

Trends and Influences in Social Networks and Enterprise Management Research: A Bibliometric Analysis

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Abstract

Social networks have emerged as a critical factor in shaping the landscape of enterprise management, influencing both theoretical development and practical applications. Recognizing their growing importance, this research conducts a bibliometric analysis to map and understand the dynamic trends and influential elements within the intersection of social networks and enterprise management research. The analysis spans a comprehensive period, using data from major academic databases to identify key research themes, prolific authors, and leading organizations contributing to this domain. The study employs the bibliometric approach, incorporating citation analysis, co-authorship networks, and keyword co-occurrence to reveal patterns and relationship within the literature. The results indicate several major trends, including the increasing focus on innovation management and knowledge sharing as critical themes within the enterprise management context. Furthermore, the study identifies a core group of influential authors who have substantially contributed to the foundational theories and methodologies in this field. The findings suggest that research on social networks in enterprise management is rapidly evolving, with emerging areas. The study concludes by proposing further investigation into underexplored areas, such as cross-cultural influences on social networks in different organizational contexts. This analysis enriches the ongoing academic discourse by providing a detailed overview of the current research landscape, offering critical insights for both academic and practitioners, and setting the stage of future inquiries in this vital area of study.

Keywords: Social Networks, Enterprises, Enterprise Management.

Introduction

As networks have evolved from mere personal connections to complex webs encompassing individuals, groups, nations, and organizations (Borgatti & Cross, 2003), the role of social networks in shaping business strategies and operations has become increasingly significant.

The foundational concept of social networks, characterized by relationships and interactions among entities, has expanded from an individual perspective to a holistic view, encompassing a diverse array of connections and structures.

Social networks offer both opportunities and challenges. They enhance communication, collaboration, and resource acquisition, facilitating the identification of business opportunities and the optimization of operations (Davidson, 2010). Entrepreneurs, in particular, benefit from leveraging personal networks to build and grow their businesses. However, the integration of social networks into business practices also poses risks. The potential for information overload, redundancy in acquired resources, and the burden of maintaining extensive networks can hinder organizational performance (Gargiulo & Benassi, 2000).

As global competition intensifies, the ability to harness the dynamic resources offered by social networks becomes increasingly vital. Understanding the multifaceted impact of social networks on enterprise management not only provides theoretical insights but also offers practical guidance for businesses seeking to navigate the complexities of the digital age.

Literature Review

A network is an entire relationship made up of entities and specific connections among things. While a social network is a collection of connections among social actors is called. Any formal or informal social interaction that exists between a group of individuals is referred to as a social network. This includes relationships that are formed directly between individuals as well as indirect links that are formed through shared cultural norms and material environments. This is the most widely accepted definition of social networks is the study of Mitchell (1969) as well.

The concept of social networks can be defined from two different angles: the individual and the overall perspective. The individual perspective served as the primary foundation for the concept early description. Its representative researcher Mitchell (1969), highlights social networks are a unique link between individuals. Simply it serves as an internet of connections linking individuals to others whether indirectly. Ritter and Gemünden (2003), demonstrates that social networks are the individual relationship that is stable and persistent.

Since the research of social networks has advanced, the study subjects have progressively grown from independent individuals to groups, nations, and organizations. Based on this, the concept of social networks has been developed and broadened, and a comprehensive definition of the notion has progressively taken shape. According to Song and Di Benedetto (2007), social networks are the assemblage of network nodes—individuals or organizations—connected by a variety of social ties (e.g., emotional relationships, tool relationships, etc.). Davern (2006), emphasizes both the individual social interactions and the broader network when defining social networks as the specific connection between individuals. Meanwhile, Wellman (2008), supposes the holistic qualities of social connection networks by defining social networks as a relationship model that binds social members together.

