

# Bibliometric Analysis of High-performance Organization Literature Review: 1984 till 2020

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## ABSTRACT

The discussion on the high-performance organization (HPO) emerged in early 1984. The terminology of the high-performance organization has attracted scholars to study the concept of the HPO, its related factors, and its outcome toward the organization's goals. Since then, scholars have frequently used the term "High-Performance Organization" further to investigate the development of the concept in this area. The objective of this study is to depict the systematic review of literature on high-performance organizations which had been published in the Scopus journals from 1984 to 2020. Based on the Scopus database, all published articles related to high organization performance were compiled and integrated as the data. VOS viewer (visualization of similarities) Publish or Perish and Microsoft Excel software has been used to process the collected data. A total of 199 documents were analyzed and found much of the high-performance organization-related work was conducted in the United States and the Netherlands. Mainly, business management and social sciences have been focused in high-performance organization literature however other important areas such as Material science, Pharmaceuticals, Chemical Engineering, Chemistry, and Mathematics have been ignored and paid less attention. This study examines the history of the HPO scientific literature and identifies current research objectives, as well as future research paths and dimensions in the field.

**Keywords:** HPO, Framework, Bibliometric Analysis, Organizational Success, Performance.

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## INTRODUCTION

High-Performance Organization (HPO) concept has attracted the great attention of researchers, shareholders, practitioners, and organizations for ensuring sustained business success, growth, and survival. Becoming a high-performance organization enables to perform well over comparable organizations for a longer period of time<sup>[1]</sup> because HPOs develop strong capabilities to run the business smoothly and manage the employees properly.

The high-performance organization is the ones that are performing extraordinary in the industry and have outstanding partnerships with staff, consumers, and other stakeholders concerning competitive advantage and reducing costs.<sup>[2]</sup> High-performance companies understand the need to step quickly into new ways of working more suited to the environment in which we operate today. When companies want to be able to compete efficiently in the global marketplace they need to rapidly and cost-effectively produce new goods and services. They need to be able to work outside their limits and optimize possible synergies.<sup>[3]</sup> According to De Waal,<sup>[4]</sup> an

organization that pays greater attention to high-performance factors and high-performance attributes is more likely than other members of its peer group to be a high-performing company. Research into high-performance organizations has shown that their sales growth is 10 percent higher on average, their earnings are 29 percent higher and the overall return of shareholders is 23 percent higher than that of non-high-performing organizations.<sup>[4]</sup>

Several HPO models have been created and defined in past studies from the originative work published by Peters and Waterman (1982). Among the models presented for HPO such as the work of Collins have retained attractiveness throughout time,<sup>[5]</sup> others have gained brief attention publicity as the work of Keller and Price,<sup>[6]</sup> although others have vanished from the academic and managerial context. De Waal's HPO model<sup>[7]</sup> is a model that was proposed in 2007 and has seen continuous and steady progress since then. It is, to this author's knowledge, the only HPO model that has been tested over and over again on its operations and found (constructive) outcomes in implementation see for instance.<sup>[8-9]</sup>

De Waal's high-performance model is a research method that originated from a systematic analysis of past studies and results of empirical findings on various organizations around the globe. Studies span over 10 years grounded on a thorough

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investigation of 290 high-performance literature sources and thus find 35 variables and five characteristics showing a positive association with competitive performance (1). “1- Continuous improvement and renewal, 2- Openness and action orientation, 3- Management quality, 4- Employee quality, 5- Long term orientation are more acknowledged by researchers,” e.g.<sup>[10-12]</sup>

High performance of the organization refers to achieving higher results over comparable organizations for a longer period of time in terms of financial goals such as profits, return on investments, or high productivity, as well as non-financial performance such as improved process management, improved stakeholder relationships and improved customer value in a highly competitive environment. According to De Waal, becoming high-performing is a significant aspect that increases and maintains a competitive advantage.<sup>[8]</sup> However, achieving high performance is a challenge for most organizations because of the lack of proper organizational structure, organizational culture, and the behaviors of the organizational members that are required for being exceptional to perform extraordinarily.<sup>[13]</sup> What constitutes High-Performance Organization has been determined HPO framework given by De Waal<sup>[1]</sup> however, what makes an organization HPO is still not known because becoming an HPO is heavily dependent on a multitude of factors concerning the context, trends, economic shifts, and country circumstances.

