




“Research on management theory: A development review and bibliometric analysis”

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RESEARCH ON MANAGEMENT THEORY: A DEVELOPMENT REVIEW AND BIBLIOMETRIC ANALYSIS

Abstract

While the literature on management theory has been growing in recent years, there are no publications regarding the evolution and mapping of this scientific field. This study dwells on the issues related to management theories in the context of today's research by identifying the most important lines of research, researchers, and the concentration of research. To explore the trends in the development of management theory, this study used bibliometric analysis. The search in the Web of Science database provided 5,825 documents (including articles, books, reviews, etc.). Methods of trend analysis, clusterization, and comparative analysis were used. The results show that a new direction of responsible management research is being formed – the organization's operations and objectives must be balanced, and their implementation must be responsible. This study enriches management literature by providing new ideas related to future research tendencies. Moreover, it fleshes out the direction for developing management theory and outlines the most-cited works and authors, the research concentration in different countries, and leading journals. For scholars and practitioners, such structured data are an important source of relevant information in published papers and allows for the definition of research guidelines.

Keywords

management theory evolution, mapping, paradigm, research concentration, Web of Science, bibliometric analysis

JEL Classification

M10, M14

INTRODUCTION

Management theories provide tools and knowledge for managing organizations, as well as guidelines for solving problems in the management of different organizations (and their structures). Their formation and development have recently attracted a great deal of interest from scholars. The *Academy of Management Review* (a journal ranked fourth in the world in 2020 according to impact factor – IF) has dedicated a special forum topic to them. In their editorial, Haveman et al. (2020) claim that some management scholars have devalued theory, but theory matters. Publications generally analyze various aspects of management theory. For instance, Esade and McKelvey (2010) discussed how to integrate modernist and postmodernist perspectives on organizations. Bodrožić and Adler (2018) analyzed the evolution of management models. Gümüşay and Amis (2021) tried to understand how theory is developed in empirical management research. Finally, Makowski (2020) outlined the need for scientific rigor and practical relevance in theory development. On the one hand, the growing interest in management theory and the abundance of publications allow for a complete view of the phenomenon. However, on the other hand, this causes problems for researchers in forming a structured picture of the situation and understanding the critical moments in management theory, its context, and management theory as a whole.

1. LITERATURE REVIEW

New knowledge in mathematics, psychology, sociology, anthropology, linguistics, economics, and engineering sciences has allowed management researchers – both theorists and practitioners – to have a deeper understanding of the interaction between organization’s internal resources and external elements, leading to new approaches, schools, and theories. For example, systematized unit theories distinguished in literature can be divided into certain groups by their chronological features (Figure 1).

The beginning of management as an organizational management science is related to the growing demand for goods and services when the increased production scale and the growing number of employees led to new approaches to work. Observations and timekeeping were used to transform the existing probabilistic, speculative and deliberative performance of work operations into a more reliable, research-based system. This study is focused on productivity, with work operations as the main research object. The tasks set included streamlining and standardizing production methods to achieve production economy and efficiency (Taylor, 1911), increasing work efficiency by reducing unnecessary movement (Gilbreth, 1911), and reducing fatigue (Gilbreth & Gilbreth, 1916). At the same time, there was a newfound interest in how managers could motivate employees to do a better job (Gantt, 1912), and management was examined on the basis of five essential functions (Fayol, 1916). The empirical research findings and their synthesis

created preconditions for the formation of theories, which are generally attributed to the dawn of management science and are called scientific management (Figure 1).

The focus shifted from work operations to the employees performing them in further research. Thus, the most important object of research became people, which allowed for the development of human relations management. Research showed that the effectiveness of management was influenced by employee relations (Follett, 1924, 1941), productivity growth was driven by a complex sequence of motives (Mayo, 1933), and the organization as a whole started to be understood as a human system (Barnard, 1938, 1948). Factors influencing job satisfaction or dissatisfaction (Herzberg, 1959) and attitudes toward work (McGregor, 1960) were also explored. The dissemination of the findings has shaped the humanistic management model and led to the emergence of human relations management.

With the development and improvement of human relations management, the object of research gradually changed from the employee to groups of employees, from groups to the whole organization, and from the organization to networks of organizations. The organization was studied as a complex open system, i.e., the totality of various elements with various interrelationships, including the principles, laws, and regularities of its creation, operation, development, and liquidation. The focus was on organizational values (Peters & Waterman, 1978), organizational structure and strategy (Mintzberg,

