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ARTICLE

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More than a quarter century of *Creativity and Innovation Management*: The journal's characteristics, evolution, and a look ahead

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Robert Rose, Hasso Plattner Institute, Digital Engineering Faculty, University of Potsdam, Germany. Email: robert.rose@hpi.uni-potsdam.de When this journal was founded in 1992 by Tudor Rickards and Susan Moger, there was no academic outlet available that addressed issues at the intersection of creativity and innovation. From zero to 1,163 records, from the new kid on the block to one of the leading journals in creativity and innovation management has been quite a journey, and we would like to reflect on the past 28 years and the intellectual and conceptual structure of *Creativity and Innovation Management (CIM)*. Specifically, we highlight milestones and influential articles, identify how key journal characteristics evolved, outline the (co-)authorship structure, and finally, map the thematic land-scape of *CIM* by means of a text-mining analysis. This study represents the first systematic and comprehensive assessment of the journal's published body of knowledge and helps to understand the journal's influence on the creativity and innovation management community. We conclude by discussing future topics and paths of the journal as well as limitations of our approach.

KEYWORDS

anniversary, bibliometrics, creativity and innovation management, science mapping

1 | INTRODUCTION

In the very first editorial of this journal, its two founders, Susan Moger[†] and Tudor Rickards, argued that the management of creativity and innovation will be of "vital importance in the next few decades of societal and industrial changes" (Moger & Rickards, 1992, p. 1). Nearly three decades later, this prediction has certainly reached popular consensus, but also eventually found acknowledgement in the scholarly community to be a crucial issue in management and organization studies (e.g., Anderson, Potočnik, & Zhou, 2014). *Creativity and Innovation Management (CIM)* currently ranks fifth among 33 journals in the

Not with standing the co-authorship of the editors-in-chief, this manuscript has fully undergone the regular double-blind peer-review process and therefore adheres to the same rigorous standards which apply to all articles published in Creativity and Innovation Management. 'innovation' category of the Academic Journal Guide (Chartered Association of Business Schools, 2018) and has been actively participating in and promoting this discourse to its present-day maturity. Since its inception, *CIM* has consistently published novel and relevant research at the intersection of creativity and innovation and the management thereof for both academics as well as research-interested practitioners. The multitude of special issues and sections in *CIM* testify to this editorial policy, which encourages submissions on nascent research topics of exploratory nature (see Table A1 in Appendix)—for example, recently on the relationship of 'Big Data and Open Innovation' (Del Vecchio, Di Minin, Petruzzelli, Panniello, & Pirri, 2018).

The critical and defining feature of an academic outlet is its community—i.e., associate editors, guest editors, editorial board members, reviewers, administrative support, author- and readership. As community development is considered to be more challenging for

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5

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independent journals (Clark & Wright, 2008), *CIM* built and maintained an engaged and diverse group of scholars and practitioners. This is evident, for example, in the frequent *CIM* community workshops that have taken place regularly since 2005. Furthermore, *CIM* has closely cooperated with the 'Continuous Innovation Network' (CINet) and the European Institute for Advanced Studies in Management's (EIASM) 'Innovation and Product Development Management' (IPDM) conference series. These engagements have not only resulted in several special issues from these conferences but also a steady influx of young researchers from these communities.

Inspired by *CIM*'s recent 25th anniversary in 2018, we take the opportunity to characterize the full knowledge base of the journal. Our study thereby represents the first comprehensive bibliometric review of *CIM*'s published body of knowledge from March 1992 to December 2019. Our main objective is to systematically assess *CIM*'s 28 published volumes for which we address the following questions:

- a. How did the journal and article characteristics evolve?
- b. What characterizes the authorship community of CIM?
- c. Which are the most influential records of CIM?
- d. Which are the main concepts discussed in CIM?

This article is organized as follows. We outline our methods and data procedures in the next section and follow with a descriptive analysis of bibliographic information, i.e., publication trends, authorship, citations and journal reputation. We then visually analyse *CIM*'s main concepts and conclude with a discussion of limitations and an outlook on future trends and areas for creativity and innovation management.

2 | METHODS

Bibliometrics—the quantitative analysis of bibliographical data (Broadus, 1987)—has become a well-established research approach in management and organization studies (e.g., Podsakoff, MacKenzie, Podsakoff, & Bachrach, 2008; Vogel, 2012). The application of bibliometric methods can facilitate a "systematic, transparent, and reproducible review process" (Zupic & Čater, 2015, p. 430). To assess the conceptual and intellectual structure of works published in *CIM*, we employ bibliometric methods by the analytic procedure of *science mapping*, that is, the representation of structure and dynamics of scientific bodies of knowledge (Zupic & Čater, 2015).

Specific to the interdisciplinary knowledge domain that *CIM* is subscribed to, bibliometric methods offer a viable way to synthesize and map heterogeneous research (Uddin, Khan, & Baur, 2015). Multiple topic-specific bibliometric studies are concerned with *creativity* (e.g., Castillo-Vergara, Alvarez-Marin, & Placencio-Hidalgo, 2018; Williams, Runco, & Berlow, 2016), *innovation* (e.g., Fagerberg, Fosaas, & Sapprasert, 2012; Shafique, 2013) or *entrepreneurship* (e.g., Landström, Harirchi, & Åström, 2012; Xu, Chen, Fung, & Chan, 2018).

Journal-specific reviews in this discipline frequently apply bibliometric methods as well-see, for example, the most recent reviews in the Journal of Product Innovation Management (Antons, Kleer, & Salge, 2016; Sarin, Haon, & Belkhouja, 2018), *R&D Management* (Rigby, 2016), *Technovation* (Merino, do Carmo, & Álvarez, 2006), or *Research-Technology Management* (Shum, Park, Maine, & Pitt, 2019). Similarly, we consider a bibliometric, science mapping study as appropriate to analyse the scientific corpus published in *CIM* to enhance the objectivity of results.

2.1 | Analytical procedure

In an initial step, we run a descriptive analysis of bibliographic data to identify influential articles as well as trends in authorship and research strategies, which provides insight into *CIM*'s intellectual structure. To visualize co-authorship patterns by regions, we use the freely available and established software 'visualization of similarities viewer' developed by van Eck and Waltman (VOSviewer, version 1.6.13; van Eck & Waltman, 2010, 2019).

In a second step, we conduct a text-mining analysis using the computer-assisted qualitative data software 'Leximancer' (version 4.5; 2016, 2018). The software analyses lexical co-occurrence information in large amounts of text data to create visually mapped networks of semantic relations between automatically detected keywords, concepts and higher-order themes (Smith & Humphreys, 2006). The use of Leximancer has become increasingly popular in management and organization studies, both topic-specific (e.g., Erichsen & Christensen, 2013; Randhawa, Wilden, & Hohberger, 2016) and journal-specific (e.g., Kozlowski, Chen, & Salas, 2017; Volery & Mazzarol, 2015). Our rationale for conducting a text-mining analysis with Leximancer is to visually map *CIM*'s conceptual structure for an interpretation of its topical foci and their relationship to each other, thereby uncovering path dependencies and proximities of topics to better understand and interpret past and potential future trajectories.

2.2 | Data collection

Our retrospective study considers all published works of CIM, spanning from its inauguration in March 1992 until the last issue of 2019. To compile our database, we first downloaded all available documents from CIM's current publisher, John Wiley & Sons, from the Wiley Online Library which resulted in 1,163 records. We then tabulated all corresponding bibliographical data available at Scopus and Crossref, complemented with metadata from Web of Science, EBSCOhost, Google Scholar and Microsoft Academic, by either using an export function, API access, or the software tool 'Publish or perish' (Harzing, 2007; version 7.17). To comprehensively obtain all CIM items from each database, our search string included both ISSNs and the title of the journal. The use of multiple academic search engines and bibliographic databases (for an overview, see, e.g., Harzing, 2019b) was mainly to compare citation and access statistics, but also due to the partially incomplete indexed record of CIM-volumes 1-18 at Web of Science and 1-6 at EBSCOhost were not available.

WILEY 7

We then computed basic metrics and manually coded document types (e.g., articles, editorials, issue information) as well as research strategies. The latter variable was based on the authors' original wording and then aggregated (i.e., within the main categories conceptual/review, empirical-qualitative, empirical-quantitative, and mixed-methods). For our analyses, we included refereed articles, and if adequate for the method of analysis, also editorials. Other document types were excluded, i.e., announcements, book reviews, commentaries, conference reports, and letters to the editor. We further normalized inconsistent data (e.g., the spelling of authors' names). For example, affiliation data often proved inaccurate, which required us to manually recode authors' institutional affiliations by country for each of the 814 articles.

