

Brand Management: Theme Evolution, Review of Hot Spots and Future Prospects

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Abstract

In the era of digital economy, brand management is facing innovative changes. To systematically outline the progress and trend of brand management research, depending on gathering and screening the 3056 literature published in WOS from 1970 to 2020, a series of relevant studies are performed as follows : 1) the knowledge map of cooperation among countries, institutions and authors, 2) the peculiarities of the different development stage of research, 3) research hotspots in the past decade, 4) the research frontier of brand management. The research conclusions are as follows : 1) Many core authors, research institutions and important articles have emerged in the field of brand management research. 2) The research on brand management can be divided into four stages: the budding period, the incubation period, the development period, and the continuous growth period. 3) The research hotspots in the past ten years are brand equity, social media, corporate brand, brand image, brand personality, marketing management. 4) The frontiers of research evolve towards consumer participation, innovation, value co-creation, and brand communities. 5) Big data, artificial intelligence, machine learning, deep learning and other related technologies bring new opportunities for brand management.

Keywords

Brand Management; Research Hot Spots; Theme Changes; Knowledge Map.

1. Introduction

The Internet, artificial intelligence, and big data-related technologies digitize consumer behavior, accelerating the ecological and innovative transformation of brand management. Brands play an important commercial value as the added value of enterprises and products and how to do a good job in brand management is an important strategy for enterprise development and competition. So it is important to clarify the hot content and cutting-edge theoretical basis of brand management research in academic circles, and apply it to brand management practice. Most scholars believe that the concept of brand was proposed by Ogilvy in 1950, and the earliest scientific literature on brand research was "The Product and the Brand" published by Gardner et al in 1955 [1]. Subsequently, Park proposed the concept of brand image management in 1983 and defined it as the process of planning, implementing and controlling brand images throughout the life cycle[2]. Until the 1980s, brand management theory began to mature gradually. In "Managing Brand Equity", Aaker proposed two brand asset management methods: brand expansion strategy and brand rejuvenation strategy [3]. Kapferer J proposed the concept of strategic brand management in 1997 to provide a systematic theoretical knowledge framework system for brand management [4].

Brand management, as a branch of brand research, has become an important topic in marketing science. In recent decades, the related literature has produced many new themes and new methods. Isabelle and others use historical analysis method to analyze the brand management

system in the past century to explore the reasons why brand management system has become the dominant marketing organization model in western countries and related industries. Golob et al analyzed the literature collected in the Journal of brand management in 2015-2019 to determine the content and theme trend being studied in the field of brand management. Thanks to the progress of society, the innovation of research theories and the changes of research method paradigm, this field is attracting the attention of many scholars.

Through literature search, it is found that there are a lot of research results on brand management and the total amount is still on the rise. These documents record the outline of knowledge development in this field in the form of knowledge units or knowledge groups, but the limited literature records cannot reflect the various aspects of brand management research. The complex relational network of knowledge groups and the evolution of differences between knowledge meta-topics pose challenges for researchers in this field. Existing studies mostly use the literature review method to review the overview of a certain field, but this method is affected by the obscure information in the literature and it is difficult to fully grasp the structure and clues of the knowledge development in the field. The bibliometric method is an important knowledge meta-analysis and longitudinal research, which can help scholars understand the birth, origin and development of the discipline [7] to supplement and expand the results obtained by using traditional literature review [8]. Bibliometric analysis can sort out the knowledge base and theme evolution of a certain research field through systematic screening of research literature and scientific measurement, so it is favored by many researchers. In view of this, this paper draws on the knowledge map of brand management research literature in recent decades with the help of bibliometric tools, aiming to clarify the knowledge base, theme evolution and hot frontier of brand management research.

This paper is structured as follows: In the next part (Section 2), the research methods and data collection are introduced. In Section 3, a map of cooperation between countries, institutions, and authors is introduced. In Section 4, the research hotspots of brand management are analyzed. In Section 5, the research hotspots of brand management are introduced. The research outlook is carried out in Section 6. Part 7 concludes the research.

2. Methodology

2.1. Research Methods

The scientific literature that can be successfully published in a certain field is reviewed by experts in the field and strictly reviewed by publications, and can represent the knowledge base of the field. With the increasing growth of scientific literature, some bibliometric analysis tools have emerged, which can dig out hidden information in large-scale literature through information visualization, thereby identifying changes and trends in knowledge development in a certain field, such as VOS viewer, SAIT, CiteSpace, etc. This article uses VOS viewer and CiteSpace tools to visualize the knowledge graph analysis of brand management research literature. VOS viewer is a widely used bibliometric analysis software that can visually analyze authors, countries, journals, and literature [9]. CiteSpace is a bibliometric visualization software based on Java language developed by Professor Chen C M of Drexel University in the United States [10].

2.2. Data Collection and Description

The data collection process is as follows: Firstly, Considering that bibliometrics needs to be supported by a comprehensive, multi-disciplinary database, this article uses the Web of Science core library as the document data source. Secondly, searching the database for articles with the subject "Brand Management", while restricting the subject to "Business", "Management" and

"Economics", the document type to "Article" and the time interval to 1970–2020. Finally, a total of 3,056 articles are obtained.