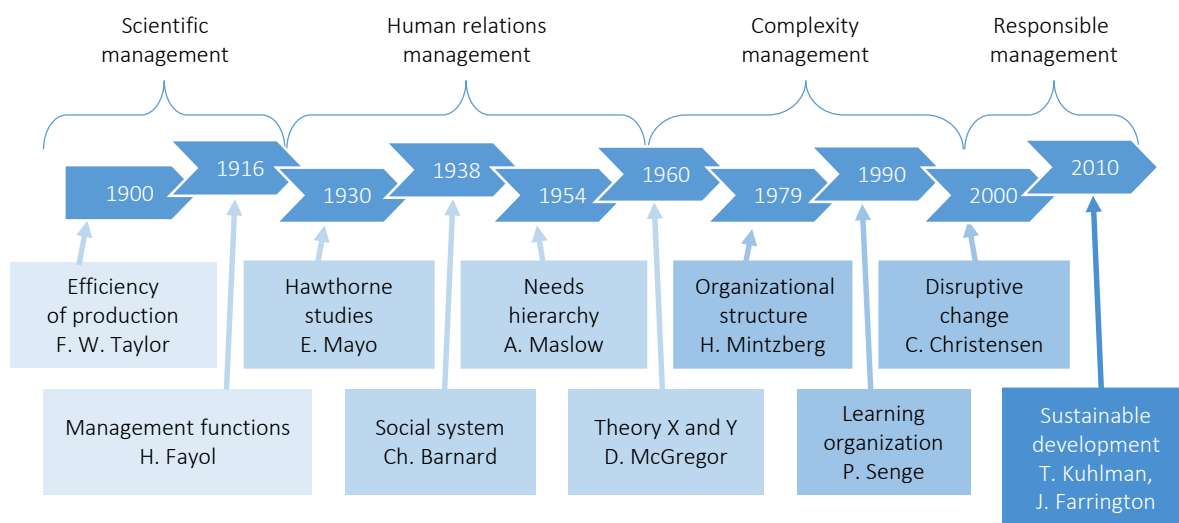


Figure 1. Evolution of management theories

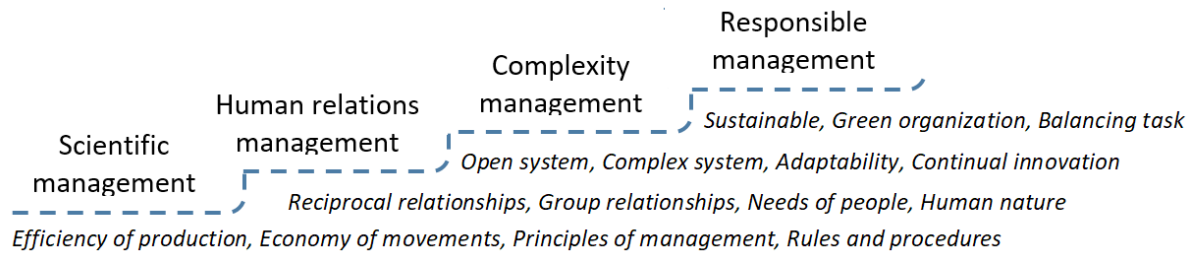


Figure 2. Continuation of management knowledge

1979), process quality (Deming, 1982), knowledge sharing (Senge, 1990), critical change, and innovation (Christensen, 1997).

Once the environmental impact of organizations has been realized, performance or profit, which is the main motivation for traditional businesses (Friedman, 2007), is no longer the center of attention. Thus, companies are expected to minimize negative impacts on the environment and society (Bilge et al., 2014). Now, organizations are encouraged to be sustainable – to integrate the principles of sustainable development into business strategy, to take into account the needs of stakeholders, not go beyond the biophysical environment and contribute to a more sustainable society (Ozeliene, 2018). Maintaining this trend, organizations develop their relations with consumers regarding the increase of ecological responsibility (Angelova & Pastarmadzheva, 2020; Cichocka et al., 2020), human resources management systems, particularly educational processes (Urbancová & Vrabcová, 2020), employer branding (Bite & Konczos-Szombathelyi, 2020; Samoliuk et al., 2022), and IT-based managerial tools (Roshchyk et al., 2022). Nanotechnology, renewable energy, self-driving cars, three-dimensional (3D) printers, digital media, social networks, virtual communities, smart cities, and, more generally, robotics and globalization, allow developing organizations in a responsible, environmentally sustainable way, balancing organizational performance and human and environmental needs. It can be argued that a new school of responsible organization management has been forming, and its distinguishing feature is research on the impact of organizational operations and their results on the environment and people.

In the evolution of management theory, the integration of knowledge and the repetition of the research object (although slightly different due to the modernizing internal and external organizational envi-

ronment) to deepen existing and create new management knowledge is observed (Figure 2). This view of the evolution of management theories aligns with Kessler (2013) and Witzel and Warner (2013).

It can be argued that the development of management theories had some continuity. Although the object of management research was changing with the modernization and globalization of the organizational environment, the focus was either on the work operations (or management areas) or the productivity of employees. Recently, however, there has been a greater focus on responsible consumption (an employee is also a consumer), the Green Deal, and respect for the environment/sustainability. This makes researchers and practitioners pay closer attention to external factors, especially social ones, such as changes in lifestyles and mindsets, and environmental ones, such as reducing packaging, resource efficiency through technological innovation, looking for new activity forms, and operating responsibly. This study aims to contribute to the literature on management theory by enhancing the understanding of the development of management science, providing ideas on development trends, and identifying key areas and research concentrations.