Asia is an acquaintance society that values location, karma, blood relationships, and kinship highly. This is reflected in a self-centered society where the distance between oneself and others represents the interpersonal relationship's distance. This phenomenon is called "Egocentric Network". Focused on a single person, an egocentric network is more concerned with the structural features of that personal social network and how those features affect their behavior (Abbasi et al., 2012). To gain an understanding of an individual network, researchers typically pose measuring questions like "How many friends and relatives do you have?" "How many friends have a very different background from yours?" and "How many friends can you trust?". Small scale, straightforward structure, and distinct relationships are features of this kind of network research, precisely because the ego-centric network concentrates on individuals. (Giannella & Fischer, 2016).

An alternative perspective highlights the aggregation of relationship nodes among all members of a network within a social network, referred to as a "Sociocentric Network" (Kilduff & Tsai, 2011). They can be categorized as strong or weak ties based on the volume and quality of their interactions with members of the collective (Granovetter, 1973). The consequences of various kinds of network correlations will vary. The primary purpose of a social core network analysis is to examine the general structural features of a given social network. Put differently, the behavior of people inside a social network can be influenced by the general structural features of the network (Mizruchi & Marquis, 2006). In order to help the firm, find opportunities, acquire resources, and accomplish resource sharing, business collaboration, and mutual benefit, each member can act as the hub of the network and build relationships with other nodes through communication or other ways (Kacanski & Lusher, 2017).

There are three fundamental components of social networks which are network nodes, connections and structures. Network nodes are actors inside the network, might including people, groups, organizations, or even societies and countries (Brass et al., 2004). Connections refer to the relationships between network nodes, and the majority of academics think that networks represent a special kind of organization. Larger networks of social and commercial ties already contain them (Borgatti & Cross, 2003). They might also take the shape of government. Its members collaborate to accomplish shared objectives and are totally dependent on trust, or more officially, agreements (Provan et al., 2007). Structure describes the form of the network, emphasizing the location and distribution of individuals and the whole.

The aim of this study is to analyze social networks and enterprise management research published in China between 2013 and 2023 using bibliometric analysis. In addition, Web of Science provided the majority of the data for this study, which was entirely based online. This study uses the results of earlier studies to present and examine scientific collaborations between social networks and enterprise management contributors. The attention was given to the following set of study questions:

1. What are the research trends in social networks and enterprise management according to the year of publication?

2. Which authors are considered the most important in the field of social networks and enterprise management?
3. How much has been published in social networks and enterprise management area concerning the affiliated organisations?
4. What are the research themes in social networks and enterprise management?

Methodology

Bibliometric analysis is a study technique to evaluate the growth and influence of scientific literature statistically. It entails using statistical analysis to look for patterns, trends, and connections within a certain topic in books, journals, and other publications. Through the analysis of data like author counts, publishing sources, citation counts, and keyword occurrences, bibliometrics can shed light on the significance and range of research endeavors (Faheem et al., 2023). This method aids in the identification of significant authors, noteworthy works, and hot subjects, fostering a more thorough comprehension of the scholarly environment and directing future lines of inquiry.

The steps involved in adopting search terms, screening search results, and refining them are covered in this section. Because high-impact articles have the potential to offer insightful information on the theoretical underpinnings of the field evolution, this study focuses on them (Di Stefano et al., 2010). As a result, the Web of Science and Scopus databases are typically used by the analysis to gather data.

Data Search Strategy

The study utilized a screening process to ascertain the appropriate search phrases to retrieve relevant articles. The study commenced by searching the Web of Science core collection using the search terms “social networks” in the title, abstract, and keywords. The search was then refined by including the terms “entrepreneurs network”, “network” and “enterprises management” Additionally, the search was limited to publications within the subject areas of sociology, management, business, economics or business finance. Furthermore, the search was stressed to articles with open access and publications written in English.

This process resulted in a total of 893 articles being collected. The query string was then modified to give priority to the search terms “social networks”. After further examination, the search terms were refined, resulting in 217 articles. These publications were then used in bibliometric analysis. All articles from the Web of Science core collection on social networks and enterprise management from 2013 to 2023 were included in the study.