Despite increasing interest in research on high-performance organizations, there are few efforts to reveal the forecast of research, especially those that have used bibliometric methods. The research in search of excellence and specifically in high-performance organizations started in 1982 and 1984 respectively. Since then, researchers have commonly used this concept to further explore the production and unique elements that could promote a high-performance organization. The purpose of this investigation is therefore to review, using bibliometric examination, the systematic studies available in the high-performance arena. A bibliometric investigation is a quantifiable tool used to analyze the nature of information and the advancement of investigations grounded on relevant publication examinations Pritchard<sup>[14]</sup> describes bibliometrics as “the application of mathematics and statistical methods to books and other media of communication”.

## LITERATURE REVIEW

This segment describes the intent of carrying out a bibliometric study and will address some of the bibliometric indicators and network visualization. In the second part, the methodology used is discussed. The third section displays bibliometric indicator tests. Finally, the conclusions are summarized, areas for further research, and some shortcomings are addressed.

A bibliometric analysis study is becoming a popular approach to disclosing the drift of past investigations.<sup>[15]</sup> As mentioned by Pritchard<sup>[14]</sup> bibliometrics is “the application of mathematics and statistical methods to books and other media of communication”. Bibliometric exploration also suggests a quantifiable approach, which uses scientific indicators to quantify text and details and facilitates an examination of available literature.<sup>[16-17]</sup> Additionally, it is helpful in assessing the magnitude and superiority of past literature to forecast particular research tendencies and configurations.<sup>[18]</sup> According to Cobo, MartinsCobo, Martínez,<sup>[19]</sup> bibliometric studies may postulate explanatory configurations of literature grounded on a field, region, country, time span, or any past information. In addition, a systemic bibliometric analysis method can provide further details on publication, comprising the rate of recurrence of keywords citations and, authors.<sup>[20]</sup>

In bibliographic studies, a variety of indicators have been used. According to Ahmi and Nasir<sup>[15]</sup> kind of published document, authors' work, association, country, and *h*-index are among the most commonly examined aspects. These statistics are part of an explanatory investigation grounded on data sets provided by the selected records. Based on citations analysis several studies also present publication impact based on impact factor (IF), impact per publication (IPP), citation per publication (CPP), and co-citation. Several methods have been established to examine these bibliometric statistics, given the contemporary availability and productivity of information accessible for research periodicals. The current trend in bibliometric research is to visualize bibliometric networks. VOSviewer, for example, is a free program that can be used to build and visualize networks. Text mining features in VOSviewer may be utilized to create and see the co-occurrence of keywords retrieved from systematic information.<sup>[20]</sup>

## DATA COLLECTION

The data source for this paper was taken from the Scopus database to attain the study goal. The data source comprises about 36,000 titles published by nearly 11,000 publishers and citation references primarily from peer reviews in social, physical, health, and life science.<sup>[20]</sup> The Scopus database search query of HPO or “High-Performance Organization” was applied on 15th April 2020. We received an overall 199 documents as an outcome of this query, which we will investigate further. As part of the data sets, the data has been exported in CSV and RIS formats. To examine the obtained documents, a few applications, including Microsoft Excel for data visualization VOSviewer, and for citation analysis, Harzing's Publish and Perish software were used.

## RESULTS AND FINDINGS

Some of the important characteristics of the data sets are offered to give an outline of the investigation of HPO. The following characteristics were assessed for all articles that met the search query: for example, abstract, citation analysis, source type, subject area, keywords, language, most active source title, and institution.<sup>[21]</sup>

### Research Productivity

Research productivity, for instance, documents published per year will be examined first. Examining documents by publication year allows for tracking the trend and prominence of the research topic over time.<sup>[22]</sup> The first publication on the high-performance organization concept was published in 1984 by Strum, D.W., Coile Jr., R.C. Since then, the concept started growing in 1988, whereas between 1999 and 2006 publication growth was a bit slow. However, the numbers amplified annually, and the maximum number of publications on high-performance organizations was in 2017. The publications on high-performance organizations decreased between 2013 and 2016 (Figure 1). Publication pattern on high-performance organizations shows that HPO is a favorite topic among academia and gaining more attention.