After obtaining the data, this article first conducts a disciplinary correlation analysis, which is the connection established between the citing document and the discipline of the cited document. Citations form the frontier of research in a certain field, and cited documents form the knowledge base of a certain field [11]. Fig.1 shows the Dual-map about the obtained articles. The left part of the map is the discipline distribution of the citing literature, which can be considered as the discipline distribution of the current status of brand management research. From the map, it can be seen that the citing document mainly concentrates on the disciplines of Psychology, Education, Health, Economics, Economics, and Politics. In the right half of the map are the disciplines of the cited literature, which are mainly distributed in the disciplines of Psychology, Education, Sociology, Economics, Politics, Systematics, and Computer science, which can be regarded as the distribution of basic disciplines of brand management research. From the whole map we found the relationship between the research status and basic research disciplines is connected by a wave curve, and the quantity of papers issued by each discipline is measured by the size of the oval.

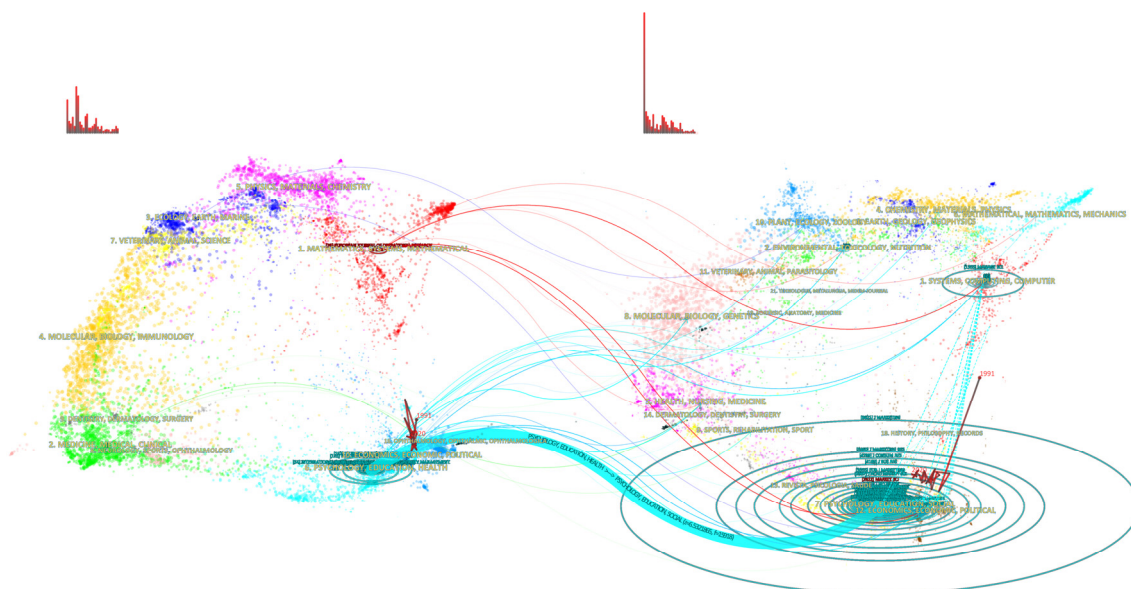


Figure 1. Disciplinary Relevance Map

2.3. Research Process

The research steps to provide results related to the research questions are as follows. First, the cooperation of the literature in the field of brand management mainly uses VOS viewer for analyzing the countries, authors, and institutions of citing documents. Further, the evolution of hot topics in brand management research in the past decade be identified through the theme evolution map and the impact flow map. The theme evolution map is drawn by clustering analysis of document co-citations through CiteSpace, and the creation of the impact flow map comes from the analysis of the logo literature. Finally, the hot and cutting-edge exploration of brand management research is mainly through the clustering and emergence analysis of keywords.

3. The Status of Cooperation

Analyzing the cooperative knowledge graph of research countries, institutions, and authors can not only sort out the contributors to the brand management research field, but also highlight whether there is close cooperation between national institutions and authors, which can be

achieved through the total link strength between nodes (TLS) to measure the strength of cooperation. Among them, the network of cooperation between countries can be regarded as the macro level, the network of cooperation between institutions can be regarded as the meso level, and the network of mutual cooperation between authors can be regarded as the micro level of the research literature. The cooperation between countries, institutions, and authors analyzed by using VOS viewer software is as follows.

From the country map of the article, we can know the countries that are interested in brand management research. The knowledge map of cooperation between countries is shown in Fig.2. In this study, the minimum threshold was set to be 4, a total of 100 countries and 64 countries appeared in the map, and 7 color clusters were generated. The cluster color blocks were clustered by the cooperation network of the homes of each country. As a result, it can be seen from the national knowledge map that the United States has the most extensive research on brand management, with 921 articles published. The United States (TLS=498), the United Kingdom (TLS=322), Australia (TLS=174) and other countries have close cooperation in the field of brand management research.

