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BIBLIOMETRIC ANALYSIS OF BRAND EQUITY RESEARCH IN FAST FOOD BUSINESSES (2013 – 2023)

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Abstract
Purpose: This study performs a systematic review of the scientific literature regarding brand equity in fast food businesses. Bibliometric analysis fucuses on the publication growth, subject area, geographic distribution of publications, productive journals and authors, keywords, and citations. *Method:* Relevant articles were identified using search engines in the Scopus and Web of Science databases. The PRISMA methodology was applied, and 82 relevant articles were found to be suitable for analysis. All identified articles were further analysed to determine the complete picture of the field of knowledge. *Findings:* The research reveals influential articles, authors, journals, and institutions within the field of brand equity and fast-food businesses. It has been found that no study related to the topic was conducted in Africa. All the studies reviewed were done in USA, China, Europe, and the Middle East. Popular keywords in the study area have also been reported. The research contributes to the better understanding of the field of brand equity and helps scholars and researchers to identify quality literature, research areas as well as appropriate journals for publishing their own findings. *Contributions/implications:* The study reveals research trends as well as areas that have received limited attention. The identification of such research trends or gaps guides future research efforts and help scholars and researchers to focus on underexplored aspects of brand equity in the fast-food industry. Considering the study findings and the identified highly cited articles, further qualitative analysis can be provided to determine the most prolific research trends.

Keywords: *Bibliometric analysis, Brand equity, Fast food, PRISMA, Scopus database, Web of Science database.*

JEL codes: *D80, D41, D22, D12, M21, M30.*

Introduction

This study aims to perform a bibliometric analysis of brand equity in fast-food businesses. Brand equity is a fundamental concept in business and marketing today. Its significance is nowhere more apparent than in the fast-food business (Oyewole, 1999) due to competition, ever-changing consumer preferences, and abundant choices. As such, marketers are preoccupied with finding strategies to sustain or potentially boost their market share. Suhartanto et al., (2019) and (Oyewole, 1999) believe that the key to surviving and thriving in this competitive environment lies in cultivating a base of loyal clients, a crucial aspect of brand equity. In order to achieve this aim, the study used PRISMA approach with search phrases such 'brand equity' and 'food' to download articles in the past decade from both web of science and scopus databases. Some articles that were not closely linked to the topic at hand were excluded from the bibliometric analysis. VOSviewer was used to analyse all bibliometric indicators such as citation analysis or co-authorship analysis.

It must be noted that fast food brands have emerged as iconic symbols of not only convenience but also distinctiveness and trust among world economies (Farzin et al., 2023). Before further exploring this study, it is imperative to elucidate the essential terminologies of 'brand' and 'brand equity' to provide a lucid understanding of the subject matter under consideration.

The concept of branding has existed for several centuries (Aaker, 1999; L. K. Keller & Swaminathan, 2020). However, much of it gained prominence in the twentieth century (Aaker, 1999). A brand can be defined as a characteristic, a logo, trademark, or package design designed to identify the products or services of an individual seller or a group of sellers. Its primary function is to differentiate these products or services from competitors (Aaker, 1999). A brand serves as a signal to the consumer, indicating the product's origin while protecting both the customer and the manufacturer from competitors who might try to offer products that seem indistinguishable (Aaker, 1999; Farzin et al., 2023). Moreover, branded products and services are reported to have advantages over unbranded ones (Watanuki & Akama, 2022). In a competitive market where products or services lack significant differentiation among firms, consumers may perceive brands as essentially identical (Y.-C. Lin & Huang, 2012).

Like the concept of 'brand,' brand equity has also gained prominence and is defined in various aspects according to the context under discussion (Aaker, 1999; Woods, 2000). Watanuki & Akama, (2022) emphasize that the main differences between branded and unbranded products are attributed to "brand equity". Aaker, (1999) defines it as a set of brand assets and liabilities linked to a brand, its name, and its symbol that add to or subtract from the value provided by a product or service to a firm and to its customers and can be categorized in terms of brand loyalty, name awareness, perceived quality brand association, and relationships. (K. L. Keller, 1993; L. K. Keller & Swaminathan, 2020) focus on 'customer-based brand equity' and the assets that the strength of a brand is rooted in the emotions, perceptions, and knowledge that customers have gained from their previous interactions and encounters. Therefore, brands characterized by solid brand equity possess competitive power over their competitors and reach an advantageous market position (Watanuki & Akama, 2022).

Hanaysha, (2022) indicates that marketing studies in the context of fast-food business need more attention. However, due to changes in consumer tastes, the fast-food restaurant industry worldwide is experiencing strong growth (Farzin et al., 2023) due to an increasing desire for fast food consumption (Ghoochani et al., 2018). In an era of globalization of consumer culture, fast food brands face an emerging need to establish and maintain solid consumer-brand relationships (Kashif et al., 2015). Food-related research has also attracted scholars' attention in many disciplines (Okumus et al., 2018). The significant growth of them all is research on restaurants, which has shown many exciting food-related topics (Chuah et al., 2022; Rajput & Gahfoor, 2020) together with the hospitality and tourism research disciplines (DiPietro, 2017; Okumus et al., 2018; Rodríguez-López et al., 2020). Previous studies have also indicated that restaurant sales experience growth when operating under a well-established brand (Boo & Mattila, 2002). As in the competitive food service industry, consumers can make various choices among alternatives (Sapic et al., 2019), so brand equity becomes crucially important. According to (Krishna et al., 2023), the fast-food industry has witnessed a boom due to increased bandwidth and network capabilities. Thus, there is a need for the industry to incorporate sustainability in online food. (Ghoochani et al., 2018) view that these trends are expected to drive ongoing expansion in the fast-food sector (Ghoochani *et al*., 2018) further argue that to stay competitive, fast food restaurants are focusing on tailored solutions to build brand loyalty and deter customers from choosing rival eateries. Success hinges on offering superior value to retain and satisfy customers, ensuring ongoing interest and patronage. Moreover, attracting new customers is challenging, and retaining existing ones can be equally tricky (Reich et al., 2005).

