# Bibliometric Analysis of Articles on Organizational Behavior

## *Örgütsel Davranış Konulu Makalelerin Bibliyometrik Analizi*

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**Özet:** Organizational behavior, a critical field in understanding and improving workplace dynamics, is the focus of this bibliometric analysis. Utilizing statistical and mathematical tools, this study explores academic documents' attributes across various disciplines, including authors, topics, citations, institutions, and countries. Bibliometric mapping, particularly using the SciMAT software, aids in visualizing research structures and knowledge connections. This research, based on the Web of Science database, provides valuable insights into academic literature. The analysis includes term grouping and research period delineation, observing the evolution of organizational behavior literature with 3187 articles. In conclusion, this study showcases the applicability of bibliometric methods in academic research, offering multidisciplinary researchers tool to comprehend resources and track field developments. Open-source analysis methods and software employed contribute significantly to the scholarly community. Key themes within the research highlight prominent and transformative subjects, while thematic maps illustrate the evolution of organizational behavior literature. Analysis of publication distribution by year reveals the field's growth, particularly in 2019 and 2021. Moreover, the study analyzes the top twenty most cited articles and identifies prolific authors. Additionally, it examines frequently used keywords, demonstrating the prevalence of "leadership." This study's thematic development analysis offers valuable insights into the dynamic landscape of organizational behavior research.

**Abstract:** İşyeri dinamiklerini anlamak ve geliştirmek için kritik bir alan olan örgütsel davranış, bu bibliyometrik analizin odak noktasıdır. İstatistiksel ve matematiksel araçları kullanarak, bu çalışma çeşitli disiplinlerdeki akademik belgelerin özelliklerini, yazarları, konuları, alıntıları, kurumları ve ülkeleri içeren şekilde araştırır. Özellikle SciMAT yazılımını kullanarak bibliyometrik haritalama, araştırma yapılarını ve bilgi bağlantılarını görselleştirmeye yardımcı olur. Web of Science veri tabanına dayalı bu araştırma, akademik literatüre değerli bakış açıları sunar. Analiz, terim gruplandırma ve araştırma dönemi belirleme, örgütsel davranış literatürünün 3187 makale ile evrimini gözlemlemektedir. Sonuç olarak, bu çalışma bibliyometrik yöntemlerin akademik araştırmada uygulanabilirliğini sergileyerek çok disiplinli araştırmacılara kaynakları anlama ve alanın gelişmelerini izleme aracı sunar. Kullanılan açık kaynak analiz yöntemleri ve yazılımı, akademik topluluğa önemli katkılar sağlar. Araştırmadaki ana temalar, önde gelen ve dönüştürücü konuları vurgularken tematik haritalar örgütsel davranış literatürünün evrimini gösterir. Yıl bazında yayın dağılımının analizi, özellikle 2019 ve 2021'de, alanın büyümesini ortaya koymaktadır. Ayrıca, çalışma en çok alıntılanan yirmi makaleyi analiz eder ve üretken yazarları belirler. Ayrıca, sık kullanılan anahtar kelimeleri inceleyerek "liderlik" kelimesinin yaygınlığını gösterir. Bu çalışmanın tematik gelişim analizi, örgütsel davranış araştırmasının dinamik peyzajı hakkında değerli perspektifler sunar.

## 1. Introduction

Contemporary organizations are changing and the field of organizational behavior is changing with them (Rousseau, 1997). The shift from organization to organizing means that activities that were once predominantly repetitive are now predominantly new activities, networks that used to be based on roles are now shaped around knowledge, careers that used to be firm-based are now based more on

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personal resources, and work structures that used to be rule-centered are now constructed by the people doing the work (Drazin and Sandelands, 1992; Manz, 1992).

The systematic study of management and organizational practices has received increasing attention in the last century. Initially, these investigations focused on physical working conditions, management principles and industrial engineering. Over time, however, the field of interest has broadened to include the human factor. This expansion gave impetus to research on individual attitudes, group dynamics and the relationships between managers and employees. Building on this historical foundation, this discipline, which is called organizational behavior, aims to understand individuals, groups and the effects of organizational processes, systems and structures on performance in organizations with a scientific approach. In this context, organizational behavior illuminates a range of important issues from human resource management to leadership strategies and contributes to the efficient and sustainable management of organizations (Schermerhorn et al. 2011).

Organizational behavior is the study of human behavior in organizations, focusing on individuals, teams, interpersonal processes and organizational structures. It is an interdisciplinary body of knowledge with strong links to the behavioral sciences-psychology, sociology and anthropology-as well as social sciences such as economics and political science. What makes the field of organizational behavior unique is its potential to integrate insights from related disciplines and apply them to real-world organizational problems and opportunities. The ultimate goal of the study of organizational behavior is to enhance the performance of people, groups and organizations and thus improve the quality of work life in general. Understanding organizational behavior is also an element to help develop the skills needed for a successful career (Uhl-Bien, 2020). In addition, organizational behavior research offers an important perspective for understanding the complexity of organizational performance and the factors that influence it (Gehrisch & Süß, 2023).

Effective organizational behavior management is vital to the success of a good organization. This management has critical functions such as increasing employees' motivation for their work, promoting cooperation and communication, resolving conflicts positively and adapting to the changing conditions of the organization. Good organizational behavior management improves productivity by increasing employees' job satisfaction and motivation, and facilitates cooperation through clear and effective communication. At the same time, managing conflict maintains workplace peace and helps the organization adapt to changing business dynamics. Finally, this management supports employees' personal and professional development, builds long-term commitment and increases the success of the organization. Therefore, organizations need to manage organizational behavior correctly to achieve long-term and sustainable success (Supriadi et al., 2019).

Organizational behavior is the study of the factors that influence individuals and groups to react and act towards organizations and to respond to how organizations manage their environment. Organizational behavior provides a framework for understanding the complex dynamics of individuals, groups, and organizations and bringing these factors together to contribute to the success of organizations. This discipline helps organizations make a range of important business decisions, from human resource management to leadership strategies, and is critical for sustainable success (Acadia, 2020; Van Der Pas & Walczuch, 2019).

The study of organizational behavior provides guidance for understanding and appreciating the many individual forces that influence behavior in organizations and for improving decisions about how to motivate and coordinate human and other resources in achieving organizational goals (Moagi et al., 2020; Van Der Pas & Walczuch, 2019). The elements of organizational behavior are: (1) individual differences in terms of both personality and abilities, (2) work experience in terms of both values, attitudes and atmosphere, (3) perception and attribution, and (4) commitment, motivation, resilience/stress and performance (performance) (Ristianti et al. 2020).

The relationship between organizational structure and organizational behavior is critical to understanding how an organization works, how it is managed, and how employees behave. Organizational structure forms the skeletal framework of organizational behavior, and interactions within this framework shape the success of the organization (Luthans et al. 2021).

The roots of research in organizational behavior date back to the late 1940s, when researchers in psychology, sociology, political science, economics and other social sciences came together in an effort to develop a comprehensive body of organizational knowledge. Organizational behavior is a field of study that seeks to understand, explain, predict and change human behavior that occurs in organizational contexts. There are three important aspects underlying this definition (Wagner III, J. A., & Hollenbeck, 2020):

1. Organizational behavior focuses on observable behaviors, such as speaking in a meeting, operating production equipment, or writing a report. It is also concerned with the internal states that accompany visible actions, such as thinking, perceiving, and making decisions.

2. Organizational behavior involves the analysis of how people behave both as individuals and as members of groups and organizations.

3. Organizational behavior also assesses the "behavior" of groups and organizations. Neither groups nor organizations "behave" in the same sense as people. However, some events occur in organizations that cannot be explained in terms of individual behavior. These events should be studied in terms of group or organizational processes.