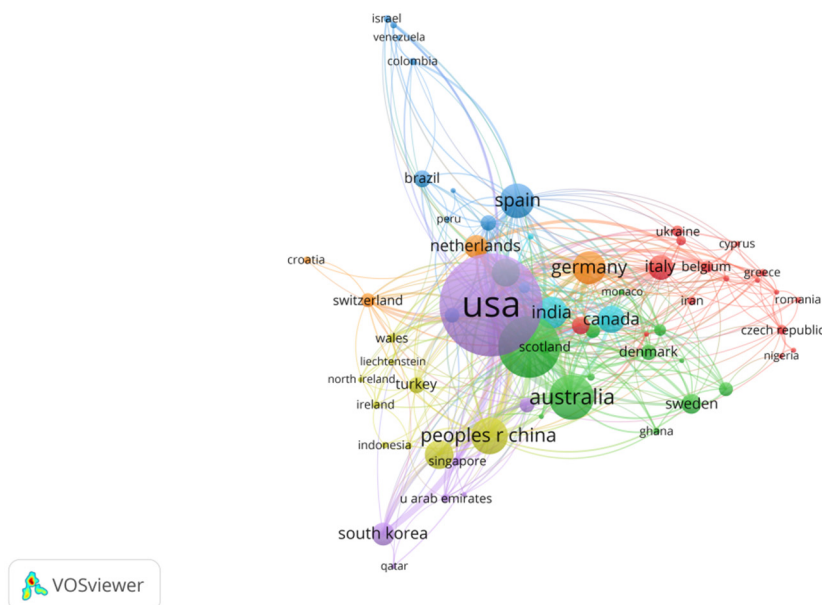


Figure 2. Knowledge map of cooperation between countries

The map of publishing institutions shows the institutions that have made outstanding contributions to brand management research, and the knowledge map of cooperation between institutions is shown in Figure 3. In this study, the minimum threshold for cooperation between institutions was set to 5. A total of 2402 institutions and 315 institutions appeared in the map, resulting in 20 clustering blocks, of which Griffith University contributed the most, with 38 articles. Erasmus University (TLS=33), Cornell University (TLS =31), Temple University (TLS=29) and other institutions have close cooperation in brand management research.

The author's collaborative knowledge map can identify the influential authors in the field and the cooperative relationship between the authors. The knowledge map of cooperation between authors is shown in Figure 3. In this study, the minimum threshold for cooperation between authors was set to 2, and a total of 6479 authors, 880 authors appeared in the map, a total of 16 clustering blocks were generated, and the author with the most articles was Balmer John M with 17 articles. Authors such as Gupta Suraksha (TLS=26), Melewar T C (TLS =24), Foroudi Pantea (TLS=21) and other authors have close cooperation in the field of brand management research.

