

A Bibliometric Analysis: The Influence of Service Profit Chain (SPC) on the Hospitality Industry

Abstract:

In the hospitality industry, the service-profit chain establishes relationships between profitability, customer loyalty, employee satisfaction, loyalty, and productivity. Several studies have empirically investigated the relationship between practices in the service profit chain and their impact on the tourism and hospitality industries. Bibliometric studies that organize production in this field, however, are still scarce. The study's goal is to analyze the influence of service profit chain practices in hospitality industry using VOSviewer software that is related to marketing. This will be achieved by analyzing articles published on the SCOPUS platform to determine state-of-the-art trends and other relevant indicators. Researcher obtained a sample of 57 materials for analysis. The author processed the data and used the VOSviewer software to graphically illustrate the results. The study examines country-wise productivity, most productive source titles, most-cited sources on the topic, top-most keyword occurrences, and yearly productivity research output trends in this area. The study findings indicate that the United States, China, Australia, Germany, India, Egypt, Malaysia, and Brazil are the most productive countries in the field of research output on the topic. The investigation also reveals that the top-most source title on the topic is "International Journal of Contemporary Hospitality Management," and frequently used keywords are "articles," "customer satisfaction," and "service profit chain." On this topic, the USA is the leading country. However, research on the service profit chain and hospitality in Asia has shown that South Korea and China are the most successful countries in this field. Only the SCOPUS database contains the study's findings. The study's findings are useful for academicians, researchers, and policymakers looking for answers to the topic.

Keywords: Customer Satisfaction, Service Profit Chain, Customer Loyalty, Service Quality, Employee Performance, Customer Emotion, Job Performance and Hospitality.

1.0 Introduction:

"The evolving service profit chain theory is transforming customer relationship management into the CEM stage, emphasizing the identification of profitable customers, improvement of customer loyalty, and implementation of effective management strategies" (Cheng & Wangcheng, 2010). "Service-profit logic and the service-profit chain are integral components of internal marketing, recognizing employees as valuable resources and focusing on understanding them for desired outcomes" (Chan & Frederick, 2020). "Researchers discovered that internal service quality enhances service performance beyond employee satisfaction, emphasizing the significance of service encounter and customer relationship characteristics for maximizing firm performance" (Hogreve et al., 2017). The SPC links service companies' internal and external environments, highlighting employee satisfaction, loyalty, productivity as mediating variables

and customer satisfaction and loyalty as mediators of external service quality and firms' financial performance (Hogreve et al., 2022). The hospitality industry has one of the most diversified workforces. Lim (2023) found that “hospitality employees perceive nine diversity and inclusion categories (age, organisational climate, culture, disability, education, gender, physical differences, policy and practice, and race) that are crucial to the companies when developing and implementing diversity management”(Lim et al., 2023). Researchers highlight the impact of customer service orientation, initiating structure, tenure potential, and managerial relational orientation on the job performance of managers in the hospitality industry. But customer orientation is vital to frontline employee performance (Loveland et al., 2016). “AI technologies are revolutionizing the hospitality sector, impacting employee engagement, retention, productivity, service quality, and customer satisfaction through a theoretical framework”(Ruel & Njoku, 2020).In the service-dominant logic era, human or machine intelligence can serve as a service, aiding employees in task execution, facilitating business transactions, and enhancing customer experience (Prentice, 2023). The service-profit chain model identifies profitable tourism along the lines of sustainability, the use of SMART technology, and social inclusion so that it benefits all of its stakeholders. Crick (2022) proposes five areas for central focus: smart education, strategic employer use, customer value identification, sustainable thinking, and government collaboration, highlighting the link between well-being and service quality in hospitality and tourism industries. Benitez (2021) identified two primary aspects of work-related well-being within the unit, namely job satisfaction and burnout, in the correlation between interpersonal conflicts within the unit and customers' perceptions of service quality (Benitez et al., 2021). The service profit chain (SPC) customer segmentation, based on fashion e-commerce customer characteristics, is beneficial for garment e-commerce consumers and aids in developing innovative customer management strategies (Wang & Zhong, 2016). According to Al-Tamimi et al. (2009), a 1-degree increase in call centre employees' satisfaction can contribute approximately 5% to the company's competitive advantage over its competitors. Employees view their work as a means to earn a living, but it also gives individuals a sense of achievement and a sense of community through exchanges with their supervisors, peers, and colleagues (Chan & Frederick, 2020).Organisational subunits—organisational climate, employee attitudes, customer satisfaction, and sales performance—where employee perceptions are favorable, enjoy superior business performance (Gelade & Young, 2005). According to Heskett (1994), The service-profit chain framework reveals strong correlations between employee satisfaction, service quality, customer satisfaction, and firm profitability, influenced by employee attributes, operational performance, and business outcomes (Yee et al., 2011). Both the service-profit chain (SPC) and employee behavior promote customer satisfaction and loyalty. Cain's 2018 study on employee engagement, focusing on dedication, energy, and absorption, found that a combination of these factors can lead to customer satisfaction and loyalty among hospitality patrons (Cain et al., 2018).

2.0.Literature Review:

2.1. Service-Profit Chain and Hospitality: A Theoretical Approach:

Marketing scholars have developed a role-service-profit chain approach, focusing on how managers evaluate technological innovations' role expectations in service quality, customer satisfaction, employee engagement, retention, and productivity (Ruel & Njoku, 2020). The literature review indicates that several hospitality establishments have adopted the Six Sigma approach to enhance service delivery efficiency, focusing on 3.4 Defects Per Million Opportunities (Lahap et al., 2015). The SPC provides new insights into employee engagement, linking it to positive consumer outcomes, benefiting hospitality industry professionals by improving customer perceptions and increasing profitability (Cain et al., 2018). The catering industry, a key component of the national economy, has significantly improved people's living standards due to its unique service management model (Zhang & Xu, 2016). The service profit chain is implemented as an entrepreneurial marketing initiative within a franchise system, focusing on retention, sales, and referrals, while ensuring service quality measures (Maritz & Nieman, 2008).