Organizational behavior has gained great importance especially in recent years and has become a fundamental factor shaping the success of organizations. This discipline aims to increase the effectiveness of organizations by examining the behavior of individuals and groups in organizations. By adopting a scientific approach, organizational behavior accepts that management practices should be appropriate for every situation. This approach responds to the changing conditions faced by organizations, the commitment to ethical values, the importance of human capital, the importance given to teams, the impact of technology, the evolution of employee expectations, the changing understanding of careers and the concern for sustainability (Schermerhorn et al. 2011).

Organizations are communities of people who come together to achieve a purpose. They function by taking resources, processing them, and transforming the results into the environment. In this context, organizations are considered open systems and interact with their external environment. These external environments include many stakeholders, from customers and suppliers to regulators and local communities. The internal structure of an organization also plays a critical role and corporate culture is a reflection of this internal structure. A positive corporate culture supports employee diversity and multiculturalism, while emphasizing respect and inclusiveness for all members. Therefore, organizational behavior and organizational structure are the cornerstones for success and sustainability in today's business world (Schermerhorn et al. 2011).

Innovation is vital for the sustainability of not only businesses but also economies in today's competitive business world. Businesses have to innovate continuously in order to keep up with rapidly changing consumer demands, technological developments and challenges in the global market and to maintain their competitive advantage. At this point, organizational behavior plays a critical role. Organizational behavior is a discipline that includes factors such as increasing employee motivation, encouraging teamwork, leading and communicating. These factors are important components that directly affect the success of innovation processes. Businesses should encourage their employees to actively participate in innovation and generate creative ideas. The role of organizational behavior at this point helps employees to develop original and innovative solutions by increasing their confidence in innovation. Furthermore, organizational behavior also addresses the ability of leaders to manage innovation processes. Leaders' visionary, risk-taking abilities and ability to inspire team members pave the way for innovation. A good leader explains to employees why innovation is important, motivates them and encourages innovative thinking. This is a critical factor in the success of innovation. In conclusion, organizational behavior is an indispensable tool for businesses to sustain their competitive advantage and grow. In today's business world where innovation has become a central element, effective management of organizational behavior will be decisive for the future success of businesses (Nippa & Schäfer, 2023).

In the future, organizational behavior is likely to remain an integral part of coping with the rapid changes and developments of the business world. The current business world reflects a time when organizations have to operate in a complex and dynamic environment, and in this context,

organizational behavior plays a vital role in strengthening their ability to adapt to these changing conditions, maintain their sustainability and gain competitive advantage. Especially today, when digital transformation is advancing rapidly, organizations will adopt organizational behavior principles and strategies to increase employees' motivation for their work, encourage collaboration and facilitate their adaptation to rapidly changing business dynamics. At the same time, in an era of increasing global competition, it seems to be even more important to create a corporate culture that supports diversity and multiculturalism in the workplace. In this context, it can be said that organizational behavior will stand out as a key element affecting the future success of organizations.

## 2.   Method

One of the methods of quantitative analysis of scientific documents (author, field, subject, citation, institution, country, etc.) published for the synthesis of information in various academic disciplines with statistical and mathematical tools is bibliometrics (Kurutkan & Orhan, 2018; Oshodi et al., 2020). Scientific mapping, or bibliometric mapping in other words, is a bibliometric analysis method that has an important role in the dynamic development process of academic studies that tries to find internal information links and aims to show the structural and dynamic aspects of scientific research (AKYÜZ et al., 2021; Cobo et al., 2011, 2012). In this study, the data obtained from the Web of Science (WOS) database were analyzed with the scientific mapping method. Science mapping is a useful technique for exploring the social, intellectual and conceptual aspects of research fields, specializations or individual documents or authors (Cobo et al., 2012). The WOS database is a large and widely accepted (Li & Hale, 2016) database of abstracts and references from high quality and influential scientific articles (Web of Science, n.d.).

The WOS database was searched using the criteria shown in Figure 1 and 3187 articles were found as a result of the search. The search term "organizational behavior" was searched in the topic field. The years 1975-2021 were selected as the year range and articles to be published in 2022 were excluded. Article and Review Articles were filtered as document type. Social Sciences Citation Index (SSCI) or Science Citation Index Expanded (SCI-EXPANDED) indexes were preferred as Web of Science Index and English was preferred as article language.
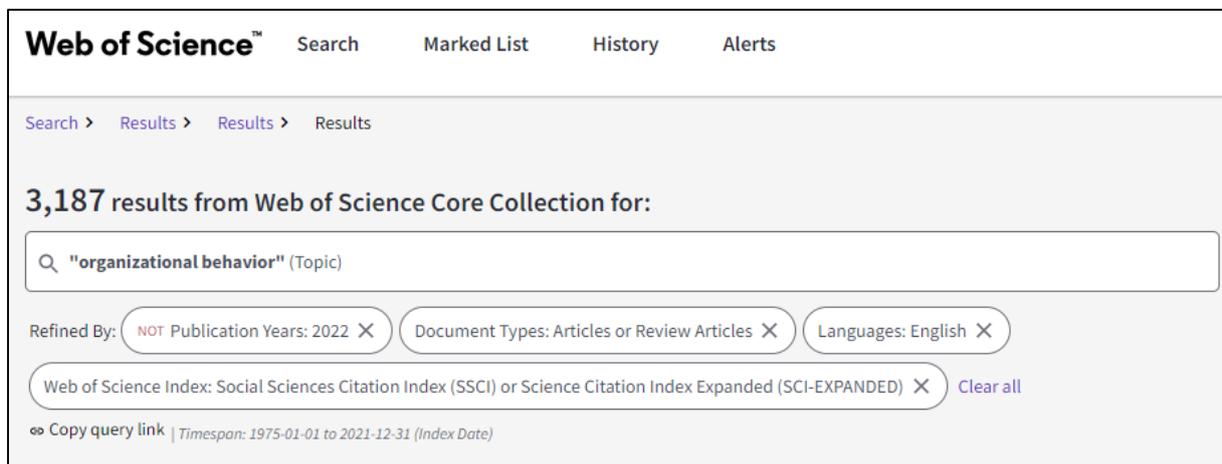


Figure 1: Search criteria in WOS.

The retrieved articles were downloaded in "plain text" format and analyzed in an open source scientific mapping program. SciMAT is a new, open source science mapping software tool. It can be freely downloaded, modified and redistributed according to the terms of the GPLv3 license (Cobozz et al., 2012). The executable file, user manual and source code are available on the website (SciMAT, n.d.).

Before the analysis, the keywords used in the articles were grouped by considering synonymy and abbreviation, singular/plural status. Accordingly, while there were initially 10218 terms in the scope of

the study, this number decreased to 9613 as a result of grouping. In order to see the thematic development of the research area, the time period was divided into 4 periods. The first period covers the years 1980-2004, the second period 2005-2012, the third period 2013-2017 and the last period 2018-2021. While determining the periods, it was taken as a basis to distribute the number of articles as equally as possible. Thus, there are 3187 articles within the scope of the study, 712, 780, 824 and 871, respectively, starting from the first period (Figure 2).
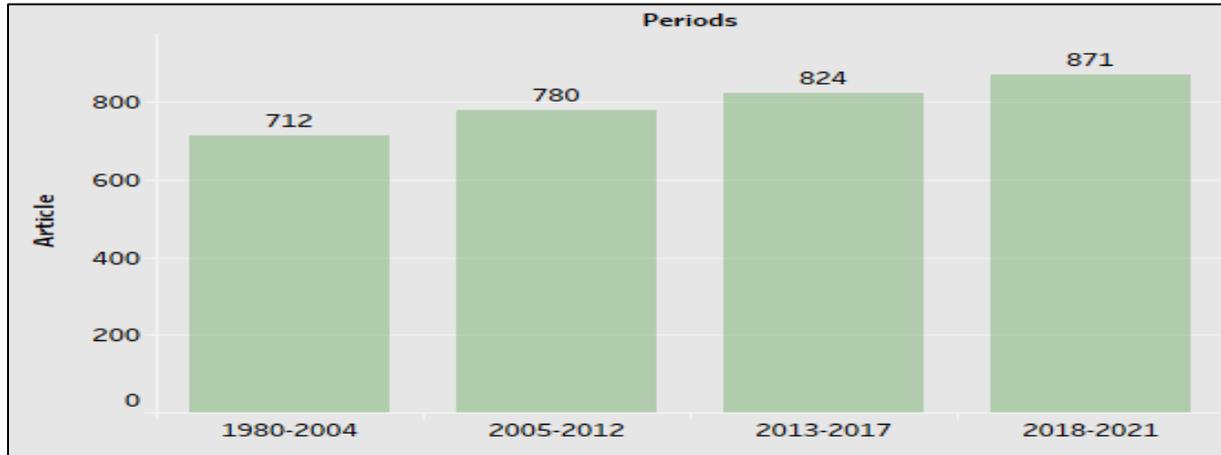