### Document Source Type

A document form refers to a document type dependent on the originality of an article (conference articles, book chapters, etc.) and a source document type refers to the source whether the document is a newspaper, a meeting, a book show, a trade publication, or a book. Papers presented in the conference which appeared in the document type could, vary from those appearing in the source type. For instance, a document presented at a conference is recorded under document form as a conference paper.<sup>[18]</sup> Nevertheless, depending on its publication status, the same document may be recorded as a full journal article, conference proceedings, or book section by source. The publications on high-performance organizations, as defined in Table 1, are distributed in seven types of documents. As shown further, (74.37%) of the total

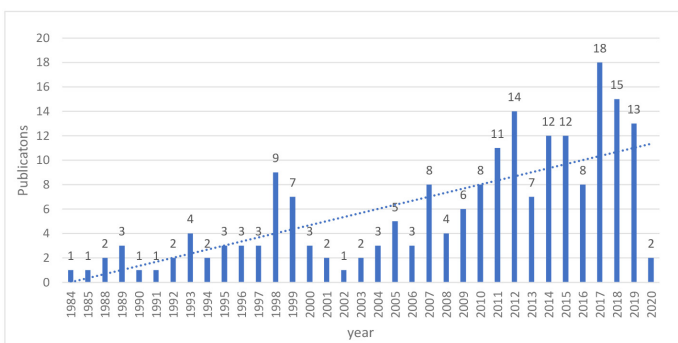


Figure 1: Document by Year.

Table 1: Type of Document.

Type of Document	No. of Documents	Percent (%)
Articles	148	74.37%
Conference Papers	24	12.06%
Review	10	5.03%
Book Chapter	6	3.02%
Book	5	2.51%
Note	4	2.01%
Editorial	1	0.50%
Unidentified	1	0.50%
<b>Total</b>	<b>199</b>	<b>100.00%</b>

Table 2: Document Source.

Document Source	No. of Documents	Percent (%)
Journals	160	80.40%
Conference Proceedings	20	10.05%
Books	11	5.53%
Trade Publications	5	2.51%
Book Series	3	1.51%
<b>Total</b>	<b>199</b>	<b>100.00%</b>

publications were in the form of an article and accompanied by a conference paper (12.06%) review paper type of documents reflected (5.03%) of the total publication, respectively. Other document types represented less than 5 % however one of the documents is unidentified by the Scopus.

Similarly, based on the source groups as seen in Table 2, the maximum number of publications were found under the journals category representing 160 publications (80.40%) whereas conference proceedings were found second representing 20 publications (10.05%) and books source showed only 11 publications (5.53%) of 199 documents.

### Document Languages

The English language is popular for publications in this research field based on Table 3. 195 documents (97.99%) of the total documents were published in English. Some of the documents were published in other languages such as Czech, French, Chinese and German languages.

### Subject Area

This study further categorizes the publications concerning the subject categories as shown in Table 4. As the high-performance organization is more focused on studies related to business, management science, and social sciences it can be seen that both subject areas demonstrate 64.82% and 24.62% of the total documents respectively. Other important contributing subject categories contain engineering, economics, medicine, computer sciences, and decision sciences.

**Table 3: Languages Used for Documents.**

Languages	No. of Documents	Percent (%)
English	195	97.99%
Chinese	1	0.50%
Czech	1	0.50%
French	1	0.50%
German	1	0.50%
<b>Total</b>	<b>199</b>	<b>100.00%</b>

**Table 4: Subject Categories.**

Subject Area	No. of Documents	Percent (%)
Management, Business, Accounting	129	64.82%
Social Sciences	49	24.62%
Engineering	31	15.58%
Economics, Econometrics, and Finance	23	11.56%
Medicine	19	9.55%
Computer Science	18	9.05%
Decision Sciences	13	6.53%
Environmental Science	8	4.02%
Psychology	8	4.02%
Nursing	7	3.52%
Arts and Humanities	5	2.51%
Energy	4	2.01%
Earth and Planetary Sciences	3	1.51%
Chemical Engineering	2	1.01%
Materials Science	1	0.50%
Chemistry	1	0.50%
Agricultural	1	0.50%
Mathematics	1	0.50%
Multidisciplinary	1	0.50%
Pharmaceutics	1	0.50%
Undefined	1	0.50%