2.2. Environmental Impact of Service -Profit Chain (SPC):

Environmental practices significantly impact service performance and external profit chain in the hospitality industry, enhancing customer satisfaction and loyalty (Kassinis & Soteriou, 2003). The service climate influences service-oriented behaviors, with a trickle-down effect affecting frontline employees' service-oriented behaviors and service quality in the hospitality industry (Ling et al., 2016). The role-service-profit chain offers potential for improving talent management practices in the hospitality industry, thereby enhancing service quality and customer satisfaction (Ruel & Njoku, 2020). Odou (2011) identified that consumer cynicism would have undesirable impacts on the company and its brand image. Specific organisational climates (i.e., corporate social responsibility and servant leadership) can help reduce cynicism towards the company (Chan & Frederick, 2020). Hotel employees' perceptions of CSR activities, including green practices, can improve performance, drive career meaning, and attract quality employees, according to service-profit chain, CSR, and social identity theory (Park & Levy, 2014). From a marketing perspective, emotional intelligence and artificial intelligence significantly impact individuals and businesses, particularly in the organizational context, affecting employees and customers (Prentice, 2023).

2.3. Marketing and Branding Hospitality Industry by Using Service -Profit Chain (SPC):

Southeast Asian brand restaurants have achieved success through brand extensions, customer-centric philosophy, service-profit-chain concept, and advanced logistic and supply chain systems (Itthiopassagul et al., 2009). Marketers and managers categorize the service profit chain model based on internal management-employee relationships, interaction between hotel service employees and customers, and profitability link (Prentice et al., 2017). The rapid growth of technology has transformed traditional brand evaluation, with high-tech, financial, and service industry users being direct drivers of brand loyalty (Wu & Lin, 2016). Marketing scholars and researchers emphasize the importance of positive employee attitudes in enhancing customer experiences and establishing a strong service brand. Bodderas (2011) suggests a framework that integrates employer brand with employee outcomes for service branding, emphasizing the

importance of a strong employer brand for employee identification (Bodderas et al., 2011). Al-Tamimi et al. (2009) highlight the service-profit chain model's connection between employee satisfaction, customer experiences, brand loyalty, and competitive advantage, fostering a corporate culture prioritizing employees and customers. The service-profit chain theory's driven model of customer equity identifies four dimensions: perceived quality, customer emotions, brand image, and customer loyalty, which enhance profit performance in tourism and hospitality industries (Cheng & Wangcheng, 2010). Increased service quality positively influences customer satisfaction, which in turn leads to better financial results through increased customer loyalty based on the applicability of the service profit chain (Novak et al., 2015). The Taj brand's sustainability is attributed to the collective spirit of employees, their role in service delivery, profitability, customer loyalty, satisfaction, productivity, service failure, and recovery paradox (Paul, 2012).

3.0 Methodology:

The bibliometric methodology encapsulates the application of quantitative techniques (i.e., bibliometric analysis—e.g., citation analysis) on bibliometric data (e.g., units of publication and citation). VOSviewer is a software tool for creating maps based on network data, as well as visualising and exploring these maps. The primary purpose of VOSviewer is to analyze bibliometric networks, but it can also create, visualise, and explore maps based on any type of network data (van Eck & Waltman, n.d.) The study is an attempt to analyze scientific research trends in the service profit chain and the hospitality industry. Indeed, a variety of fields in business research, including business strategy, electronic commerce, finance, human resource management, and marketing, have applied the bibliometric methodology. The SCOPUS database, one of the most trustworthy indexing and citation databases, provided the data for the study. The main search keywords for the research were "service profit chain", "hospitality industry", "service profit chain", "SPC", "hospitality industry", "tourism and hospitality", and "brand". The research team retrieved a total of 57 published articles on May 11, 2024. Finally, the research team selected the articles for analysis based on key parameters such as productive countries, citations, document sources, keyword occurrences, subject areas, top source titles, and language related to service profit chains and the hospitality sector. The authors used VOSviewer to analyse the collected data and arrive at the appropriate findings.

4.0. Data Analysis and Interpretation:

4.1. Publications by Year:

Using SCOPUS data, the first article on the service profit chain and hospitality appeared in 1974. After a considerable delay, the second article on the service profit chain and hospitality appeared in 1987. However, one by one, articles began to appear in 1990 and 1991. Two articles were published in 1997. In 2003 and 2004, the published articles were, respectively, 3 and 2. As for annual publication growth, at least one article was published per year between 2006 and 2024 (shown in Table 1). 2009 saw the publication of four articles, followed by two in 2010, three in 2012, one in 2013, and two in 2014. In 2015, there was an increase of 2 articles. The year 2016 saw the highest number of articles on service-profit chains and hospitality, with six publications.