Figure 2: Distribution of articles according to periods

Analyses were performed in SciMAT program; [Unit of analysis: Words (authorRole=true, sourceRole=true, addedRole=true); Kind of network: Co-occurrence; Normalization measure: Equivalence index; Cluster algorithm: Simple Centers; Evolution measure: Inclusion index; Overlapping measure: Inclusion index] configurations were used.

The search term "organizational behavior" was excluded from the analysis so that important themes related to organizational behavior could be seen and evaluated. Strategic diagrams, overlap map and thematic development map were used to visualize the analysis findings. The size of the spheres representing the themes in the visuals is directly proportional to the number of publications. The quality assessment of the themes was based on the number of publications, total number of citations and h-index values. The strategic diagram shows the identified clusters of each period on a two-dimensional axis and classifies them according to Callon's measures of density and centrality. Each cluster in the strategic diagram can be enriched with selected bibliometric measures. The relationship between each cluster element can be shown in a separate network graph. The X-axis represents centrality, which measures the importance of the selected theme. As themes move to the right in the diagram, their external relationships become stronger and their centrality increases. The Y axis represents intensity, which measures the development of the selected theme. As the themes move up the diagram, their internal relationships become stronger and their intensity increases. The size of each sphere is proportional to the number of elements that fall under the theme (Akyüz et al., 2021; Cobo et al., 2012).

The strategic diagram consists of 4 parts (Figure 3).

**Motor themes:** The upper right quadrant containing themes with high centrality and intensity.

**New emerging or disappearing themes**: This is the lower left quadrant containing themes with low centrality and intensity.

**Core (Fundamental) and transformational themes:** Lower right quadrant containing themes with high centrality and low intensity.

**Highly developed and isolated themes:** The upper left quadrant containing themes with low centrality and high intensity (Cobo et al., 2011; Nasir et al., 2020).
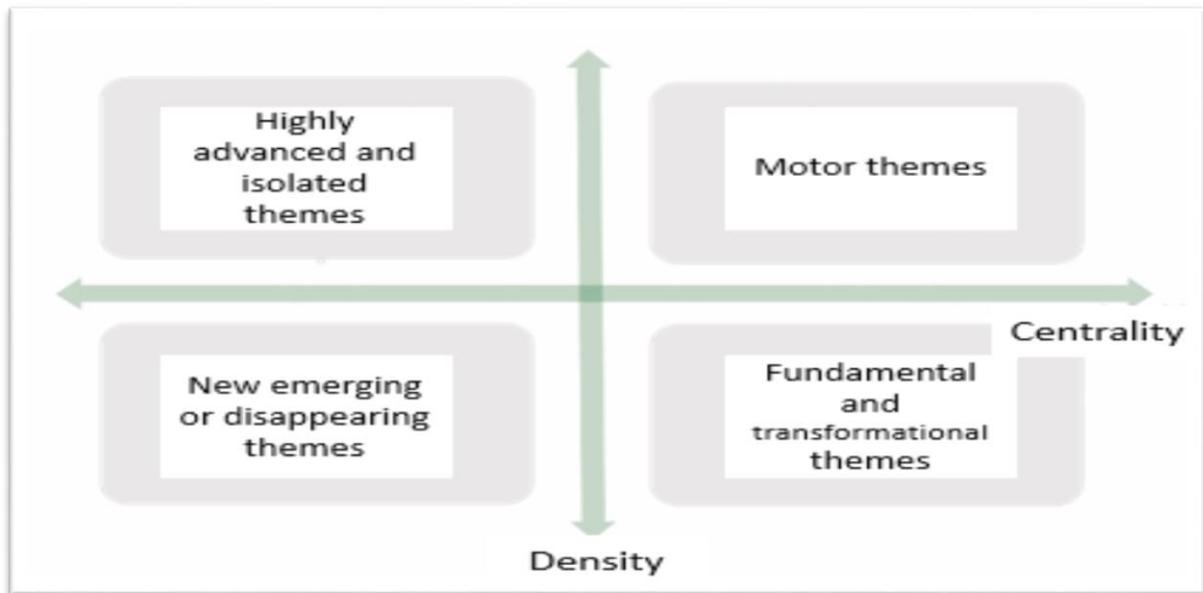
Figure 3: Strategic diagram

The quantitative development of the keywords used in the articles according to the periods is shown in the overlap map. In the thematic development map, the relationships of themes between the periods are shown. The relationships between the themes are shown with lines connecting the themes. The thickness of the lines is directly proportional to the strength of the relationship. The use of the same keywords as the theme names between the themes is shown with a solid line and the use of common keywords other than the theme names is shown with a dashed line.

## 3. Findings

The distribution of the number of publications on organizational behavior according to years is shown in Figure 4. Accordingly, the first publication was in 1980. Since 1989, there has been a regular increase in the number of articles. Since 2019, it is seen that there has been a very serious increase, and 2021 has seen the highest number of articles (n=309) published compared to all years.
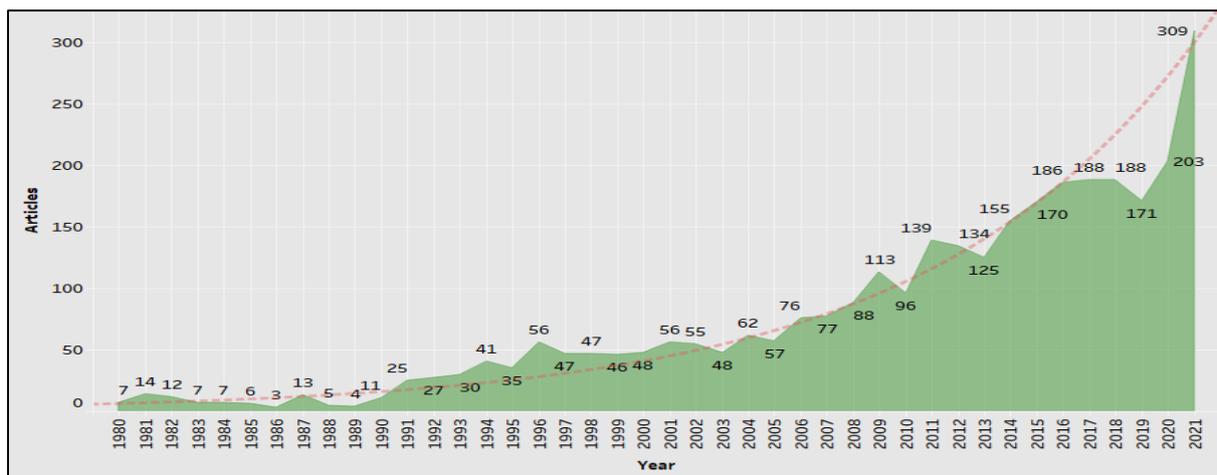