The paramount importance of maintaining and nurturing ongoing relationships with current customers must be considered. This prioritization arises from the understanding that loyal, established patrons play a substantial role in a brand's financial stability and possess the potential to serve as brand advocates, thereby enhancing the brand's reputation and influence in the market. In the complex world of competitive fast-food establishments, maintaining existing customers is a crucial factor that significantly impacts long-term sustainability and the success of a brand (Daradkeh et al., 2023; Mohammad Haghighi, 2012). This study answers the following research questions:

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1. What is the current research on brand equity in fast food businesses?
2. What are the most frequently cited studies on brand equity in fast food businesses?
3. How has research on brand equity in fast food businesses evolved?

However, despite notable previous research in brand equity and fast-food businesses, there still needs to be a gap in understanding the extent and dynamics of brand equity. This study aims to bridge this research gap by conducting a bibliometric analysis of brand equity in fast-food businesses. By systematically reviewing and analyzing the relevant literature, this research will shed light on key themes, research trends, and intellectual contributions within brand equity and fast-food businesses. The findings will enhance the understanding of the current research landscape and guide future research efforts in this area. The practical implications of this study include among others enhanced research collaboration in that it facilitates networking opportunities for academics and fast food practitioners in promoting the development of new research projects and initiatives. The study also gives future research directions such as conducting of comparative studies to examine similarities or differences in brand equity research between fast food businesses and other industries. The findings also inform policy decisions related to fast food industry such that the policies are aligned with industry needs and trends. Lastly, fast food practitioners will be able to use this evidence-based research in decision making regarding brand strategies.

Research method

To comprehensively cover the data, we gathered raw data from the Scopus and WoS databases. The Thomson Reuters Web of Science database was the only one that allowed bibliometric studies for more than 40 years; however, in 2004, the company Elsevier Science introduced Scopus, enabling researchers to conduct specific analyses by area and period in both databases (Sánchez et al., 2017). Based on the recommendation of (Alsharif et al., 2023), the article has followed the instructions of the preferred reporting items for systematic reviews and meta-analyses (PRISMA) protocol. The search strings used in the two databases were captured to fit the study field and the topic, 'brand equity' AND 'fast food businesses' and 'brand equity' AND 'food.' The time frame spanned from 2013 to 2023, of which we target a recent decade. In bibliometric analyses, it is expected to set a substantial period of five years (Alsharif et al., 2023), a decade, or even several decades (Dong et al., 2023). The year 2023 was included, despite not yet ending, to capture the few publications completed at the time of the search, September 2023. This was so because we had prior information on fewer studies conducted in fast food companies. Henceforth, we captured all those for 2023 from January to August 2023. The search yielded 368 results (159 from Scopus and 209 from WoS) (see Figure 1). The number of results, as expected, was not as high because there are few brand equity studies conducted in fast food businesses. The screening of the documents was done in such a way that all abstracts were read and adopted from the ideal documents. Figure 1 vividly shows that 68 documents were duplicates and thus excluded from the database. A total of 185 documents were further excluded from the list of 300 documents due to being irrelevant as they did not relate to the core topic at hand. Lastly, 82 full articles were downloaded and used for bibliometric analysis.