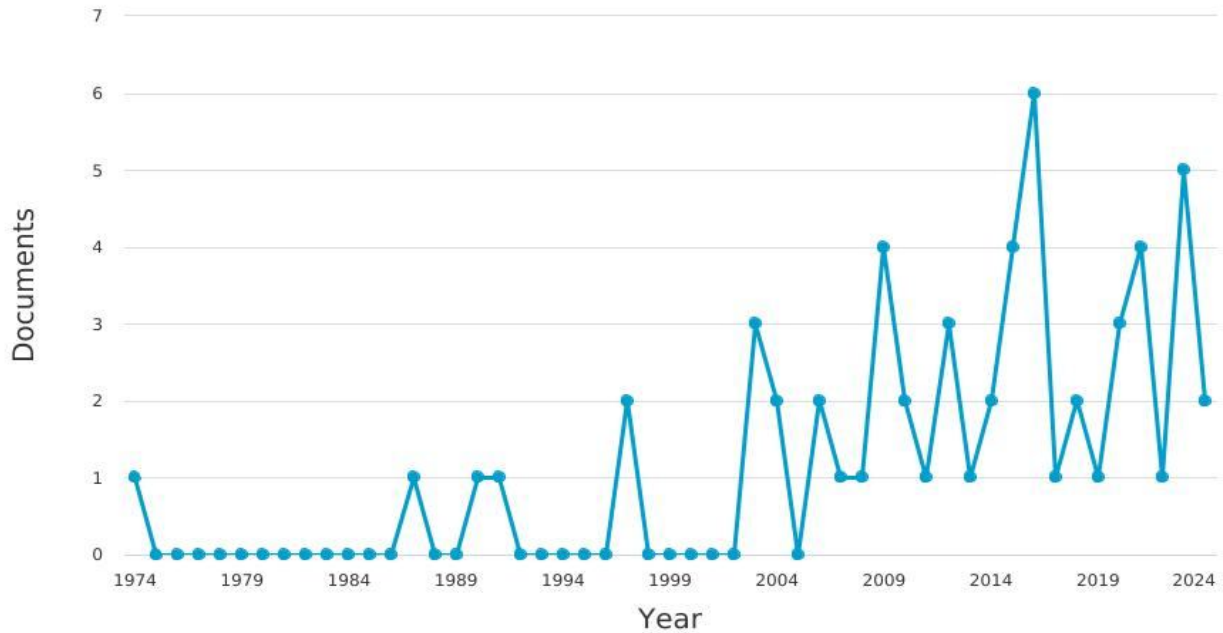
2020 saw three articles, 2021 saw four, and 2023 saw five. Finally, two articles on the respected topic appeared in 2024.

Table 1: Number of Publications by Year

SL. No.	Year	Publications
1.	2024	2
2.	2023	5
3.	2022	1
4.	2021	4
5.	2020	3
6.	2019	1
7.	2018	2
8.	2017	1
9.	2016	6
10.	2015	4
11.	2014	2
12.	2013	1
13.	2012	3
14.	2011	1
15.	2010	2
16.	2009	4
17.	2008	1
18.	2007	1
19.	2006	2
20.	2004	2
21.	2003	3
22.	1997	2
23.	1991	1
24.	1990	1
25.	1987	1
26.	1974	1

Documents by year

Scopus



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Figure 1: Publications by Year

The number of publications has grown gradually. Figure 1 illustrates the annual trend of publications on the service-profit chain and hospitality, generated from the SCOPUS data of 57 articles. 2016 saw the highest number of publications, with six articles published. The data collection took place in 11th May 2024.

4.2. Publications by Subject Area:

Table 2 divides the 57 articles into eleven subject areas. The prime subject area is "Business, Management, and Accounting," with 23 published articles, equivalent to 23.2% of the total. The second major subject area is "medicine," which has 12 articles, or 12.1% of the total. The third influential subject area is "engineering," with nine (9.1%) articles. "Economics, Econometrics, and Finance" with 6 articles; "Pharmacology, Toxicology, and Pharmaceutics" with 6 articles; and "Social Sciences" with 6 articles, equivalent to 6.1% of the total. Both "Computer Science" and "Material Sciences" subject areas have 5 articles (5.1%). The "Agricultural and Biological Science" and "Decision Sciences" subject areas each published four articles. The rest of the subject area contributes 19.2% of the total.

Table 2: Number of Publications by Subject Area

SL. No.	Subject Area	Publications	% of Total
1.	Business, Management and Accounting	23	23.2
2.	Medicine	12	12.12
3.	Engineering	9	9.09

4.	Economics, Econometrics and Finance	6	6.06
5.	Pharmacology, Toxicology and Pharmaceutics	6	6.06
6.	Social Sciences	6	6.06
7.	Computer Science	5	5.05
8.	Materials Science	5	5.05
9.	Agricultural and Biological Sciences	4	4.04
10	Decision Sciences	4	4.04
11.	Others	19	19.19

Figure 2 illustrates, based on statistical calculations, the number of publications on service-profit chains and the hospitality industry within the subject area. This graphical presentation represents the subject area's vivid position on the topic.