2. METHODOLOGY

To achieve the aim of this paper, the research questions were formulated as follows: How have publications on management theory evolved in recent years? What are the key areas addressed in management theory? Who are the main contributing authors? Which journals are impacting the research streams? To answer the research questions and identify trends in the development of management theory, the most prominent research works, and the research concentration, bibliometric analysis, which is a valuable technique using mapping

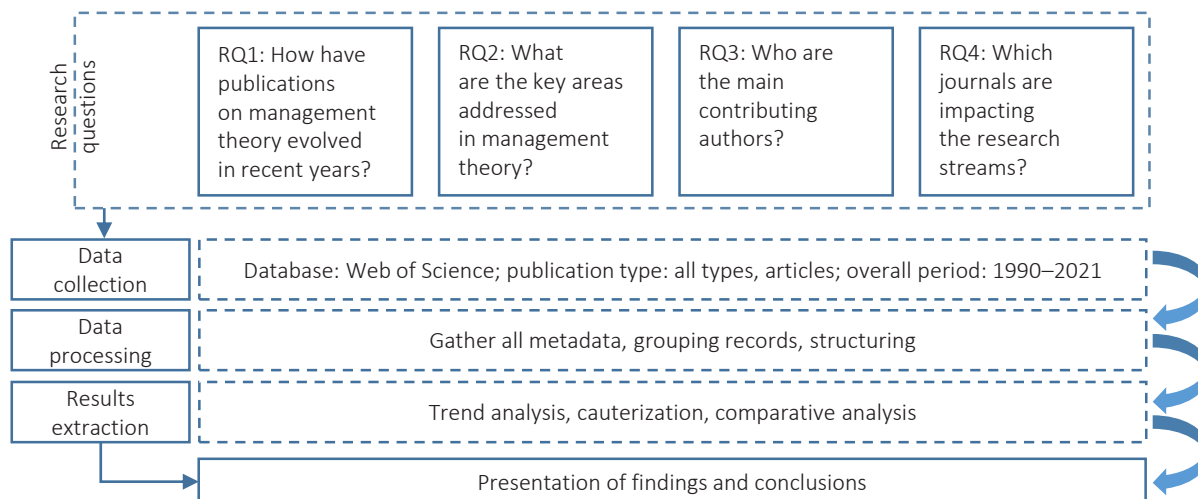


Figure 3. Research methodology

and clustering, was carried out. Bibliometric analysis includes three main steps: data collection, data processing, and results extraction (da Silva & de Souza, 2021). These steps are incorporated into the research methodology (Figure 3).

The data collection step was established through the research protocol, which differed depending on the research questions or the research stages as they were interpreted. According to the research protocol, a complete dataset was analyzed for each Web of Science source (Table 1).

Table 1. Data collection protocol

Topic	Research questions (stages)			
	RQ1 (I)	RQ2 (II)	RQ3 (III)	RQ4 (IV)
Keywords	Management theory, organization theory, organisation theory			
Database	Web of Science			
Search type	Title (searches: title, abstract, author, keywords, and keywords plus)			
Document type	All types, articles	All types, articles	All types	All types
Period	1990–2020	1990–2020, 2016–2020	1990–2021, 2016–2021	1990–2020

The data search for this analysis was performed using the Web of Science Core Collection search engine of the Clarivate Analytics database in November 2021. A search of the Web of Science Core Collection database by name was performed using the keywords ‘management theory’, ‘organization theory’, and the British spelling of the latter: ‘organisation theory’. The search parameters of the first stage were defined as follows: search by

title, which refers to the title of the journal article, proceedings, paper, book, or book chapter; and period – from 1990 to 2020. The search was conducted in all Web of Science Core Collection database categories and had two iterations. During the first iteration, ‘all types’ of documents were analyzed. During the second iteration of this stage, the search was limited to those documents classified as ‘articles’ – books, chapters of books, and proceedings were excluded. For this study, articles were selected because they are the documents that best reflect the production of original research (Smirnova, 2020). Key areas were identified at stage two of the research, which included examining all papers within the entire period analyzed. While analyzing the correlation with the most recent and original research, publications and scientific articles for the last five years were additionally examined. Stage three included an analysis of the most-cited works within the entire period, and from 2016 to 2021 (Clarivate Analytics provides the latest information, including for the most recent year). Furthermore, after structuring the information in stages three and four, the content of the authors’ articles and the content of the articles from the latest issues were analyzed to answer the research questions more accurately.

After data collection, records were grouped, and data processing activity was carried out. The main ideas in the discovered texts were analyzed, and their relevance to the management theory was studied. For quantitative data analysis and visu-

alization of bibliometric networks, the free-access VOSviewer (version 1.6.17) software was applied, and co-authorship and co-words networks were constructed. VOSviewer (Van Eck & Waltman, 2021) is intended primarily for analyzing bibliometric networks, and it provides three visualizations, referred to as the network visualization, the overlay visualization, and the density visualization.

Presentation of results is provided next. Information processing and visualization for bibliometric analysis were prepared using the Clarivate analytics results analysis tool, Microsoft Office Excel, and VOSviewer.

Regarding the main focus of this paper, the sample was obtained using the name-based search for three keywords (see Table 1) mentioned above as concepts. The keywords that arose in the analyzed documents (co-occurrence of keywords), the co-citation (cited authors), and co-authorship were observed within the sample of 5,825 documents (including articles, books, reviews, etc.), 94% of which were in English. These results, their presentation, and discussion were carried out according to the research question sequence.