3 | DESCRIPTIVE ANALYSIS

3.1 | Publication trends

The full dataset of *CIM* records constitutes 28 volumes of four issues each. Accordingly, our dataset includes 112 issues, comprising 814 articles, 120 editorials, and 229 other document types (such as book reports or practitioner insights) on a total of 10,431 pages. From an annual perspective, the number of published articles has grown, with 27 articles in 1992 and 40 articles in 2019. Issue sections have varied over time, with occasional conference reports, practitioner insights, and letters to the editor. Although we focus on articles as they represent the refereed knowledge of interest, *CIM* had a tradition of frequently publishing refereed book reviews and highlight books of the quarter until 2012 (N = 97). Table 1 presents a summary of journal-level metrics.

The scientific inquiry into the multi-faceted phenomena of creativity and innovation arguably benefits from increased methodological plurality; an argument also made in the ongoing debate about how to bridge the relevance gap in management research (e.g., Kieser, Nicolai, & Seidl, 2015). CIM's editorial policy follows this rationale by calling for "different perspectives, relevant research questions, multiple methods, surprising findings and new ways of thinking" (Björk & Hölzle, 2016, p. 3). Statistically speaking, this is reflected in diverse research strategies of articles published in CIM. The 814 articles from 1992 to 2019 are 27.6 per cent of a conceptual nature or literature reviews, 28.1 per cent employ empirical-quantitative, 41.4 per cent empirical-qualitative, and 2.8 per cent mixed-method research designs. The proportion of empirical studies increased substantially over time (see Table 1), whereas conceptual work, which characterized the journal in its early years, has become less common in recent volumes.

Several other trends among article characteristics are noticeable. First, the mean length of articles (number of pages) developed from 7.4 pages in 1992 (SD = 3.2) to 13.7 pages in 2019 (SD = 2.8). Although the mean article length varies in recent years, a general trend to longer articles is evident. This development mirrors the general increase in article length in management journals (Ronda-Pupo, 2017). Second, the length of titles and abstracts (number of characters) has grown as well. The mean title length steadily increased from 60 characters in 1992 (SD = 29) to 94 characters in 2019 (SD = 26). Mean abstract length has more than doubled from 548 characters in 1992 (SD = 244) to 1,169 characters in 2019 (SD = 220). Although a mere count of article features precludes equally important contextual considerations, the overall increment of article, title,and abstract length is apparent and not unique to CIM—a development that has implications for citation rates (Tahamtan, Afshar, & Ahamdzadeh, 2016), and more generally, for the user-centricity of scientific communication.

Finally, the number of references cited per article has increased as well. The incomplete availability of bibliographic data for references cited by *CIM* articles only allowed us to consider the last 17 years. The mean of cited references increased from 32 references in 2003 (SD = 18) to 73 references in 2019 (SD = 19). This trend is consistent with literature in all scientific fields (Boyack, van Eck, Colavizza, & Waltman, 2018) as could be expected with the general growth of scientific knowledge in complexity and volume (Marx & Bornmann, 2016), but also because of evolving citation behaviours (Tahamtan & Bornmann, 2018).

3.2 | Authorship

Over the course of 28 years, a total of 1,028 individual authors have published in *CIM*. In line with the trend towards team-based authorship in management and organization studies (Acedo, Barroso, Casanueva, & Galán, 2006) and all other academic disciplines (Wuchty, Jones, & Uzzi, 2007), the ratio of co-authored articles at *CIM* increased over time. Liu, Olivola, and Kovacs (2016) outline three potential explanations to engage in co-authorship collaborations: reasons of productivity (due to increasing research complexity), networking (ease of digitally-enabled collaboration), or strategic explanations which are unrelated to research quality, but are driven by career-related considerations.

Figure 1 presents the annual development of co-authorship collaborations of articles published in *CIM*. The mean number of authors per article developed from 1.4 authors (1992) to 2.7 authors (2019).

Authors from 50 countries have published in *CIM*, spanning a considerable diversity of geographic regions. Figure 2 displays the annual development of authors' country of affiliation, aggregated from countries to subregions for easier visual assessment. A strong focus on Europe (74 per cent of all articles) reflects *CIM*'s origins, since its founders, succeeding editorial boards, and its publisher are based in Europe. Countries of the Anglosphere accounted for 35 per cent of all author affiliations and are thus substantial, in comparison to other management journals, however, to a lesser degree, where Vogel, Hattke, and Petersen observe a "predominance of Anglo-Saxon scholarship" (2017, p. 1708). Also, contrary to the trend of growing contributions from US-based management scholars to European-based journals (Vogel, 2012), today's ratio of US affiliations in *CIM* is only at 5.9 per cent in 2019.

		Articles	Co-auth	norship ^a	Article	length ^a	Referenc	te count ^a	Researc	h strategies ¹	٩		Cited ^c				AAS ^f	
Vol.	Year	 z	Σ	SD	Σ	SD	Σ	ß	Conc.	Quant.	Qual.	Mix.	z	Σ	JIFd	CS [®]	z	Editors-in-Chief
1	1992	27	1.4	(9.0)	7.4	(3.2)	19.7	(15.8)	56%	19%	26%	%0	175	6.5			4	
2	1993	26	1.3	(0.7)	8.0	(3.4)	25.3	(12.7)	50%	12%	38%	%0	188	7.2	I	I	ო	
e	1994	24	1.3	(0.5)	8.1	(4.6)	20.2	(12.7)	46%	21%	29%	4%	146	6.1	I	ı	0	
4	1995	24	1.6	(0.8)	8.9	(2.9)	35.0	(30.1)	67%	8%	25%	%0	128	5.3	I	I	0	
5	1996	25	1.6	(1.1)	9.6	(3.8)	26.5	(18.0)	52%	12%	36%	%0	88	3.5	I	ı	0	
6	1997	23	1.4	(0.5)	9.5	(3.4)	I	I	52%	13%	35%	%0	251	10.9	I	ı	0	Susan Moger & Tudor Rickards
7	1998	19	1.4	(0.8)	9.3	(3.4)	I	I	74%	5%	21%	%0	204	10.7	I	ı	0	
00	1999	27	1.6	(0.7)	9.4	(3.8)	I	I	48%	15%	37%	%0	337	12.5	I	I	0	
6	2000	23	1.5	(0.0)	10.8	(5.2)	I	I	22%	22%	52%	4%	296	12.9	I	ı	0	
10	2001	26	2.0	(1.2)	9.6	(2.7)	I	I	54%	4%	38%	4%	364	14.0	I	I	2	
11	2002	25	2.4	(1.1)	10.4	(3.7)	I	I	32%	28%	36%	4%	845	33.8	I	ı	1	
12	2003	23	1.9	(0.7)	10.4	(3.6)	31.8	(18.0)	26%	26%	39%	%6	581	25.3	I	ī	16	
13	2004	23	1.8	(0.8)	11.5	(2.4)	50.6	(21.3)	35%	26%	35%	4%	982	42.7	I	ı	9	Petra de Weerd-
14	2005	38	2.5	(1.2)	10.9	(2.7)	36.0	(17.8)	24%	29%	47%	%0	1,618	42.6	I	I	49	Nederhof &
15	2006	37	2.1	(1.0)	11.0	(2.8)	44.5	(21.5)	41%	22%	35%	3%	1,063	28.7	I	I	20	Olaf Fisscher
16	2007	38	2.3	(1.2)	11.6	(2.6)	45.6	(26.1)	24%	26%	47%	3%	1,247	32.8	I	I	15	
17	2008	26	2.2	(1.0)	11.9	(3.2)	46.8	(20.1)	19%	27%	50%	4%	832	32.0	T	I	20	
18	2009	29	2.2	(1.2)	10.8	(2.5)	37.7	(19.7)	24%	24%	45%	7%	565	19.5	I	I	13	
19	2010	31	2.6	(1.0)	13.2	(3.3)	57.7	(24.5)	%9	42%	48%	3%	1,264	40.8	I	I	26	
20	2011	24	2.2	(0.8)	13.7	(3.8)	63.7	(25.5)	8%	33%	50%	8%	634	26.4	I	I	4	Petra de Weerd- Nodorhof S
21	2012	29	2.3	(1.2)	14.9	(3.6)	71.0	(18.1)	24%	34%	41%	%0	942	32.5	0.855	I	146	Klaasjan Visscher
22	2013	28	2.3	(1.0)	14.8	(4.8)	72.8	(26.8)	14%	29%	57%	%0	593	21.2	0.714	0.92	114	
23	2014	33	2.8	(1.3)	14.6	(2.5)	73.4	(24.8)	%6	55%	30%	%9	608	18.4	1.016	1.38	167	
24	2015	43	2.8	(1.1)	15.5	(3.8)	69.4	(18.1)	%6	37%	47%	7%	636	14.8	1.143	1.85	183	
25	2016	32	2.9	(1.4)	16.3	(3.3)	7.77	(26.7)	3%	44%	53%	%0	280	8.8	1.423	1.90	80	
26	2017	33	2.8	(0.9)	12.6	(2.5)	78.2	(21.7)	%6	42%	48%	%0	273	8.3	1.553	2.02	115	Jennie Björk &
27	2018	38	3.0	(1.5)	12.7	(3.1)	76.4	(32.4)	8%	34%	53%	5%	95	2.5	2.015	3.11	70	Katharina Hölzle
28	2019	40	2.7	(1.1)	13.7	(2.8)	73.1	(18.5)	8%	53%	38%	3%	16	0.4	ı	ı	158	
^a Count of Mixed-met	authors, thod stud	pages and re lies. ^c Citatio	eferences n data ret	per article (:rieved on 2	N = 814). 1/01/202	^b Conc. = C ?0 from Sco	Conceptual, opus. We a	theoretical ; ssigned zero	and review citations to	articles; Qu 5 the 140 Cl	ant. = Emp IM items ea	iirical-qua. ach which	ntitative s are missir	tudies; Quind and Sco	ual. = Emp pus compi	irical-qual ared to th	litative stu e full data	udies; Mix. = set of 1,163 items