Data Analysis

The Web of Science core collection provided the data sets, which contained the year and title of research publication, author name, journal, citation, and keyword. These datasets cover the years 2013 to 2023 and were subsequently analyzed using Bibliometrix software version 4.3.0. It is a package for the R statistical programming language for quantitative scientometric and bibliometric research. Bibliometrix is a library with a large number of efficient statistical algorithms, access to high-quality numerical routines, and integrated data visualization tool (Aria & Cuccurullo, 2017). Bibliometrix performs the entire process, while other software programs usually focus on implementing a specific bibliometric analysis (data download, data

conversion, data preprocessing, analysis, data reduction, networking, normalization, mapping and visualization). Meanwhile, Bibliometrix also has a user-friendly interface (Aria & Cuccurullo, 2017; Derviş, 2020).

Findings

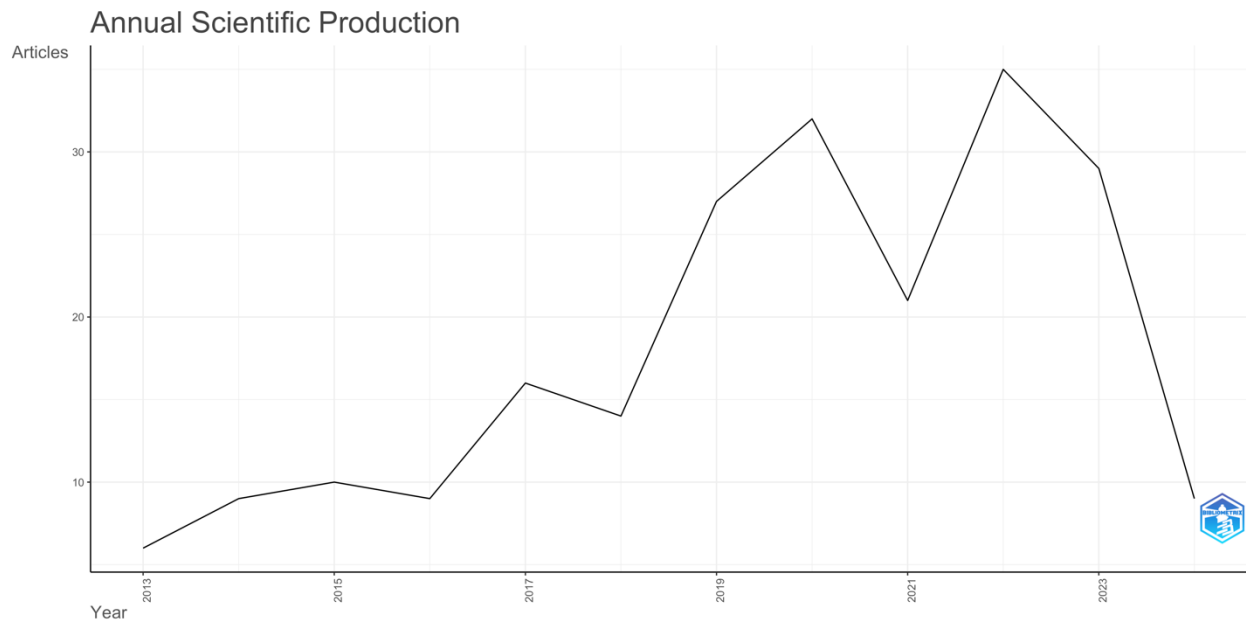


Figure 1. The Annual Scientific Production

Based on the data presented in Figure 1, it can be observed that the phenomena exhibited an increase in annual publications from 2013 to 2015, with the number of publications rising from 6 to 10. However, there was a little decline in 2016, reaching 9 articles. The number of publications increased in 2017, with a total of 16 publications, although a decline was observed with 14 articles in 2018. Despite this, the trend reversed from 2018 to 2020, as the number of publications experienced an upward trajectory, reaching 32. the number of publications decreased to 21 in 2021. There was a rise to 35 articles in 2022, while a drop to 29 articles in 2023.

