the relationships between the key elements of institutional entrepreneurship (Small 1973). A co-citation map consists of a series of nodes representing journal articles and a series of edges representing the simultaneous appearance of articles in the reference lists of other papers (Leydesdorff 2011). Two or more papers are co-cited when they appear together in the references list of other publications (Boyack and Klavans 2010). For example, when the papers X and Y are both cited by paper Z, X and Y are co-cited. Publications that are more often cited together are more likely to be related in the subject area (Hjørland 2013). Second, we employed a keyword co-occurrence analysis, which is another method to identify core topics within a field. The resulting map or network highlights the keywords which frequently appear together in publications and thus form a relationship. We included the keywords given by the authors, but also

the so-called “keywords plus” which are algorithmically generated to enhance the representation of the articles’ content (Zhang et al. 2019).

We used Microsoft Excel (version 16.16.20) mainly for our performance analyses and VOSviewer (version 1.6.15) by Van Eck and Waltman (2020) for our bibliographic mappings.

2.2. Data Collection and Data Set

We used the Web of Science (WoS) Core Collection by Clarivate Analytics with all available indexes to collect our bibliometric dataset on 19 April 2020. This database contains “the most prestigious academic journals” (Adriaanse and Rensleigh 2013, p. 727) and is therefore frequently used in bibliometrics.

As “institutional entrepreneurship” is an established term, we used it as the exact search string. Whereas the inclusion of further variations of the search term might have led to a fuller dataset, our search strategy allowed us to capture the core of institutional entrepreneurship research and can provide a representative overview of the field (Merigó et al. 2018). We conducted a topic search, that is, the term was searched in the title, abstract, and keywords of publications. The oldest publication in the data set is by Garud et al. (2002). We excluded research that was published after the end of 2019 because the temporal distribution of publications and citations would have been non-representative for 2020. The search resulted in 655 publications. We restricted the search to business and management as disciplines (categories), which led to 397 documents. The last restriction related to an inclusion of only articles, reviews, books, and book chapters as document types. As a result, the final dataset contained 380 publications. A breakdown of these according to document types is shown in Table 1. Articles by far dominate the list numerically, but it was also found that 29 reviews are included in the relevant data set. Table 2 shows the publications’ languages. Only four of all documents were written in another language than English.

Table 1. Document types.

Document Type	Search Results	
Article	345	90.78%
Review	29	7.64%
Book Chapter	3	0.79%
Book	3	0.79%
Total	380	100.00%

Table 2. Languages.

Language	Search Results	
English	376	98.95%
Portuguese	2	0.53%
German	1	0.26%
Spanish	1	0.26%
Total	380	100.00%

3. Results

3.1. Performance Analyses

3.1.1. Annual Publications and Citations

Figure 1 shows the annual distribution of the publications of our data set, whereas Figure 2 shows how often the publications of the data set were cited in each year. The figures show both increasing publications and citations. In 2019, publications on institutional entrepreneurship were cited 3610 times.

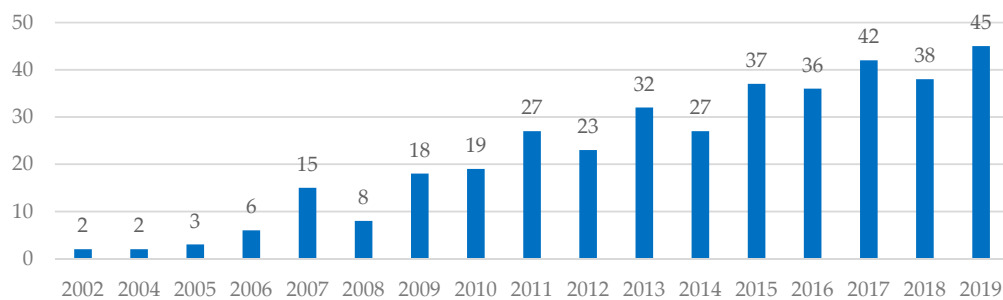


Figure 1. Annual publications.