Figure 4: Number of publications by year

The total number of citations and annual average number of citations of the top twenty most cited articles by years are shown in Figure 5. Accordingly, it is seen that "Maslach, 2001" received the highest number of citations (n=6286). The average number of citations per year of "Maslach, 2001" is 285,7. "Maslach, 2001" is followed by "Hevner AR, 2004" with a total of 6286 citations and an annual

average of 238.6 citations. Information about the other articles in the top twenty is as shown in Figure 5.
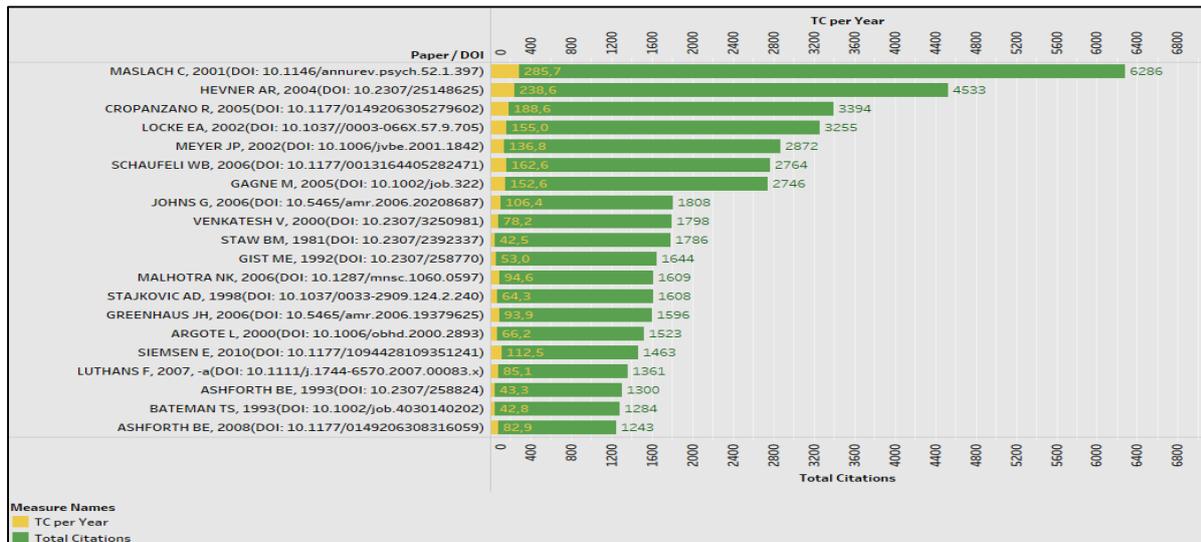


Figure 5: Number of citations of articles by year

Figure 6 shows the names and statistics of the top 20 authors who produced and contributed the most articles. Articles Fractionalized in the figure measures an author's contributions to a set of individually published articles (hypothesis of uniform contribution of all co-authors in each document) (Bibliometrix.Org, n.d.). Luthans F is by far the author who has produced the most articles, with 39 articles, far ahead of the other authors. Articles Fractionalized also shows that the same author is the top contributor with 14.67%. Although Goosmas DT has 10 articles, he ranks second in terms of contribution with 8.33%.
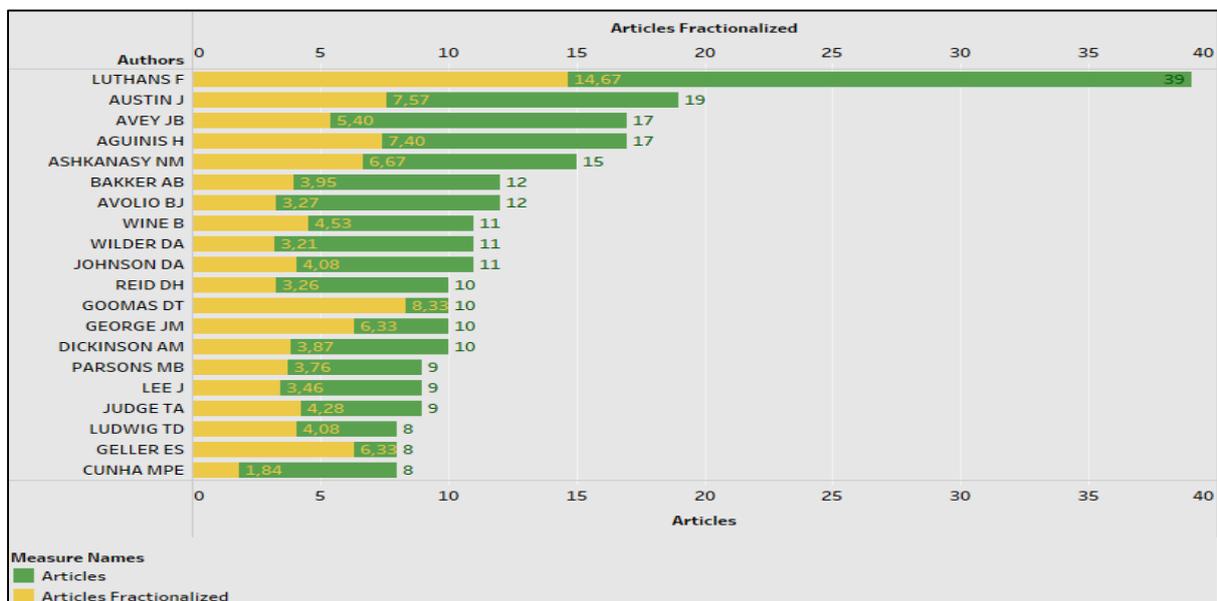


Figure 6: Number of articles by authors

The word cloud and the table prepared in such a way that the keywords of the articles included in the analysis are the top ten in order of highest usage are as shown in Figure 7. The size of the terms in the word cloud is directly proportional to the number of uses. As stated before, the term "organizational behevior", which constitutes the search criteria, was excluded from the study. Accordingly, the most used keyword was "leadership" (n=102). The total number of keywords in the top ten is 983.

Figure 7: Author keywords word cloud

The overlap map showing the periodic development of keywords for the periods determined for the research area is shown in Figure 8. Accordingly, the number of keywords increased in parallel with the number of articles published. In the first period, 1980-2004, 2031 keywords were used, 843 of which continued to be used in the next period, while 1188 could not be transferred to the next period (stability index = 0.42). In the second period, 2005-2012, 2552 keywords were used for the first time, and a total of 3395 keywords were used together with those from the previous period. In the second period, 2080 keywords were retired and 1315 were transferred to the next period (stability index = 0.39). In the third period, 2013-2017, a total of 4118 keywords were used with the introduction of 2803 new keywords, of which 2670 were retired and 1448 were transferred to the next period (stability index = 0.35). In the last period, 2018-2021, 2786 keywords were used for the first time and the total number of keywords used in the period was 4234.
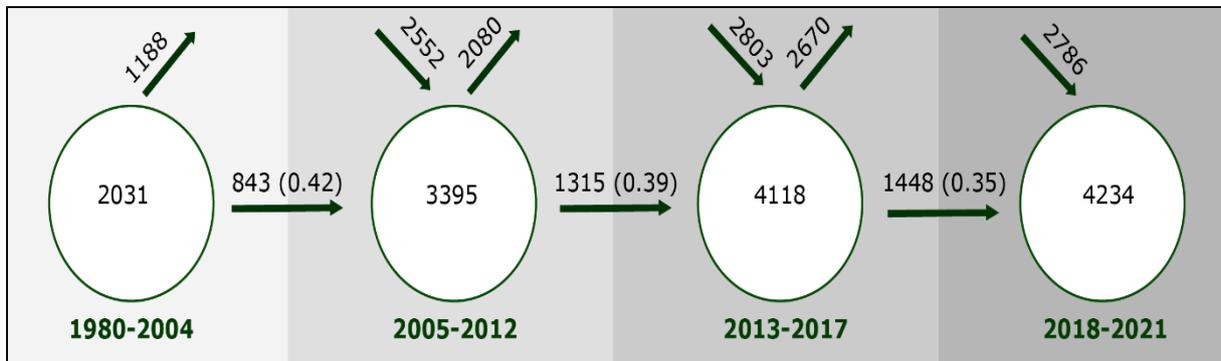