(based on Crossref data this equals to a sum of 39 received citations). ^d2018 Journal Impact Factor (2-year; Clarivate Analytics, 2019). ^eCiteScoreTM 2018 (Scopus, Elsevier BV, 2019). ^fSum of Altmetric Attention Scores across items, retrieved from Altmetric Explorer on 21/01/2020.

ROSE ET AL.



FIGURE 1 Development of collaborations in CIM (1992–2019). Note: Numbers 1 to 8 depict the author count per article



FIGURE 2 Development of authors' region of affiliation in CIM (1992–2019). Note: Subregions based on ISO 3166. Random coloring across regions, and graded color scheme for subregions (White, Slocum, & McDermott, 2017) [Colour figure can be viewed at wileyonlinelibrary.com]

Concerning co-authorships at the country level of analysis, multiauthored articles involving institutions based in the UK, US, Germany, Sweden, Denmark and the Netherlands are at the centre of collaborations in CIM. Figure 3 presents a map of co-authorships by country of affiliation across all volumes. Displayed are 32 countries and 110 links between them. This visualized network shows that authors based in the UK and US engage most frequently in co-authorships which could be partially explained by institutional incentives prevalent in both countries (e.g., tenure systems) to publish with international coauthors (Liu et al., 2016).

Citations 3.3

Citation analysis is the traditional bibliometric method for evaluating scholarly impact, providing insight about the relative importance of published work (Tahamtan & Bornmann, 2018; Zupic & Čater, 2015), and in the context of our journal-specific science mapping approach, helps to identify influential articles and topics which are characteristic of CIM.

Based on Scopus data, CIM has received a total of 15,250 citations at present (98.5 per cent for articles, 1.4 per cent for editorials,



FIGURE 3 Map of co-authorships in CIM by country of affiliation (1992–2019). Note: N = 814 articles. Overlay visualization, full counting method (Perianes-Rodriguez, Waltman, & van Eck, 2016). Node sizes correspond with number of articles and color scale with average publication year. Threshold of three articles and total link strength above zero required for a country to be included. VOSviewer advanced parameters were set to default (van Eck & Waltman, 2019) [Colour figure can be viewed at wileyonlinelibrary.com]

and 0.1 per cent for other items). Table 2 displays the most cited works in *CIM* from 1992 to 2019, which in sum account for 22 per cent of all received citations. It should be noted that within this depiction, the relative influence of recent articles is not adequately represented with less time available for newer articles to be cited. We address this by displaying the rate of citations per year (C/Y) and further discuss access statistics and alternative metrics below to provide complementary insights.

As measured by total citations, the most referenced article published by *CIM* is from De Jong and Den Hartog (2010), either being ranked first or second according to Scopus, Google Scholar, Web of Science or Crossref. As measured by the yearly rate of citations, the most frequently cited article is the review of Design Thinking by Johansson-Sköldberg, Woodilla, and Çetinkaya (2013) (C/Y = 27.9). Other topics covered in the most-cited works are notably diverse, and empirical studies listed in Table 2 were conducted equally with qualitative and quantitative research designs. *CIM* articles that have been cited at least once (N = 759) received a mean of 20 citations.

To identify the most recent popular articles and topics of *CIM*, we obtained access statistics from Web of Science, which indexes only 328 of *CIM*'s articles, and thus restricts us from a detailed analysis. Still, among users of Web of Science, the most accessed document since 2013 is a conceptual article from Bogers and West (2012) on the topic of 'open and user innovation'.

A more comprehensive overview of the currently most popular work from *CIM* is offered by a publisher report for 2018, which was made available to us by Wiley. According to the report, article downloads from Wiley Online Library steadily increased since 2009 (e.g., by 16 per cent from 2016 to 2017). Readership across regions remained equally distributed since 2015, with articles being mainly accessed from Europe (40 per cent), North America (14 per cent), Australia (8 per cent), and China (5 per cent). *CIM* articles were downloaded, on average, 284 times per article in 2018.

In Table 3, we display the ten most downloaded articles from Wiley Online Library during 2018. In reviewing Table 3, the recency of articles becomes apparent (two articles from 2018 already included), especially in comparison to the most cited articles (see Table 2 with a median at 2007). Of downloads of the displayed articles, 27 per cent can be assigned to the topic of Design Thinking, a concept which experienced substantial recent attention in both academia and practice, and is a continuously featured topic in *CIM* (e.g., Carlgren, Rauth, & Elmquist, 2016; Johansson-Sköldberg et al., 2013; Kummitha, 2019). Furthermore, the topic of Open Innovation is also high on the list (28 per cent of the top ten downloads based on Table 3).

To gauge the general impact of *CIM* publications, we further analysed alternative metrics. The so-called 'Altmetrics' can be broadly defined as "scholarly impact measures based on activity in online tools and environments" (Priem, Groth, & Taraborelli, 2012, p. 1). The

TABLE 2Twenty-five most cited works of CIM (1992-2019)

R	Rank	Title	Author(s)	Year	Cites	C/Y
1		Measuring innovative work behaviour	De Jong, J; Den Hartog, DN	2010	256	25.6
2	2	The paradox of diversity management, creativity and innovation	Bassett-Jones, N	2005	212	14.1
3	3	Working together apart? Building a knowledge-sharing culture for global virtual teams	Zakaria, N; Amelinckx, A; Wilemon, D	2004	199	12.4
4	Ļ	Design thinking: Past, present and possible futures	Johansson-Skoldberg, U; Woodilla, J; Cetinkaya, M	2013	195	27.9
5	5	Community-based innovation contests: Where competition meets cooperation	Bullinger, AC; Neyer, AK; Rass, M; Moeslein, KM	2010	159	15.9
6		On-the-job innovation: The impact of job design and human resource management through production ownership	Dorenbosch, L; van Engen, ML; Verhagen, M	2005	152	10.1
7	,	Communitition: The tension between competition and collaboration in community-based design contests	Hutter, K; Hautz, J; Füller, J; Mueller, J; Matzler, K	2011	151	16.8
8	3	Antecedents of team creativity: An examination of team emotional intelligence, team trust and collaborative culture	Barczak, G; Lassk, F; Mulki, J	2010	137	13.7
9)	Open innovation - the Dutch treat: Challenges in thinking in business models	van der Meer, H	2007	135	10.4
1	.0	Determinants of innovative work behaviour: Development and test of an integrated model	Ramamoorthy, N; Flood, PC; Slattery, T; Sardessai, R	2005	132	8.8
1	.1	Editorial: Managing creativity in the cultural industries	Jeffcutt, P; Pratt, AC	2002	131	7.3
1	.2	Managing people to promote innovation	Shipton, H; Fay, D; West, MA; Patterson, M; Birdi, K	2005	130	8.7
1	.3	Towards systematic business model innovation: Lessons from product innovation management	Bucherer, E; Eisert, U; Gassmann, O	2012	121	15.1
1	.4	Lifestyle meets market: Bohemian entrepreneurs in creative industries	Eikhof, DR; Haunschild, A	2006	116	8.3
1	.5	Exploration and exploitation in innovation: Reframing the interpretation	Li, Y; Vanhaverbeke, W; Schoenmakers, W	2008	115	9.6
1	.6	Transformational leadership and innovative work behaviour: Exploring the relevance of gender differences	Reuvers, M; van Engen, ML; Vin-kenburg, CJ; Wilson-Evered, E	2008	108	9.0
1	.7	Stimulating the potential: Creative performance and communication in innovation teams	Kratzer, J; Leenders, RTAJ; van Engelen, JML	2004	107	6.7
1	.8	Role models for radical innovations in times of open innovation	Gemünden, HG; Salomo, S; Hölzle, K	2007	106	8.2
1	.9	Understanding the advantages of open innovation practices in corporate venturing in terms of real options	Vanhaverbeke, W; Van de Vrande, V; Chesbrough, H	2008	103	8.6
2	20	Creativity and innovation through multidisciplinary and multisectoral cooperation	Alves, J; Marques, MJ; Saur, I; Marques, P	2007	102	7.8
2	21	Entrepreneurial leadership and new ventures: Creativity in entrepreneurial teams	Chen, MH	2007	100	7.7
2	22	Innovation contests: A review, classification and outlook	Adamczyk, S; Bullinger, AC; Möslein, KM	2012	99	12.4
2	23	Minimizing market risks through customer integration in new product development: Learning from bad practice	Enkel, E; Perez-Freije, J; Gassmann, O	2005	99	6.6
2	24	Organizing pharmaceutical innovation: From science-based knowledge creators to drug-oriented knowledge brokers	Gassmann, O; Reepmeyer, G	2005	99	6.6
2	25	Managing distributed innovation: Strategic utilization of open and user innovation	Bogers, M; West, J	2012	98	12.3