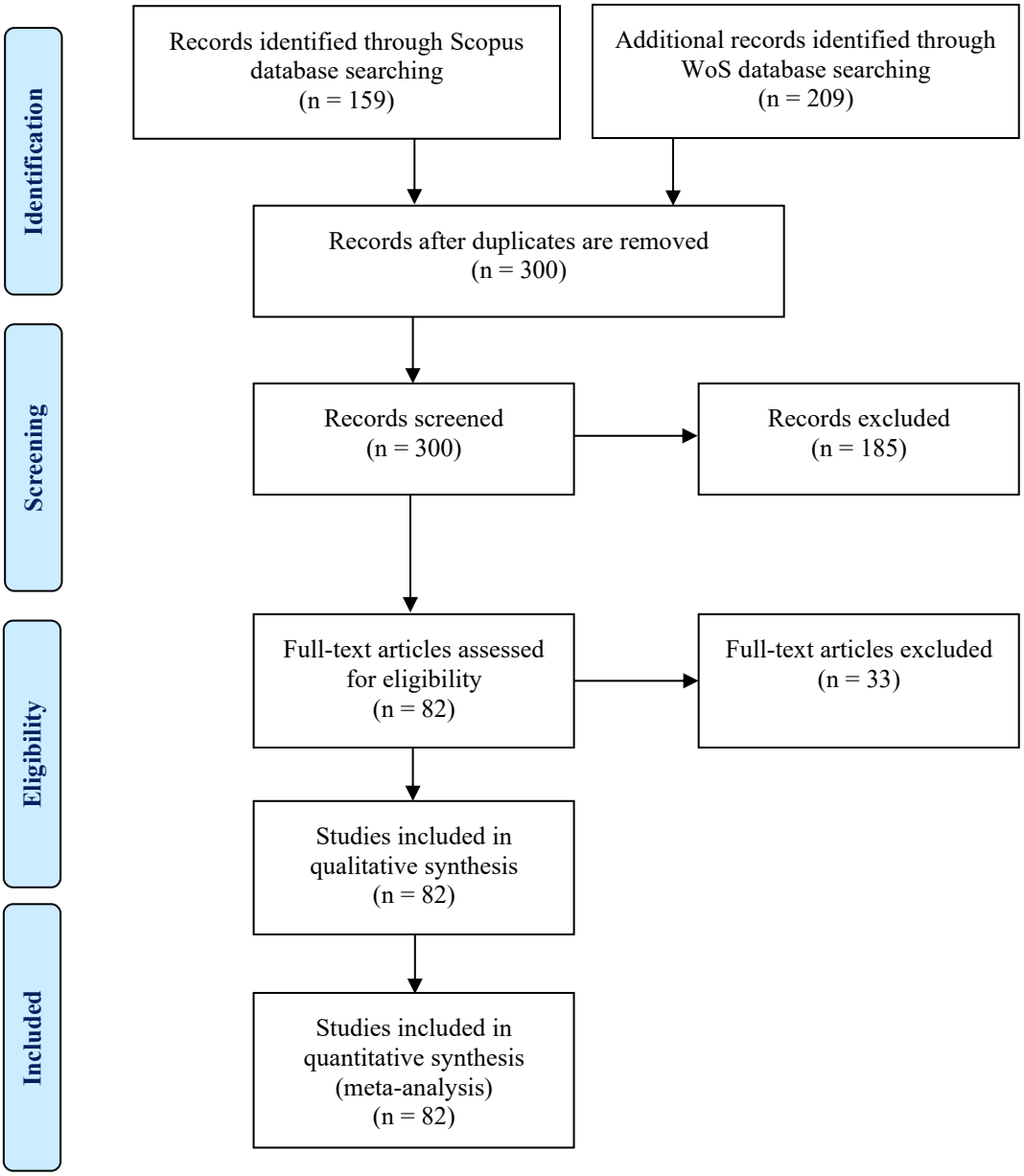

Figure 1. PRISMA Flow Diagram

**Source: Moher D, Liberati A, Tetzlaff J, Altman DG, The PRISMA Group (2009)*

Results

Document and Source Types

The review of the documents in Scopus and WoS revealed that only 19 articles published in the Scopus database were eligible for bibliometric analysis. Sixty-three eligible articles from the WoS database were also included for bibliometric analysis. In this regard, a total of 82 articles were bibliometrically analyzed. Eighty-two articles were the only types of documents reviewed.

Year of Publications/Evolution of Published Studies

The evolution of the articles published annually is captured in Table 1 below. The table clearly shows an increase in publications from 2013 to 2023. From this trajectory, the publications are expected to continue to increase even in the following years. This indicates that brand equity and food topics are very significant, and researchers will continue to research such topics.

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It is also evident from the table that 2023 had the highest number of publications despite being a partial year. It is worth noting from the table that 2021 had the most significant increase in the number of publications, with a percentage increase of 16% (from 6 to 15 publications, all from the WoS). Table 1 further shows that in 2013, 2018, and 2021, there were no publications in the Scopus database. All publications were made in the WoS with 3, 8, and 24 percentages in 2013, 2018, and 2021, respectively. As per the observed pattern, the research of interest has been skewed towards the WoS from 2013 to 2023.

Table 1. Year of Publications

Year	Total Publications (Scopus)	Percentage (%)	Total Publications (WoS)	Percentage (%)	Total Publications (Scopus + WoS)
2013	0	0	2	3	2
2014	4	21	1	2	5
2015	1	5	3	5	4
2016	1	5	4	6	5
2017	2	11	2	3	4
2018	0	0	5	8	5
2019	2	11	3	5	5
2020	1	5	5	8	6
2021	0	0	15	24	15
2022	3	16	11	17	14
2023	5	26	12	19	17
Total	**19**	**100.00**	**63**	**100.00**	**82**

Graphically, it clearly shows a haphazard trend in the publication of both WoS and Scopus (see Figure 2). Scopus publications recorded a sharp increase from 2013 to 2014 before the decline in 2015. There was a low change in the number of Scopus publications afterward until they increased from 0 in 2018 to 2 in 2019 when another decline was observed until 2021. From the year 2021, Scopus publications have exhibited an upward trend until the year 2023. It should be noted that the period 2021 to 2023 recorded the highest increase in the number of Scopus publications. This trend indicates that publications on brand equity within the field of food will continue to rise because the food industry has become a dominant global industry.

Unlike Scopus, the publications for WoS slightly decreased in 2013 before steadily increasing between 2014 and 2016. After that, a zigzag downward and upward trend became prominent between 2016 and 2020. The number of publications between 2020 and 2021 recorded the highest increase before a sharp decline in 2022. The year 2023, even though it is incomplete, shows that there will be an upward trend in the number of WoS publications.

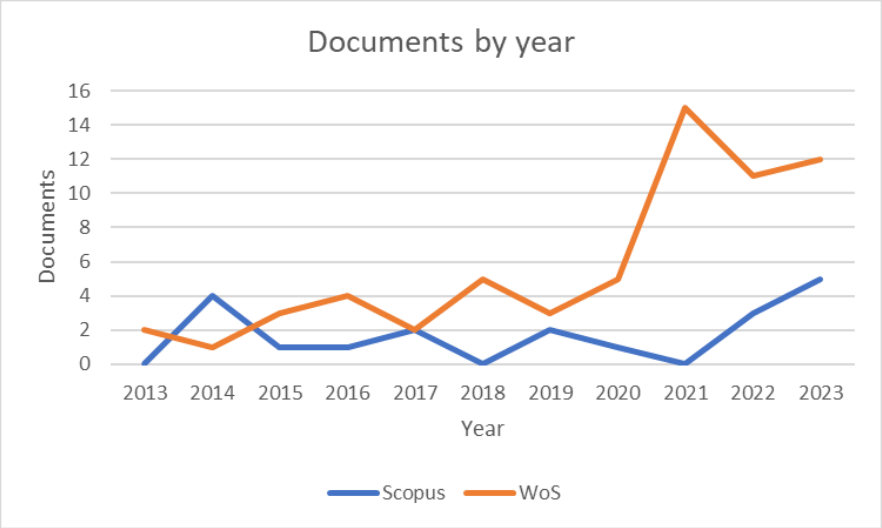

Figure 2. Document by Year

Subject Area

Table 2 shows the subject area of the topic at hand. It clearly shows that most publications were in the Business, Management, and Accounting fields, with a total percentage of 52 in the WoS and 38 in Scopus. The other pertinent publication area was Social Sciences, with a total percentage of 11 and 15 in Scopus and WoS, respectively. This was expected because brand equity is a business and social science concept.

Food Science Technology is another critical subject area on which the research topic has been investigated. However, all publications in this subject area were made in the WoS with a percentage of 14. It is also worth noting that the concept of brand equity and food cuts across other subject areas, such as Economics, Econometrics and Finance, Agriculture and Biological Sciences, and Environmental Science and Engineering, as indicated in Table 2 below.