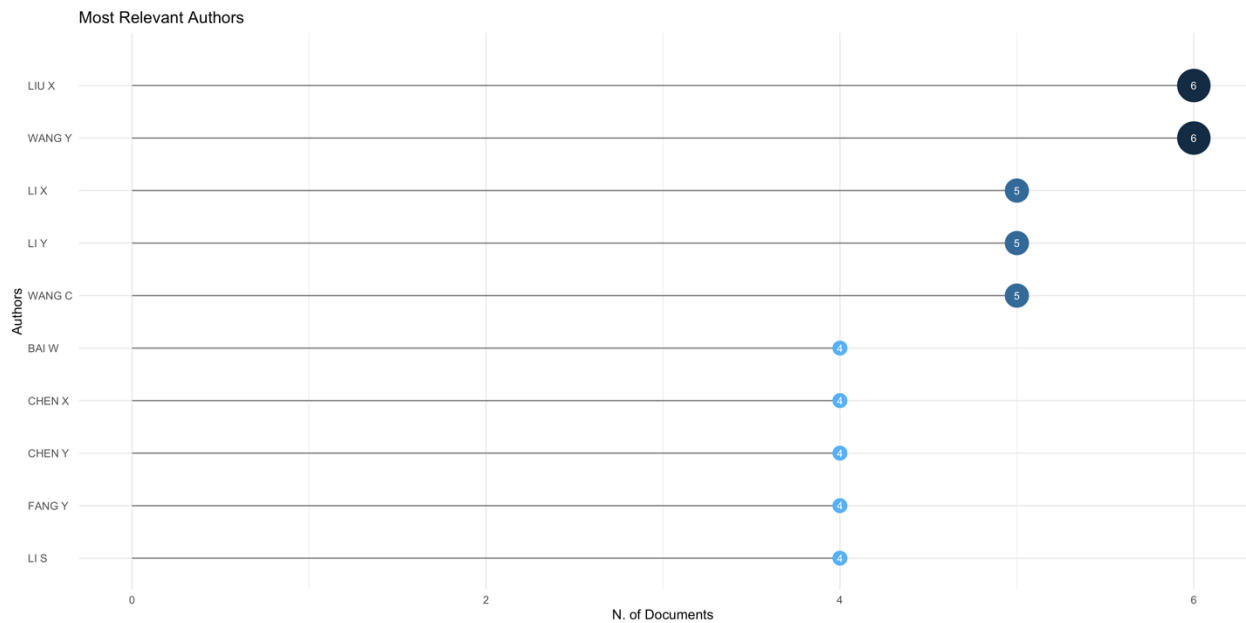


Figure 2 .The Most Relevant Authors

Figure 2 shows the authors who have had a notable impact on social networks and enterprise management, based on the relevance of publications they have had. Liu, X. and Wang, Y. were ranked best among authors with the most relevance, with 6 articles. The subsequent authors on the list include Li, X., Li, Y. and Wang, C., who have made 5 contributions each. Bai, W., Chen, X., Chen, Y., Fang, Y. and Li, S. have produced 4 publications each. These authors have contributed significantly to the scientific community and have probably had a big impact on how social networks and enterprise management is understood and directed.