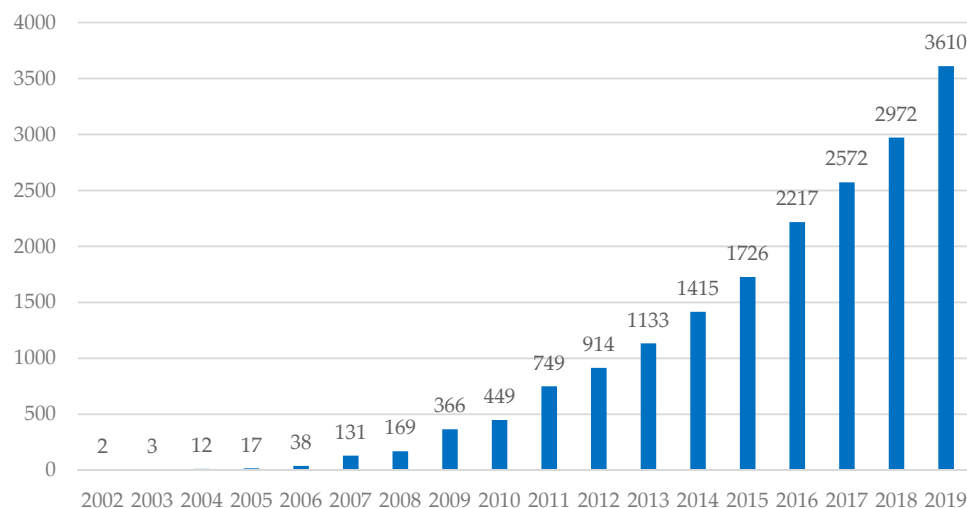


Figure 2. Annual citations.

3.1.2. Most Productive and Influential Journals

In total, our data set comprised articles published in 139 different journals. Table 3 lists the 20 most productive journals, that is, with the most published articles on institutional entrepreneurship, which account for 205 (54.81%), more than half of the 374 journal documents (345 research articles and 29 reviews). Several journals share the same rank due to the same number of published papers. It can be seen that *Organization Studies*, which has published 39 documents on institutional entrepreneurship, has published more papers than any other journal by far. The interdisciplinary journal published research that aims to better understand organizations, organizing, and the organized in and between societies. With 17 publications, the *Academy of Management Journal* ranks second. The journal focuses on empirical research on the broad scope of management. The *Journal of Business Venturing* is a leading scholarly journal of entrepreneurship and also accounts for 17 publications on institutional entrepreneurship. Every one of 13 papers was published in the *Journal of Business Ethics* and *Journal of Management Studies*. Both journal titles represent their topical focus.

Table 4 lists the journals by number of citations, measuring their impact. It shows that the *Academy of Management Journal* is leading by means of received citations, followed by *Organization Studies*, *Academy of Management Annals*, *Academy of Management Review*, and *Journal of Business Venturing*. We added the 2018 Journal Impact Factor (JIF), as provided by the Journal Citation Reports (JCR) by Clarivate Analytics, as supplementary information. The 2018 JIF is calculated as the quotient of all citations a journal received in 2016 and 2017 and the number of citable articles in the same years. Thus, the number measures a journal's research influence and impact based on the relationship between citing and cited journals. The 2019 JIF list was released on 20 June 2020, and therefore after we conducted the bibliometric analysis. The *Academy of Management Annals* has the highest overall JIF, but, within the institutional entrepreneurship field, only nine documents were published and cited 1623 times, which leads to an average paper impact of 180.33.

Table 3. Journal productivity.

Rank	Journal	Articles	
1	Organization Studies	39	10.43
2	Academy of Management Journal	17	4.55
2	Journal of Business Venturing	17	4.55
3	Journal of Business Ethics	13	3.48
3	Journal of Management Studies	13	3.48
4	Research Policy	12	3.21
5	Organization Science	11	2.94
6	Academy of Management Annals	9	2.41
6	Technological Forecasting and Social Change	9	2.41
6	Organization	9	2.41
6	Academy of Management Review	9	2.41
7	Journal of Management Inquiry	8	2.14
8	Entrepreneurship and Regional Development	6	1.60
8	European Management Journal	6	1.60
8	Industrial Marketing Management	6	1.60
8	Business and Society	6	1.60
9	Entrepreneurship Theory and Practice	5	1.34
9	Organization and Environment	5	1.34
10	British Journal of Management	4	1.07
10	Human Relations	4	1.07
...
	Total	374	100.00%

Table 4. Journal impact.

Rank	Journal	Citations	JIF
1	Academy of Management Journal	3567	7.191
2	Organization Studies	3121	3.543
3	Academy of Management Annals	1623	12.289
4	Academy of Management Review	1618	10.632
5	Journal of Business Venturing	1307	6.333
6	Organization Science	1088	3.257
7	Organization	844	2.704
8	Academy of Management Perspectives	518	3.857
9	Journal of Management Studies	513	5.839
10	Journal of Business Ethics	492	3.796
11	Business Strategy and the Environment	437	6.381
12	International Journal of Management Reviews	399	7.600
13	Journal of International Business Studies	359	7.724
14	Journal of Management	290	9.056
15	Research Policy	272	5.425
16	Entrepreneurship Theory and Practice	215	6.193
17	Business & Society	190	5.013
18	Technological Forecasting and Social Change	153	3.815
19	Human Relations	147	3.367
20	European Management Review	144	1.600

JIF: Journal Impact factor.

3.1.3. Most Productive and Influential Authors

In total, 774 authors were identified in the data set who have published on institutional entrepreneurship. Table 5 outlines the top seven contributing authors in the field ranked by their number of published articles. These top contributing authors with at least four documents published, 36 articles in total which makes up almost a tenth (9.47%) of all 380 publications in our study. The other 344 articles were published by authors who released three (24 authors) or fewer papers. The top-ranked authors have not co-authored together, which is the reason why a co-author analysis was not conducted. The list is dominated by Nelson Phillips who has published more than 100 articles and book chapters in the fields of entrepreneurship, organization, innovation, and institutional theory so far.