Documents by subject area

Scopus

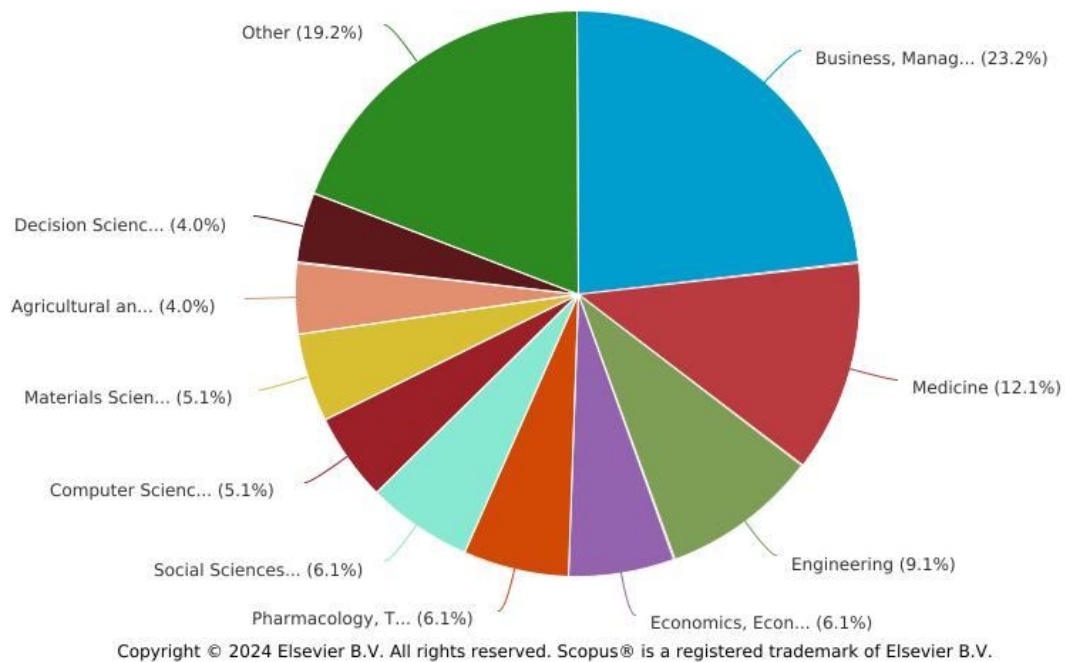


Figure 2: Publications by Subject Area

4.3. Publications by Journal:

Table 3 shows the top 10 core journals in the study's research field, with "International Journal of Contemporary Hospitality Management" publishing the most articles. The second-highest was "Development in Marketing Science," followed by "Production and Operations Management,"

"Worldwide Hospitality and Tourism Themes," "International Journal of Globalisation and Small Business," and "Tourism Research."

Table3: Number of Publications by Journals

SL.No.	Journal	Publications	% of 57
1.	International Journal of Contemporary Hospitality Management	3	5.263%
2.	Developments in Marketing Science	2	3.508
3.	Production and Operations Management	1	1.754
4.	Worldwide Hospitality and Tourism Themes	1	1.754
5.	International Journal of Globalization and Small Business	1	1.754
6.	International Journal of Hospitality and Tourism Administration	1	1.754
7.	International Journal of Hospitality Management	1	1.754
8.	Journal of Human Resources in Hospitality and Tourism	1	1.754
9.	Journal of Marketing Theory and Practice	1	1.754
10.	Journal of Services Marketing	1	1.754

Table4: Number of Citations by Journal

Sl.No.	Journals	Citations
1.	International Journal of Hospitality Management	42
2.	International Journal of Contemporary Hospitality Management	37
3.	Journal of Marketing	37
4.	Journal of Applied Psychology	31
5.	Harvard Business Review	29
6.	Journal of Business Research	25
7.	Journal of Marketing Research	20
8.	Academy of Management Journal	19
9.	Cornell Hospitality Quarterly	19
10.	Journal of Retailing	18

Upon scrutinizing the journals that published the 57 articles, we discovered that 10 renowned journals, specializing in service-profit chains and hospitality, have garnered significant citations (as indicated in Table 4). The International Journal of Hospitality Management holds the highest citation count with 42 citations. The two journals with the second highest citation count are the International Journal of Contemporary Hospitality Management, with 37 citations, and the Journal of Marketing, also with 37 citations. The Journal of Applied Psychology occupies the third position with 31 citations. Harvard Business Review holds the fourth position with 29

citations, while the Journal of Business Research holds the fifth position with 25 citations. The citations for the next five journals range from 25 to 18.