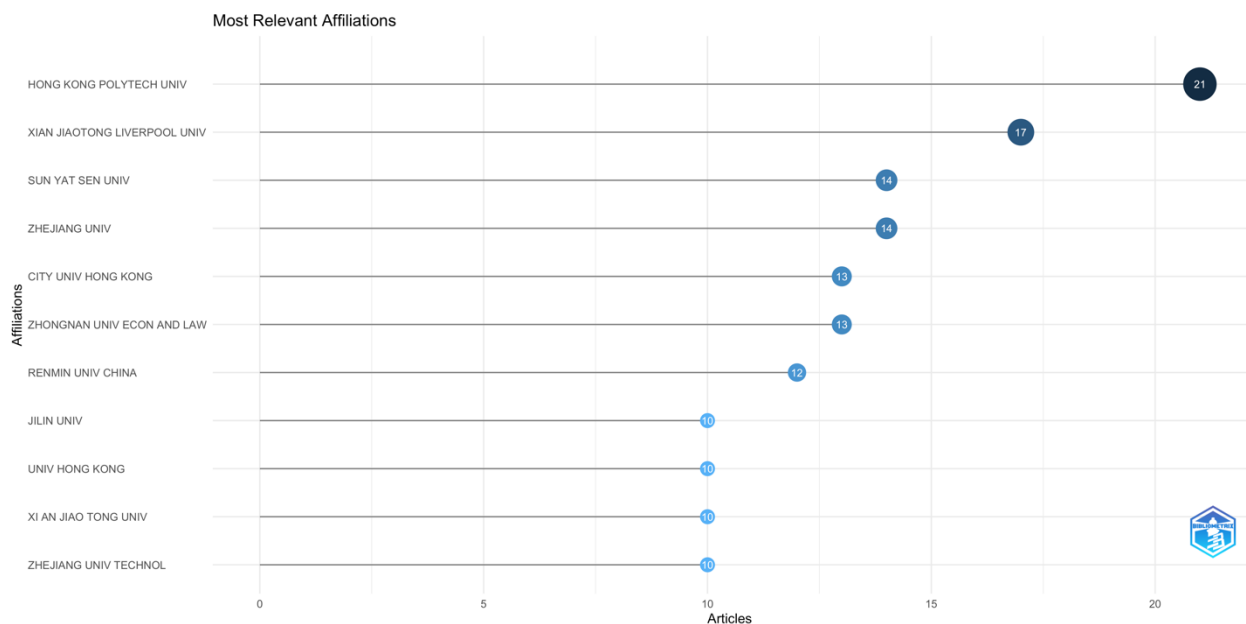


Figure 3. The Most Relevant Affiliations

Figure 3 displays the affiliations that have demonstrated strong stake on social networks and enterprise management. Hong Kong Polytech University has the greatest number of

publications, with 21, followed by Xi’an Jiaotong Liverpool University, with 17 articles. Sun Yat Sen University and Zhejiang University have published 14 articles in this field. City University of Hong Kong and Zhongnan University of Economics and Law have contributed 13 articles each, while Renmin University of China has published 12 papers. Jilin University, The University of Hong Kong, Xi’an Jiaotong University and Zhejiang University of Technology have produced 10 publications each.