3. RESULTS AND DISCUSSION

3.1. Publication trends on management theories

By analyzing publication trends, all documents from 1990 until 2020 were distributed by year.

The data analysis revealed some almost sinusoidal variation in the number of scientific papers. It should be noted that the number of scientific papers on management theory has significantly increased since 2008, especially between 2016 and 2019. Of all publications, 51% (2,975) were articles; their trends were also thoroughly analyzed. A more pronounced increase in the number of articles on management theory was observed in 2010, peaking in 2019 (Figure 4).

Interest in management theories has increased, starting from 2008. This may be related to the desire to find tools to overcome the financial crisis and the recovery of business after the crisis, meaning that interest in management performance, models, uncertainty, and game theory has increased (Figure 5). During that period, most research results were published in the research section of Business Economics (45%), followed by (with a fairly significant gap) Computer Science (15%), then Engineering (14%), and finally Operations Research Management Science (12.5%) in fourth place. In general, the first three research areas remained the critical areas throughout the period concerned, with only a change in their order: Business Economics (40%), Engineering (12%), and Computer Science (11%). Other research sections – Operations Research Management Science, Psychology, Social Sciences other topics, Environmental Sciences/Ecology, and Public Administration – are directly or closely related to management science and its development.

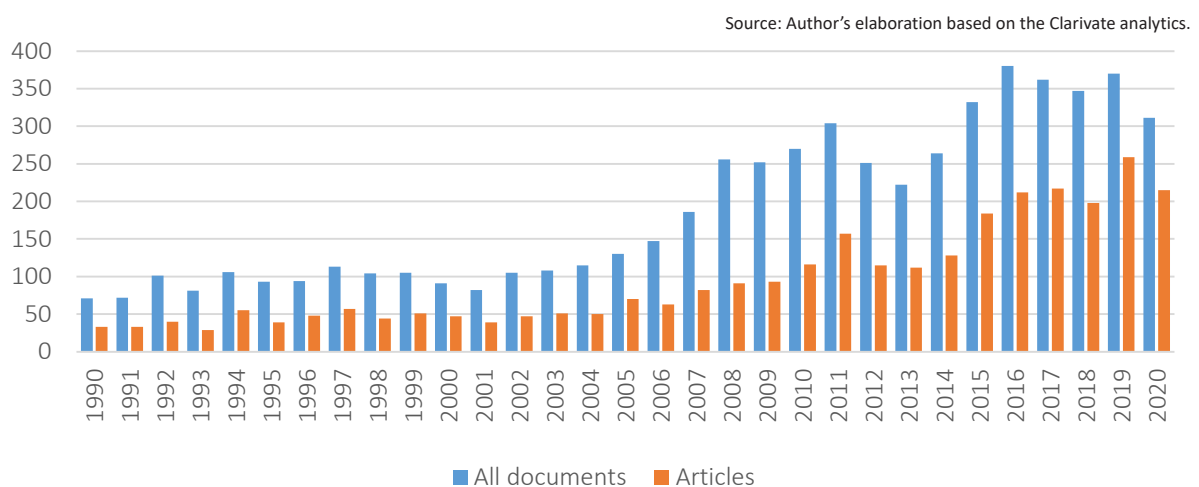


Figure 4. Distribution of the number of documents by year

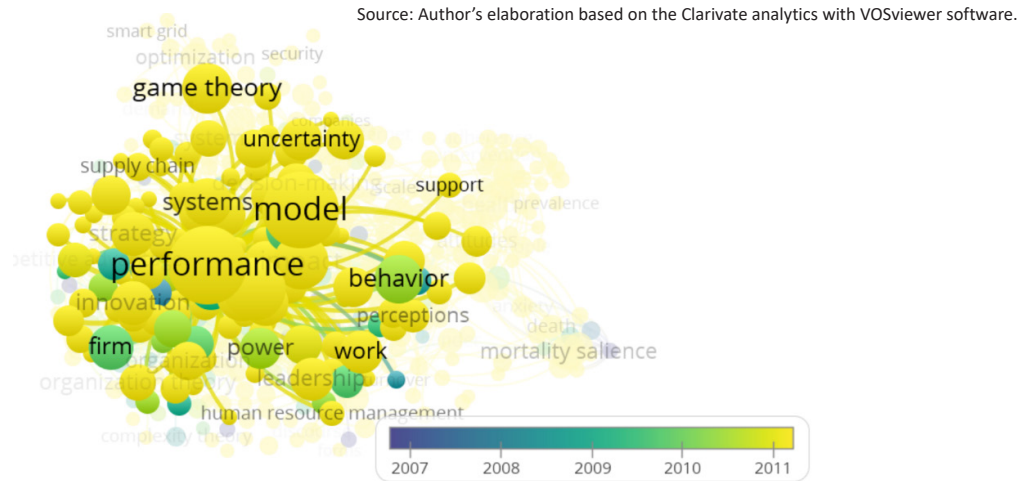


Figure 5. Keyword co-occurrence network over the years

3.2. Key areas

By analyzing the key areas in management theory, 14,545 keywords were identified. The co-occurrence map was created considering the keywords that appeared a minimum of 10 times in all collected documents. In total, 401 keywords met this threshold and are represented in 7 clusters interconnected by 13,036 links. Based on the significance represented by the size of the circles, the most common keywords by cluster are: cluster