Figure 8: Overlap map

The strategic diagram for the period 1980-2004 is shown in Figure 9 (A). Each cluster is represented by the theme with the highest number of uses within that theme. The clustering network of the theme with the highest centrality and density, which represents the largest cluster in the diagram, is also shown in Figure 9 (B). In the period analysis, Min frequency: 2 and Min co-occurrence: 5 were set. The number of documents was taken as the performance measure of the diagram. Accordingly, 5 themes emerged from 2031 keywords in the period. Among these themes, "performance" and "job-satisfaction" are in motor themes, "work" theme is in basic and transformational themes, "organizational-behavior-management" theme is in highly developed and isolated themes, "behavior" theme is in emerging or disappearing themes. In the diagram, the internal and external relationships of the "performance" theme in the motor theme are quite strong. The "behavior" theme in the emerging or disappearing theme can be said to be an emerging theme. This is because the centrality of the "behavior" theme increased in the next period (2005-2012) shown in Figure 10, and it is seen that the prominent "model" theme of the strategic diagram is one of the related themes in the clustering network within the basic and transformational themes.
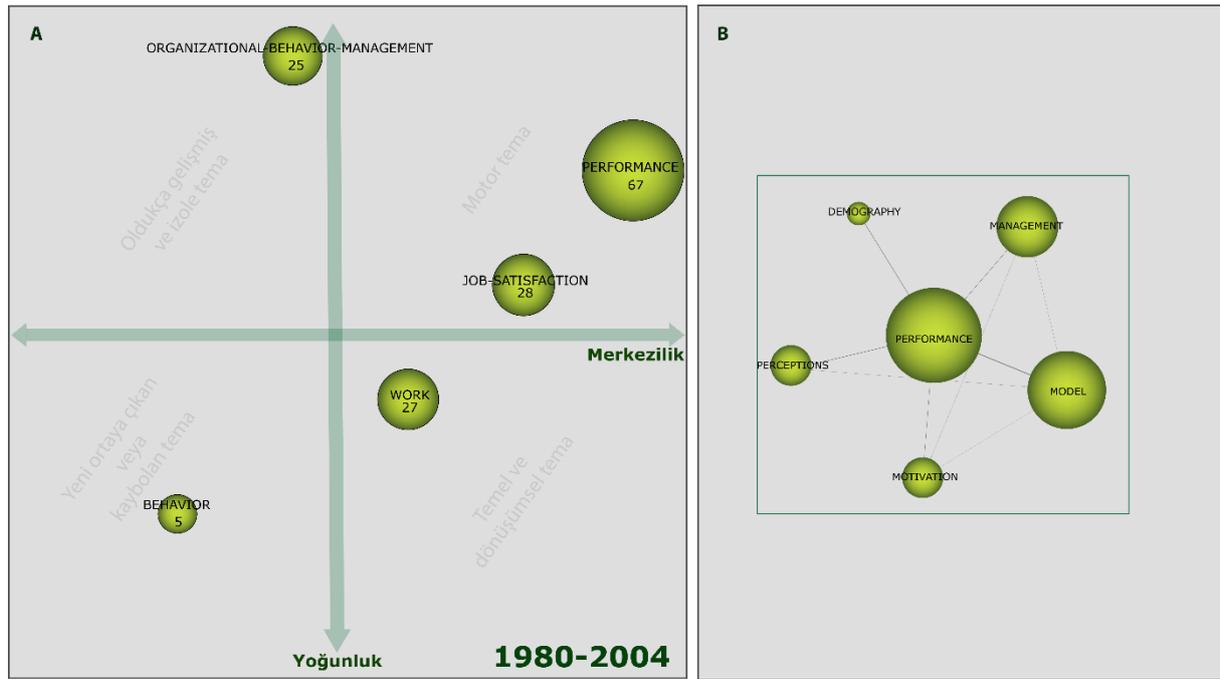
Figure 9: (A) Strategic diagram for the period 1980-2004, (B) Theme "Performance"

The performance analysis findings of the themes in the 1980-2004 period strategic diagram are as shown in Table 1. It is seen that the "performance" theme, which stands out in the diagram, has the highest number of documents (n=67), the highest h-index value (45) and the highest number of citations (n=13848).

Table 1: Findings on the Themes of the 1980-2004 Period

| Name | No. of documents | No. of citations | h-index | Centrality | Density |
|---|---|---|---|---|---|
| Organizational-behavior-management | 25 | 469 | 13 | 0,4 | 8,2 |
| Job-satisfaction | 28 | 8987 | 25 | 0,8 | 5,6 |
| Performance | 67 | 13848 | 45 | 1,0 | 5,7 |
| Work | 27 | 7535 | 22 | 0,6 | 2,8 |
| Behavior | 5 | 430 | 5 | 0,2 | 1,2 |

The strategic diagram for the period 2005-2012 is shown in Figure 10 (A). In the period analysis, Min frequency: 5 and Min co-occurrence: 5 were determined. The number of documents was taken as the performance measure of the diagram. Fifteen themes emerged from 3395 keywords in the period. Among these themes, "Antecedents" and "Hope" themes are in Motor themes, "Personality", "Job-Satisfaction", "Model", "Impact" and "Leadership" themes are in Basic and transformational themes, "Auditory-feedback", "Collectivism", "Individualism-collectivism", "Dementia" and "Organizational-Behavior-Management" themes are in Highly developed and isolated themes, "Strategy" theme is in New emerging or disappearing themes. Of the themes in the diagram, the one with the strongest internal and external relationships is the "Hope" theme. The "Hope" theme has particularly strong relationships with the "Resilience" and "Optimism" themes. The theme with the highest number of documents is "Model" (n=54). The clustering network showing the related themes of these two themes

is also shown in Figure 10 (B). It is seen that the themes with higher centrality also have a higher number of documents.
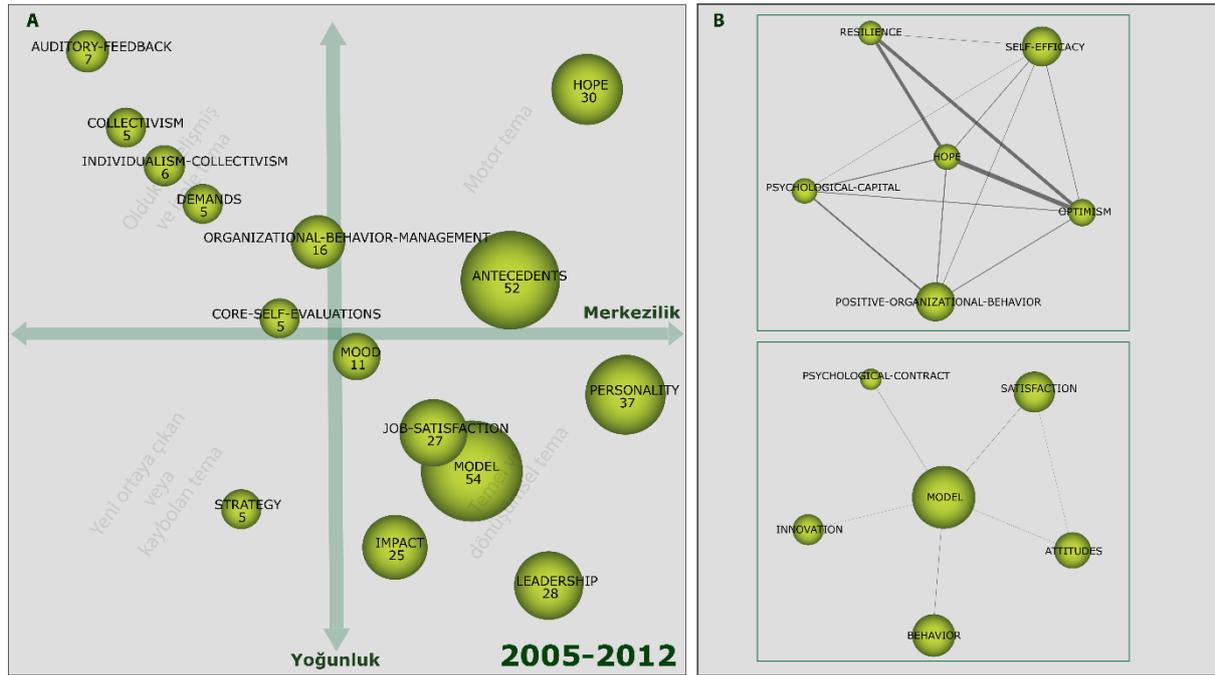