### Publications by Countries

This study also assesses the number of publications produced by countries based on the author’s affiliation with the institution. Overall, a total of 38 identified countries were involved in the publications on high-performance organizations. As seen in Table 5 the countries that contribute the minimum five publications on high-performance organizations. The United States contributes the highest number of publications (58) showing (29.15%) of the total documents on high-performance organizations followed by the Netherlands (23.62%), United Kingdom (8.04%), Australia (5.03%), Thailand (4.52%), and China (2.51%). This result shows that established economies have taken top ranks in high-performance organization exploration compared to evolving economies.

**Table 5: Documents by Countries.**

Country	No. of Documents	Percent (%)
United States	58	29.15%
Netherlands	47	23.62%
United Kingdom	16	8.04%
Australia	10	5.03%
Thailand	9	4.52%
China	5	2.51%

**Table 6: Most active institutions.**

Institution	No. of Document	Percent (%)
Maastricht School of Management MSM	26	13.07%
HPO Center	25	12.56%
StatMind Management Research and Development	8	4.02%
University of Greenwich	7	3.52%
Open University of the Netherlands	4	2.01%
Kingston University	4	2.01%
Vrije Universiteit Amsterdam	3	1.51%
Grand Valley State University	3	1.51%
Adaptation Ltd	2	1.01%
Trireme Consultants	2	1.01%

### 10 Most Active Institutions

The contribution of the institutions related to high-performance organization research also has been included in this study, i.e. based on the top ten institutions. Table 6 shows that the Maastricht School of Management MSM has the maximum number of publications on high-performance organizations. The HPO Center becomes the second highest followed by StatMind Management Research and Development.

### Authorship Analysis

This study also shows the most active authors working in high-performance organizations. Table 7 listed the top ten authors working on high performance. Based on the table, De Waal, A. Coulson-Thomas, and C. Goedegebuure, R. are among the most active authors in this area of research that publish more than 5 publications on the high-performance organization.

### Keywords Analysis

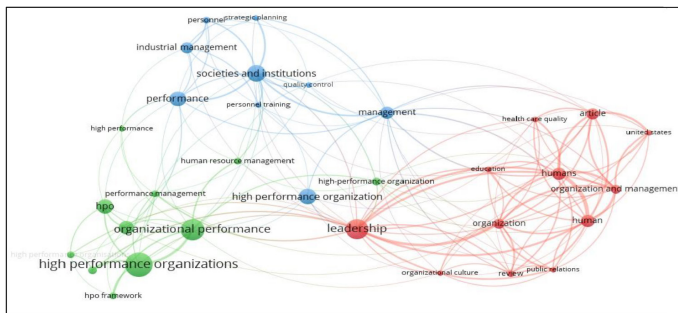
The author keywords also have been mapped with the VOS viewer. Figure 2 shows a network visualization of the author keywords in which color, circle size, font size, and thickness of connecting lines were used to present the association with other keywords.<sup>[18]</sup> Based on the analysis, there are three clusters in HPO research that have been established based

**Table 7: Most active authors.**

Name of Authors	No. of Document	Percent (%)
De Waal, A.	46	23.12%
Coulson-Thomas, C.	7	3.52%
Goedegebuure, R.	7	3.52%
Frijns, M.	3	1.51%
Mroueh, M.	3	1.51%
Bhaumik, A.	2	1.01%
Fongsuwan, W.	2	1.01%
Ghazzawi, I.A.	2	1.01%
Ghijssen, P.W.T.	2	1.01%
Habil, D.S.F.	2	1.01%

**Table 8: Top 20 Keywords.**

Keywords	Total	Percent (%)
High Performance Organizations	61	10.34%
Organizational Performance	19	3.22%
Leadership	18	3.05%
Societies And Institutions	15	2.54%
HPO	13	2.20%
Performance	13	2.20%
Human	11	1.86%
Humans	11	1.86%
Management	11	1.86%
Article	10	1.69%
Industrial Management	10	1.69%
Organization	9	1.53%
Organization And Management	8	1.36%
Performance Support	7	1.19%
HPO Framework	6	1.02%
Human Resource Management	6	1.02%
Performance Management	6	1.02%
Personnel	6	1.02%
Review	6	1.02%
Education	5	0.85%



**Figure 2:** Keywords visualization network map.

on the author’s keywords. The first cluster, which is colored in green is related to high-performance organizations, organizational performance, performance management, and the HPO framework. The second cluster, which is colored in red includes the keywords of leadership, organization, organization and management, organizational culture, and education.