Table 5. Author productivity.

Rank	Author	No. of Articles
1	Phillips, Nelson	8
2	Tracey, Paul	5
3	McMullen, Jeffrey S.	5
4	Spicer, André	5
5	Jain, Sanjay	5
6	De Clercq, Dirk	4
7	Maguire, Steve	4

The 20 most influential authors are shown in descending order of citations in Table 6. The 20 authors have received 15,475 citations in total. The order has changed significantly, for instance, McMullen, as well as De Clercq, do not appear in the list anymore. The author with the most citations is Steve Maguire with 1264 citations on four published articles within the given data set. In his research, he focuses on technological and institutional change and analyzes the new risks to human health and the environment that emerge. Cynthia Hardy, with 1248 citations overall, belongs to the highly cited researchers in business and economics and focusses on organizational change as well as the exercise of power in organizations. Julia Battilana also stands out, not only due to her high number of citations (1139) but also regarding her special research area as she focuses on the behavior of actors and how it is shaped by certain norms.

Table 6. Author impact.

Rank	Author	No. of Citations
1	Maguire, Steve	1264
2	Hardy, Cynthia	1248
3	Battilana, Julie	1139
4	Lawrence, Thomas B.	1009
5	Dacin, M. Tina	990
6	Dacin, Peter A.	990
7	Leca, Bernard	941
8	Greenwood, Royston	936
9	Suddaby, Roy	909
10	Phillips, Nelson	885
11	Boxenbaum, Eva	799
12	Tracey, Paul	778
13	Garud, Raghu	642
14	Jain, Sanjay	609
15	Dean, Thomas J.	534
16	Kumaraswamy, Adepu	527
17	Dorado, Silvia	409
18	Spicer, André	345
19	Jarvis, Owen	324
20	Munir, Kamal A.	197

3.1.4. Most Influential Articles

Table 7 lists the 20 most cited articles which mention institutional entrepreneurship in the title, abstract, or keywords, ranked by the frequency of their average citation per year. The focus on the annual citations on average does not privilege older documents which had more time to be cited by subsequent research. The highest number of annual citations, 72.64, belonged to the seminal paper *How Actors Change Institutions: Towards a Theory of Institutional Entrepreneurship* by Battilana et al. (2009). The paper with the highest overall citations *Institutional Entrepreneurship in Mature Fields: The Big Five Accounting Firms* by Greenwood and Suddaby (2006), was cited 894 times since its publication. The *Academy of Management Journal* published 5 out of the 20 most frequently cited articles. All other journals from the list published only one or two articles.

Table 7. Most influential articles.

Rank	Title	Authors	Journal	Year of Publ.	Total Citations	Average Citations per Year	References
1	How Actors Change Institutions: Towards a Theory of Institutional Entrepreneurship	Battilana, Leca, and Boxenbaum	Academy of Management Annals	2009	799	72.64	Battilana et al. (2009)
2	Sensemaking in Organizations: Taking Stock and Moving Forward	Maitlis and Christianson	Journal of Management Annals	2014	391	65.17	Maitlis and Christianson (2014)
3	Institutional Entrepreneurship in Mature Fields: The Big Five Accounting Firms	Greenwood and Suddaby	Academy of Management Journal	2006	894	63.86	Greenwood and Suddaby (2006)
4	Social Enterprises as Hybrid Organizations: A Review and Research Agenda	Doherty, Haugh, and Lyon	International Journal of Management Reviews	2014	339	56.50	Doherty et al. (2014)
5	Social Entrepreneurship: Why We Don't Need a New Theory and How We Move Forward From Here	Dacin, Dacin, and Matear	Academy of Management Perspectives	2010	515	51.50	Dacin et al. (2010)
6	Institutional entrepreneurship in emerging fields: HIV/AIDS treatment advocacy in Canada	Maguire, Hardy, and Lawrence	Academy of Management Journal	2004	815	50.94	Maguire et al. (2004)
7	Sustainable Entrepreneurship and Sustainability Innovation: Categories and Interactions	Schaltegger and Wagner	Business Strategy and Environment	2011	437	48.56	Schaltegger and Wagner (2011)
8	Social Entrepreneurship: A Critique and Future Directions	Dacin, Dacin, and Tracey	Organization Science	2011	380	42.22	Dacin et al. (2011)
9	Entrepreneurship in and around institutional voids: A case study from Bangladesh	Mair and Marti	Journal of Business Venturing	2009	445	40.45	Mair and Marti (2009)
10	Toward a Theory of Social Judgements of Organizations: The Case of Legitimacy, Reputation, and Status	Bitektine	Academy of Management Review	2011	354	39.33	Bitektine (2011)

Table 7. Cont.