Figure 4. Word Cloud

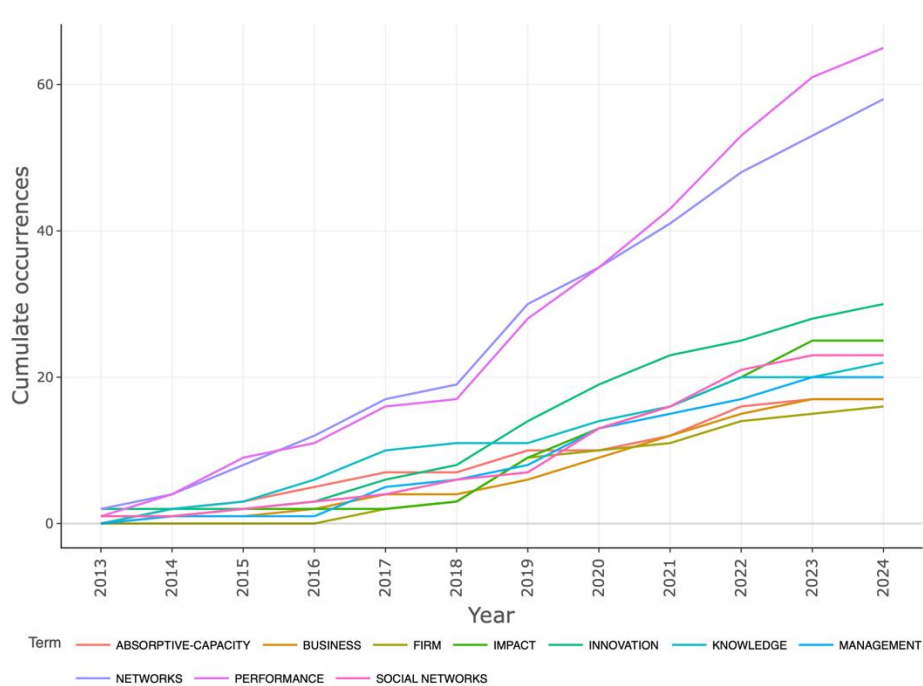


Figure 5. Words' Frequency Over Time

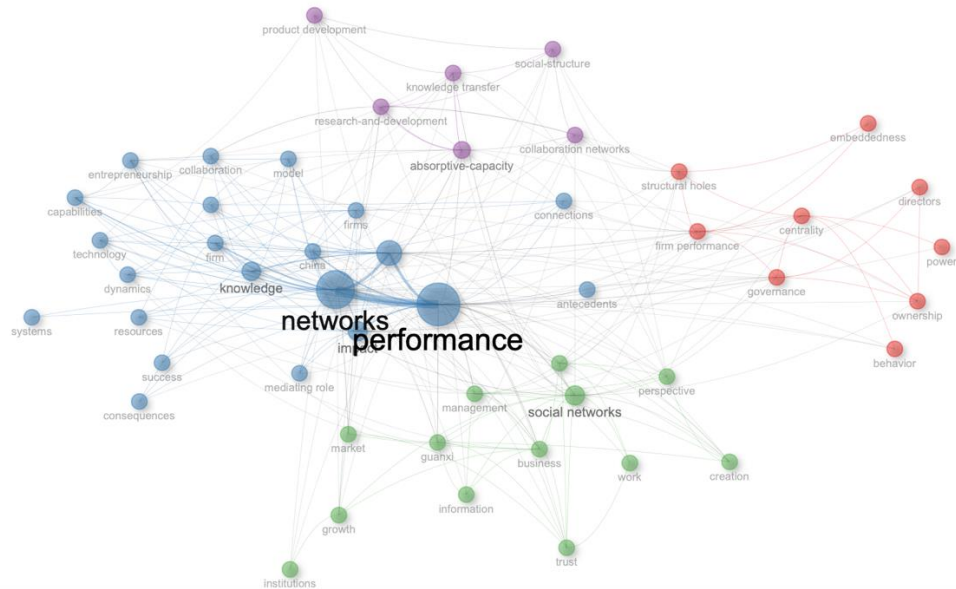


Figure 6. Co- occurrence Network

The word cloud diagram in Figure 4 shows the keywords frequently used in the social networks and enterprise management topic. Specifically, Figure 5 is a visualization of the word dynamics of commonly used keywords. Most of these keywords began to grow around 2016, among which “performance”, “networks” and “innovation” grew rapidly after 2018. While the co-occurrence frequency of keywords such as “knowledge”, “influence”, and “absorptive capacity” is relatively average.

There is a great deal of variation in the keywords associated with research on social networks and enterprise management. The numerous connected subjects that are extensively researched in the field of social networks and enterprise management in China are depicted in Figure 6. It is evident from looking at Figure 6 that a wide range of topics are being investigated. There are 4 clusters altogether, each gathering 50 objects.

- Cluster 1. Orange color consists of 9 items, including firm performance, centrality, governance, structural holes, behavior, ownership, directors, power and embeddedness.
- Cluster 2. Blue color consists of 22 items, including performance, networks, innovation, impact, knowledge, firm, firms, model, China, dynamics, capabilities, strategy, connections, entrepreneurship, collaboration, mediating role, resources, success, technology, antecedents, consequences and systems.
- Cluster 3. Green color consists of 13 items, including social networks, management, business, information, guanxi, market, ties, trust, creation, perspective, work, growth and institutions.
- Cluster 4. Purple color consists of 6 items, including absorptive-capacity, research-and-development, knowledge transfer, collaboration networks, social-structure and product development.