Cites = Total received citations based on Scopus data, retrieved on 21/01/2020. C/Y = Citations per year. Adapted referencing style for brevity. Ranking order by total citation count.

TABLE 3	Ten most downloaded articles of CIM from Wiley in 2018
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Rank	Title	Author(s)	Year	Downloads
1	Design thinking: Past, present and possible futures	Johansson-Skoldberg, U; Woodilla, J; Cetinkaya, M	2013	4,080
2	The paradox of diversity management, creativity and innovation	Bassett-Jones, N	2005	2,655
3	Big data for open innovation in SMEs and large corporations: Trends, opportunities, and challenges	Del Vecchio, P; Di Minin, A; Petruzzelli, AM et al.	2018	2,275
4	Measuring innovative work behaviour	De Jong, J; Den Hartog, DN	2010	1,798
5	Understanding the advantages of open innovation practices in corporate venturing in terms of real options	Vanhaverbeke, W; Van de Vrande, V; Chesbrough, H	2008	1,731
6	Case study: Jack Welch's creative revolutionary transformation []	Abetti, PA	2006	1,519
7	Outsourcing creativity: An abductive study of open innovation using corporate accelerators	Richter, N; Jackson, P; Schildhauer, T	2018	1,400
8	Double ambidexterity: How a Telco incumbent used business-model and technology innovations []	Kaulio, M; Thorén, K; Rohrbeck, R	2017	1,329
9	Action planning for new product development projects	Buijs, J	2008	1,267
10	Framing design thinking: The concept in idea and enactment	Carlgren, L; Rauth, I; Elmquist, M	2016	1,261

Download counts refer to Wiley Online Library. Adapted referencing style for brevity.

bibliometric community increasingly engages in a lively discussion about the different aspects of Altmetrics (e.g., Erdt, Nagarajan, Sin, & Theng, 2016; Sugimoto, Work, Larivière, & Haustein, 2017). For the purpose of our study, we utilize the article-level 'Attention Score' provided by the aggregator . This composite measure is based on counts of mentions from multiple online sources (e.g., news outlets, Twitter or Wikipedia), weighted by the volume, source and authors of article mentions (Erdt et al., 2016). Both increasingly popular and criticized (Mukherjee, Subotić, & Chaubey, 2018), the Altmetric Attention Score (AAS) can provide at least an indication of which *CIM* articles receive the most attention beyond traditional citation counts. Table 4 lists the five highest-ranked *CIM* records based on the AAS, representing 23 per cent of the total AAS score of 1,249, and led by an experimental study from Brem and Utikal (2019) with an AAS of 111.

On balance, this snapshot of CIM's most influential workaccording to its received citations, access statistics and Altmetric scores—is indicative of a considerable diversity but also shows a recency of topics from management and organizational practice which are popular among citing researchers and the current readership of the journal. A clear focus on articles explaining the antecedents and requirements for creativity, innovation and innovative work behaviour, as well as Design Thinking and Open Innovation, can be recognized (see also Table A2 for a list of the recipients of CIM's 'Tudor Rickards and Susan Moger Best Paper Award'). As a next step, we look at the network of the journal with respect to incoming and outgoing citations. Table 5 shows the journals that are cited in *CIM* (outgoing) or which are citing *CIM* (incoming), respectively.

Several aspects of this journal-based perspective on knowledge flows of *CIM* stand out. First, the distribution of cited and citing journals each is considerably dispersed with relatively low frequencies of citation and record counts for the top 15 journals. Second, the most prominently represented journal in this overview is the *Journal of Product Innovation Management*, which is renowned as the leading outlet for research on the management of technology and innovation

TABLE 4	Five CIM articles with the highest Altmetric Attention Sco	re
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Rank	Title	Author(s)	Year	AAS
1	How to manage creativity time? Results from a social psychological time model lab experiment on individual creative and routine performance	Brem, A; Utikal, V	2019	111
2	Welcome interferences: Dealing with obstacles promotes creative thought in goal pursuit	Marguc, J; Van Kleef, GA; Förster, J	2015	66
3	Design thinking: Past, present and possible futures	Johansson-Skoldberg, U; Woodilla, J; Cetinkaya, M	2013	54
4	The paradox of diversity management, creativity and innovation	Bassett-Jones, N	2005	32
5	Constraints that help or hinder creative performance: A motivational approach	Roskes, Ma	2015	24

AAS = Altmetric Attention Score, retrieved from Altmetric Explorer on 21/01/2020. Adapted referencing style for brevity.

TABLE 5Outgoing and incoming journal citations (1992–2019)

Rank	Publication	CS	Citations by	/ CIM	Publication	CS	Records cit	ing CIM
1	Journal of Product Innovation Management	5.43	1,062	3.12%	International Journal of Innovation Management	1.32	183	1.68%
2	Academy of Management Journal	10.36	982	2.88%	Journal of Product Innovation Management	5.43	119	1.09%
3	Strategic Management Journal	7.91	792	2.33%	Journal of Business Research	5.32	112	1.03%
4	Academy of Management Review	9.2	782	2.30%	R&D Management	2.99	107	0.98%
5	Research Policy	6.56	691	2.03%	Sustainability	3.01	106	0.97%
6	Organization Science	4.76	685	2.01%	Technological Forecasting and Social Change	4.32	97	0.89%
7	Administrative Science Quarterly	8.42	621	1.82%	European Journal of Innovation Management	2.08	93	0.85%
8	Harvard Business Review	1.91	543	1.59%	Creativity Research Journal	1.66	87	0.80%
9	R&D Management	2.99	527	1.55%	International Journal of Technology Management	1.47	77	0.71%
10	Management Science	5.08	473	1.39%	Management Decision	2.74	67	0.61%
11	Journal of Applied Psychology	6.86	402	1.18%	Technovation	6.25	61	0.56%
12	Journal of Management	10.96	340	1.00%	Journal of Creative Behavior	1.73	61	0.56%
13	Technovation	6.25	336	0.99%	Industrial Marketing Management	5.79	56	0.51%
14	Journal of Personality and Social Psychology	7.41	272	0.80%	Technology Analysis and Strategic Management	2.05	55	0.50%
15	California Management Review	6.62	265	0.78%	Journal of Knowledge Management	5.63	54	0.49%
16	Journal of Business Venturing	9.79	261	0.77%	Lecture Notes in Computer Science	1.06	51	0.47%
17	Creativity Research Journal	1.66	253	0.74%	Research Policy	6.56	47	0.43%
18	Journal of Marketing	9.28	251	0.74%	International Journal of Project Management	6.41	47	0.43%
19	Journal of Management Studies	5.99	215	0.63%	International Journal of Human Resource Management	2.71	46	0.42%
20	The Leadership Quarterly	6.23	202	0.59%	International Journal of Innovation and Technology Management	0.62	44	0.40%
-	All other citations	-	24,453	70.76%	All other records	-	9,342	85.61%
			∑ 34,408	(100.00%)			\sum 10,912	(100.00%)

Ranking order by total counts of citations and records. $CS = CiteScore^{M}$ 2018 (Scopus, Elsevier BV, 2019). Counts of outgoing (given) citations (record duplicates included) are based on Scopus data retrieved on 21/01/2020 for 686 CIM records. Counts of citing records (record duplicates excluded) account for 15,250 incoming (received) citations of CIM. Self-citations of CIM and periodical conference proceedings are excluded (both included in 'all other citations/records').