Rank	Title	Authors	Journal	Year of Publ.	Total Citations	Average Citations per Year	References
11	Bridging Institutional Entrepreneurship and the Creation of New Organizational Forms: A Multilevel Model	Tracey, Phillips, and Jarvis	Organization Science	2011	324	36.00	Tracey et al. (2011)
12	Constructing Markets and Shaping Boundaries: Entrepreneurial Power in Nascent Fields	Santos and Eisenhardt	Academy of Management Journal	2009	377	34.27	Santos and Eisenhardt (2009)
13	Toward a theory of sustainable entrepreneurship: Reducing environmental degradation through entrepreneurial action	Dean and McMullen	Journal of Business Venturing	2007	423	32.54	Dean and McMullen (2007)
14	An evolutionary approach to understanding international business activity: The co-evolution of MNEs and the institutional environment	Cantwell, Dunning, and Lundan	Journal of International Business Studies	2010	317	31.70	Cantwell et al. (2010)
15	Institutional Entrepreneurship in the Sponsorship of Common Technological Standards: The Case of Sun Microsystems and JAVA	Garud, Jain, and Kumaraswamy	Academy of Management Journal	2002	512	28.44	Garud et al. (2002)
16	Discourse and Deinstitutionalization: The Decline of DDT	Maguire and Hardy	Academy of Management Journal	2009	312	28.36	Maguire and Hardy (2009)
17	New practice creation: An institutional perspective on innovation	Lounsbury and Crumley	Organization Studies	2007	356	27.38	Lounsbury and Crumley (2007)
18	Ideologically motivated activism: How activist groups influence corporate social change activities	Den Hond and De Bakker	Academy of Management Review	2007	346	26.62	Den Hond and Bakker (2007)
19	Agency and institutions: The enabling role of individuals' social position	Battilana	Organization	2006	340	24.29	Battilana (2006)
20	Institutional Entrepreneurship, Partaking, and Convening	Dorado	Organization Studies	2005	302	20.13	Dorado (2005)

3.2. Science Mapping

3.2.1. Article Co-Citation Analysis

In total, our dataset of 380 publications included 24,465 references. In order to concentrate on the most relevant research and to arrive at a manageable number of publications, which would allow us to draw clear conclusions, it is common to set a threshold of citations (Kruggel et al. 2020; Luther et al. 2020). Our threshold was set to a minimum of 20 citations. As a result, 108 cited references were bibliographically analyzed. Figure 3 shows the article co-citation map.

The most cited study, *Institutional entrepreneurship in emerging fields: HIV/AIDS treatment advocacy in Canada* (Maguire et al. 2004) at the center of the figure was cited in 188 articles. It applies institutional entrepreneurship theory to the healthcare sector and analyzes how institutional entrepreneurs change institutions short- and long-term. According to them, the actors of change mostly are in leading positions with earned trust and access to other researchers. They point out that the institutionalism of new practices in emerging fields happens when they are linked to existing organizational routines and because of the alignment with the values of diverse stakeholders (for stabilization and “new field-level norms”). Papers by Greenwood and Suddaby (2006) with 176 citations, DiMaggio and Powell (1983) and DiMaggio (1988) with 148 and 132 citations, and Garud et al. (2002) with 122 citations are following in the ranking. All these top-ranked citations were published at least ten years ago and even go back until 1983. Therefore, they were published during a timeline which could be called institutional entrepreneurship’s “building stage”, as seen in the analysis of the annual publication distribution and because they establish fundamental knowledge.

The co-citation map shows three clusters, which are identified by the VOSViewer. In order to find suitable labels for the clusters, we looked for a common thematic thread in the titles, abstracts, and keywords of all publications assigned to a cluster. Clusters are usually somewhat blurry as they are formed by statistical and not content-related means so that not all publications in a cluster cover the same research theme.

The red cluster with 48 items could be called “Foundations of Institutional Entrepreneurship” and mainly includes the articles by DiMaggio and Powell (1983); Greenwood et al. (2002); Meyer and Rowan (1977); Seo and Creed (2002). Most articles in this component analyze the theoretical background and process models of institutional entrepreneurship.

The green cluster with 39 items could be labeled as “Application of Institutional Entrepreneurship”. It consists of articles by Maguire et al. (2004); Greenwood and Suddaby (2006); Garud et al. (2002). Within this set of articles, institutional changes in specific fields are analyzed based on case studies.

The blue cluster with 21 items could be called “Occurrences and Facets of Institutional Entrepreneurship”. It contains articles by DiMaggio (1988); Battilana et al. (2009); Garud et al. (2007), which catch the most attention. The range of aspects in this cluster is much wider than in the other two. The articles dive deeper into the further development and application of institutional entrepreneurship theory.

Within the 108 articles in this map, Thomas Lawrence appears most frequently with seven articles. Lawrence has already published more than 100 articles, mainly focusing on institutional theory with a trend of researching the organizational effects. The three occurring clusters, however, have their similarities in their research, and Lawrence’s articles appear in each.