Figure 10: (A) Strategic diagram for the period 2006-2012, (B) Clustering network

The performance analysis findings of the themes in the strategic diagram for the period 2005-2012 are as shown in Table 2. It is seen that the "Model" theme, which stands out in the diagram, has the highest number of documents (n=54) and the other prominent theme "Antecedents" has the highest h-index value (35). The "Job-satisfaction" theme with the highest number of citations (n=6828) has an h-index of 22.

Table 2: Findings on Themes for the 2005-2012 Period

| Name | No. of documents | h-index | No. of citations | Centrality | Density |
|---|---|---|---|---|---|
| Hope | 30 | 23 | 6031 | 11,5 | 38,0 |
| Antecedents | 52 | 35 | 4368 | 10,6 | 8,3 |
| Personality | 37 | 28 | 6287 | 16,2 | 4,8 |
| Job-satisfaction | 27 | 22 | 6828 | 7,0 | 3,2 |
| Leadership | 28 | 21 | 1923 | 11,4 | 2,3 |
| Model | 54 | 33 | 5735 | 10,1 | 2,9 |
| Impact | 25 | 20 | 3353 | 7,0 | 2,3 |
| Organizational-behavior-management | 16 | 11 | 324 | 0,5 | 11,3 |
| Mood | 11 | 10 | 264 | 2,0 | 7,6 |
| Auditory-feedback | 7 | 5 | 51 | 0,0 | 50,0 |

| Collectivism | 5 | 5 | 411 | 0,0 | 29,8 |
|---|---|---|---|---|---|
| Individualism-collectivism | 6 | 6 | 1592 | 0,0 | 17,7 |
| Demands | 5 | 5 | 3447 | 0,1 | 14,6 |
| Core-self-evaluations | 5 | 5 | 2276 | 0,5 | 8,1 |
| Strategy | 5 | 5 | 171 | 0,4 | 2,4 |

The strategic diagram for the period 2013-2017 is shown in Figure 11 (A). In the period analysis, Min frequency: 5 and Min co-occurrence: 5 were determined. The number of documents was taken as the performance measure of the diagram. From 4118 keywords in the period, 15 themes emerged. Among these themes, "job-Satisfaction", "Model", "Psychological-capital", "Work-engament", "Transformational-leadership" and "Optimism" themes are in Motor themes, "Organizational-citizenship-behavior" and "Satisfaction" themes are in Basic and transformational themes, "Development" and "Organizational-Behavior-Management" themes are highly developed and isolated, while "Gender", "Innovation", "Personality", "Management" and "Organizations" are emerging or disappearing themes. Of the themes in the diagram, the one with the strongest internal and external relationships is "Psychological-capital". The theme with the highest number of documents is the "Model" theme (n=54). The clustering network showing the related themes of these two themes is also shown in Figure 11 (B). In the strategic diagram, it is seen that the themes with higher centrality also have a higher number of documents.
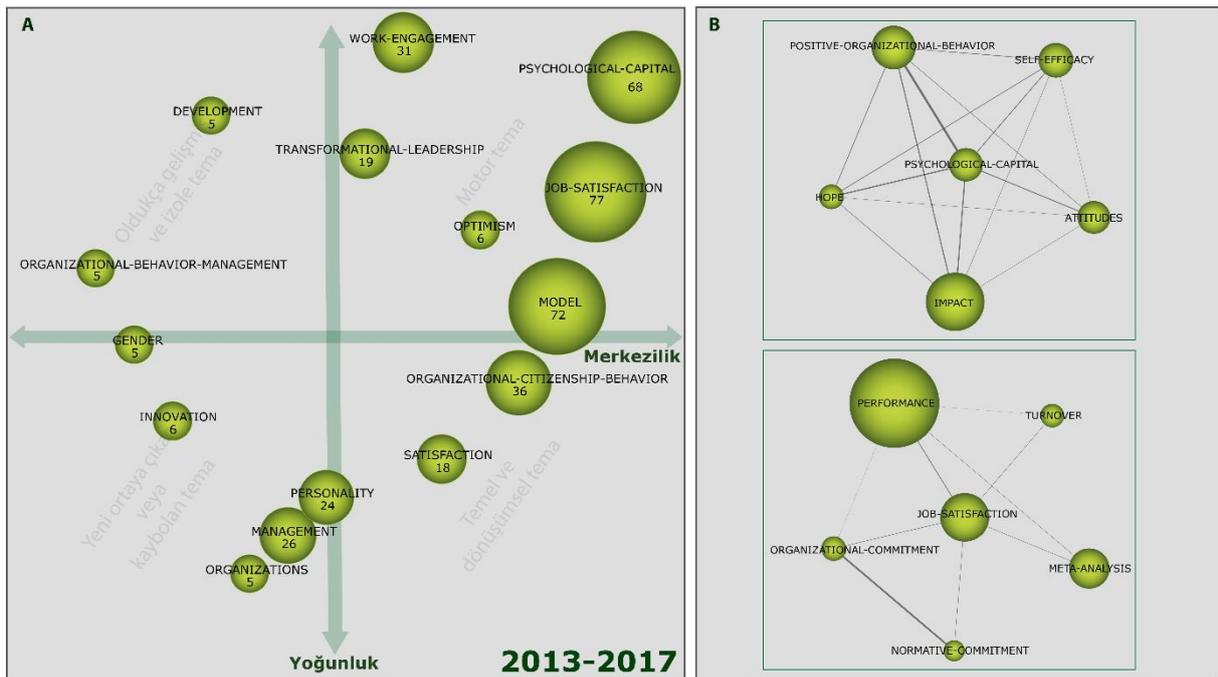


Figure 11: (A) Strategic diagram for the period 2013-2017 (B) Clustering network

The performance analysis findings of the themes in the strategic diagram for the 2013-2017 period are as shown in Table 3. The "Job-Satisfaction" theme, which has the highest number of documents in the diagram (n=77), has an h-index of 30 and a total number of 3489 citations. The "Psychological-cap" theme, which has the strongest internal and external relationships, has a total number of 3743 citations and an h-index of 34.