(Sarin et al., 2018), and shares close historical ties with *CIM*. Second, journals dedicated to the field of project management are notably absent from the top 20 cited or citing sources. The *International Journal of Project Management*, a premier journal of the project domain (Crawford, Pollack, & England, 2006), has been cited a mere 92 times in *CIM* (0.27 per cent of all citations) and 47 articles have cited *CIM* (0.43 per cent of all records). Whereas Midler and colleagues argue that "innovation activities are almost always conducted within a project framework" (Midler, Killen, & Kock, 2016, p. 3), the knowledge

exchange, as measured by citations, is apparently limited. Beyond *CIM*, this disparity has also been observed for the fields of innovation and project management research in general (Davies, Manning, & Söderlund, 2018). Third, an inspection of frequencies for periodical proceedings citing *CIM* (not displayed in Table 5) indicates a strong knowledge flow towards the fields of engineering (e.g., IEEE proceedings), information systems (e.g., the European, Americas, Pacific Asia, Australasian, or International Conference on Information Systems), or product design (e.g., International Design Conference), which

¹⁴ WILEY-

highlights the curiosity for cross-disciplinary collaboration in the light of today's technology-driven innovation challenges. Lastly, a substantial 11.7 per cent of all records which are citing *CIM* are classified in Scopus as (chapters of) books, handbooks, or textbooks. Following a rationale of external scholarly impact recently outlined by Aguinis, Ramani, Alabduljader, Bailey, and Lee (2019), this can be interpreted as a knowledge transfer to students, and eventually, future practitioners.

3.4 | Journal reputation

Despite the progressing debate about what constitutes scholarly impact nowadays (e.g., Aguinis, Shapiro, Antonacopoulou, & Cummings, 2014; Osterloh & Frey, 2020) and corresponding criticism of academic ranking systems (e.g., Adler & Harzing, 2009; Renwick, Breslin, & Price, 2019), the traditional assessment of a journal's impact and reputation remains based on its rankings. Vogel et al. (2017) differentiate three types of rankings according to methodological approaches: (1) citation-based rankings, (2) expert-based rankings and (3) hybrids of the aforementioned. A comprehensive compendium of 13 journal rankings relevant to management and organization studies is published and frequently updated by Anne-Wil Harzing on her website (2019a), which lists *CIM* as one of 17 journals in the 'innovation' subject area.

The most prevalent citation-based metric for journals is the 'Journal Impact Factor' (JIF) as published in the Journal Citation Reports[®], and depicts the "ratio between citations and recent citable items published" (Clarivate Analytics, 2019), reported for a citation window of two and five years, respectively. *CIM* has been indexed in the underlying Social Sciences Citation Index since 2012, and its two-year impact factor has steadily increased since (see Table 1) towards 2.015 in 2018 (5-year JIF = 2.866), which ranks *CIM* as the 123rd of 217 journals in the management category (third quartile).

Another citation-based measure is Hirsch's *h*-index (2005), which has found widespread dissemination (Waltman, 2016). The *h*-index has been described as a "robust measure of sustained and durable performance," also when applied to journals (Harzing & van der Wal, 2009, p. 42). Variations of the *h*-index are calculated based on different citation data and timespans, e.g., Google's *h*5-index considers five years of publications and citations as indexed by Google Scholar. *CIM*'s current *h*5-index is at 32 (*h*5-median = 44), which ranks it 16th in the 'Entrepreneurship & Innovation' category (Google, 2020).

As for frequently utilized expert-based rankings, *CIM* is indexed in the 'ABDC Journal Quality List' (Australian Business Deans Council, 2019) and the 'Jourqual3' (German Academic Association for Business Research, 2015) with a 'C' rating in each. Regarding hybrid rankings, which are based on the preferences of expert panels as well as citation counts, *CIM* is among the five top-ranked journals of the 'Academic Journal Guide' out of 33 journals in the 'innovation' category (Chartered Association of Business Schools, 2018).

It should be noted that the incomplete indexing of CIM articles on major academic search engines and databases potentially could impede its metrics. As reviews increasingly rely on systematic retrieval procedures, unindexed CIM items would be omitted in such reviews, also from further citation chains. Based on the 814 items we coded as articles, the respective coverage on popular academic search engines and databases is at 40.3 per cent (Web of Science), 79.4 per cent (EBSCOhost), 98.5 per cent (Google Scholar), and 99.9 per cent (Scopus). Missing items, however, are mostly published in early volumes of the journal with higher availabilities for recent volumes. Given that, first, the mentioned publisher report states article access statistics for CIM above average in the 'Business & Management' category, and second, accessibility and visibility have been found to be positively related to citations (Tahamtan et al., 2016; Tahamtan & Bornmann, 2018), we presume further improvement in CIM journal metrics in the future.

4 | TEXT-MINING ANALYSIS

To assess the conceptual structure of *CIM*'s body of knowledge, we use the software Leximancer (2016). We refer to our methods section as well as the introductory article by Smith and Humphreys (2006) and further methodological literature (Angus, Rintel, & Wiles, 2013; Stockwell, Colomb, Smith, & Wiles, 2009) for a detailed description of Leximancer, and in what follows, outline our analytic and interpretational procedure.

First, we compiled titles and abstracts of the 814 articles published in CIM from 1992 to 2019. We preferred this approach over a full-text analysis to minimize text clutter and because titles and abstracts have a high lexical density, containing the document's most important keywords and phrases (a similar approach is followed, for example, by Kallens & Dale, 2018). Second, to identify topical foci over time, we further temporally partitioned the dataset into four equal seven-year segments instead of the unevenly distributed editorial terms. Finally, we manually merged concepts for inclusion (e.g., singular and plural forms), added stop words for the English language and the user-defined concepts 'NPD' (new product development), 'R&D' (research and development), 'SME' (small and mediumsized enterprises), and 'TRIZ' (theory of inventive problem solving) based on highly frequent detected name-like concepts of a preliminary analysis. Compound concepts with relatively few occurrences were not merged (e.g., Design Thinking, Open Innovation). The analysed dataset contains 716,440 characters (without spaces) and 124,066 words (including stop words) in approximately 5,899 sentences.

The resulting map of our Leximancer analysis, as displayed in Figure 4, shows 67 concepts clustered in 19 themes, connected to four equal temporal segments of seven years each. The three parenting themes which accumulate the most hits—i.e., the number of text blocks related to the theme (Leximancer, 2016; provided in brackets)—are 'innovation' (1,293), 'creativity' (804), and 'management' (629). The notably distinct locations of the four temporal segment



FIGURE 4 Leximancer concept map for CIM's article titles and abstracts (1992–2019). Note: Initial result for topical clustering algorithm is displayed (Leximancer, 2016). N = 814 records. Theme size = 24%. If themes are parenting identically named concepts, the latter are not labeled [Colour figure can be viewed at wileyonlinelibrary.com]

nodes imply shifting emphases over the course of *CIM*'s evolution and reflect the journal's editorial policy to encourage contemporary research contributions.

The earliest temporal segment from 1992 to 1998 is associated with the theme of 'creativity' which is closely connected to the theme of 'teams'. The relative prominence of creativity at *CIM* was recently also highlighted by Slavich and Svejenova (2016) in a bibliometric study on this topic. Article titles and abstracts in early *CIM* volumes are significantly shorter in length (see Table 1), and 20 of the 218 articles do not contain abstracts, which results in the lowest overall count of text blocks of this period (488) and becomes further visible by the relative distance of this segment node to the main themes.

The second temporal segment (1999–2005) relates to a count of 643 text blocks. This period is closely associated with the theme 'TRIZ'. Three special issues of this period are dedicated solely to TRIZ (see Table A1 in the Appendix), which is a frequently reoccurring topic throughout *CIM*'s history; for example, it was recently addressed by Schöfer, Maranzana, Aoussat, Bersano, and Buisine (2018). Other nearby located themes involve 'change', constituting a domain of specific relevance to organizational practitioners (e.g., Vanhaverbeke & Peeters, 2005). The third temporal segment (2006–2012) accumulates

a count of 817 text blocks, located close to the themes 'teams', 'generation' and 'ideas.' The latter themes likely concern 'idea generation', a frequent topic of interest in *CIM*, with foci on various stages of the idea process (e.g., Frederiksen & Knudsen, 2017).