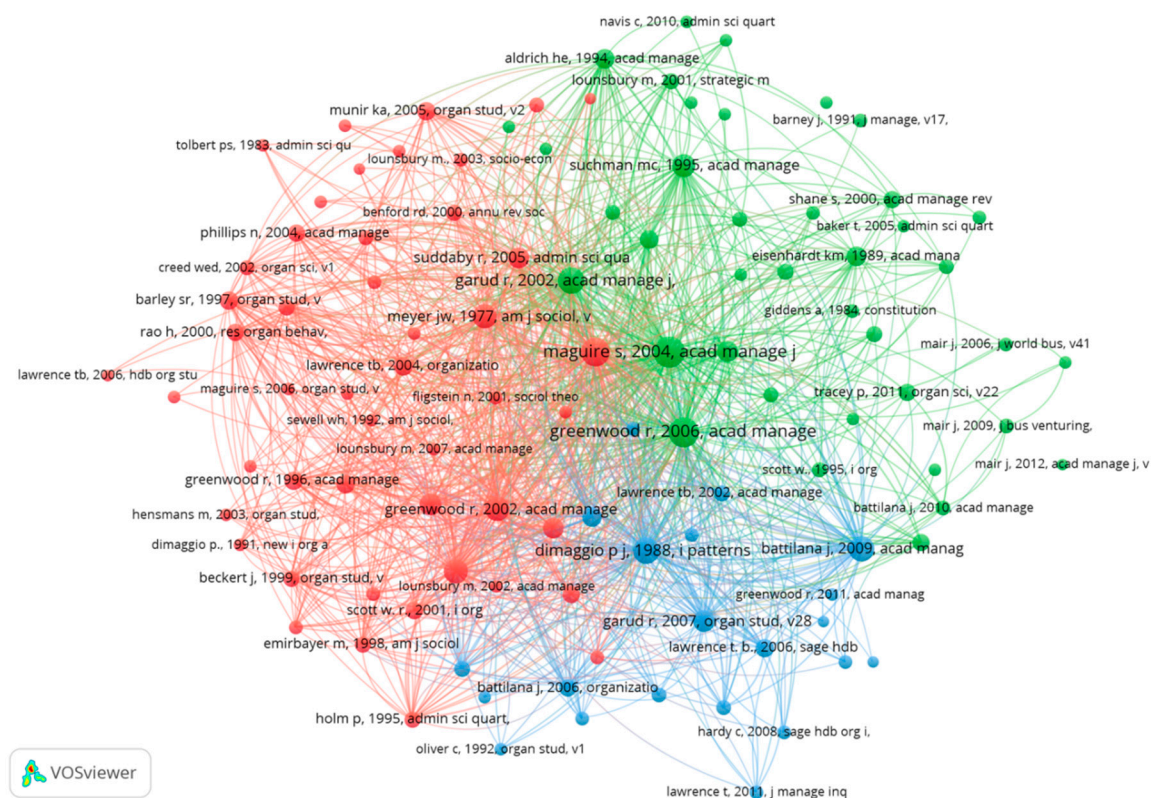


Figure 3. Article co-citation map.

3.2.2. Keyword Co-Occurrence Analysis

The 380 publications in our dataset contained 1882 keywords. Again, we set a threshold—this time to a minimum of 14 occurrences—to identify the most representative keywords. This resulted in the 45 most relevant keywords.

The size of the nodes in the map reflects the number of occurrences of the keyword (Figure 4). Their closeness and the thickness of the edges indicate the strength of their relationship, that is, the frequency of their co-occurrences. The links from the central keyword “institutional entrepreneurship” to the words “organizations”, “fields”, and “management” appear to be the strongest, followed by links to “transformation”, “dynamics”, and “legitimacy”. Therefore, these keywords describe the core of institutional entrepreneurship research. Also “China” and “India” as keywords are striking and suggest that, in these countries, institutional change driven by powerful actors is a frequent research topic.

The top 45 keywords can be assigned to five clusters. The red cluster could be named “Deliberate Change by Institutional Entrepreneurs”. With 12 items, it represents the largest group of keywords that frequently appear together in the given data set. Articles in which keywords like “construction”, “creation”, “emergence”, and “evolution” appear together tend to analyze the course of change of institutions driven by institutional entrepreneurs.

The green cluster with 11 items could be labeled “Strategy of Institutional Entrepreneurship”. The articles are linked to keywords like “innovation”, “knowledge”, “networks”, “performance”, and “strategy”, therefore representing the idea that institutional entrepreneurship occurs to strategically generate advantages for the change agents.

The yellow cluster with seven items could be labeled “Public-Private Networks”. In this cluster, the co-occurred keywords “business”, “governance”, “management”, “policy”, and “China” draw attention. The articles in which the listed keywords appeared together round off the above-mentioned issues and often analyze cases to find an explanation for the functionality of institutional entrepreneurship within networks of private and public actors.