1 (96 items) – performance, management, knowledge, innovation; cluster 2 (75 items) – model, uncertainty, systems, game theory; cluster 3 (66 items) – self-management, communication, grounded theory, education; cluster 4 (59 items) – leadership, work, power, post modernism; cluster 5 (54 items) – impact, implementation, sustainability, commitment; cluster 6 (28 items) – framework, governance, participation; and cluster 7 (23 items) – behavior, mortality salience, self-esteem (Figure 6).

Source: Author's elaboration based on the Clarivate analytics with VOSviewer software.

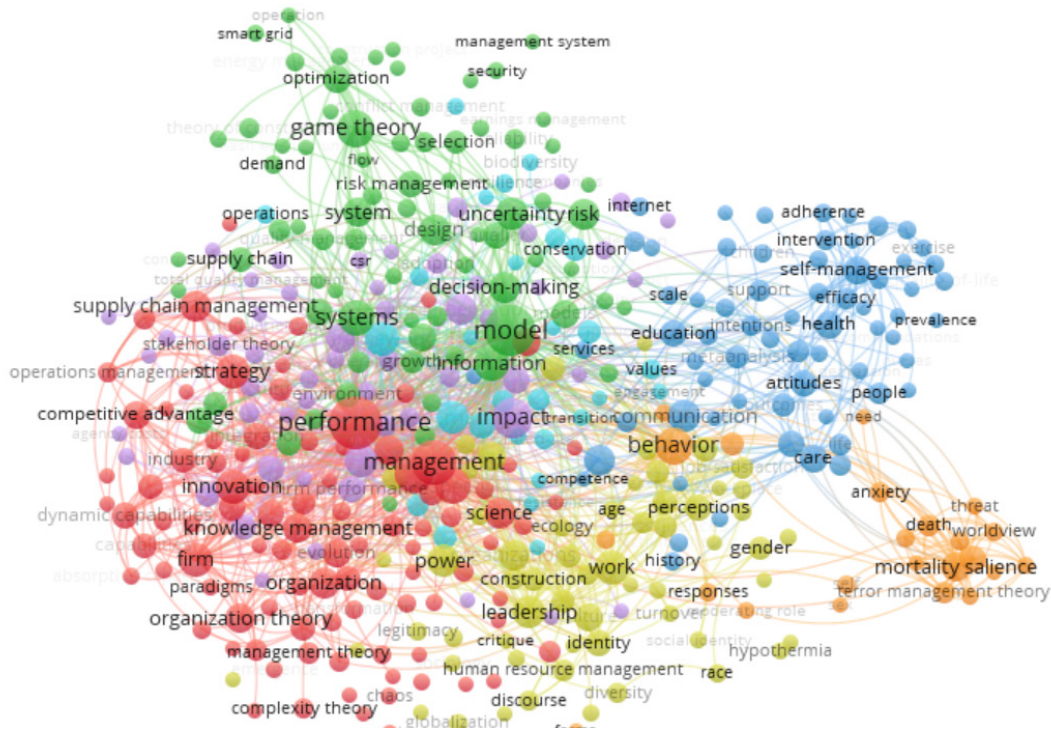


Figure 6. Keyword co-occurrence network

Table 2. The most-cited keywords

1990–2020 keywords (occurrences)		2016–2020 keywords (occurrences)	
All documents	Articles	All documents	Articles
Performance (296)	Performance (225)	Model (118)	Model (96)
Model (283)	Model (213)	Performance (107)	Performance (87)
Management (186)	Management (136)	Impact (79)	Impact (62)
Impact (142)	Impact (108)	Strategy (66)	Management (49)
Knowledge (126)	Knowledge (100)	Management (60)	Strategy (54)
Game Theory (121)	Behavior (98)	Game Theory (58)	Framework (45)
Behavior (113)	Systems (85)	Framework (56)	Knowledge (43)
Systems (108)	Perspective (76)	Knowledge (52)	Systems (39)
Information (101)	Framework (73)	Work (47)	Work (37)
Framework (95)	Strategy (69)	Uncertainty (45)	Behavior (36)
Firm (94)	Information (69)	Systems (44)	Uncertainty (36)
Strategy (92)	Firm (68)	Behavior (41)	Governance (36)
Innovation (91)	Leadership (67)	Governance (41)	Leadership (35)
Work (87)	Work (67)	Leadership (40)	Game Theory (31)
Leadership (85)	Governance (67)	Perspective (38)	Grounded Theory (30)
Technology (85)	Innovation (91)	Innovation (37)	Health (30)
Uncertainty (84)	Game Theory (121)	Decision-Making (37)	Decision-Making (29)
Governance (82)	Technology (65)	Grounded Theory (37)	Sustainability (28)
Power (79)	Uncertainty (65)	Sustainability (36)	Perspective (28)
	Communication (65)	Implementation (35)	Design (27)
	Mortality Saliency (60)	Health (34)	Innovation (26)
		Information (34)	Communication (26)
		Optimization (34)	Optimization (26)

To identify the key areas in management research, keywords were analyzed in more detail, finding the most common occurrences both in all papers and in articles only as the main types of documents for publishing research results. In addition, the keywords in recent papers and articles were analyzed to identify the latest trends in management research. The findings of this analysis are presented in Table 2.