Table 3: Findings on Themes for the 2013-2017 Period

| Name | No. of documents | h-index | No. of citations | Centrality | Density |
|---|---|---|---|---|---|
| Work-engagement | 31 | 22 | 1480 | 7,81 | 27,41 |
| Psychological-capital | 68 | 34 | 3743 | 32,61 | 23,24 |
| Job-satisfaction | 77 | 30 | 3489 | 27,80 | 9,51 |
| Model | 72 | 29 | 2739 | 23,00 | 7,07 |
| Transformational-leadership | 19 | 16 | 1412 | 7,77 | 11,27 |
| Management | 26 | 14 | 728 | 3,89 | 1,76 |
| Organizational-citizenship-behavior | 36 | 20 | 219 | 10,05 | 4,46 |
| Personality | 24 | 15 | 760 | 7,00 | 1,95 |
| Satisfaction | 18 | 13 | 699 | 8,77 | 2,44 |
| Development | 5 | 5 | 151 | 0,94 | 14,88 |
| Optimism | 6 | 6 | 158 | 9,57 | 8,61 |
| Organizational-behavior-management | 5 | 4 | 39 | 0,00 | 7,72 |
| Gender | 5 | 5 | 63 | 0,00 | 5,79 |
| Innovation | 6 | 6 | 574 | 0,50 | 3,51 |
| Organizations | 5 | 4 | 49 | 2,11 | 1,09 |

The strategic diagram for the last period, 2018-2021, is shown in Figure 12 (A). In the period analysis, Min frequency: 3, Min co-occurrence: 5 were determined. The number of documents was taken as the performance measure of the diagram. Eighteen themes emerged from 4234 keywords in the period. Among these themes, "Unethical-pro-organizational-behavior", "Psychological-capital", "Resources", "Performance", "Transformational-leadership" and "Moral-disengagement" themes are in Motor themes, "Stress", "Work", "Job-performance" and "Perceptions" themes are in Basic and transformational themes, "Self-determination-theory", "Social-exchange" and "Emotions" are highly developed and isolated themes, while "Management", "Business", "Counterproductive-work-behavior" and "Individual-differences" are emerging or disappearing themes. "Unethical-pro-organizational-behavior" has the strongest internal and external relationships among the themes in the diagram. The theme with the highest number of documents is "Performance" (n=124). The clustering network showing the related themes of these two themes is also shown in Figure 11 (B). In the strategic diagram, it is seen that the themes with higher centrality also have a higher number of documents.
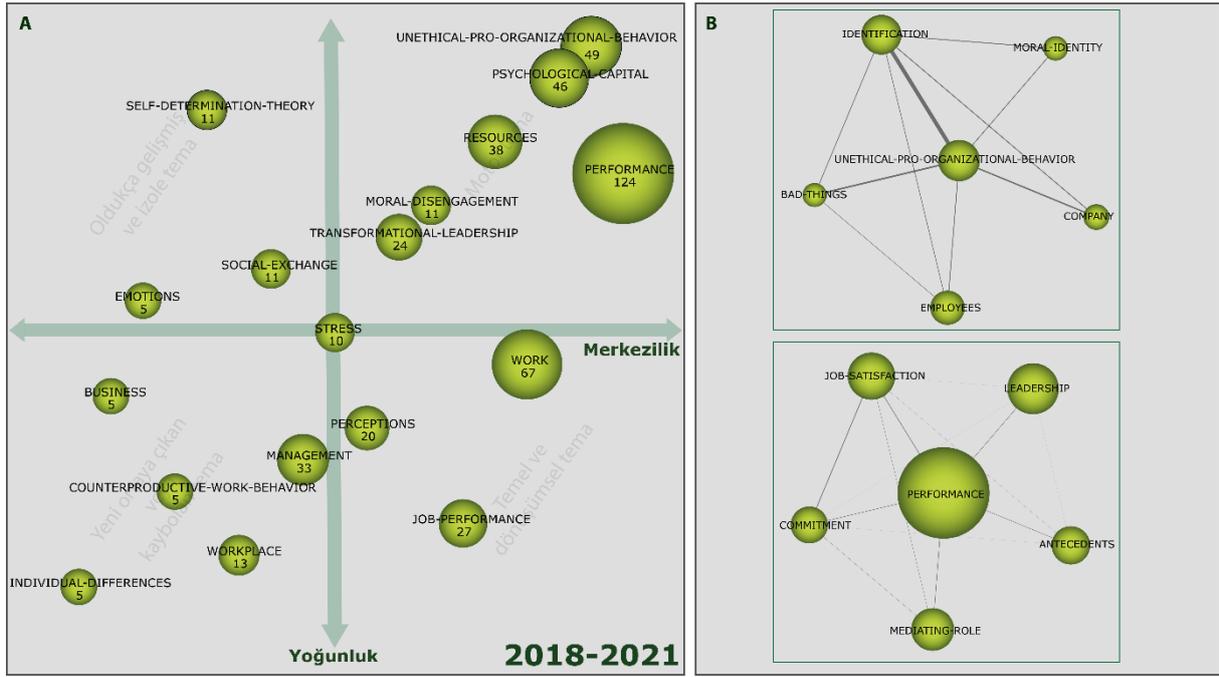
Figure 12: (A) Strategic diagram for 2018-2021  (B) Clustering network

The performance analysis findings of the themes in the 2018-2021 strategic diagram are as shown in Table 4. The "Performance" theme, which has the highest number of documents (n=124) in the diagram, has the highest h-index (18) and the total number of citations is 970. The theme "Unethical-pro-organizational-behavior", which has the strongest internal and external relationships, has a total number of 471 citations and an h-index of 12.

Table 4: Findings on Themes for the 2018-2021 Period

| Name | No. of documents | h-index | No. of citations | Centrality | Density |
|---|---|---|---|---|---|
| Unethical-pro-organizational-behavior | 49 | 12 | 471 | 17,39 | 24,42 |
| Psychological-capital | 46 | 15 | 616 | 16,78 | 15,35 |
| Resources | 38 | 7 | 908 | 12,23 | 9,10 |
| Performance | 124 | 18 | 970 | 39,57 | 7,91 |
| Transformational-leadership | 24 | 10 | 360 | 6,04 | 5,40 |
| Work | 67 | 15 | 563 | 14,81 | 4,07 |
| Management | 33 | 9 | 234 | 4,42 | 2,79 |
| Job-performance | 27 | 8 | 197 | 10,93 | 2,59 |
| Moral-disengagement | 11 | 5 | 126 | 7,46 | 7,19 |
| Workplace | 13 | 5 | 105 | 3,21 | 2,25 |
| Perceptions | 20 | 8 | 200 | 5,46 | 3,01 |

| | | | | | |
|---|---|---|---|---|---|
| Self-determination-theory | 11 | 4 | 65 | 3,08 | 9,29 |
| Stress | 10 | 5 | 791 | 5,28 | 4,26 |
| Social-exchange | 11 | 4 | 109 | 3,35 | 5,27 |
| Emotions | 5 | 3 | 41 | 0,92 | 5,14 |
| Business | 5 | 3 | 56 | 0,20 | 3,85 |
| Counterproductive-work-behavior | 5 | 3 | 36 | 1,33 | 2,79 |
| Individual-differences | 5 | 2 | 29 | 0,12 | 2,10 |

The thematic development map of the research periods is presented in Figure 13. When the number of publications is analyzed, it is seen that the theme of "Performance" in the 1980-2004 period, the themes of "Antecedents" and "Model" in the 2005-2012 period, the themes of "Psychological-capital", "Job-satisfaction" and "Model" in the 2013-2017 period, and the theme of "Performance" in the 2018-2021 period are the themes with the highest number of publications within their periods.

The "Behavior" theme in the 1980-2004 period has a strong relationship with the "Personality" and "Model" themes from the following period. The theme of "Organizational-behavior-management" showed a relationship in the second and third periods and remained under the same name, but was not included in the last period. The theme of "Job-satisfaction" remained under the same name by showing a relationship in the second and third periods, and was replaced by the theme of "Performance" in the last period. The theme of "Performance" in the first and last periods is in a relationship with the theme of "Model" in the second and third periods.

The "Hope" theme in the second period has a strong relationship with the "Optimism" and "Psychological-capital" themes from the next period, and the "Dementia" theme has a strong relationship with the "work-engagement" theme. The "Psychological-capital" theme was also associated with the same name in the last period.