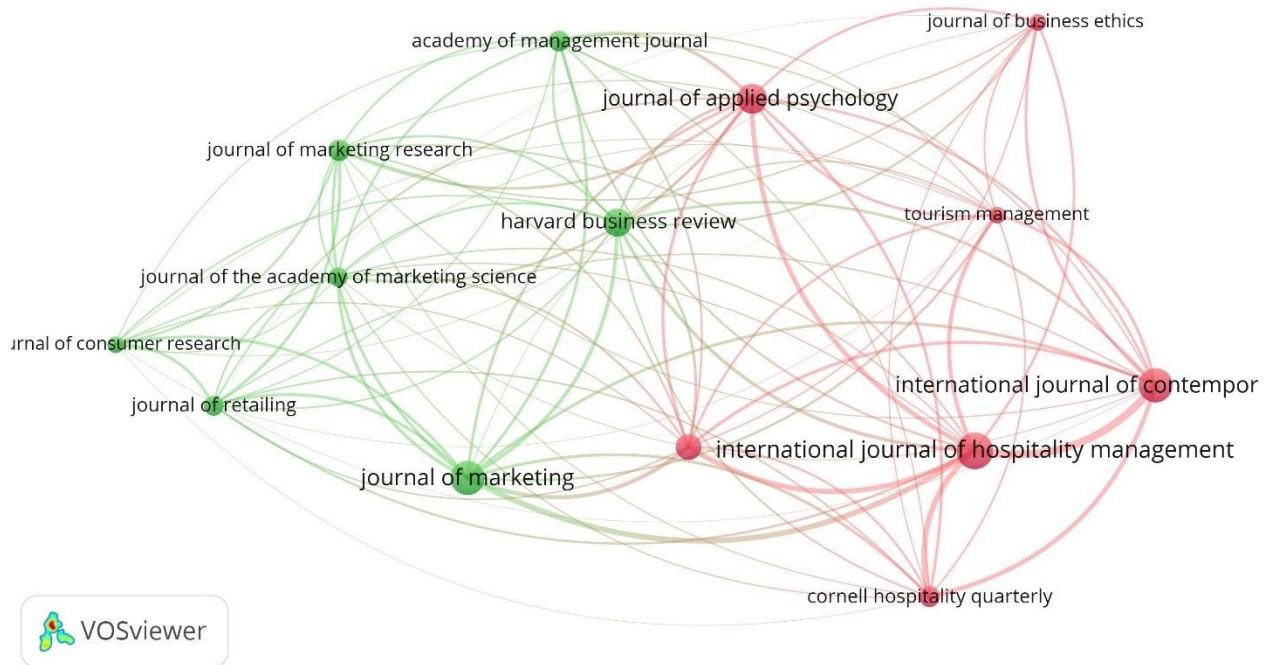


Figure 3: Journal Citations Network

4.4. Keywords Analysis:

The total of 958 keywords initially appeared in the study on service-profit chain and hospitality. We then carried out keyword filtering by limiting the occurrences in the SCOPUS database to a minimum of three times. After filtering, 34 keywords meet the threshold. Table 5 lists the keywords that appear most frequently. We notice that the keyword “Article” has appeared 11 times, followed by “Human “(10 times), “Customer Satisfaction” (7 times), “Service Profit Chain” (7 times), “Humans” (6 times), “Controlled Study” (5 times), “Customer Loyalty,” “Drug Marketing,” and “Male” and “Service Quality (4 times), respectively. Out of all the keywords, "human," "customer satisfaction," "service profit chain," and "service quality" have the most significant impact on the study's research field.

Table5: All Keywords Occurrence

SL.No.	Keyword	Occurrences
1.	Article	11
2.	Human	10
3.	Customer Satisfaction	7
4.	Service Profit Chain	7

5.	Humans	6
6.	Controlled Study	5
7.	Customer Loyalty	4
8.	Drug Marketing	4
9.	Male	4
10.	Service Quality	4

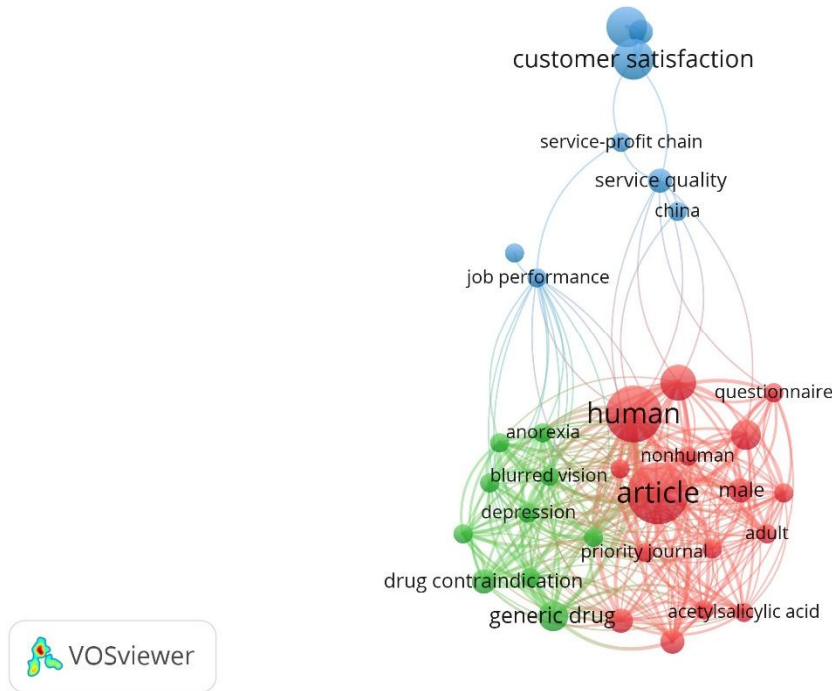


Figure 4: All Keywords Trends

After analysing author keyword occurrences using VOSviewer software, a total 193 author keywords have appeared in the SCOPUS database. Table 6 shows the most influential author keyword occurrences in the service profit chain and hospitality industry. The first influential author keyword was "service profit chain" (7 times). The second influential author keyword is "customer satisfaction" (6 times). "Customer Loyalty" and "Service Quality" both occupy the third position in the author's keyword occurrences (4 times). The fourth influential author keyword is "service profit chain" (3 times).

Table6: Author Keywords Occurrence

SL.No.	Keyword	Occurrences
1.	Service Profit Chain	7
2.	Customer Satisfaction	6
3.	Customer Loyalty	4
4.	Service Quality	4

5.	Service-Profit Chain	3
6.	Employee Performance	2
7.	Hospitality	2
8.	Customer Emotion	2
9.	Job Performance	2
10.	Servant Leadership	2

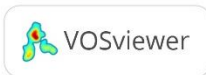
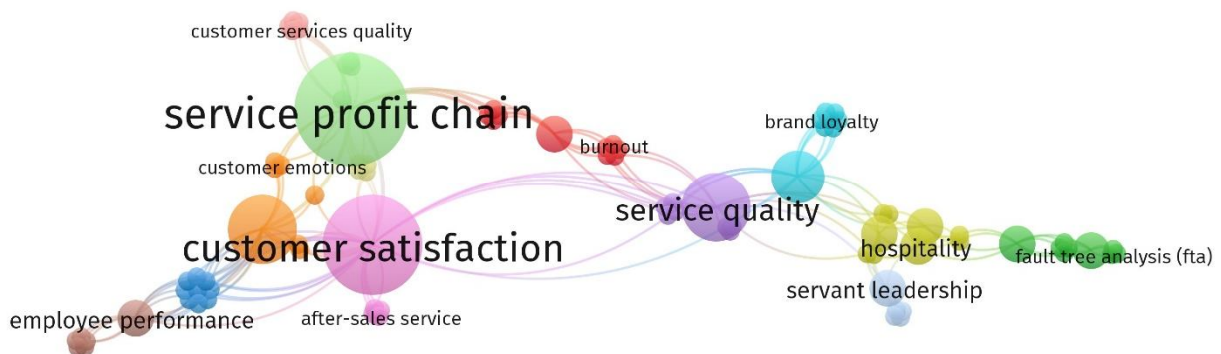