The analysis of the most recent keywords that do not yet have many occurrences has distinguished the following main keywords by clusters: cluster 2 – optimization, operation, smart grid; cluster 3 – self-management, adherence, outcomes, intention, self-esteem; cluster 5 – green, green supply change management, sustainability, corporate social responsibility; and cluster 6 – challenges, climate change, resilience, impact. In general, recent research works cover three major areas: sustainability (climate change, deteriorating environmental conditions, and resource drain encourage the search for solutions to operate without compromising future generations), optimization (production/operation planning framework for reducing uncertainty and making responsible decisions to increase productivity), and self-management (strategy/method to promote employee changing behavior and to achieving the highest lev-

els of performance and creativity). In addition, it is worth mentioning that methods returning to qualitative research and case study are also increasingly mentioned, although quantitative methods remain important, especially in the big data era. Thus, the latest trends correspond to the direction of management development highlighted in the first chapter: responsible management, which can now be supplemented with the results obtained. Responsible management integrates and includes the following three lines of research: (1) performing sustainable organizational operations (meeting public expectations with the least possible negative environmental impact), (2) balancing performance and employee expectations, and (3) performing operations with a sufficient level of efficiency to ensure the continuity of the organization's operations.

3.3. Contributing authors

The analysis of authors conducting research on the development or application of management theories found 11,711 authors, which are grouped into four clusters (Figure 7). With this, an attempt is made to draw attention to the situation that only slightly more than 7% (847) of authors have two or more publications in the analyzed field, and seven authors have 10 and more publications.

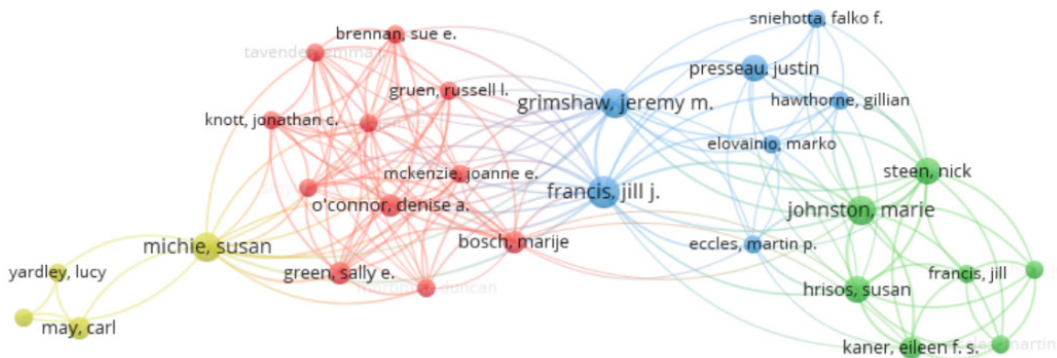


Figure 7. Fragment of author clusters

The authors with the greatest number of published documents – J. Greenberg, S. Solomon, and T. Pyszczynski – address research in terror management and self-esteem; M. K. Bader, M. M. Guanci, and S. Figueroa are interested in therapeutic temperature management; and Ch. Julmi and E. Scherm are interested in strategic management. It should be noted that the authors with the largest number of publications published in journals of psychology and medicine, while their research is focused on behavior change, self-assessment, and well-being. It is clear that personal behavior research is now being widely conducted in medical management, which could contribute to/deepen management knowledge in the field of human resource management. Incidentally, a detailed analysis of the Web of Science database shows that authors with the most publications are often co-authors (Table 3).

The analysis of the most-cited works reveals the areas in which management researchers are most interested. At the same time, the latest-cited sources are also a great tool for identifying promising research areas. According to the analysis of the

most-cited publications, the most recurring aspects of research are sustainability and change (Table 4). In recent publications, the emphasis has been put on strategic management, organizational productivity, and relationship with the environment. Thus, the most-cited authors – such as Karl E. Weick (424 citations, interested in sense making, reliability, crisis); Jeff Greenberg (364 citations, concentrated on self-esteem, terror management theory); Juerger Pfeffer (362 citations, interested in social networks, social media); Kathleen M. Eisenhardt (302 citations, focused on strategy and organizations, as well as ecosystems and business model design); and Michael C. Porter (282 citations, interested in customer engagement) – support the newest tendencies.

It is noteworthy that authors from 111 countries have contributed to management theory research. The most documents were published in 9 countries: the USA (1,497), China (884), England (553), Australia (283), Canada (260), Germany (227), France (150), the Netherlands (144), and Italy (118). These countries were also the most collaborative, as they had the largest number of links with different countries.