The blue cluster, containing nine items, can be named “Dynamics of Institutional Entrepreneurship” because keywords such as “dynamics”, “embedded agency”, “institutional change”, and “movement” describe the change process. While the red cluster focused on the role of the institutional entrepreneur who drives this change, and the blue cluster, more abstractly, looks at change itself. The keyword “legitimacy” also shows that the institutional entrepreneur cannot act unboundedly but depends on external approval (Garud et al. 2002). However, legitimacy does not necessarily relate to established institutions but can also be based on distinctness (Taeuscher et al. 2020).

The purple cluster consists of the six words “agency”, “discourse”, “fields”, “power”, “transformation”, and “work”. It could be named “Mechanisms of Institutional Entrepreneurship” as they take a closer look at the drivers and processes of how institutional entrepreneurs change institutional structures.

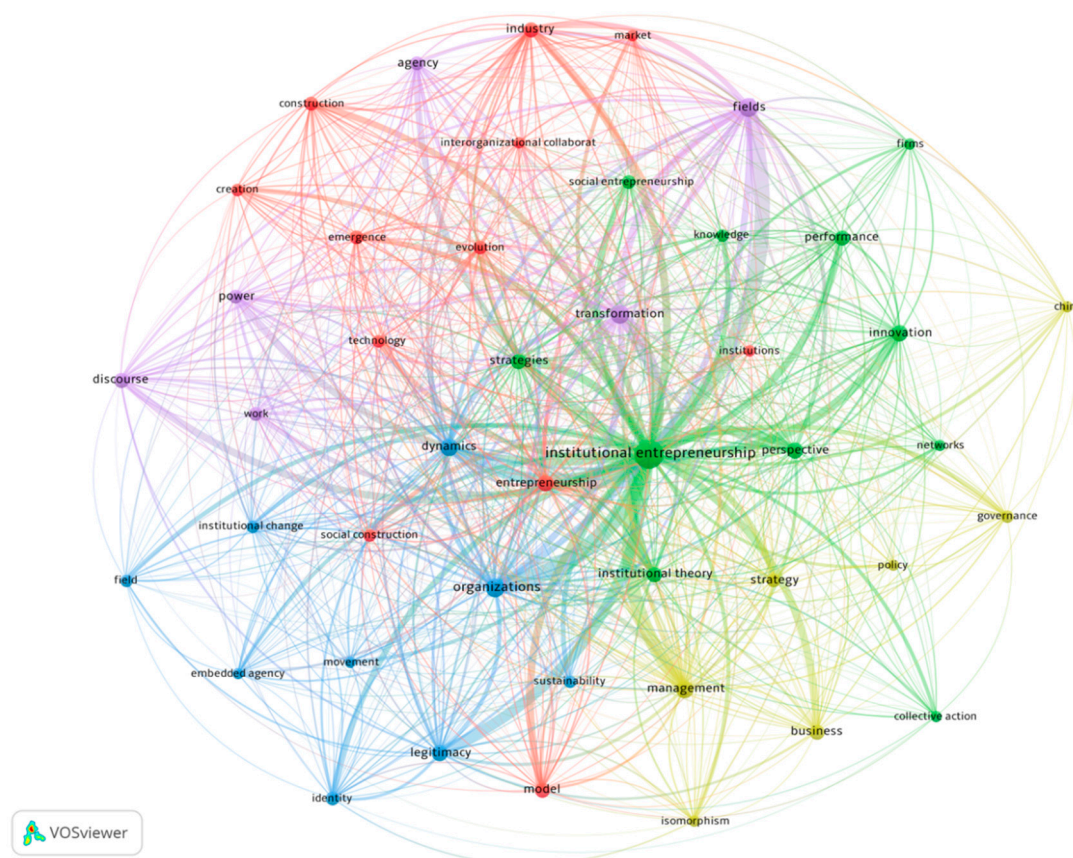


Figure 4. Keyword co-occurrence map.

4. Discussion

4.1. Performance Analyses

Both the number of annual publications and their citations show a growing trend and therefore, an ever-increasing research interest in institutional entrepreneurship. We do not see any setbacks and therefore assume that the field does not stagnate yet. In comparison, its intellectual predecessor, institutional theory (without the focus on an entrepreneurial change agent), has been characterized as a mature field (Alvesson and Spicer 2019; Scott 1987, 2008).