The latest temporal segment (2013–2019) shares the highest count of text blocks (952) and is positioned in close proximity to the themes 'open', 'disruptive' and 'innovation', which relate to the more recent topics discussed in innovation studies such as Open Innovation (e.g., Del Vecchio, Di Minin, & Petruzzelli, 2018) and disruptive innovations (e.g., Petzold, Landinez, & Baaken, 2019).

5 | LIMITATIONS

Our bibliometric study is subject to some limitations. First, bibliographic data for *CIM* at academic search engines and databases is still partially incomplete (e.g., references) or inaccurate (e.g., institutional affiliations), which required us to impute by compiling multiple data sources. On the one hand, this added layer of manual data review ensures consistency of our dataset, but on the other hand, also introduces room for error. Second, for data restriction reasons, we had to refrain from analyses of co-citations, bibliographic couplings or

ROSE ET AL.

author-supplied keyword co-occurrences, which would have provided a more comprehensive picture of the journal. Lastly, citations, coauthorships and lexical co-occurrences are context-sensitive, e.g., citation behaviour and collaboration decisions can be motivated by non-science-related factors (Bornmann & Daniel, 2008; Liu et al., 2016; Tahamtan et al., 2016; Tahamtan & Bornmann, 2018), and lexical features of article abstracts can vary substantially (e.g., Hartley & Betts, 2009).

6 | OUTLOOK

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When the present editors took over the journal editorship at the beginning of 2016, they added a quote to every editorial. Looking at the past three years, the following quotes can be seen as representative to express the vision and nature of the journal.

"Imagination is the highest form of research." (Albert Einstein; as cited in Björk & Hölzle, 2016)

"Never tell people how to do things. Tell them what to do and they will surprise you with their ingenuity." (General George Patton; as cited in Hölzle, Björk, Richtnér, Ritzén, & Visscher, 2017)

"We cannot teach our kids to compete with the machines who are smarter – we have to teach our kids something unique. In this way, 30 years later, kids will have a chance." (Jack Ma; as cited in Del Vecchio, Di Minin, & Petruzzelli, 2018)

Adding to the very first editorial of Susan Moger and Tudor Rickards on the importance of creativity and innovation for societal and industrial changes, it becomes clear that *CIM* is a cornerstone of management research. Living in times of increasing volatility, uncertainty, complexity and ambiguity caused by digitalization, globalization and climate change, it is the mandate of editors, authors, reviewers and readers to think about new ways to deal with these challenges and provide impulses. All of us are not only part of the scientific community but also shape with our work the way organizations and societies think and act creatively and innovatively. The following corresponding potential future foci emerge based on the present study.

Combining technology and creativity. Technologies challenge the current view on strategy, management and entrepreneurship. While it is not sure yet when ubiquity will be reached, technology is at the core of most companies, organizations and societies. Therefore, more research on technology and creativity in the areas of Creativity Support Systems (CSS), Computer-supported Collaborative Work (CSCW), data-driven creativity enhancement, and virtual work in general, is needed.

Fostering disruptive innovation. Furthermore, we have to think about how technologies (e.g., artificial intelligence, blockchain, cloud technology, and others) create or enhance business value. Not all technologies will result in disruptive innovation, but companies have to find innovative business models and processes to transform technology in use. Moreover, to solve current and future wicked problems, we need to move beyond our current understanding of Design Thinking and Open Innovation to develop truly disruptive ideas and solutions.

Driving social innovation. We need to broaden our perspective on innovation. Not only technologies drive innovation but rather users' or societies' needs. Research on social innovation is often linked to specific problems with a local focus, which makes it hard to generalize insights. In fact, social innovation involves many different aspects and stakeholders, making interdisciplinary innovation research mandatory.

Applying innovative methods. So far, CIM has seen an almost equal split between quantitative and qualitative methods. For the future, we encourage authors to continue to look for methodological advancements and novel research methods for more in-depth studies on creativity and innovation. Case studies, experiments, big data analysis, ethnography and observation could be appropriate means to broaden and enhance our understanding of why and how creativity and innovation happens.

Publishing innovative formats. We as a journal will also experiment with new formats, aiming at publishing thought-provoking, novel and unique pieces that might not follow the regular article format but encourage ongoing discussions on trends and topics in *CIM*. The voice of the practitioner needs to further echo through practice-oriented pieces, combining academia and practice in novel ways.

Bridging disciplines. It is astonishing to see that there is not more overlap between disciplines, for example, between project and innovation management or traditional behavioural and organizational science and creativity and innovation. The growing impact of design research on innovation reflects the potential of creating joint research paths. While different disciplines speak different languages and build on different knowledge repositories, much is to be gained by crossing the divide and addressing problems with interdisciplinary research efforts. As the nature of innovation becomes increasingly cross-disciplinary, we expect to see a lot more research on multidisciplinary, entrepreneurial and design-driven approaches for innovation.

Widening the geographical and cultural scope. Our (co-)authorship analysis indicates a strong (historical) focus on Europe and the Anglosphere for institutional affiliations. A broader future geographical scope of the journal-potentially supported by the composition of the editorial board-is aimed for. This is in line with increasing international collaborations in management scholarship, also given the pressing need to understand creativity and innovation across different cultures. CIM is receiving more and more submissions from emerging countries, notably China, while the overall quality of the submitted manuscripts is to date still lower compared to such from traditional regions. CIM has, at its latest workshop, made the commitment to focus on these regions by enlarging and working closely with the authors' and reviewers' base, adding new editorial board members, and fostering collaborations with (networks of) researchers.

16

CIM has evolved over the last 28 years to become a unique outlet for creativity and innovation management. Not only the number of readers, authors and reviewers has been growing but also the outreach and impact. While still being a niche journal, *CIM* today actively and sustainably contributes to the debate on creativity, design, entrepreneurship and innovation on a much broader scientific and practical scale.

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REFERENCES

- Acedo, F. J., Barroso, C., Casanueva, C., & Galán, J. L. (2006). Coauthorship in management and organizational studies: An empirical and network analysis. *Journal of Management Studies*, 43, 957–983.
- Adler, N. J., & Harzing, A.-W. (2009). When knowledge wins: Transcending the sense and nonsense of academic rankings. Academy of Management Learning & Education, 8, 72–95.
- Aguinis, H., Ramani, R. S., Alabduljader, N., Bailey, J. R., & Lee, J. (2019). A pluralist conceptualization of scholarly impact in management education: Students as stakeholders. Academy of Management Learning & Education, 18, 11–42.
- Aguinis, H., Shapiro, D. L., Antonacopoulou, E. P., & Cummings, T. G. (2014). Scholarly impact: A pluralist conceptualization. Academy of Management Learning & Education, 13, 623–639.
- Anderson, N. R., Potočnik, K., & Zhou, J. (2014). Innovation and creativity in organizations: A state-of-the-science review, prospective commentary, and guiding framework. *Journal of Management*, 40, 1297–1333.
- Angus, D., Rintel, S., & Wiles, J. (2013). Making sense of big text: A visual-first approach for analysing text data using Leximancer and Discursis. International Journal of Social Research Methodology, 16, 261–267.
- Antons, D., Kleer, R., & Salge, T. O. (2016). Mapping the topic landscape of JPIM, 1984–2013: In search of hidden structures and development trajectories. *Journal of Product Innovation Management*, 33, 726–749.
- Australian Business Deans Council. (2019). ABDC Journal Quality List. Retrieved 21 January 2020, from https://abdc.edu.au/research/abdcjournal-list/
- Björk, J., & Hölzle, K. (2016). Editorial. Creativity and Innovation Management, 25, 3–5.
- Bogers, M., & West, J. (2012). Managing distributed innovation: Strategic utilization of open and user innovation. *Creativity and Innovation Man*agement, 21, 61–75.
- Bornmann, L., & Daniel, H. (2008). What do citation counts measure? A review of studies on citing behavior. *Journal of Documentation*, 64, 45–80.
- Boyack, K. W., van Eck, N. J., Colavizza, G., & Waltman, L. (2018). Characterizing in-text citations in scientific articles: A large-scale analysis. *Journal of Informetrics*, 12, 59–73.
- Brem, A., & Utikal, V. (2019). How to manage creativity time? Results from a social psychological time model lab experiment on individual creative and routine performance. *Creativity and Innovation Management*, 28, 291–305.
- Broadus, R. N. (1987). Toward a definition of bibliometrics. *Scientometrics*, 12, 373–379.
- Carlgren, L., Rauth, I., & Elmquist, M. (2016). Framing design thinking: The concept in idea and enactment. *Creativity and Innovation Management*, 25, 38–57.