Keywords such as organizational performance, management, industrial management, and performance support were among the most encountered author keywords Figure 2 presents a network visualization map for the keywords connecting each other based on appearance, frequency of usage in the literature, and importance, for example, high organizational performance and leadership has strong connection furthermore Table 8 lists top 20 keywords based on the network map and frequency.

As of April 20th, 2020, Table 9 summarizes the citation metrics for the publications retrieved. In 36 years (1984–2020) of high-performance organization writings, there are 1679 citations reported. Harzing’s Publish and Perish software developed this citation metric by entering a RIS-formatted file from the Scopus database into the software, which then displayed the raw citation metrics.

In the meantime, Table 10 below lists the top 10 most cited articles in the database of Scopus (based on the number of times

**Table 9: Citation Analysis.**

Citation Metrics	Data
Years of publication	1984-2020
Citation years	36
Total Papers	199
Total citations	1679
Citations per year	46.64
Citations per paper	8.44
Authors per paper	1.90
Hirsch <i>h</i> -index	19
Egghe <i>g</i> -index	37
PoP <i>h<sub>i</sub></i> ,norm	14
PoP <i>h<sub>i</sub></i> ,annual	0.39

cited). Samuel Bowles (1984) has earned the largest number of citations (371 cites or an average of 30.92 citations per year), titled “Policies designed for self-interested citizens may undermine the moral sentiments evidence from economic experiments”.

## DISCUSSION AND CONCLUSION

The bibliometric analysis will be used to assess the research trend on high-performance organizations. It can estimate the efficiency of research<sup>[23]</sup> and publications in a certain research area by using this bibliometric approach. According to Qiu

**Table 10: Top 10 Cited Articles.**

Authors	Title	Source	Cites	Cites/Year
S. Bowles	Policies designed for self-interested citizens may undermine “The moral sentiments”: Evidence from economic experiments	American Association for the Advancement of Science	371	30.92
U. Nabit, N. Klazinga, J. Walburg	The EFQM excellence model: European and Dutch experiences with the EFQM approach in health care	International Journal for Quality in Health Care	108	5.4
J.-M. Hiltrop	The quest for the best: Human resource practices to attract and retain talent	European Management Journal	106	5.05
S. Wood	Getting the measure of the transformed high-performance organization	British Journal of Industrial Relations	98	4.67
P. Evans, B. Wolf	Collaboration rules	Harvard Business Review	82	5.47
S.E. Markham, I.S. Markham	Self-management and self-leadership reexamined: A levels-of-analysis perspective	The Leadership Quarterly	42	1.68
M. Kohlbacher, S. Gruenwald	Process ownership, process performance measurement and firm performance	International Journal of Productivity and Performance Management	33	3.67
A. Haikonen, T. Savolainen, P. Järvinen	Exploring Six Sigma and CI capability development: Preliminary case study findings on management role	Journal of Manufacturing Technology Management	29	1.81
A. de Waal, M. Frijns	Longitudinal research into factors of high performance: The follow-up case of Nabil Bank	Measuring Business Excellence	28	3.11
K.R. Thompson, N.J. Mathys	The Aligned Balanced Scorecard: An Improved Tool for Building High Performance Organizations	Organizational Dynamics	27	2.25

and Lv,<sup>[24]</sup> bibliometric data may be used to estimate the performance of a certain research topic and can help research-related institutions govern policies such as funding allocation and comparing scientific input and output. Additionally, the findings of the bibliometric analysis will describe the contributing factors of studies in a study field and assist researchers in conducting successful investigations.<sup>[25]</sup>

As a result, the focus of this study is on high-performance organization publications found in the Scopus database. Using the supplied search query, this study discovered 199 documents from the specified database. Strum, D.W., and Coile Jr., R.C. (1984) started a study on high-performance companies (based on papers acquired from the Scopus database) called “Transferring lessons from high-performance organizations.” Since then, the publications on high-performance organizations have steadily increased till 1998. Between 2000 and 2004, the growth of publications was a little slower. Year after year, the number of publications on high-performance organizations increased, with 2017 seeing the largest number of articles. However, in 2013 and 2016, the number of publications on high-performance organizations decreased marginally.