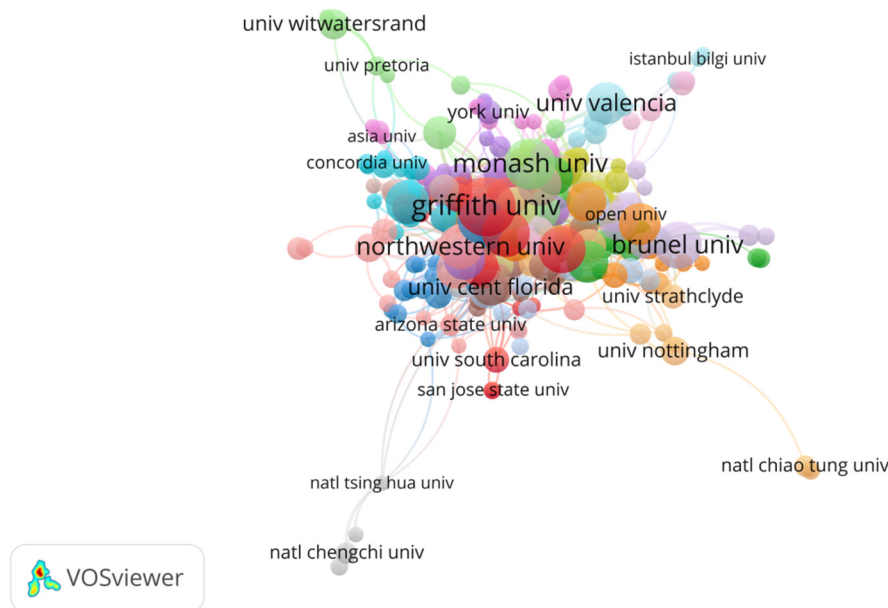


Figure 3. Knowledge map of cooperation between institutions

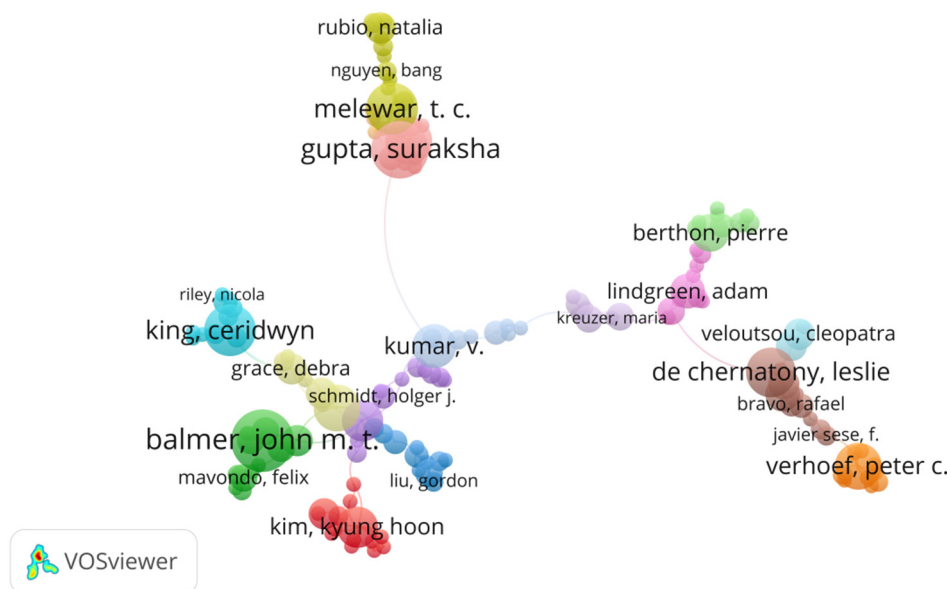


Figure 4. Knowledge map of cooperation between authors

4. The Theme Evolution Analysis

Analyzing the dynamic evolution of brand management topics can clarify the structural context of the research in this field. This article uses CiteSpace for document co-citation clustering analysis. Document co-citation clustering can use related algorithms to cluster many documents with a certain knowledge connection and transform them into a number of different research topics. These research topics can represent the field of attention of scholars and the distribution of each topic at different stages can represent the topic’s evolution.

In this study, the time span is set to 1973-2020, the time slice is 1, Node Types="Reference", and the network is cut to "Pathfinder" & "Pruning sliced networks" & "Pruning merged network", Top N is 30 and the clustering algorithm selects LLR. The results show that the

number of nodes obtained is 627, the connecting lines are 1048 and a total of 20 clusters are obtained. In addition, the Modularity Q value is used to measure the clarity of the cluster boundary, and the Mean Silhouette value is used to measure the cluster size. In this study, $Q=0.8912$, which can indicate that the boundaries between brand management research topics are clear and the domain differentiation is more significant. While the $S=0.3167$, this is because the content and paradigm of brand management research are different, which results in many small clusters. Considering the Timeline view reflects the historical span of the topic and the association relationship of each cluster member from the perspective of time series, and can visually represent the knowledge evolution, this paper drew a timeline map of the clustering results. The Timeline view is shown in Figure 5 below.

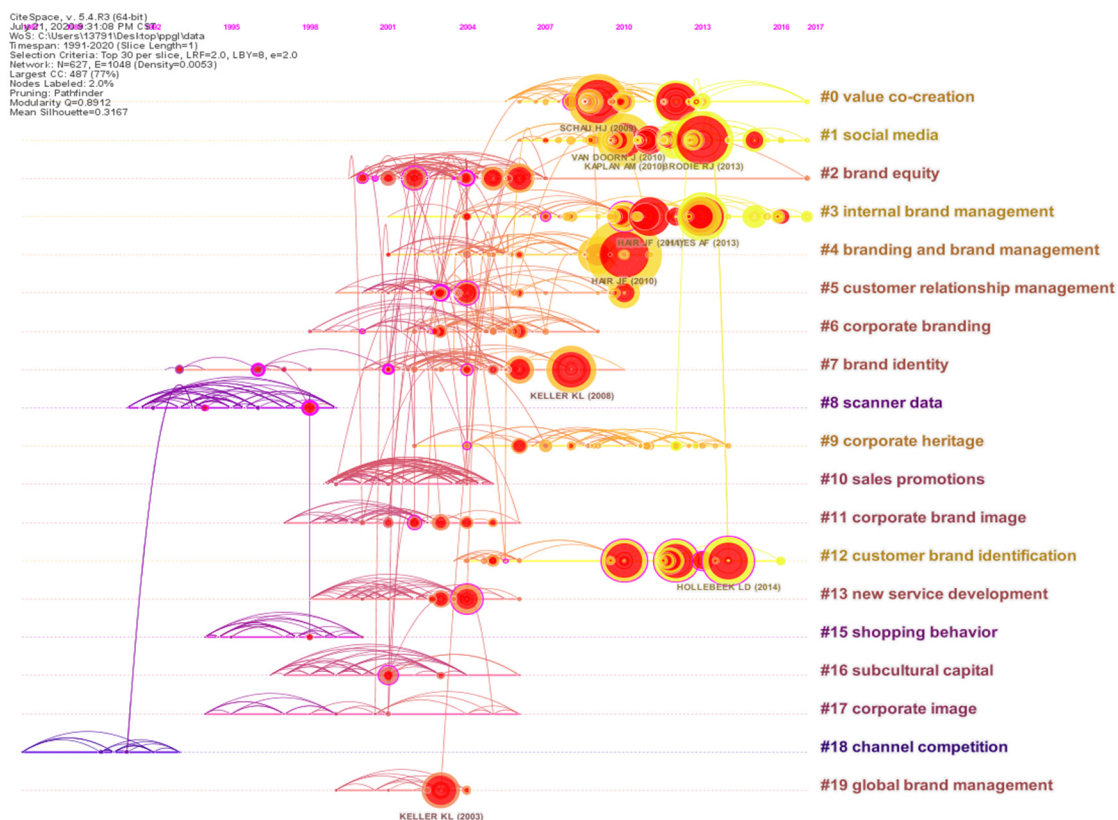


Figure 5. Timeline view of the clustering results

It can be seen from Figure.5 that the themes of brand management research are different in each period. For example, the largest #2 brand equity cluster lasts for up to 30 years, and some clusters appear in the map for a short duration. It may be that with the advancement of technology and changes in knowledge, scholars have unearthed topics that are more worthy of research, and then turned to the corresponding topics for research. According to the span of the timeline map, brand management can be divided into four stages: the budding period, the incubation period, the development period, and the continuous growth period. The theme evolution of each period is as follows:

(1)The budding period (before 1993). This stage is the early stage of brand management research. At this stage, only a cluster called channel competition appeared and there are few clustering documents and no high-prominence documents, but it has a laying effect on subsequent knowledge research. The most frequently cited documents in the clustering include Aaker's "Consumer Evaluations of Brand Extensions" published in 1990, which studies how consumers form attitudes toward brand extensions [13]. And Aaker is equivalent to the "Managing Brand Equity" published in 1991, which first studied brand equity, summarized

brand equity into five basic assets, and clarified the contribution value of brand equity for managers [3].