Table 3. Authors with the largest number of publications

Author (s)	Doc. numbers	h-index	Research field	Journals
Greenberg, Jeff	16	48	Psychology	Journal of Personality and Social Psychology; Personality and Individual Differences; Behavioral Sciences; Journal of Humanistic Psychology, Journal of Individual Differences, International Journal of Aging & Human Development
Solomon, Sheldon	12	53		
Pyszczynski, Tom	8	64		
Figueroa, Stephen	13	7	Physics; Neurology	Stroke, Therapeutic Hypothermia, and Temperature Management, Critical Care Nurse, Critical Care Nursing Clinics of North America
Bader, Mary Kay	12	54		
Guanci, Mary McKenna	11	11		
Blissitt, Patricia A	10	7		
Mathiesen, Claranne	10	2	Strategic Management	Strategic Management: Theory, Decisions, Critical Reflections; Betriebswirtschaftliche Forschung Und Praxis
Julmi, Christian	11	0		
Scherm, Ewald	11	3		

Table 4. The most-cited publications

Source: Clarivate analytics data.

Period	Author (s), title, publisher	Total citations
1990–2021	Acker, J. Hierarchies, Jobs, Bodies: A Theory of Gendered Organizations, 1990, GENDER & SOCIETY 4 (2)	2,920
	Ghoshal, S. Bad management theories are destroying good management practices, 2005, ACADEMY OF MANAGEMENT LEARNING & EDUCATION 4 (1)	1,884
	Brown, S.L., Eisenhardt, K.M. The art of continuous change: Linking complexity theory and time-paced evolution in relentlessly shifting organizations, 1997, ADMINISTRATIVE SCIENCE QUARTERLY 42 (1)	1,877
	Davis, J.H.; Schoorman, F.D., Donaldson, L. Toward a stewardship theory of management, 1997, ACADEMY OF MANAGEMENT REVIEW 22 (1)	1,728
	Carter, C.R., Rogers, D.S. A framework of sustainable supply chain management: moving toward new theory, 2008, INTERNATIONAL JOURNAL OF PHYSICAL DISTRIBUTION & LOGISTICS MANAGEMENT 38 (5-6)	1,586
	Aguilera, R.V., Rupp, D.E., Williams, C.A., Ganapathi, J. Putting the S back in corporate social responsibility: A multilevel theory of social change in organizations, 2007, ACADEMY OF MANAGEMENT REVIEW 32 (3)	1,476
	Fiss, P.C. Building Better Causal Theories: A Fuzzy Set Approach to Typologies in Organization Research, 2011, ACADEMY OF MANAGEMENT JOURNAL 54 (2)	1,384
	Conner, K.R. A Historical Comparison of Resource-Based Theory and 5 Schools of Thought Within Industrial-Organization Economics - Do We Have a New Theory of The Firm, 1991, JOURNAL OF MANAGEMENT 17 (1)	1,235
	Chen, I. J., Paulraj, A. Towards a theory of supply chain management: the constructs and measurements, 2004, JOURNAL OF OPERATIONS MANAGEMENT 22 (2)	1,097
	Anderson, P. Complexity theory and organization science, 1999, ORGANIZATION SCIENCE 10 (3)	898
	Schot, J., Geels, F.W. Strategic niche management and sustainable innovation journeys: theory, findings, research agenda, and policy, 2008, TECHNOLOGY ANALYSIS & STRATEGIC MANAGEMENT 20 (5)	889
	Gladwin, T.N.; Kennelly, J.J., Krause, T.S. Shifting Paradigms For Sustainable Development - Implications For Management Theory And Research, 1995, ACADEMY OF MANAGEMENT REVIEW 20 (4)	869
	Deci, E.L.; Olafsen, A.H., Ryan, R.M. Self-Determination Theory in Work Organizations: The State of a Science, 2017, ANNUAL REVIEW OF ORGANIZATIONAL PSYCHOLOGY AND ORGANIZATIONAL BEHAVIOR, 4	451
	Ray, V. A Theory of Racialized Organizations, AMERICAN SOCIOLOGICAL REVIEW, 2019, 84 (1)	241
	2016–2021	Otley, D. The contingency theory of management accounting and control: 1980-2014, MANAGEMENT ACCOUNTING RESEARCH, 2016, 31
Gond, J.P., Cabantous, L., Harding, N., Learmonth, M. What Do We Mean by Performativity in Organizational and Management Theory? The Uses and Abuses of Performativity, 2016, INTERNATIONAL JOURNAL OF MANAGEMENT REVIEWS 18 (4)		158
Hitt, M.A.; Xu, K. and Carnes, C.M. Resource based theory in operations management research, 2016, JOURNAL OF OPERATIONS MANAGEMENT 41		149
Nitzl, C. The use of partial least squares structural equation modelling (PLS-SEM) in management accounting research: Directions for future theory development, 2016, JOURNAL OF ACCOUNTING LITERATURE 37		146
Kang, J., Xiong, Z., Niyato, D., Ye, D., Kim, D. I., Zhao, J. Toward Secure Blockchain-Enabled Internet of Vehicles: Optimizing Consensus Management Using Reputation and Contract Theory, 2019, IEEE TRANSACTIONS ON VEHICULAR TECHNOLOGY 68 (3)		127
Zhao, E. Y., Fisher, G., Lounsbury, M., Miller, D. Optimal distinctiveness: Broadening the Interface Between Institutional Theory and Strategic Management, 2017, STRATEGIC MANAGEMENT JOURNAL 38 (1)		127
Reed, M.S., Vella, S., Challies, E., de Vente, J. et al. A theory of participation: what makes stakeholder and public engagement in environmental management work? 2018, RESTORATION ECOLOGY 2		123
Teece, D. J. Dynamic capabilities and entrepreneurial management in large organizations: Toward a theory of the (entrepreneurial) firm, 2016, EUROPEAN ECONOMIC REVIEW 86		120
Trigeorgis, L., Reuer, J. J. Real Options Theory In Strategic Management, 2017, STRATEGIC MANAGEMENT JOURNAL 38 (1)		113