Figure 5: Author Keywords Occurrence

4.5. Geographical Analysis of Publications:

During the research period of the study until May 2024, the top 15 countries published 51 articles focusing on service-profit chains and the hospitality industry. Table 7 presents an analysis of the top 10 countries' publications. The United States has the highest number of publications associated with it (13 publications). China has the second highest number of publications (6). Australia, tied with Germany, holds the third position in terms of publications, while India has four publications to its credit. Egypt has the fourth-highest number of publications on service profit chain and hospitality with three, followed by Brazil, Denmark, and Hong Kong, which have the fifth position with two publications. Finally, **Bangladesh** has achieved the sixth position in the publication rankings on this topic with one publication. Figure 6 illustrates the graphical presentation of country-wise publications adopted from SCOPUS databases up to 11th May 2024.

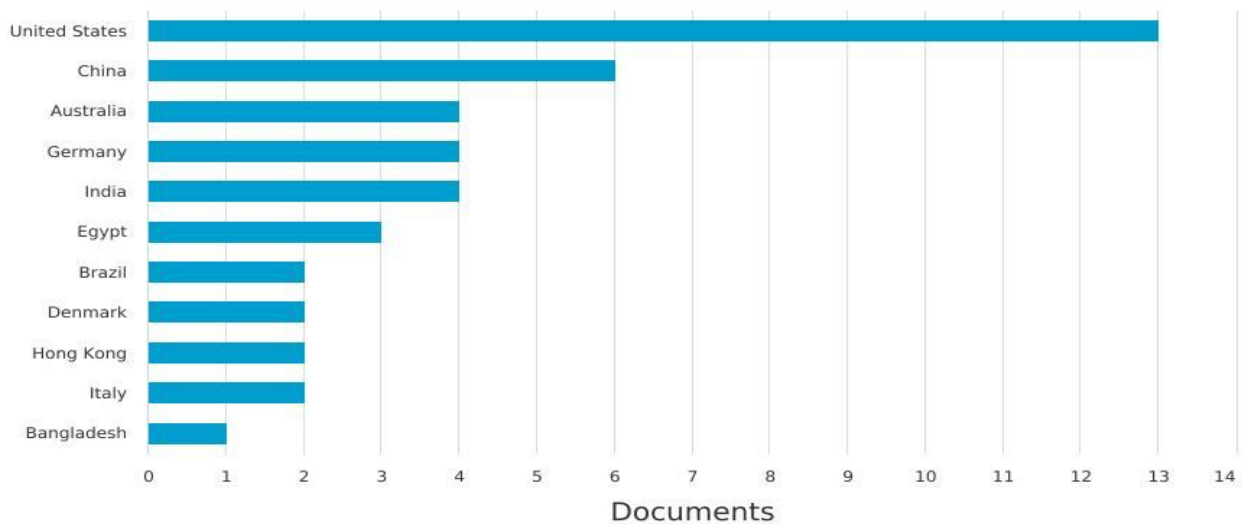
Table7: Number of Publications by Country

SL. No.	Country	Publications	% of 57
1.	United States	13	22.807
2.	China	6	10.526
3.	Australia	4	7.017
4.	Germany	4	7.017
5.	India	4	7.017
6.	Egypt	3	5.263
7.	Brazil	2	3.508
8.	Denmark	2	3.508
9.	Hong Kong	2	3.508
10.	Bangladesh	1	1.754

Documents by country or territory

Scopus

Compare the document counts for up to 15 countries/territories.



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Figure 6: Publications by Country

Initially, citations from 30 different countries were displayed. However, we carried out citation filtering by restricting a country's document to appear at least twice in the SCOPUS database. After filtering, 16 countries meet the threshold. Table 8 shows the highest number of citations for service profit chains and hospitality research in the United States (705), followed by South Korea (206), Germany (197), and China (171). This indicates significant contributions and increased focus on the field, as well as the researchers' proper research and credit for the sources used. Other countries include Egypt, Denmark, Switzerland, the Netherlands, the UK, and Italy.

Table8: Number of Citations by Country

Sl.No.	Country	Citations
1.	United States	705
2.	South Korea	206
3.	Germany	197
4.	China	171
5.	Egypt	150
6.	Denmark	144
7.	Switzerland	114
8.	Netherlands	47
9.	United Kingdom	42
10.	Italy	28

Figure 7 demonstrates 16 items (15 clusters). The optimal citation prioritizes research and contributions within the study area. Cluster 1 consists of two items: The United States and China. Followed by cluster 2 (1 item) Australis, Cluster 3 (1 item) Brazil, Cluster 4 (1 item) Denmark, Cluster 5 (1 item) Egypt, Cluster 6 (1 item) Germany, Cluster 7 (1 item) India, Cluster 8 (1 item) Italy, Cluster 9 (1 item) Malaysia, Cluster 10 (1 item) United Kingdom, Cluster 11 (1 item) Switzerland, Cluster 12 (1 item). Netherlands, Cluster 13 (1 item) Thailand; Cluster 14 (1 item) South Korea; and Cluster 15 (1 item) Slovenia.