The theme "Organizational-citizenship-behavior", which emerged in the third period, established a very strong relationship with the theme "Counterproductive-work-behavior" in the last period and was replaced by this theme.

The theme of "Workplace" in the last period is in a relationship with the themes of "Innovation" and "Organization" from the previous period. "Moral-Disengagement", "Emotions", "Business" and "Individual-Differences" themes emerged for the first time in the last period.

The themes connected by the dashed line in the figure are themes that are not used together but have a common relationship with other themes.
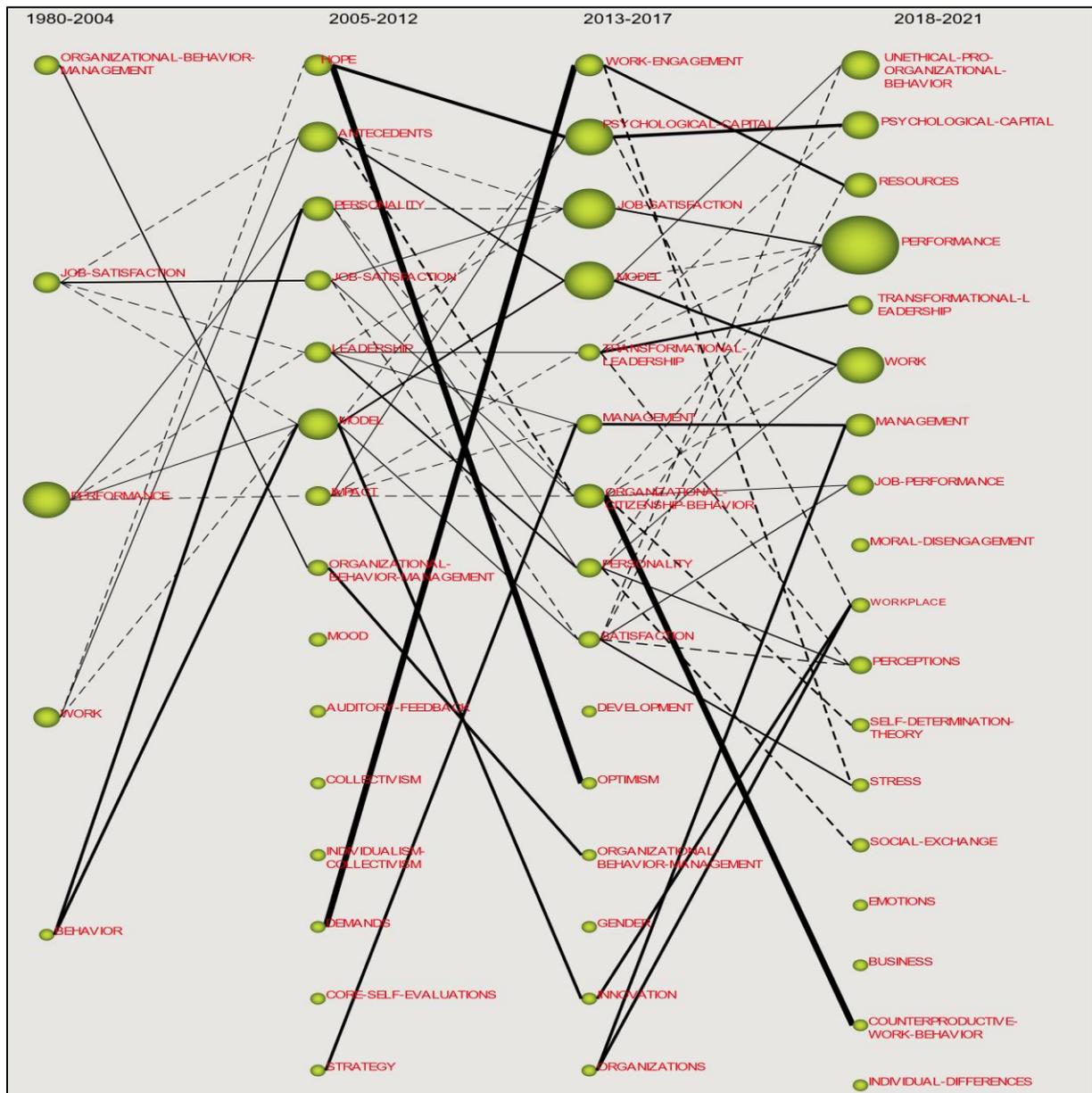
Figure 13: Thematic development map (1980-2021)

## 4.    Conclusion and Recommendations

The results of this study show how bibliometrics methods can be effectively used in the analysis of academic literature. These analyses aimed to assess various characteristics of publications in different academic disciplines, such as authors, topics, citations, institutions and countries. In particular, the bibliometric mapping or scientific mapping method has helped to visualize the structural and dynamic aspects of scientific research and to understand the intrinsic knowledge linkages.

This study was conducted using the Web of Science database, which is considered as a source of abstracts and citations of high quality and influential scientific articles. The research process involved analyzing data from a large collection of articles with SciMAT, a scientific mapping software. SciMAT is an open-source software that is freely available to provide access to the results of this study and to provide guidance to future researchers.

In the analysis phase, terms were grouped based on the keywords used and research periods were identified. These periods were created to observe the development of the literature on organizational behavior, and a total of 3187 articles were examined in this process.

As a result, this study shows how bibliometric methods can be used effectively in academic research. Such analyses can help researchers in different disciplines to better understand the sources and monitor developments in their research fields. Moreover, the open-source nature of the analysis methods and software used during the study is a great contribution to the scientific research community.

Motor themes form an important part of this study, and those with high centrality and intensity are located in the upper right quadrant of the themes. These themes represent topics that are particularly salient and influential in the research field. Emerging or disappearing themes are located in the lower left quadrant and appear to have low centrality and intensity. This reflects changes and developments in the research literature over time. Foundational and transformational themes are located in the lower right quadrant and include themes with high centrality and low intensity. These themes represent the cornerstones of the literature and transforming topics. Highly developed and isolated themes are located in the upper left quadrant and include themes with low centrality and high intensity. These themes often represent isolated topics of a particular sub-topic or field.

When the distribution of the number of publications on organizational behavior by years is examined, it is seen that the first publication in this field was in 1980 and there has been an increase in the number of articles over time. A significant increase is observed especially in 2019 and 2021.

In addition, the top twenty most cited articles by year were analyzed. Among these articles, the total number of citations of the article named "Maslach, 2001" clearly stands out and the annual average number of citations is quite high. "Hevner AR, 2004" ranks second in terms of the number of citations.

Among the authors in the study, prominent ones were also identified. In particular, the author named "Luthans F" stands out as the author who produced the most articles with 39 articles and at the same time contributed to these articles.

Finally, the analysis of the keywords used in the research shows that the term "leadership" is the most used keyword and this term stands out in the research literature. Among these keywords, the term "leadership" was used 102 times and the total number of uses of the top ten keywords was 983. When the keywords of the research field in different periods are examined, it is seen that the number of these words has increased over time and some keywords are used continuously between periods. This is an important finding that shows the development of keywords in the field of organizational behavior.

In conclusion, this study aimed to analyze the academic literature on organizational behavior using bibliometrics methods and identified thematic development and important themes in this field. The results of this study provide access to important information in this field for researchers, educators and decision makers and guide future research.

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### ETİK ve BİLİMSEL İLKELER SORUMLULUK BEYANI

Bu çalışmanın tüm hazırlanma süreçlerinde etik kurallara ve bilimsel atıf gösterme ilkelerine riayet edildiğini yazar(lar) beyan eder. Aksi bir durumun tespiti halinde Toplumsal Politika Dergisi'nin hiçbir sorumluluğu olmayıp, tüm sorumluluk makale yazarlarına aittir.

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