Table 2. Subject Area

Subject Area	Total Publications (Scopus)	Percentage (%)	Total Publications (WoS)	Percentage (%)	Total Publications (Scopus + WoS)
Business, Management and Accounting	14	38	44	52	58
Agricultural and Biological Sciences	5	14	6	7	11
Social Sciences	4	11	13	15	17
Economics, Econometrics and Finance	3	8	2	2	5
Arts and Humanities	2	5	2	2	4
Engineering	2	5	0	0	2
Chemistry	1	3	0	0	1
Computer Science	1	3	1	1	2
Decision Sciences	1	3	0	0	1
Energy	1	3	1	1	2
Environmental Science	1	3	3	4	4
Mathematics	1	3	0	0	1
Medicine	1	3	1	1	2
Food Science Technology	0	0	12	14	12
Total	**37**	**100.00**	**85**	**100.00**	**122**

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Bibliometric analysis

According to (Donthu et al., 2020 Zupic & Cater, 2015), bibliometric analysis is a group of techniques that extract, classify, and analyze the existing body of knowledge to develop structural images and summaries of research domains. It is a method that displays the intellectual essence of a subject area (Arora & Chakraborty, 2021; Rejeb et al., 2022) and the current state of the field and shows the prospects of research in a particular direction (Kapoor et al., 2018; Mishra et al., 2017; Rejeb et al., 2022). Various tools were used to analyze the articles, and according to (Garfield, 1979; Waltman et al., 2010), citation analysis, co-authorship analysis, and co-citation analysis are the most commonly used tools. The VOSviewer software was extensively used to generate a network visualization for keyword analysis, co-citation, etc. According to (Otte & Rousseau, 2002; Waltman et al., 2010), network analysis helps to visualize and quantitatively evaluate the configurational output of citation and co-citation analysis. (Chen et al., 2008; Sternitzke & Bergmann, 2009). Also, keyword and co-authorship techniques are widely used in literature review studies. In our study, all the above techniques were applied.

Keywords Analysis

Waltman et al., (2010) stated that clustering in the VoSviewer software depends on minimizing distances between the analyzed keywords. Figures 3 and 4 clearly show various clusters grouped in different colors for easy identification. Both figures have an equal number of clusters, which is 5. Therefore, Figure 3 in the Scopus database shows that the closest keywords are captured in cluster 1 (red): brand awareness, brand equity, brand image, and brand loyalty. The second group (green) has marketing, sustainability, and systematic reviews. The third cluster, 3 (blue), comprises relationship and value equity. Cluster 4 (yellow) and Cluster 5 (purple) have one keyword each, trust and sales, respectively, and are not closely interconnected. We can deduce that cluster 1 is more interconnected since it is denser and tightly connected. This means that they share significant similarities in the field of brand equity.

Figure 4 in the WoS database also shows a similar scenario in which cluster 1 (red) has six strongly interconnected keywords: experience, loyalty, perceived value, purchase intention, service quality, and trust. Unlike in the Scopus database, trust is a solid interrelated keyword in the WoS database, as it falls within the most robust cluster (cluster 1). However, it is not surprising that trust is so interrelated that it develops over time if consistent use of the brand exists. Cluster 2 (green) comprises antecedents, brand loyalty, trust, perceptions, and satisfaction, which are equally strongly interrelated. Last is Cluster 3 (blue), which has five keywords: determinants, food, image, model, and performance. Cluster 4 (yellow) has brand equity, perception, products, quality, and willingness to pay, while Cluster 5 (purple) comprises corporate social responsibility, equity, Impact, and the least interconnected moderating role.

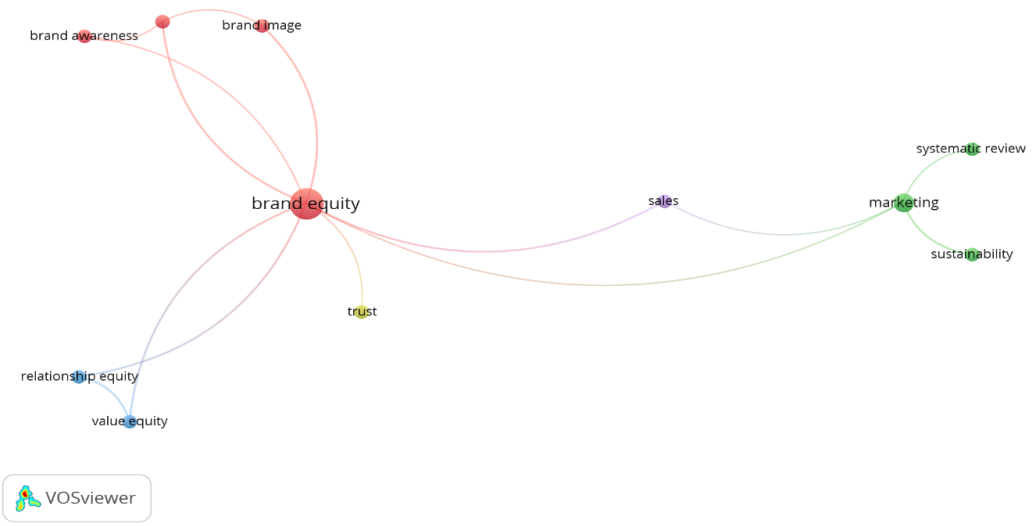

Figure 3. Network visualization map of the author keywords (Scopus)