3.4. Main journals of publication

To identify journals that publish the most articles on management theory and impact the research streams, an analysis was performed using the Web of Science Core Collection database analytic tool. As shown in Figure 8, eight major journals have a high concentration of articles on management theory. Among these, there is a non-management

journal – a medical journal called *Therapeutic Hypothermia and Temperature Management*. The analysis of articles in the latest issues of this journal reveals, however, that the medical research published in this journal and the journal itself were included in the research field due to the specific use of the word ‘management’ in medical research. Some management topics are covered by *Advances in Social Science, Education, and Humanities*



Figure 8. Main journals publishing articles in the management theory field

Research, but belong more to social sciences, education, and humanities. When analyzing a slightly larger number of journals, two other non-management journals (and two related disciplines) can be distinguished: *Applied Mechanics and Materials* (material science and mechanical engineering) and *Lecture Notes in Computer Science* (computer science), where the use of management knowledge also can be found, and from which management science can draw new ideas.

The leading management journals were analyzed using the Journal Citation Reports (only available for journals indexed by the SCIE and SSCI). It was found that in 2020 three of the journals analyzed had an IF higher than 10, and were among the best management journals (only 13 journals from management categories had an IF higher than 10 in 2020 in the WoS database). All leading jour-

nals are published in the USA or England except the *Journal of Business Ethics*, published in the Netherlands. This fact shows the concentration of research and finance in the management field. It should be noted that some journals tend to specialize and deepen their knowledge in, for example, productivity (e.g., *Organization Studies*).

In contrast, others cover a broader field of management topics (e.g., *Academy of Management Review*, *Organization*). In summary, the development of management theory is mostly analyzed by management journals published in the USA and England, showing that researchers and funding are concentrated in these countries, and the topics covered are broadly in-line with the topics and keywords discussed above. Although there is a noticeable cross-cutting use of knowledge, this could be further developed more actively.

CONCLUSION

This paper draws attention to the evolution of management theory. It seeks to more distinctly define the frames imposed by the analysis results, which marked the boundaries for future research tendencies.

The trend analysis of publications found an almost sinusoidal tendency in the number of scientific papers. It should be noted that the number of scientific papers on management theory has increased significantly since 2008, especially between 2016 and 2019, and the largest number of

articles on management theory was published in 2019. This may be related to the search for ways to overcome the financial crisis and improve or optimize organizations' performance and, therefore, links back to management theory. The analysis of key areas helped refine the main lines of the research conducted. It must be observed that, in addition to technological innovation, the issues of meeting the needs of employees and society remain important to performance optimization. It can be argued that the issues of balancing the performance of stakeholders and the organization will become increasingly important in the future. The analysis of recent publications and the most-cited authors has complemented research in strategic management, sustainability, and change, and extends the topics of operational productivity and the relationship with the environment. It should be noted that papers are published in management journals, and the potential for interdisciplinary collaboration is observed with the computer and mechanical sciences, as well as with the medical sciences.

Thus, this study has fleshed out the direction for developing management theory – responsible management; identified the most important lines of research, namely sustainable change, strategic management, the needs of employees and society, and the relationship with the. For scholars and practitioners, such structured data is an important source of relevant information in published papers and allows for the definition of research guidelines.

Summarizing this study has confirmed the idea that a new direction of responsible management research is being formed. In a dynamic environment, an organization must operate effectively to ensure business continuity, but the organization's operations and objectives must be balanced throughout the supply chain, and their implementation must be responsible. Responsibility encompasses both the internal and external environments of an organization, i.e., it must be understood and analyzed both from the point of view of the responsible use of resources and from the points of view of stakeholders, which must include the needs of future generations.

There are nevertheless some limitations in this study. First, this study analyzed a complete dataset of the Web of Science database. Thus, it is assumed that all publications had equal access to the research field during the period analyzed, and sampling to estimate the population mean was not performed. However, as noted by Rogers et al. (2020), other but unrecorded publications usually exist. Thus, some slight error is possible. Second, the term 'management' is widely used in different contexts, and publications that use the term to describe very specific issues that are not relevant to organizational management may have been included in the study. Such publications may have distorted some of the findings of the study, but did not materially affect the discussion.

AUTHOR CONTRIBUTIONS

Conceptualization: Ilona Skačkauskienė.

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