Conclusion

A bibliometric analysis was conducted on the topic of social networks and enterprise management. The investigation involved a methodical search for pertinent scholarly papers using keywords in the Web of Science core collection. A total of 217 research publications were reviewed. The results of the study showed that there were 657 authors, including single authors and co-authors. The data in Figure 1 showed that the average number of research papers in the field of social networks and enterprise management has generally shown a significant upward trend between 2013 and 2023, although there are some fluctuations in 2016, 2018, 2021 and 2023. The works of Liu, X., Wang, Y, Li, X., Li, Y. and Wang, C have had a great impact on the field of social networks and enterprise management in China. These authors have made significant contributions to related research and development. In terms of institutional affiliation, Hong Kong Polytech University, Xi'an Jiaotong Liverpool University, Sun Yat Sen University and Zhejiang University displayed strong interest in conducting social networks and enterprise management research. The results revealed the emergence of thematic patterns, which led to the identification of 4 distinct clusters, including a total of 50 projects. (As Figure 6 described).

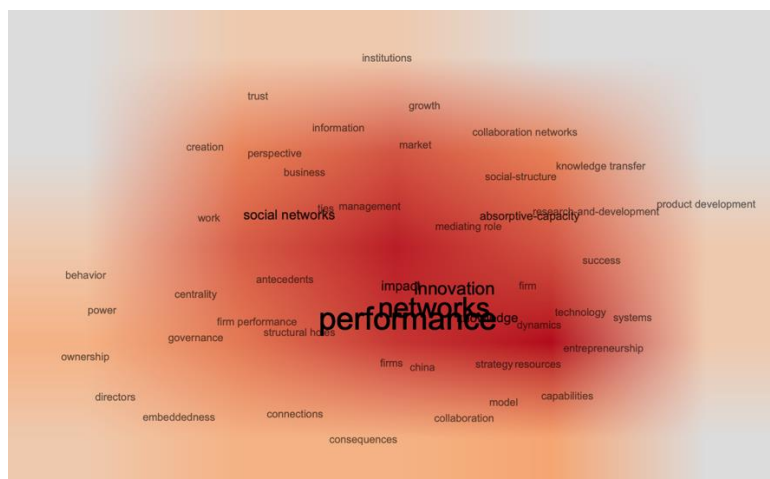


Figure 7. Co- occurrence Density

In addition, this analysis offers a concise synopsis of the most popular subjects pertaining to social networks and enterprise management. These subjects cover performance, innovation, networks, and impact. The density visualization in Figure 7 illustrates a pattern that darkens gradually, signifying the prevalence and domination of the keywords/topics being addressed in several nations worldwide. As with earlier bibliometric surveys, this study offers information about the state of social networks and enterprise management at the moment, forecasts future paths for relevant research, and points up possible areas for cooperation.

An examination of social networks and enterprise management research trends, relevant authors, institutional affiliations, and keyword usage offers crucial insights into the past, present, and future of this field. Trends analysis shows how the field study is still developing, with new paradigms and themes that represent how social networks are still being adapted for use in enterprise management. This development demonstrates the field flexibility and response to the evolving demands of entrepreneurs.

Seminal works and influential authors who have had a long-lasting impact on social networks and enterprise management study were found by looking for pertinent publications. These contributions demonstrate the cumulative nature of knowledge development in the field by acting as building blocks for further research. The author network analysis highlights how collaborative the field research is. In order to develop multidisciplinary viewpoints and a lively and active academic community, collaboration is crucial. By highlighting prominent themes and developing areas of interest, the examination of keyword usage offers insightful information about the lexicon of the field study.

This analysis provides a compass for scholars, entrepreneurs, and policymakers to navigate the diverse research in this field. This study emphasizes the vital function social networks play in enterprise management and the attitude of cooperation that propels advancement in the industry. Future research will be informed by the insights gathered from this analysis as organizations expand, which will ultimately assist to give entrepreneurs across a range of industries more successful management experiences.

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