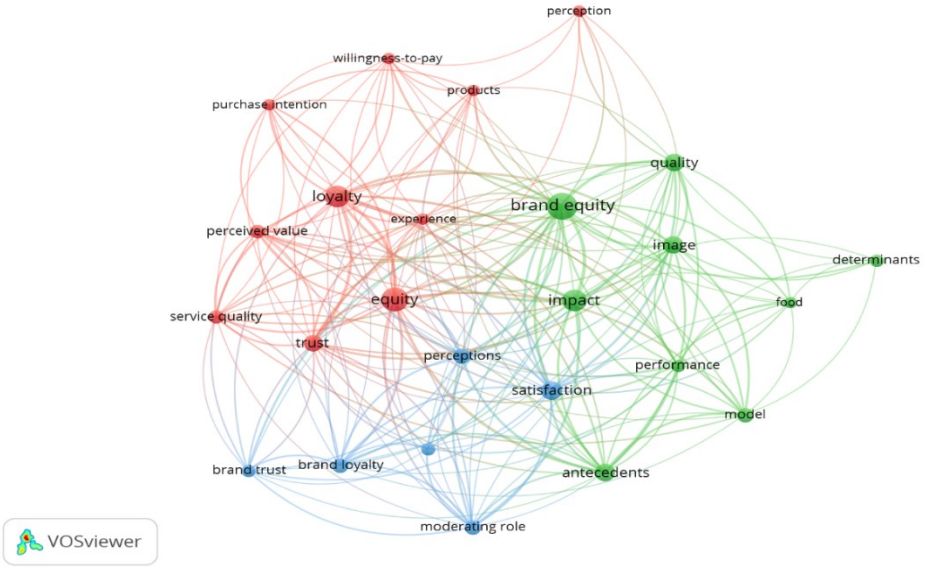

Figure 4. Network visualization map of the author keywords (WoS)

Zipf's law is an empirical law that describes the frequency distribution of words in a language. It states that the frequency of any word is inversely proportional to its rank in the frequency table (Zipf, 1949). Applying Zipf's law to the keywords in Table 3 helped us interpret the relative importance of each term based on their frequencies. The WoS database had a total of 25 keywords, whereas the Scopus database had a total number of 12 keywords. For simplicity's sake, only the top 12 keywords were tabulated. Table 3 clearly shows the frequencies or occurrences of the top 12 keywords. To apply Zipf's law, the square root of the total number of keywords in the WoS database (25) was 5, and that of the Scopus database was 3.46. Therefore, the most frequent and significant keywords from the WoS database are brand equity, equity, Impact, loyalty, and satisfaction. The top 4 most common and highly significant keywords in the Scopus database are brand equity, marketing, brand awareness, and brand image. It is also observable that, apart from the top 2 keywords (brand equity and marketing), the rest of the keywords in the Scopus database have identical significance levels. Furthermore, it is worth noting that different keywords occur in different databases, as seen in Table 3.

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Table 3. Top Keywords and occurrences

Author Keywords (WoS)	Occurrence	Percentage (%)	Author Keywords (Scopus)	Occurrence	Percentage (%)
brand equity	28	16	brand equity	11	89
Equity	22	13	marketing	4	11
Impact	18	11	brand awareness	2	6
Loyalty	17	10	brand image	2	6
satisfaction	13	8	brand loyalty	2	6
antecedents	12	7	marketing strategy	2	6
Image	12	7	relationship equity	2	6
Quality	12	7	sales	2	6
Trust	11	6	sustainability	2	6
perceptions	9	5	systematic review	2	6
brand loyalty	8	5	trust	2	6
Model	8	5	value equity	2	6
Total	**170**	**100.00**		**35**	**100.00**

Geographical Distribution of Publications - Most Influential Countries

Table 4 shows the top countries that contributed to the publications in both the Scopus and WoS databases. The top countries that contributed significantly to the publications on brand equity in the food industry include the United States, the People's Republic of China (PRC), India, Thailand, and England. However, such a trend could be attributed to the size of the population. The PRC has the largest population size in the world and, hence, the most significant number of publications in WoS (17%). Similarly, the USA has the highest number of publications (25%) in the Scopus database, followed by India at 20%, all highly populated countries.

It is worth noting that among the countries that contributed highly to the publications, they are from somewhere other than the African continent. This indicates that more studies on brand equity are needed in Africa. The other factor that could have contributed to the lower number of publications in the two central databases in Africa is the fact that there is an influx of predatory journals that many countries in Africa use to publish their articles. Ignorance or lack of knowledge on the identification of predatory journals is also another factor that has reduced the number of publications from the continent of Africa.

Table 4. Countries that contributed to the publications

Country (WoS)	Total Publications	Percentage (%)	Country (Scopus)	Total Publications	Percentage (%)
People's Republic of China (PRC)	10	17	USA	5	25
USA	9	15	India	4	20
England	7	12	Thailand	2	10
Spain	5	8	Brazil	1	5
Taiwan	5	8	PRC	1	5
Malaysia	4	7	Indonesia	1	5
Pakistan	4	7	Iran	1	5
South Korea	4	7	Malaysia	1	5
France	3	5	Pakistan	1	5
India	3	5	South Korea	1	5
Australia	2	3	Sweden	1	5
Canada	2	3	U.K.	1	5
Total	**59**	**100.00**		**20**	**100.00**

Table 5 below presents the most influential institutions in the publications of brand equity in food businesses, and all of them are from the USA, Europe, Asia, and China. Africa needs to be presented by an institution, meaning there is a research gap on brand equity in African institutions that should ideally be filled up. The eight leading institutions published in the Scopus database had the same number of publications, each with a percentage of 13. In the WoS, Purdue University and the University of Valencia had the highest % of publications at 17% each. The other 16 institutions that used the WoS had the same number of publications, each rated 11%. This indicates which institutions can be used for future collaborations with brand equity and the food industry. Institutions, especially those in Africa, should consider being proactive and partnering with any of the most influential institutions, as stated in Table 5 below.

Table 5. Most influential institutions

Institution (Scopus)	Total Publications	Percentage (%)	Institution (WoS)	Total Publications	Percentage (%)
Betagro Group, Bangkok, Thailand	1	13	Purdue university	3	17
University of Missouri	1	13	University of Valencia	3	17
University of Utah	1	13	Comsats university Islamabad	2	11
Westminster college	1	13	Hong Kong Polytech University	2	11
Kasetsart university	1	13	Kyung hee university	2	11
Eppi-centre, UCL Social Research Institute,	1	13	Ming chuan university	2	11
University of Automotive	1	13	Sakarya university	2	11
China University of Geosciences,	1	13	University of Bradford	2	11
Total	**8**	**100.00**		**18**	**100.00**

Authorship

In order to determine prolific authors, we applied Lotka's law. Lotka's law, also known as the Lotka-Paeto law or the Law of Scientific Productivity, is a principle that describes the distribution of productivity in various fields, such as scientific research, literature, and other creative endeavors (Lotka, 1926). The law states that the number of authors with a certain number of publications is inversely proportional to the square of the number of publications. From Table 6 below, the constant was found to be zero; therefore, the exact number of prolific authors could not be determined. This suggests that no relationship exists between the number of published papers and the number of authors publishing those papers. It implies that all the eight authors stated in Table 6 are equally likely to publish any number of papers, and there is no concentration of prolific authors.