(2) The gestation period (1994-2000). With the overflow of knowledge in the budding period, brand management research has entered the second stage. The clusters in this stage include scanner data and shopping behavior. The most cited literature under the cluster named scanner data is "Strategic Brand Management: Building, Measuring, and Managing Brand Equity" published by Keller in 1998, which systematically elaborates the establishment, measurement and management of brand equity [14]. And Shocker et al published "Challenges and Opportunities Facing Brand Management: An Introduction to the Special Issue" in 1994, which focuses on the status of brand management in the 1990s, as well as the challenges and opportunities faced by brand managers, and pointed out that senior executives are faced with crisis challenges caused by customers and competitive market activities, and they need to consider the function of brand management from a strategic perspective[15]. The most cited literature under the cluster named shopping behavior is "Consumers and Their Brands: Developing Relationship Theory in Consumer Research" published by Susan in 1998, which is the first empirical study of the metaphorical relationship between consumers and brands and advocates relationship marketing. Moreover, he advocated the effectiveness of relationship marketing in the context of consumer brands, and introduced consumer brand relationship marketing into the research field of brand loyalty and brand personality[16].

(3) Development period (2001-2010). With the deepening of the research topics and fields of the previous stage, the research results of this stage have exploded with a large number of nodes, and many scholars and high-impact documents have emerged. The clusters in the development period includes branding and brand management, customer relationship management, corporate branding, brand identity, sales promotions, corporate brand image, new service development, subcultural capital, corporate image, global brand management. Figure 4 shows that the homogeneity of the clusters in this period is relatively high, the lines between the clusters are abundant, and the cluster theme is clear, indicating that the research cohesion of this period is strong, and the period is orange in the map. The literature with a higher frequency of citation and emergence during this period is the "Multivariate Data Analysis: A Global Perspective" published by Hair Equivalent in 2010, which simplified a large number of statistical research into basic concepts, and explored how to understand and use specific statistical techniques to achieve multivariate data analysis. From the standpoint of emergence, it is the most influential document in this period and represents the transformation of research methods to achieve technological paradigm[17]. The most central node in this period is the "Brand Experience: What Is It? How Is It Measured? Does It Affect Loyalty?" published by Rust in 2010, which defined brand experience as the feeling caused by brand-related stimuli, and constructed a brand experience scale from senses, emotions, intelligence and behavior, confirming that brand experience directly or indirectly affects consumer satisfaction and loyalty through brand personality [18].

(4) Continuous growth period (2011-present). During this period, due to the accumulation of a large amount of research knowledge in the previous period, the topic of brand management research in the past ten years has tended to stabilize fields, such as the cluster named value co-creation, social media, brand equity, internal brand management, customer brand identification. It can be seen from Figure4 that the co-cited documents did not appear after 2018. This is because the co-cited documents are related to the year of publication under the default threshold. This does not mean that there is no strong influence in this field after 2018. However, it takes time to examine and identify. The high emergence literature of this period is Hollebeek's first empirical research on consumer brand participation. This research has designed and verified a brand scale for consumer participation in a specific social media environment and the results shows that consumers' "self-brand connection" and "brand use

intention” represent the key elements of consumer brand participation[19]. The most central document is the first definition of customer participation behavior by Van et al., which defined customer participation behavior as the behavioral performance of customers toward the brand or company (except purchase) driven by motivation, and conducted research on conceptual models related to the causes and consequences of customer participation [20].

5. Research Hotspot in Recent Decade

5.1. Research Hotspot Knowledge Group

Taking into account the topical activity of the cited literature and the timeliness of the research, this paper uses the keyword clustering method to sort out the research hotspots in the past ten years. Keywords are a high-level generalization of research topics, and keyword clustering is helpful for mining and recognizing the hotspots of field research. When performing literature keyword cluster analysis, the time span is set to 2010-2020, the time slice is 1, node types="Reference", and the network is cut to "Pathfinder"&"Pruning sliced networks"&"Pruning merged network", top N=50. The results show that a total of 13 clustering blocks are obtained and the closer the clustering block is, the more documents are covered. In addition, $Q= 0.7748$ and $S=0.9215$ which means the clustering effect is good. The clustering result is shown in Figure 6.