- Castillo-Vergara, M., Alvarez-Marin, A., & Placencio-Hidalgo, D. (2018). A bibliometric analysis of creativity in the field of business economics. *Journal of Business Research*, 85, 1–9.
- Chartered Association of Business Schools. (2018). Academic Journal Guide. Retrieved 21 January 2020, from https://charteredabs.org/ academic-journal-guide-2018-view/
- Analytics Clarivate. (2019). Journal Citation Reports[®]. Retrieved 21 January 2020, from https://jcr.clarivate.com/
- Clark, T., & Wright, M. (2008). Sustaining independent journals. In Y. Baruch, A. M. Konrad, H. Aguinis, & W. H. Starbuck (Eds.), *Opening* the black box of editorship (pp. 176–187). New York, NY: Palgrave Macmillan.
- Crawford, L., Pollack, J., & England, D. (2006). Uncovering the trends in project management: Journal emphases over the last 10 years. *International Journal of Project Management*, 24, 175–184.
- Davies, A., Manning, S., & Söderlund, J. (2018). When neighboring disciplines fail to learn from each other: The case of innovation and project management research. *Research Policy*, 47, 965–979.
- De Jong, J., & Den Hartog, D. N. (2010). Measuring innovative work behaviour. Creativity and Innovation Management, 19, 23–36.
- Del Vecchio, P., Di Minin, A., & Petruzzelli, A. M. (2018). Editorial. Creativity and Innovation Management, 27, 3–5.
- Del Vecchio, P., Di Minin, A., Petruzzelli, A. M., Panniello, U., & Pirri, S. (2018). Big data for open innovation in SMEs and large corporations: Trends, opportunities, and challenges. *Creativity and Innovation Management*, 27, 6–22.
- Elsevier BV (2019). Scopus. Retrieved 21 January 2020, from https:// www.scopus.com
- Erdt, M., Nagarajan, A., Sin, S. C. J., & Theng, Y. L. (2016). Altmetrics: An analysis of the state-of-the-art in measuring research impact on social media. *Scientometrics*, 109, 1117–1166.
- Erichsen, P. G., & Christensen, P. R. (2013). The evolution of the design management field: A journal perspective. *Creativity and Innovation Management*, 22, 107–120.
- Fagerberg, J., Fosaas, M., & Sapprasert, K. (2012). Innovation: Exploring the knowledge base. *Research Policy*, 41, 1132–1153.
- Frederiksen, M. H., & Knudsen, M. P. P. (2017). From creative ideas to innovation performance: The role of assessment criteria. *Creativity and Innovation Management*, 26, 60–74.
- German Academic Association for Business Research. (2015). Jourqual3. Retrieved 21 January 2020, from http://vhbonline.org/en/service/ jourqual/vhb-jourqual-3/
- Google. (2020). Google Scholar. Retrieved 21 January 2020, from https:// scholar.google.com/citations?view_op=top_venues&hl=en&vq=bus_ entrepreneurshipinnovation
- Hartley, J., & Betts, L. (2009). Common weaknesses in traditional abstracts in the social sciences. Journal of the American Society for Information Science and Technology, 60, 2010–2018.
- Harzing, A.-W. (2007). Publish or perish. Retrieved 7 February 2020, from https://harzing.com/resources/publish-or-perish
- Harzing, A.-W. (2019a). Journal quality list (66th edition). Retrieved
 15 February 2020, from https://harzing.com/resources/journalquality-list
- Harzing, A.-W. (2019b). Two new kids on the block: How do Crossref and Dimensions compare with Google Scholar, Microsoft Academic, Scopus and the Web of Science? *Scientometrics*, 120, 341–349.
- Harzing, A.-W., & van der Wal, R. (2009). A Google Scholar h-index for journals: An alternative metric to measure journal impact in economics and business. *Journal of the American Society for Information Science* and Technology, 60, 41–46.
- Hirsch, J. E. (2005). An index to quantify an individual's scientific research output. Proceedings of the National Academy of Sciences, 102, 16569–16572.
- Hölzle, K., Björk, J., Richtnér, A., Ritzén, S., & Visscher, K. (2017). Editorial. *Creativity and Innovation Management*, *26*, 113–114.

18

- Johansson-Sköldberg, U., Woodilla, J., & Çetinkaya, M. (2013). Design thinking: Past, present and possible futures. *Creativity and Innovation Management*, 22, 121–146.
- Kallens, P. C., & Dale, R. (2018). Exploratory mapping of theoretical landscapes through word use in abstracts. *Scientometrics*, 116, 1641–1674.
- Kieser, A., Nicolai, A., & Seidl, D. (2015). The practical relevance of management research: Turning the debate on relevance into a rigorous scientific research program. Academy of Management Annals, 9, 143–233.
- Kozlowski, S. W. J., Chen, G., & Salas, E. (2017). One hundred years of the Journal of Applied Psychology: Background, evolution, and scientific trends. Journal of Applied Psychology, 102, 237–253.
- Kummitha, R. K. R. (2019). Design thinking in social organizations: Understanding the role of user engagement. *Creativity and Innovation Management*, 28, 101–112.
- Landström, H., Harirchi, G., & Åström, F. (2012). Entrepreneurship: Exploring the knowledge base. *Research Policy*, 41, 1154–1181.
- Leximancer. (2016). Leximancer. Retrieved 7 February 2020, from https:// info.leximancer.com/
- Leximancer. (2018). Leximancer User Guide 4.5.
- Liu, C., Olivola, C., & Kovacs, B. (2016). Co-authorship trends in the field of management: Facts and perceptions. Academy of Management Learning & Education, 16, 509–530.
- Marx, W., & Bornmann, L. (2016). Change of perspective: Bibliometrics from the point of view of cited references: A literature overview on approaches to the evaluation of cited references in bibliometrics. *Scientometrics*, 109, 1397–1415.
- Merino, T. G., do Carmo, L. P., & Álvarez, V. S. (2006). 25 years of Technovation: Characterisation and evolution of the journal. *Technovation*, 26, 1303–1316.
- Midler, C., Killen, C. P., & Kock, A. (2016). Project and innovation management: Bridging contemporary trends in theory and practice. *Project Management Journal*, 47, 3–7.
- Moger, S., & Rickards, T. (1992). Editorial: Why another management journal? *Creativity and Innovation Management*, 1, 1–4.
- Mukherjee, B., Subotić, S., & Chaubey, A. K. (2018). And now for something completely different: The congruence of the Altmetric Attention Score's structure between different article groups. *Scientometrics*, 114, 253–275.
- Osterloh, M., & Frey, B. S. (2020). How to avoid borrowed plumes in academia. *Research Policy*, 19, 103831. https://doi.org/10.1016/j.respol. 2019.103809
- Perianes-Rodriguez, A., Waltman, L., & van Eck, N. J. (2016). Constructing bibliometric networks: A comparison between full and fractional counting. *Journal of Informetrics*, 10, 1178–1195.
- Petzold, N., Landinez, L., & Baaken, T. (2019). Disruptive innovation from a process view: A systematic literature review. *Creativity and Innovation Management*, 28, 157–174.
- Podsakoff, P. M., MacKenzie, S. B., Podsakoff, N. P., & Bachrach, D. G. (2008). Scholarly influence in the field of management: A bibliometric analysis of the determinants of university and author impact in the management literature in the past quarter century. *Journal of Management*, 34, 641–720.
- Priem, J., Groth, P., & Taraborelli, D. (2012). The altmetrics collection. *PLoS* ONE, 7, 1–2.
- Randhawa, K., Wilden, R., & Hohberger, J. (2016). A bibliometric review of open innovation: Setting a research agenda. *Journal of Product Innovation Management*, 33, 750–772.
- Renwick, D. W. S., Breslin, D., & Price, I. (2019). Nurturing novelty: Toulmin's greenhouse, journal rankings and knowledge evolution. *European Management Review*, 16, 167–178.
- Rigby, J. (2016). A long and winding road: 40 years of R&D Management. R&D Management, 46, 1062–1083.