In comparison to other forms of papers, journal articles were published in more than 70% of the cases. Almost 80% of the publications were written in English and came from 38 different nations. Two of the top countries that participated in the publication of the high-performance organization are the United States and the Netherlands. The research on high-

performance organizations is frequently published in journals that fall under the categories of business, management, accounting, social science, and engineering. Additionally, the analysis indicates steady but slow growth in the field of high performance limited to some organizations suggesting the need for more research in this field focusing on organizations such as Chemical Engineering, Genetics, Molecular Biology, Pharmaceuticals, Material Science, and Chemical Engineering. As it has been found in this bibliometric study other than business management and social sciences organizations research on HPOs for all other organizations was ignored which could further bring additional dimensions and insights making the HPO research domain more enriched and enhanced. Therefore, based on these research results, researchers should consider organizations such as Agricultural and Biological Sciences, Chemistry, Pharmaceuticals, Chemical Engineering, Genetics, Biochemistry, and Materials Science which are equally important to study as indicated in this study.

The impact of publications on high performance can be seen from the citation matrix revealed in this paper. There have been 199 documents published with a total of 1679 citations over the 36 years of publishing (1984–2020). For documents retrieved from the Scopus database on high-performance companies, there are 46.64 citations each year, 8.44 citations per article, and 1.90 authors per publication.

Notwithstanding the unique kind of bibliometric methods, the study has flaws that should be focused to provide readers with a clear knowledge of the work and advancing

forthcoming research. First, the outcomes were based just on the document title's unique keyword, i.e. HPO or "high-performance organization." As a result, the search query on other fields, such as abstract and keyword, has been left out of this analysis. The main cause for this is that most studies focusing on a specific subject will include it in the title of their documents. Some likely included a term linked to the search query in the abstract or keywords, but their research topic was likely unrelated to what the researcher was seeking. As a result, there is a lot of categorizing and cleaning to be done before the analysis can begin. It is likely that future research will be expanded into it.

It's also worth mentioning that there's no such thing as a flawless search query; as a result, false positive and negative results should be expected.<sup>[18]</sup> Finally, being the primary source of documents, this study solely utilized the Scopus database. Even though Scopus is one of the most comprehensive data sources for indexing all scholarly articles,<sup>[18-22]</sup> It does not cover all available sources however, Web of Science, Google Scholar, and Dimensions are some of the other databases that could be used in future research.<sup>[26]</sup> Combining all of these databases will almost certainly result in more exciting and useful findings. Notwithstanding these flaws, this study has added to the body of knowledge by describing the current state of high-performance organization research. Using the bibliometric technique, this study also expands and complements empirical work on high-performance organization literature and provides valuable insights into the trend of past work.

## CONFLICT OF INTEREST

The authors declare no conflict of interest.