Table 6. Most Productive Authors

Author's Name (Scopus)	No. of Documents	Percentage (%)	Author's Name (WoS)	No. of Documents	Percentage (%)
Ahmad, M.Z.	1	25	Jang, Soocheong (Shawn)	3	30
Anselmsson, J.	1	25	Seo, Soobin	3	30
Bakar, Z.A.	1	25	Coderre, Francois	2	20
Bao, D.	1	25	Konuk, Faruk Anil	2	20
Total	**4**	**100.00**		**10**	**100.00**

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According to (Glänzel & Schubert, n.d.), co-authorship is an official statement that more than one author or organization contributed to a technical document. Therefore, the analysis captured using the nodes in Figures 5 (countries) and 6 (countries) provides information on the cooperative mechanisms between individuals and organizations contributing to the success of science and technology partnerships. Figure 5 has 11 clusters of countries within the Scopus database. The node for the United States is intense in Figure 5, showing a collaboration of authors from the USA and South Korea. The rest of the 10 clusters each had one country per cluster. Evidence can be seen from the small number of nodes other than India, which has many publications without co-authorship. It is again pertinent to note that no African country exists among the countries. Considering the topic at hand, it is visible that there is significant room for African countries to collaborate with all these 12 countries to fill this research gap that exists currently.

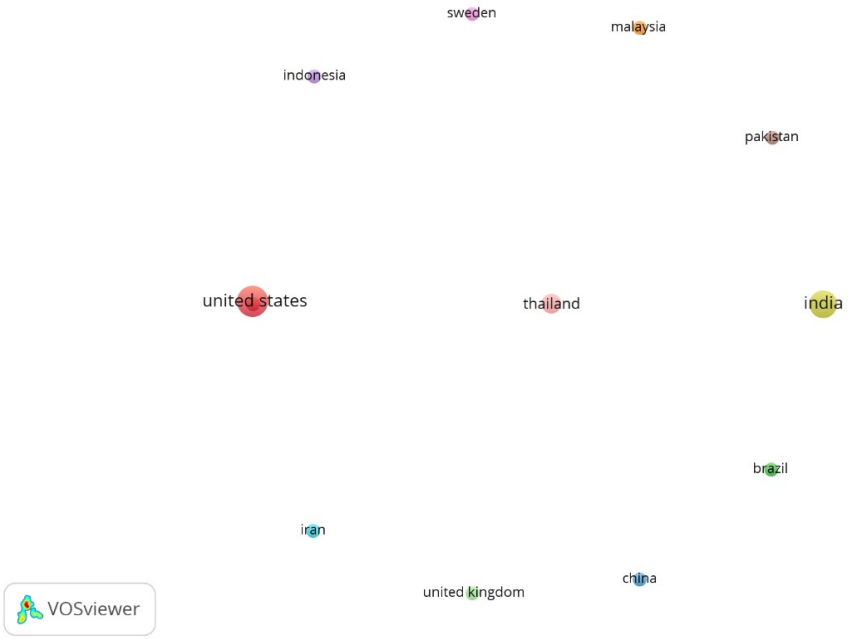

Figure 5. Network visualization map of the co-authorship (Scopus)

Unit of analysis = Countries
Counting method: Fractional counting
Minimum number of documents of a country = 1
Minimum number of citations of a country = 0

Figure six comprises 6 clusters of countries within the WoS database. Many of the collaborating countries are from Europe, and none of the countries are from Africa. Cluster 1 (red) shows the Czech Republic, New Zealand, Pakistan, and PRC co-authorship. The co-authorship of these countries is intense, as can be deduced from the intensity of the red node and connections. The second group (green) comprises India, Malaysia, Singapore, and South Korea. Comparatively, South Korea collaborated with the United States on the same topic in the Scopus database. This may indicate that the country is open to co-authorship activities so African countries can consider partnering with South Korea. Cluster 3 (blue) has only three countries, namely Canada, France, and Scotland; Cluster 4 (yellow) has Bangladesh, England, and Kuwait; and Cluster 5 (purple) comprises Germany, Taiwan, and the USA. Lastly, cluster 6 (blue) only has two countries, Portugal and Australia

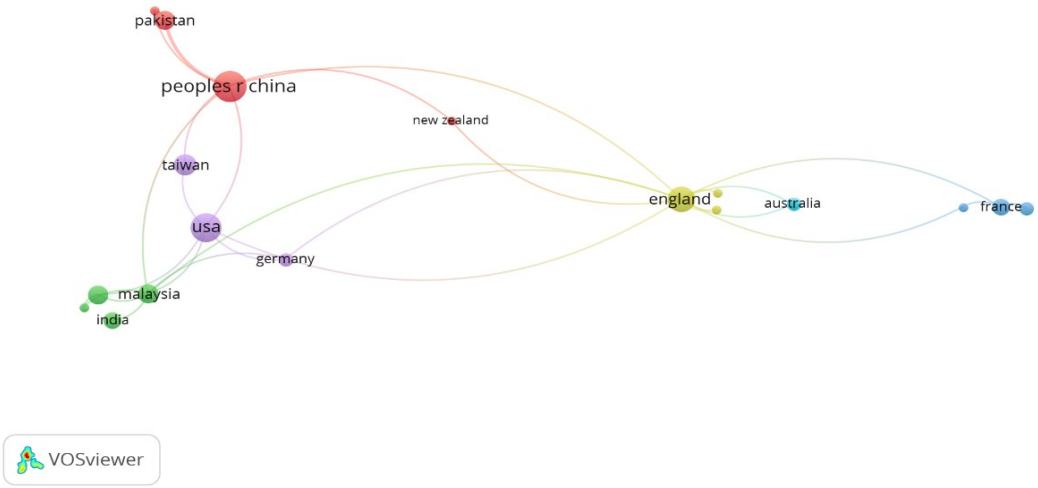

Figure 6. Network visualization map of the co-authorship (WoS)

Unit of analysis = Countries
Counting method: Fractional counting
Minimum number of documents of a country = 1
Minimum number of citations of a country = 0

Citation Analysis

According to J.-S. Lin & Himelboim, (2019), evaluating the author citation network is critical to identifying essential authors in a specific field. As per (Bakshy et al., 2011), influential authors are critical in disseminating knowledge and encouraging information flow in a particular study field. Analyzing the most highly cited publications is emphasized to identify the most popular publications and research areas (Dong et al., 2023). This can boost the acceptability and visibility of these publications, especially among young researchers (Ashraf H et al., 2022).