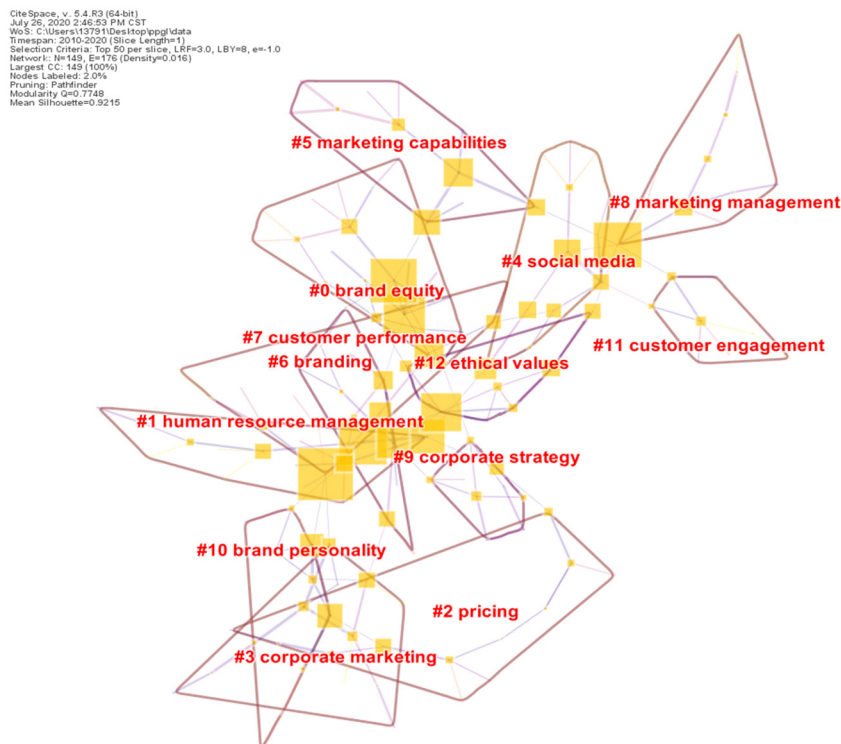


Figure 6. Keyword clustering view

Through keyword clustering analysis, this article summarizes the hotspot knowledge group framework of brand management as shown in Figure 7. First, as an open community, social media influences consumers' attitudes towards brands and purchase intentions in the form of "opinion leaders" of customers. Social media enables consumers and companies to generate social network relationships to form virtual brand communities. This network strengthens consumer participation and forms user-produced content and these content will form corporate reputation in online communities, which makes the brand more exposed and company performance more better. Therefore, social media has become a research hotspot in

brand management. Secondly, the luxury management, consumer loyalty, brand recognition, brand crisis and positioning under the theme of brand equity constitute the research hotspots related to brand equity and brand management. Third, in corporate branding, employer branding and corporate social responsibility have attracted the attention of many scholars. Key words such as brand alliance, corporate strategy, and country of origin constitute the research hotspots in corporate branding and brand management. Since then, in the digital age, brand strategy, brand experience, sensory marketing, and brand collaboration have constituted the research hotspots of brand imagination and brand management. Finally, brand remodeling, sustainable supply chain, brand extension constitute the research hotspots of brand personality and brand management. The research results are mainly used in various fields of enterprise and commodity marketing management.