## REFERENCES

- De Waal A. Success factors of high performance organization transformations. *Measuring Business Excellence*. 2018;22(4):375-90. doi: 10.1108/MBE-08-2018-0055.
- Honyenuga BQ, Tuninga RS, Ghijsen PW. High performance organizations framework as a predictor of firm performance in the insurance industry in Ghana. *Journal of Transnational Management*. 2014;19(4):261-78. doi: 10.1080/15475778.2014.960786.
- Holbeche L. *The high-performance organization*. Routledge. 2012.
- De Waal. The secret of high performance organizations. *Management Online Review*. 2008;4.
- Collins J. *Good to Great: Why Some Companies Make the Leap and Others Don't*. SAGE Publications, New Delhi, India; 2009.
- Keller S, Price C. *Beyond performance. How Great Organizations Build Ultimate*. 2011.
- De Waal A. The characteristics of a high performance organization. *Business strategy series*. 2007.
- De Waal A, De Haas J. Longitudinal research into the effects of the high performance organisation framework: The case of NEH Philippines. *International Journal of Productivity and Performance Management*. 2018;67(6):985-99. doi: 10.1108/IJPPM-08-2017-0183.
- Santos P, De Waal A. Factors of high performance in Portugal. *International Journal of Organizational Analysis*. 2019;28(3):611-25. doi: 10.1108/IJOA-07-2019-1824.
- Melchar DE, Bosco SM. *Achieving high organization performance through servant leadership*; 2010.
- Katzenbach JR, Smith DK. *The wisdom of teams: Creating the high-performance organization*. Harvard Business Review Press; 2015.
- De Waal A, Sivro M. The relation between servant leadership, organizational performance, and the high-performance organization framework. *Journal of Leadership and Organizational Studies*. 2012c;19(2):173-90. doi: 10.1177/1548051812439892.
- De Waal A, Heijtel I. Searching for effective change interventions for the transformation into a high-performance organization. *Management Research Review*. 2016;39(9):1080-104. doi: 10.1108/MRR-04-2015-0094.
- Pritchard A. Statistical bibliography or bibliometrics. *Journal of Documentation*. 1969;25(4):348-9.
- Ahmi A, Nasir MHM. Examining the trend of the research on eXtensible business reporting language (XBRL): A bibliometric. *International Journal of Innovation, Creativity and Change*. 2019;5(2):1145.
- Michael Hall CM. Publish and perish? Bibliometric analysis, Journal ranking and the assessment of research quality in tourism. *Tourism Management*. 2011;32(1):16-27. doi: 10.1016/j.tourman.2010.07.001.
- Daim TU, Rueda G, Martin H, Gerdri P. Forecasting emerging technologies: Use of bibliometrics and patent analysis. *Technological Forecasting and Social Change*. 2006;73(8):981-1012. doi: 10.1016/j.techfore.2006.04.004.
- Sweileh WM, Al-Jabi SW, AbuTaha AS, Zyoud SH, Anayah FMA, Sawalha AF. Bibliometric analysis of worldwide scientific literature in mobile – health: 2006-2016. *BMC Medical Informatics and Decision Making*. 2017;17(1):72. doi: 10.1186/s12911-017-0476-7. PMID 28558687.
- Cobo MJ, Martínez MA, Gutiérrez-Salcedo M, Fujita H, Herrera-Viedma E. 25 years at Knowledge Based Systems: A bibliometric analysis. *Knowledge-based Systems*. 2015;80:3-13. doi: 10.1016/j.knosys.2014.12.035.
- Rusly FH, Ahmi A, Yakimin Y, Talib A, Rosli K. Global perspective on payroll system patent and research: A bibliometric performance. *International Journal of Recent Technology and Engineering*. 2019;8:148-57.
- Singh VK, Banshal SK, Singhal K, Uddin A. Scientometric mapping of research on 'Big Data'. *Scientometrics*. 2015;105(2):727-41. doi: 10.1007/s11192-015-1729-9.
- Ahmi M. Bibliometric analysis of global scientific literature on web accessibility. *International Journal of Recent Technology and Engineering*. 2019;7:250-8.
- Nederhof AJ. Bibliometric monitoring of research performance in the social sciences and the humanities: A review. *Scientometrics*. 2006;66(1):81-100. doi: 10.1007/s11192-006-0007-2.
- Qiu J, Lv H. An overview of knowledge management research viewed through the web of science (1993-2012). *Aslib Journal of Information Management*. 2014;66(4):424-42. doi: 10.1108/AJIM-12-2013-0133.
- Akhavan P, Ebrahim NA, Fetrafi MA, Pezeshkan A. Major trends in knowledge management research: A bibliometric study. *Scientometrics*. 2016;107(3):1249-64. doi: 10.1007/s11192-016-1938-x.
- Banshal SK, Uddin A, Singhal K, Singh VK. Computer science research in India: a scientometric study. In: 2015 Annual IEEE India Conference (INDICON). 2015; 1-6.