To find the most influential articles on the subject of interest, we developed Table 7, which shows the most citations in terms of ranks, regardless of the year of publication, for the top 8 key authors. Table 7 below also shows the metrics for citations and highly cited articles related to brand equity and food companies. The citation years span over 11 years, from 2013 to 2023, with 63 papers from the Scopus database and 19 from the WoS database. The most cited paper titled 'Green Consumers' Behavioral Intention and Loyalty to Use Mobile Organic Food Delivery Applications: The Role of social supports, Sustainability Perceptions, and Religious Consciousness' with 175 citations, as indicated in Table 7, was published in 2023 in the WoS database by Hasan, Al Amin, Arefin, and Mostafa. Another highly cited paper with 161 citations was published in 2014 in the Scopus database by Anselmsson, Bondesson, and Johansson. The article was titled 'Brand Image and Customers' Willingness to Pay a price premium for food brands.' The table also displays fairly rated and cited articles published in both the Scopus and WoS databases within the study period of 2013 to 2023.

The table further shows that the least of the top 8 influential authors was Xu, Prayag, and Song, who published an article in the WoS database in 2022 with 107 citations titled "The effects of consumer brand authenticity, brand image, and age on brand loyalty in time-honored restaurants: Findings from SEM and fsQCA. The other article, titled 'Prioritizing Brand Equity Methods from the Perspective of Customers for the Food Industry', was published in 2014 in the Scopus database with citations 4 from Yousefi and Najafi.

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Table 7. Citations Metrics/Highly Cited Articles

No.	Authors/Title		Authors/Title		Year/Cites	
	Scopus		WoS		(Scopus/WoS)	
1	Anselmsson J., Bondesson N.V., Johansson U.	Brand image and customers' willingness to pay a price premium for food brands	Hasan, MM; Al Amin, M; Arefin, MS; Mostafa, T	Green consumers' behavioral intention and loyalty to use mobile organic food delivery applications: the role of social supports, sustainability perceptions, and religious consciousness	2014/ 2023	161/ 175
2	Singh P.K., Pattanayak J.K.	Study of the Relationship among the Factors of Brand Equity: A Study on Fast-food Brands	Ali, A; Sherwani, M; Ali, A; Ali, Z; Sherwani, M	Investigating the antecedents of halal brand product purchase intention: An empirical investigation	2016/ 2021	11/ 130
3	Hoskins J.D., Griffin A.	New product performance advantages for extending large, established fast moving consumer goods (FMCG) brands	Dressler, M; Paunovic, I	The Value of Consistency: Portfolio Labeling Strategies and Impact on Winery Brand Equity	2019/ 2021	7/ 117
4	Burnier P.C., Spers E.E., Guerra D.	Effect of Production Process and Attitudes on the Intent to Buy Sustainable Beef	Shandy, VM; Mulyana, A; Harsanto, B	Social media richness, brand equity, and business performance: An empirical analysis of food and beverage SMEs	2020/ 2023	5/ 114
5	Stanton J.V., Guion D.T.	Perceptions of "Organic" Food: A View Through Brand Theory	Liczmanska-Kopcewicz, K; Pyplacz, P; Wisniewska, A	Resonance of Investments in Renewable Energy Sources in Industrial Enterprises in the Food Industry	2015/ 2020	5/ 114
6	Packer J., Russell S.J., McLaren K.,	The Impact on dietary outcomes of licensed and brand	Kodas, D; Ozel, CH	Antecedents of	2022/ 2023	4/ 111

	Siovolgyi G., Stansfield C., Viner R.M., Croker H.	equity characters in marketing unhealthy foods to children: A systematic review and meta-analysis		gastronomy destination brand equity: An examination of gastronomy experience, motivation, and destination satisfaction		
7	Nawaz Z., Ahmad M.Z., Piracha S.H., Raza M.A.	Customer equity of Pakistani fast-food restaurant: A study of attitudinal customer equity	Husnain, M; Wang, ZX; Poulova, P; Syed, F; Akbar, A; Akhtar, MW; Akbar, M; Usman, M	Exploring Brand Hate and the Association Between Similar Competitor Offer and Brand Equity: A Moderated-Mediation Model	2017/ 2021	4/ 110
8	Yousefi Darestani S., Najafi A.A.	Prioritizing Brand Equity Methods from Customers' Perspective for the Food Industry	Xu, J; Prayag, G; Song, HQ	The effects of consumer brand authenticity, brand image, and age on brand loyalty in time-honored restaurants: Findings from SEM and fsQCA	2014/ 2022	4/ 107

Discussion and conclusions

The analysis revealed that brand equity in fast-food businesses has been a topic of growing interest, reflecting the recognition of its significance in the highly competitive fast-food industry. However, comparing the two databases revealed an unequal distribution of research. Only 19 articles were found in Scopus, the oldest database in the world (Sánchez et al., 2017), compared to 63 articles in WoS. The sizes of the selected databases can justify the fewer articles in the Scopus database: in 2021, more than 171 million records, 5,000 fully open access, hybrid, and subscription journals were listed in WoS, while only more than 46 million records from among 19.500 titles of the publications, including over 18.500 reviewed magazines were found in Scopus (Słupińska et al., 2021). While a few researchers have used Scopus to do similar analyses (Jayantha & Oladinrin, 2019), recent studies have revealed that the bulk of bibliometric articles use the WoS database (Cuccurullo et al., 2016; Zupic & Cater, 2015). Therefore, two significant implications might be suggested: i) WoS (with 63 articles) can be suggested for researchers searching for scientific information on the topic; ii) for researchers publishing their articles in the field of fast-food brand equity, it is recommended to choose journals listed in both databases to increase the visibility of research.