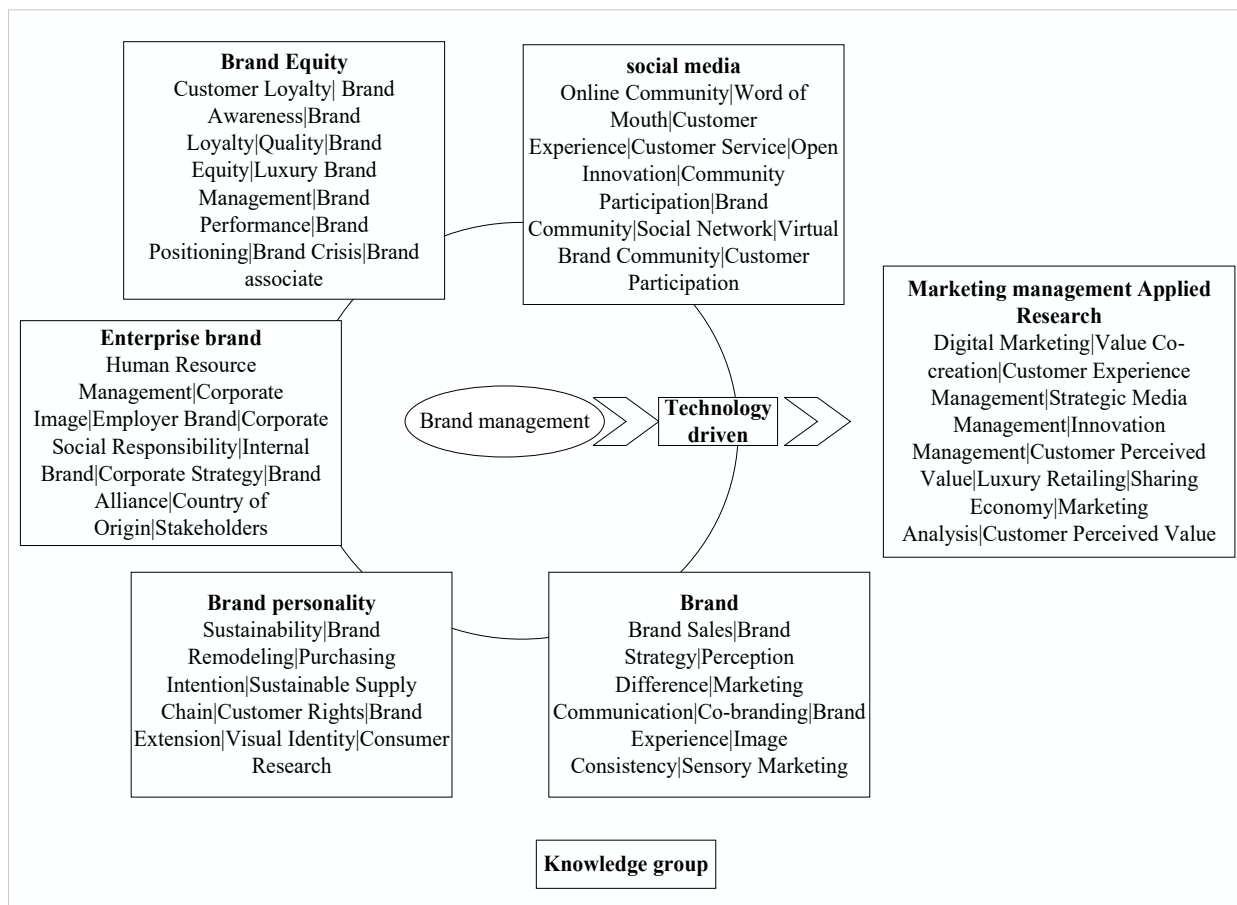


Figure 7. The knowledge group of the hot topics of brand management research

5.2. Suddenly Cited Documents

The dynamic characteristics of a topic can be detected by the suddenness of the cited documents under the topic. Sudden documents are a symbol of highly active field topics, used to explore emerging trends and hotspots, and provide "beginning" and "end". The cycle time to reflect the attention of hot literature [12]. This article uses iconic literature to further explore the development of the topical context of hot literature in the past decade. The alluvial flow of the iconic document generated by the alluvial graph generator is shown in Figure 8.

A total of 4 citation streams of iconic documents have been generated, which represent the hot research content of the development of the theme of the period. Among them, Godey et al's "Brand and country-of-origin effect on consumers' decision to purchase luxury products" alluvial outflow is now a landmark for 8 years from 2012 to 2019. The research aims to

incorporate the association between the brand and the country of origin into the factors that influence consumers to purchase luxury goods[28].

Cornelissen’s "Corporate communication: A guide to theory and practice" has an alluvial flow for 3 years. The study emphasized the importance of corporate communication in brand management [29]. Spielmann’s "Is it all or nothing? Testing schema congruity and typicality for products with country origin" has an alluvial flow of 3 years. The study found that products of origin should use clues consistent with the origin for brand promotion [30]. "The levers of engagement: an exploration of governance in an online brand community" by Cooper et al. studied the management mechanism of online brand communities[31].

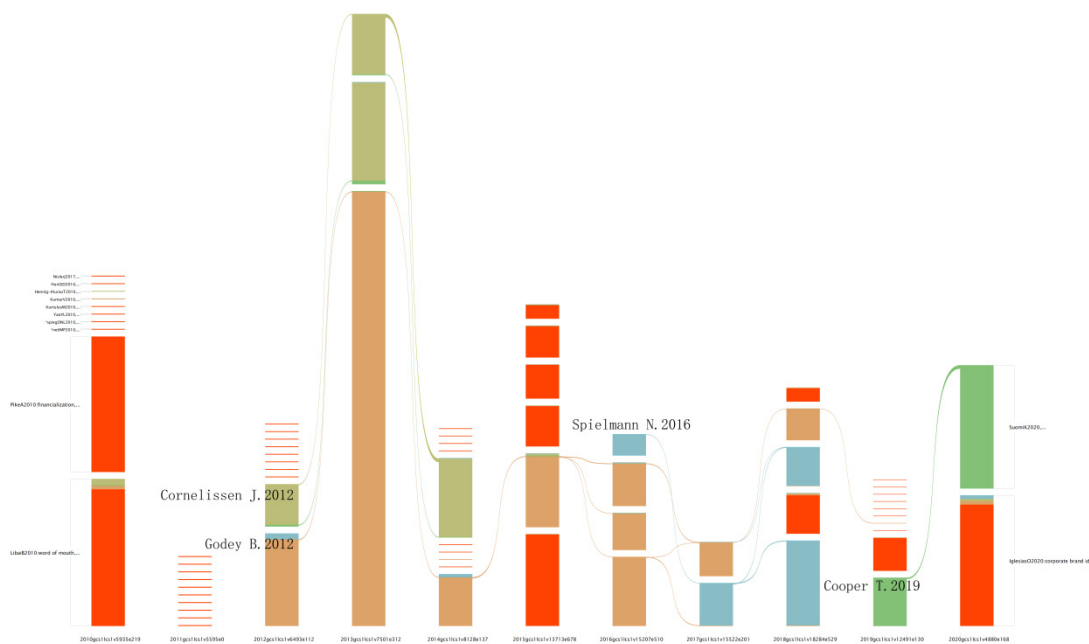


Figure 8. Alluvial flow of landmark literature in the past 10 years

6. Research Outlook

Based on the knowledge base and research hotspots of brand management, this paper further prospects the theoretical basis, technical paradigm and possible research directions of innovation output of brand management in the future. The framework is shown in Figure 9:

(1) Digital empowerment and brand management. In the context of the digital age and the globalization of brand management, brand management research is facing new opportunities. Digital-related technologies are driving product innovation and business model innovation. Digital-related technologies have narrowed the gap in space and changed the way companies brand management[32]. The realization of a digital strategy by an enterprise can promote user assets and brand assets to form the company's digital assets, and empower the corporate brand global ecosystem[33]. In user asset management, the value chain of an enterprise can be restructured by users, differentiated management through user portraits, make full use of word-of-mouth data in enterprise brand asset management, and solve the trust crisis with the help of block chain technology to achieve corporate reputation management Communicate with the brand[34], realize the globalization strategy of the corporate brand, and create more corporate social value.