The analysis of the journals shows that institutional entrepreneurship is a multidisciplinary topic that is published in 139 journals. Due to its foundations in institutional theory, organization journals, such as *Organization Studies*, *Organization Science*, and *Organization*, which also employ sociological theories to publish institutional entrepreneurship papers. The second part of the portmanteau “institutional entrepreneurship” also gets some attention from entrepreneurship journals such as the

Journal of Business Venturing, *Entrepreneurship and Regional Development*, and *Entrepreneurship Theory and Practice*. However, papers published in these journals do not deal with institutional entrepreneurship at its core. Generally, only a few articles published in entrepreneurship journals have the term “institutional entrepreneurship” in their titles. For example, in his short commentary, Aldrich (2011) warns researchers not to focus too much on institutional entrepreneurs as individual human beings. Rather, institutional entrepreneurship should be seen as a collective endeavor. The suggestion from Battilana et al. (2009) that entrepreneurs are also institutional entrepreneurs when they create new business models was picked up by several scholars. For example, Lee and Hung (2014) examine how Chinese entrepreneurs not only introduced new mobile phones but changed the mobile phone market. Similarly, Gasbarro et al. (2018) address the development of sustainable innovative business models. Also, general management journals such as the *Academy of Management Journal*, *Journal of Management Studies*, *Academy of Management Annals*, *Academy of Management Review*, *Journal of Management Inquiry*, *European Management Journal*, and *British Journal of Management* cover the topic. The high number of papers published in the *Journal of Business Ethics* and also their citations shows that institutional entrepreneurship has also an ethical dimension.

The analysis of the authors shows that many researchers work on institutional entrepreneurship and that there is no outstanding author dominating the field. Rather, the institutional entrepreneurship community comprises a large number of researchers who collaborate and cite each other's works. Future researchers on institutional entrepreneurship should know their contributions. The different distribution of authors regarding productivity and impact can have many reasons. Usually, seminal papers establishing a new theory or concept and review articles summing up and further developing prior research—such as Battilana et al. (2009)—attract many citations, whereas applied papers, and especially empirical papers testing aspects of the theory or concept, are usually comparatively less cited. However, the applied paper by Maguire et al. (2004) stands out. This could be due to its healthcare context, which also attracts much research interest. At least partially, the paper could have been cited not only because of its theoretical foundation but its reference to a specific industry.

Apart from the literature that explicitly addresses institutional entrepreneurship, another body of literature can be identified that deals with both institutions and entrepreneurship but does not explicitly refer to institutional entrepreneurship theory. Especially, this research stream not directly related to institutional entrepreneurship examines the favoring or inhibiting effects of existing institutions on entrepreneurial behavior (Bouncken et al. 2020; Pacut 2020; Sobel 2008; Wang et al. 2019; Welter and Smallbone 2011) and, more generally, on the emergence, flourishing, and success of entrepreneurship (Acs et al. 2018; Aidis et al. 2008; Ali et al. 2020; Bouncken et al., 2020; Bowen and Clercq 2008; Dai and Si 2018; Eijdenberg et al. 2019; Estrada-Robles et al. 2018; Estrin et al. 2013; Lv et al. 2020; Galindo-Martín et al. 2019; Manolova et al. 2008; Queirós et al. 2019; Urbano et al. 2020), especially where institutional voids exist (Puffer et al. 2010). Rather than institutional entrepreneurship's focus on institutional change, this body of research sees entrepreneurs as embedded in existing institutions. Their change is not primarily addressed. Additionally, this research stream has to be distinguished from non-institutional effects on entrepreneurship. For example, the economic crisis caused by the COVID-19 pandemic has major effects on entrepreneurs (Kraus et al. 2020c) beyond the institutional level.

4.2. Science Mapping

The article co-citation analysis identified three clusters in institutional entrepreneurship research. The first two clusters represent a common distinction of research. Theoretical or conceptual papers establish and further develop a research field, explore its intellectual roots, and compare its main features with other theories, whereas empirical papers apply the theory to a specific research object to generate propositions or to test hypotheses. The third cluster appears as a somewhat unspecific reservoir for partial aspects of the two other clusters. Therefore, the insights from the co-citation analysis are somewhat limited.

This lack of specificity seems to be overcome by the keyword co-occurrence analysis. Here, we dive deeper into content-related aspects of institutional entrepreneurship research. The clusters seem to reflect the structure–agency problem that is one of the major topics in social sciences in general and in institutional theory in particular (Heugens and Lander 2009). It is our impression that institutional entrepreneurship research has not yet fully realized that the structure–agency dichotomy is on another conceptual level than is usually addressed. It is not a theory of regular dynamic social phenomena but a theory of social change (Tiberius 2012). In the common sociological and organizational debate, scholars argue for either structure’s or agency’s primacy in explaining social phenomena but both concepts are interrelated as structure builds the foundation in which agency takes place, or repeated (routine) agency is what establishes structures (Heugens and Lander 2009; Giddens 1991; Reed 1997). In contrast, institutional entrepreneurship addresses how agency, while being embedded in structures (Garud et al. 2007), elevates itself above these structures and disrupts them. This is indeed a “heroic” act in Aldrich’s (2011) sense, whether enacted by individuals, organizations, or groups. On the organizational level, even single individuals, such as the CEO, clearly can be powerful enough to change organizational structures. The idea that an individual human being could be able to change institutions on a market or societal level, seems to be intimidating or unrealistic, especially for institutional theorists who stress the restricting power of structures. They might argue that market or societal changes are predominantly made by organizations, which is certainly true. However, individuals can use organizations to force change. Major market disruptions such as digitization of many industries (Anderson and Agarwal 2011; Bouncken et al. 2019; Eller et al. 2020; Hagberg et al. 2016; Höhne and Tiberius 2020; Kraus et al. 2019; Tiberius and Hirth 2019) or the electrification of cars (Kley et al. 2011) are often ascribed to individuals who are the CEOs of leading firms.