Despite the discrepancies mentioned above between the selected databases, a steady

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growth of researcher interest in the brand equity of fast-food businesses can be envisioned. Only two articles were published in 2013 (0 in Scopus) while starting from the 20s, the number of articles can be counted in two-digit numbers. This steady growth can be explained by the global growth of fast-food restaurants ((Nguyen et al., 2018)) and the expansion of global fast-food brands (Kashif et al., 2015; Zhang et al., 2022).

Considering the subject area, Business, Management, and Accounting are dominating, followed by Biological and Social Sciences, Economics, Econometrics and Finance, and Food Science Technology (in WoS), respectively. Therefore, scientists representing areas such as Chemistry, Decision Sciences, or Environmental Science could find a *Tabula Rasa* for their pioneering studies. The author's keywords provided in the analyzed articles reflected the emerging considerations in the subject areas. Slightly different keywords were indicated in the analyzed databases. In the Scopus database, five keyword clusters were identified that unify *brand-related* keywords (brand awareness, brand equity, brand image, brand loyalty), *equity-related* keywords (relationship equity, value equity), *research area-related* keywords (marketing, sustainability, systematic review), and two merging clusters identifying merging concepts: trust and sales. According to (Chen et al., 2008; Su & Lee, 2010), keywords usually show fundamental study material and themes, diverse perspectives and research foci, and the status and potential research prospects. The analysis of the author keywords in the WoS database revealed several research directions, namely: *consumer behavior-related* cluster (experience, loyalty, perceived value, purchase intention, service quality, trust), *attitude-related* cluster (brand loyalty, brand trust, perceptions, satisfaction), *management-related* cluster (determinants, image, model, performance), *product-related* cluster (brand equity, perception, products, quality and willingness to pay), and *impact-related* cluster (social responsibility, equity, Impact, moderating role). Keyword-choosing guidelines can be suggested for scholars by merging the differences found in the databases.

1. Identify keywords in the research area (for instance, marketing, sustainability, and so on).
2. Identify the keywords specifying the analyzed object (for example, brand, equity, product, and so on).
3. Identify the keywords that specify the analyzed outcome (that is, consumer attitude or behavior).
4. Identify the process to be improved (such as management, Impact).

Analysis of geographic contributions to the research area revealed several trends. Publishing in the journals indexed in the WoS database was found to be the most popular among scholars representing the People's Republic of China, the United States, England, Spain, and Taiwan. However, scholars from different countries chose the Scopus database: the United States, India, and Thailand. Only researchers from the United States were dominant in both databases. However, China and India dominate in different databases: as scholars from China choose to publish their research in the WoS, researchers from India dominate in Scopus. WoS is also better preferred by Australian, Canadian, and European researchers (England et al.); however, only two articles from European (Sweden and U.K.) countries and no articles from Australia and Canada were found in the Scopus database. In addition, no published research by African scholars was found.

The Scopus database analysis indicates that no academic institution is leading in the field of brand equity in fast food businesses. In contrast, the results of the WoS database indicated that Purdue University (USA) and the University of Valencia (Spain) are the most prominent in the field.

Bibliographic analysis highlighted the dominance of specific key authors, suggesting their expertise and contribution to the field. These influential authors and the institutions they represent have played a significant role in

shaping the discourse on brand equity in fast-food businesses and have contributed significantly to accumulating knowledge in this area. To make the published research more impactful, scientific co-authorship can be named a popular strategy. However, in brand equity in fast food businesses, only one occurrence of international collaboration was found in Scopus (a collaboration of authors from both the United States and South Korea). The analysis of the WoS database revealed six collaborating clusters: cluster 1 (Czech et al. Zealand, Pakistan, and PRC), cluster 2 (India, Malaysia, Singapore, and South Korea), cluster 3 (Canada et al.), cluster 4 (Bangladesh, England, Kuwait), cluster 5 (Germany et al.), and cluster 6 (Portugal and Australia). Since the area under evaluation is not widely explored, greater collaboration between scholars representing different countries would strengthen its academic foundations.

Citation count and the number of links that they have with their works display the prominence of individual scientific articles on a particular topic (Garfield, 1979; Small, 1973). The citation analysis revealed that the recently published article by (Hasan et al., 2023) was the most cited (175 citations) in the WoS in the area, while the most cited article in the Scopus (161 citations) was published almost a decade ago by (Anselmsson et al., 2014). Furthermore, the second most cited article (Singh & Pattanayak, 2016) in Scopus had only 11 citations. An assumption can be made that the authors publishing their research in Scopus face the problem of being unnoticed and under-cited. The authors are encouraged to share their research within academia and their networks to avoid such situations. In addition, the journals indexed in the Scopus database could also promote the featured papers to encourage the authors to continue their research in the emerging field.

The analysis highlighted the popularity of specific journals publishing research on brand equity in fast-food businesses. The information can guide researchers in selecting the appropriate outlets for their work and provide a comprehensive understanding of the research landscape.

The findings of the bibliometric analysis contribute to our understanding of brand equity in fast-food businesses and serve as a foundation for future research. It is, however, progressive if the African continent and more countries from Europe also join other continents in contributing to studies within brand equity and fast-food businesses. The identified research gaps and emerging trends allow scholars to explore new avenues and deepen their understanding of brand equity in the context of fast-food businesses.

Finally, the study had a few limitations such as publication type limitations in that it was only restricted to journal articles and did not capture other types of publications such as conference proceedings. The findings of this study may not be generalized to other industries or contexts other than fast food businesses. The study was only limited to publications that were written in English language and did not capture publications in other languages. A period study of a decade may have been too limited though acceptable but limited the timeframe scope.

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Management Theory and Studies for Rural Business and Infrastructure Development
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