- Ronda-Pupo, G. A. (2017). The effect of document types and sizes on the scaling relationship between citations and co-authorship patterns in management journals. *Scientometrics*, 110, 1191–1207.
- Sarin, S., Haon, C., & Belkhouja, M. (2018). A twenty-year citation analysis of the knowledge outflow and inflow patterns from the Journal of Product Innovation Management. *Journal of Product Innovation Man*agement, 35, 854–863.
- Schöfer, M., Maranzana, N., Aoussat, A., Bersano, G., & Buisine, S. (2018). Distinct and combined effects of disciplinary composition and methodological support on problem solving in groups. *Creativity and Innovation Management*, 27, 102–115.
- Shafique, M. (2013). Thinking inside the box? Intellectual structure of the knowledge base of innovation research (1988–2008). *Strategic Man*agement Journal, 34, 62–93.
- Shum, V., Park, A., Maine, E., & Pitt, L. F. (2019). A bibliometric study of Research-Technology Management, 1998–2017. Research-Technology Management, 62, 34–43.
- Slavich, B., & Svejenova, S. (2016). Managing creativity: A critical examination, synthesis, and new frontiers. *European Management Review*, 13, 237–250.
- Smith, A. E., & Humphreys, M. S. (2006). Evaluation of unsupervised semantic mapping of natural language with Leximancer concept mapping. *Behavior Research Methods*, 38, 262–279.
- Stockwell, P., Colomb, R. M., Smith, A. E., & Wiles, J. (2009). Use of an automatic content analysis tool: A technique for seeing both local and global scope. *International Journal of Human Computer Studies*, 67, 424–436.
- Sugimoto, C. R., Work, S., Larivière, V., & Haustein, S. (2017). Scholarly use of social media and altmetrics: A review of the literature. *Journal* of the Association for Information Science and Technology, 68, 2037–2062.
- Tahamtan, I., Afshar, A. S., & Ahamdzadeh, K. (2016). Factors affecting number of citations: A comprehensive review of the literature. *Sci*entometrics, 107, 1195–1225.
- Tahamtan, I., & Bornmann, L. (2018). Core elements in the process of citing publications: Conceptual overview of the literature. *Journal of Informetrics*, 12, 203–216.
- Uddin, S., Khan, A., & Baur, L. A. (2015). A framework to explore the knowledge structure of multidisciplinary research fields. *PLoS ONE*, 10, 1–22.
- van Eck, N. J., & Waltman, L. (2010). Software survey: VOSviewer, a computer program for bibliometric mapping. *Scientometrics*, 84, 523–538.
- van Eck, N. J., & Waltman, L. (2019). VOSviewer. Retrieved 7 February 2020, from http://www.vosviewer.com/
- Vanhaverbeke, W., & Peeters, N. (2005). Embracing innovation as strategy: Corporate venturing, competence building and corporate strategy making. Creativity and Innovation Management, 14, 246–257.
- Vogel, R. (2012). The visible colleges of management and organization studies: A bibliometric analysis of academic journals. *Organization Studies*, 33, 1015–1043.
- Vogel, R., Hattke, F., & Petersen, J. (2017). Journal rankings in management and business studies: What rules do we play by? *Research Policy*, 46, 1707–1722.
- Volery, T., & Mazzarol, T. (2015). The evolution of the small business and entrepreneurship field: A bibliometric investigation of articles published in the International Small Business Journal. *International Small Business Journal*, 33, 374–396.
- Waltman, L. (2016). A review of the literature on citation impact indicators. *Journal of Informetrics*, 10, 365–391.
- White, T. M., Slocum, T. A., & McDermott, D. (2017). Trends and issues in the use of quantitative color schemes in refereed journals. *Annals of* the American Association of Geographers, 107, 829–848.

- Williams, R., Runco, M. A., & Berlow, E. (2016). Mapping the themes, impact, and cohesion of creativity research over the last 25 years. *Creativity Research Journal*, 28, 385–394.
- Wuchty, S., Jones, B. F., & Uzzi, B. (2007). The increasing dominance of teams in production of knowledge. *Science*, 316, 1036–1039.
- Xu, N., Chen, Y., Fung, A., & Chan, K. C. (2018). Contributing forces in entrepreneurship research: A global citation analysis. *Journal of Small Business Management*, 56, 179–201.
- Zupic, I., & Čater, T. (2015). Bibliometric methods in management and organization. *Organizational Research Methods*, 18, 429–472.

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APPENDIX A

TABLE A1	Special issues and section	ns of CIM (1992–2019)
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Year	Vol.	Issue	Торіс	(Guest) Editors
1999	8	2	Innovation through knowledge management	Rickards, T; Moger, S
2001	10	2	Theory of inventive problem solving (TRIZ)	Mann, D
2004	13	3	Creativity in the workplace	Lubart, T; de Weerd-Nederhof, P
2005	14	1	Updating the theory of inventive problem solving (TRIZ)	Moehrle, MG; Fisscher, O
2007	16	4	Innovation roles	de Weerd-Nederhof, P; Fisscher, O
2009	18	1	Managing the efficiency-flexibility tension in innovation	Magnusson, M; Boccardelli, P; Börjesson, S
2009	18	2	Theory of inventive problem solving (TRIZ)	Gundlach, C; Moehrle, MG
2010	19	2	Creativity and new technologies	Lubart, T; Courcelle, S
2010	19	3	Community-based innovation	Raasch, C; Stockstrom, C; Herstatt, C; Lüthje, C
2012	21	2	Innovation, social responsibility, creativity and ethics	Weisenfeld, U
2013	22	1	Emerging technology management	Groen, AJ; Walsh, ST
2013	22	2	Design management	Moultrie, J; Visscher, K
2013	22	3	Management and entrepreneurship in creative industries	Visscher, K; Konrad, ED; Pechlaner, H
2014	23	1	Facilitating creativity and innovation in hospitality organizations	Stierand, M
2014	23	2	Organizational processes and context of creativity	van der Meer, H; Visscher, K; de Weerd-Nederhof, P
2014	23	4	Organizational improvisation	Leybourne, S; Lynn, G; Vendelø, MT
2015	24	1	The role of social networks in organizing ideation, creativity and innovation	Mascia, D; Magnusson, M; Björk, J

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TABLE A1 (Continued)

Year	Vol.	Issue	Торіс	(Guest) Editors
2015	24	2	Organizing creativity: Creativity and innovation under constraints	Caniëls, MCJ; Rietzschel, EF
2015	24	2	Gamification of innovation	Roth, S; Schneckenberg, D; Tsai, CW
2015	24	4	Technology entrepreneurship	Harms, R; Walsh, ST
2016	25	2	Project portfolio management	Gemünden, HG; Killen, C; Kock, A
2018	27	1	Big data and open innovation	Del Vecchio P; Di Minin, A; Petruzzelli, AM
2018	27	3	Entrepreneurship in cultural and creative industries	McKelvey, M; Lassen, A
2019	28	4	Paving the way for performance management and management control in innovation networks	Nosella, A; Agostini, L

We excluded special issues and sections which are dedicated to events or conferences but not to specific topics for brevity. If special sections are not preceded by an editorial, introduction, or guest editors are not mentioned otherwise, the editors-in-chief of the issue are provided.

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Year	Title	Author(s)	Design
2006	A review of the effectiveness of CPS training: A focus on workplace issues	Puccio, GJ; Firestien, RL; Coyle, C; Masucci, C	Conceptual/review
2006	Team polarity and creative performance in innovation teams	Kratzer, J; Leenders, RTAJ; van Engelen, JML	Empirical-quantitative
2007	Role models for radical innovations in times of open innovation	Gemünden, HG; Salomo, S; Hölzle, K	Empirical-quantitative
2008	A social network perspective of lead users and creativity: An empirical study among children	Kratzer, J; Lettl, C	Empirical-quantitative
2009	Exploratory study of organizational creativity in creative organizations	Moultrie, J; Young, A	Mixed-methods
2010	Information processing and firm-internal environment contingen-cies: Performance impact on global new product development	Kleinschmidt, E; de Brentani, U; Salomo, S	Empirical-quantitative
2011	Communitition: The tension between competition and collaboration in community-based design contests	Hutter, K; Hautz, J; Füller, J; Mueller, J; Matzler, K	Mixed-methods
2012	Networks for innovation - But what networks and what innovation?	Hemphälä, J; Magnusson, M	Empirical-quantitative
2013	Design thinking: Past, present and possible futures	Johansson-Skoldberg, U; Woodilla, J; Cetinkaya, M	Conceptual/review
2014	The antecedents of creativity revisited: A process perspective	Caniëls, MCJ; De Stobbeleir, K; De Clippeleer, I	Empirical-qualitative
2015	Use of social media in inbound open innovation: Building capabilities for absorptive capacity	Ooms, W; Bell, J; Kok, RAW	Empirical-qualitative
2016	Framing design thinking: The concept in idea and enactment	Carlgren, L; Rauth, I; Elmquist, M	Empirical-qualitative
2017	In search of new product ideas: Identifying ideas in online communities by machine learning and text mining	Christensen, K; Nørskov, S; Frederiksen, L; Scholderer, J	Empirical-quantitative
2018	Open foresight: The influence of organizational context	Wiener, M	Empirical-qualitative
2019	Resilient employees are creative employees, when the workplace forces them to be	De Clercq, D; Pereira, R	Empirical-quantitative

The award has been given annually since 2006. Adapted referencing style for brevity.