Three clusters focus on agency by dealing with the change agent’s goals and interests (deliberate change), his or her strategies to achieve them (strategy), and the specific mechanisms that are used to implement the strategies. The public-private networks cluster addresses that existing institutions are mainly located in the public sphere and, in order to change them, alliances with public actors are necessary. These agents also have goals and interests. Finally, the dynamics cluster switches the perspective from agency to process. Whereas an agent’s behavior and agency is always a process, not every process involves human behavior or actions. Therefore, the process perspective is more abstract by focusing on the change without a close look at the agents. However, it has to be noted that the bibliometric clusterings tend to suggest somewhat clear borders between research fields, which usually is not the case (Waltman et al. 2010).

5. Conclusions

This paper reports on our bibliometric analysis of the fast-growing institutional entrepreneurship literature in business and management research to determine the most productive journals and authors as well as the most influential journals, authors, and articles. Additionally, we map the intellectual capital of the field quantitatively, using co-citation and co-occurrence analyses.

In total, 380 scientific papers were included in the analysis. Most publications are papers published in scholarly journals (374) and are written in English (376). Since 2015, institutional entrepreneurship received increased attention in research. Among all 774 authors, Nelson Phillips is the most productive (8 articles, 738 citations), and the most-cited author is Steve Maguire (4 articles, 1264 citations). Looking at journals as outlets for institutional entrepreneurship research, it becomes clear that the research field is strongly associated with organization studies and has comparably weak ties with entrepreneurship research. With 39 documents and an impact factor of 3.543, *Organization Studies* published most articles on institutional entrepreneurship. In contrast, the *Academy of Management Journal* ranks first according to its number of received citations and with a JIF of 7.191. The most cited article, with 894 citations, is entitled *Institutional Entrepreneurship in Mature Fields: The Big Five Accounting firms* and was co-authored by Greenwood and Suddaby (2006). The seminal paper *How Actors Change Institutions: Towards a Theory of Institutional Entrepreneurship* by Battilana et al. (2009) ranks first

regarding the average annual citations, with 72.64 citations per year. A large body of literature dealing with both institutions and entrepreneurship does not refer to institutional entrepreneurship theory.

The article co-citation analysis identified theoretical and conceptual research on one hand and applied and empirical research on the other hand. A third cluster comprised particular aspects of institutional entrepreneurship with no specific common focus. The keyword co-occurrence analysis reflects the structure–agency problem that is addressed by institutional entrepreneurship theory. The predominating agency aspect is specified by the change agent’s goals and interests, strategies, and specific mechanisms needed to implement the strategies. As structural aspects, the relevance of public agents for existing institutions is especially considered. Finally, a more abstract process rather than the agency view looks at the change process irrespective of change agents.

As with every research, our study entails several limitations. First, it has to be stated again, that bibliometric analyses are helpful to measure and map a research field, but cannot substitute for literature reviews. Therefore, we encourage researchers to engage in such an endeavor. Qualitative analyses would enrich our quantitative findings (Fetscherin and Heinrich 2015).

Second, we only used the WoS database to retrieve our data set. The database is highly comprehensive, but might not cover all institutional entrepreneurship literature. Therefore, future studies might also use other databases such as Scopus or Google Scholar (Archambault et al. 2009; Harzing and Alakangas 2016; Mongeon and Paul-Hus 2016).

Third, our analysis was limited to the disciplines of business and management. However, as institutional theory stems from sociology and is applied in many other fields, such as policy, a broader scope could evoke further insights and new avenues for business and management scholars working in the institutional entrepreneurship field. Future research might, therefore, consider this.

Fourth, several bibliometric software programs exist, which have specific advantages and disadvantages. The tools we used delivered appropriate results for our analyses. However, it cannot be ruled out that other software would have provided better results or results which could have been interpreted more easily. For example, other bibliometric analyses chose programs such as Gephi (Fahimnia et al. 2015) or HistCite (Persson et al. 2009).

Fifth, several journals might have different practices in regards to keywords. Some might even not use keywords at all. As a consequence, the keyword co-occurrence analysis might be slightly biased.

Sixth, bibliometrics in general are potentially subject to the so-called Matthew effect (Larivière and Gingras 2010; Wang 2014). Already frequently cited articles might also be cited by subsequent researchers, not due to the article’s quality but prior impact alone. This might lead to biased conclusions.

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