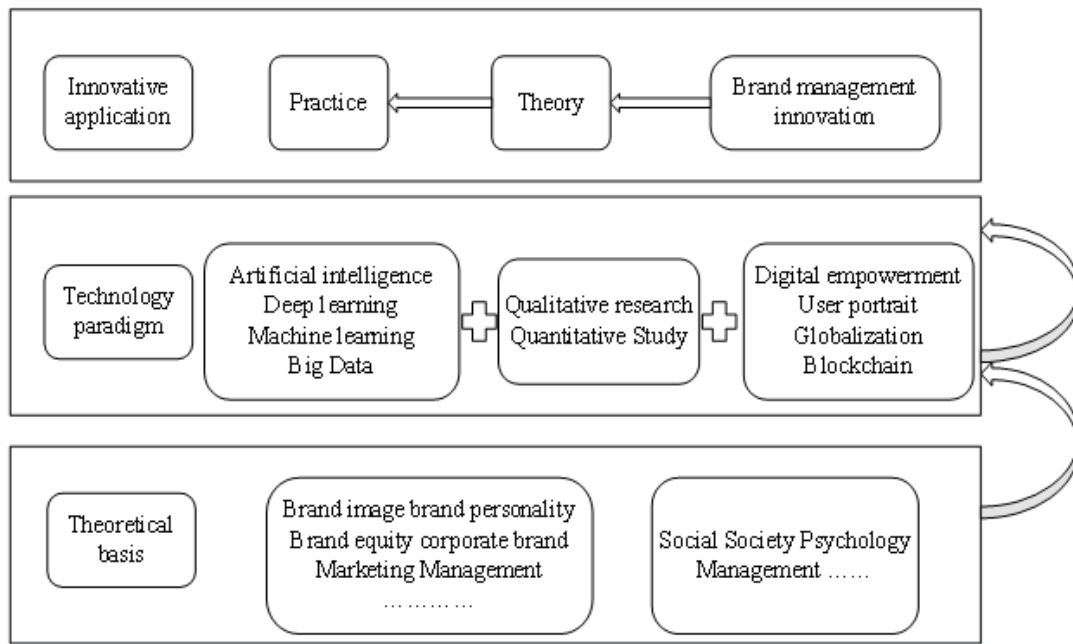


Figure 9. Outlook research framework

(2) With the development of artificial intelligence, big data and other related technologies, brand management research methods have brought new possibilities. Data mining algorithms related to machine learning and deep learning can process user multi-modal data and understand consumption from multiple perspectives [35-36]. To achieve the formulation of brand management strategies. Artificial intelligence-related technologies provide a basis for the analysis of multi-dimensional heterogeneous data generated by social media, and can form mixed research with questionnaires, empirical research and other methods, and provide support for the technological paradigm innovation of brand management research methods [37].

(3) Mixed disciplines and brand management. The integration of psychology, sociology, geography and other multi-disciplinary knowledge to form users' multi-label data combined with real-world related issues for research, making important innovations for multi-disciplinary research on brand management[38].

7. Conclusion

This paper collects the scientific literature on brand management included in the core database of Web of science, and uses quantitative analysis and qualitative review to systematically review the literature on brand management, which is helpful to the development trend. The main conclusions are:

(1) Based on the analysis of the cooperative knowledge graph, the country with the most extensive research on brand management is the United States, followed by the United Kingdom, Australia and other countries. Griffith University has the most publications, followed by Cornell University, Temple University and other institutions. The authors with the most published literature are Balmer John M T, Gupta Suraksha, Melewar T C and other scholars.

(2) Based on the co-cited timeline knowledge map of literature, it can be seen that brand management research has experienced the budding period (before 1993), the incubation period (1994-2000), the development period (2001-2010), and the continuous growth period (2011- To date), numerous high-influential logo documents have emerged in various periods and have played an important role in promoting the development of brand management

research. The research themes of each stage are different, and brand management research theories are developing in stages. Among them, the research themes in the development period are the most abundant. The relevant theoretical knowledge of brand management research lays the foundation.

(3) Based on the analysis of the keyword knowledge graph, it can be seen that the hot topics in brand management research in the past ten years are brand equity, social media, corporate brand, brand image, brand personality, etc., each topic hotspot has formed a certain knowledge element, which together constitute a brand Knowledge group for management research. The frontiers of research evolve towards consumer participation, innovation, value co-creation, and brand communities. Based on the alluvial flow map of the literature, it is found that four iconic documents have played an important role in promoting the hot topics of brand management research in the past ten years. Two of the iconic documents are related to the country of origin and brand research, which shows that the issues related to the country of origin are much Scholars are concerned.

(4) Big data, artificial intelligence, machine learning, deep learning and other related technologies will further empower brand management. Brand management research faces new opportunities, and research method paradigms and research data sources will show a diversified trend.

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