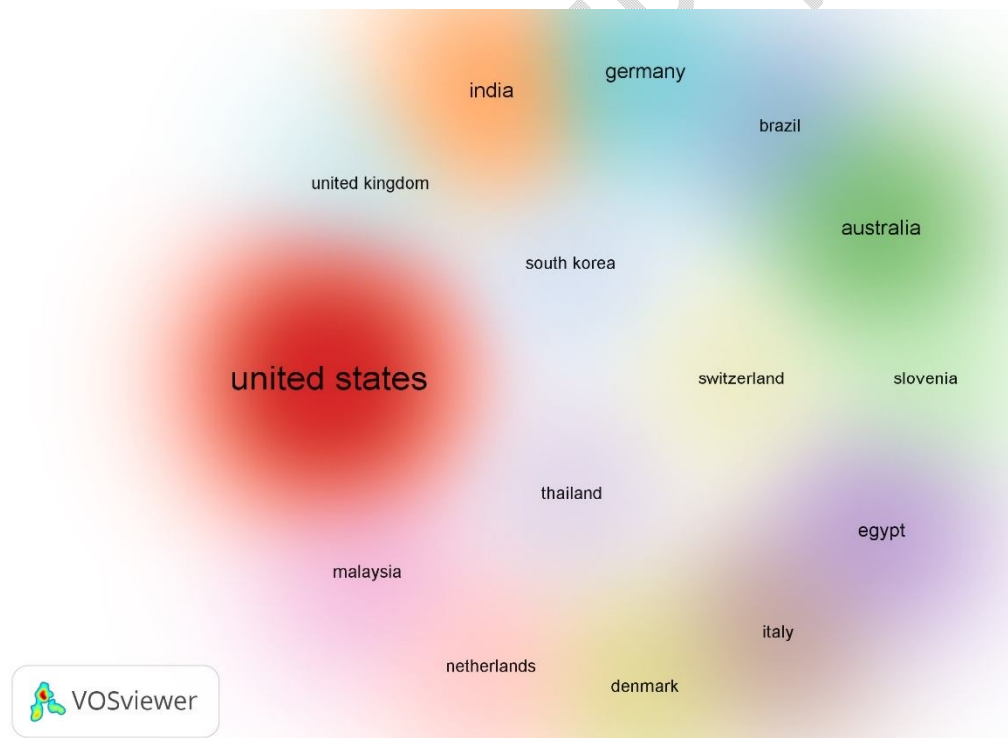


Figure 7: Citations byCountry

4.6. Analysis of Publications by Organizations:

The top 10 universities responsible for publishing 57 articles with the highest citations are: University of Cyprus, Princeton University, University of Southern California, EwhaWomans University, South China Normal University, School of Management, University of San Francisco, Institute for Insurance Economics (I.Vw-Hsg), and Århus University. There is neither one nor two or three universities responsible for the majority of citations. The University of Cyprus ranks first, along with Princeton University and the University of Southern California, with 260 citations. EwhaWomans University ranks in the second position with 162 citations. South China Normal University ranks third, tied with the Tourism and Hospitality Management Department with 145 citations. Citations for the following four organizations range from 139 to 63.

Table9: Number of Citations by Organizations

SL. No.	Organization	Publications	Citations
1.	University of Cyprus	1	260
2.	Princeton University	1	260
3.	University of Southern California	1	260
4.	EwhaWomansUniversity,	1	162
5.	South China Normal University	1	145
6.	School of Management, China	1	145
7.	University of San Francisco	1	139
8.	Institute For Insurance Economics (I.Vw-Hsg)	1	113
9.	KliniskEpidemiologiskAfdeling, Århus University	1	106
10.	The Universityof Georgia	1	63

It is important to understand how scholars interact amongst themselves (including associated author attributes such as affiliated institutions and countries). Scholars who collaborate form a network known as "invisible collages," whose studies can help develop research projects (Donthu et al., 2021). Using VOSviewer software, the minimum number of documents of an organization 1 and of the 130 organizations. Only 130 meet the thresholds. The largest set of connected items consists of 19 items (1 cluster).

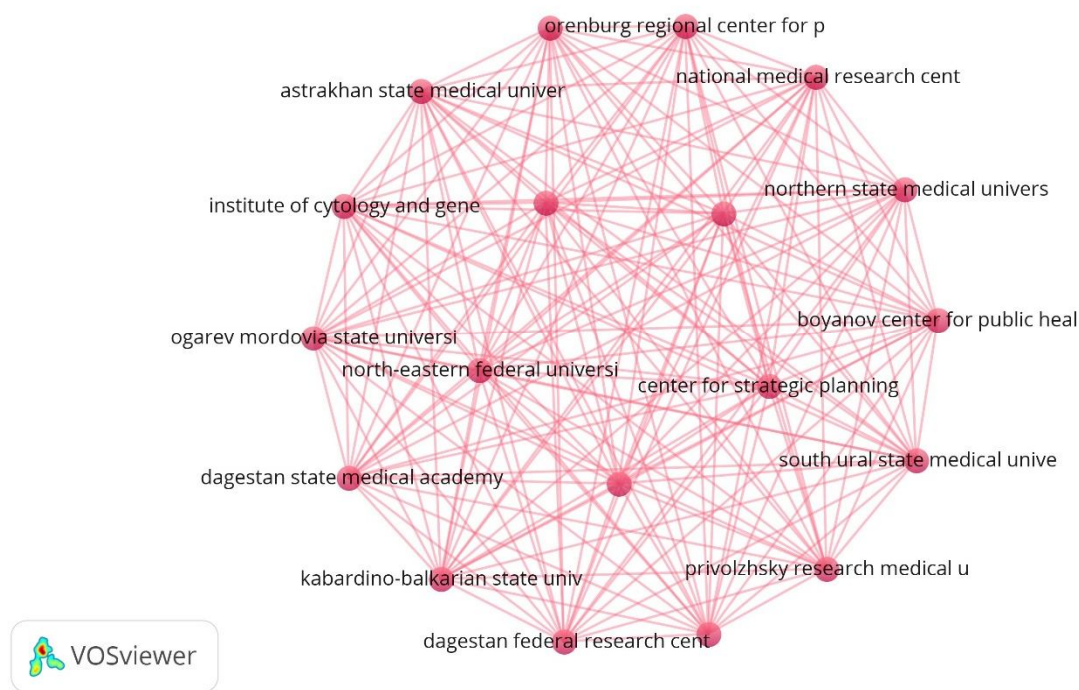


Figure8: Organization-Wise Co-Authorship

4.7: Analysis of Citations:

The analysis of article citations is the most widely used method of assessing the impact of authors, journals, and articles; hence, it identifies the key papers in the research area (Cavalcante et al., 2021). Table 10 analyses the structure of citations in the relevant area of research. The article "Greening the Service Profit Chain: The Impact of Environmental Management Practices," with a total of 260 citations, is the most cited in this area.

Table10: Citations by Articles

Title	Author	Journal	Year	Citations
Greening the service profit chain: The impact of environmental management practices	Kassinis	Production and Operations Management	2003	260
The trickle-down effect of servant leadership on frontline employee service behaviors and performance: A multilevel study of Chinese hotels	Ling Q.	Tourism Management	2016	145
Corporate social responsibility: Perspectives of hotel frontline employees	Park	International Journal of Contemporary Hospitality Management	2014	139
The influence of the employer brand on employee attitudes relevant for service branding: An empirical investigation	Bodderas	Journal of Services Marketing	2011	113
Hedonic/functional congruity between stores and private label brands	Lee D.	Journal of Marketing Theory and Practice	2008	44
AI redefining the hospitality industry	Ruel	Journal of Tourism Futures	2020	40
Do employees' perceptions of diversity management enhance firm's financial performance: the moderating role of board members' diversity level	Lim J.	International Journal of Contemporary Hospitality Management	2023	37
Uncovering the service profit chain in the casino industry	Prentice C.	International Journal of Contemporary Hospitality Management	2017	17
Learning to foresee the effects of social identity complexity and need for social approval on technology brand loyalty	Wu	Technological Forecasting and Social Change	2016	16
Customers' Perceptions of Employee Engagement: Fortifying the Service-Profit Chain	Cain L.	International Journal of Hospitality and Tourism Administration	2018	13

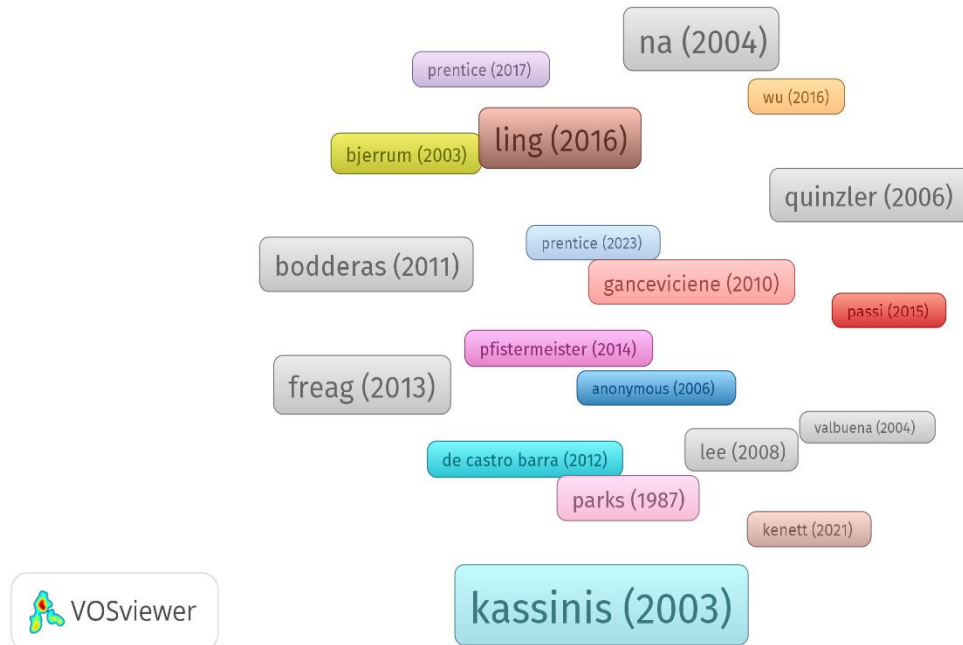


Figure 9: Citations by Documents

4.8. Analysis by Authors:

The analysis of authors focuses on the number of productions and publications made by various authors from different countries. Table 11 displays the top ten authors and their publications. Ganceviciene, R., tied for first place with Prentice, C., and Zouboulis, C.C., each having two publications out of the 57 articles. Abdallah, O.Y. followed with one publication, Abdel-Aziz, S.A. with one publication, Abdel-Salam with one publication, Acosta, W. with eleven publications, Al-Tamimi, W.S. with eleven publications, and Amberti, D. with one publication.

Table 11: Publications by Authors

SL.No.	Author	Publications	% of 57
1.	Ganceviciene, R.	2	3.508
2.	Prentice, C.	2	3.508
3.	Zouboulis, C.C.	2	3.508
4.	Abdallah, O.Y.	1	1.754
5.	Abdel-Aziz, S.A.	1	1.754
6.	Abdel-Salam	1	1.754
7.	Acosta, W.	1	1.754
8.	Al-Tamimi, W.S.	1	1.754
9.	Amberti, D.	1	1.754

10.	Aslyamov, O.R.	1	1.754
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Figure 10 depicts the graphical presentation of authors in terms of number of publications.

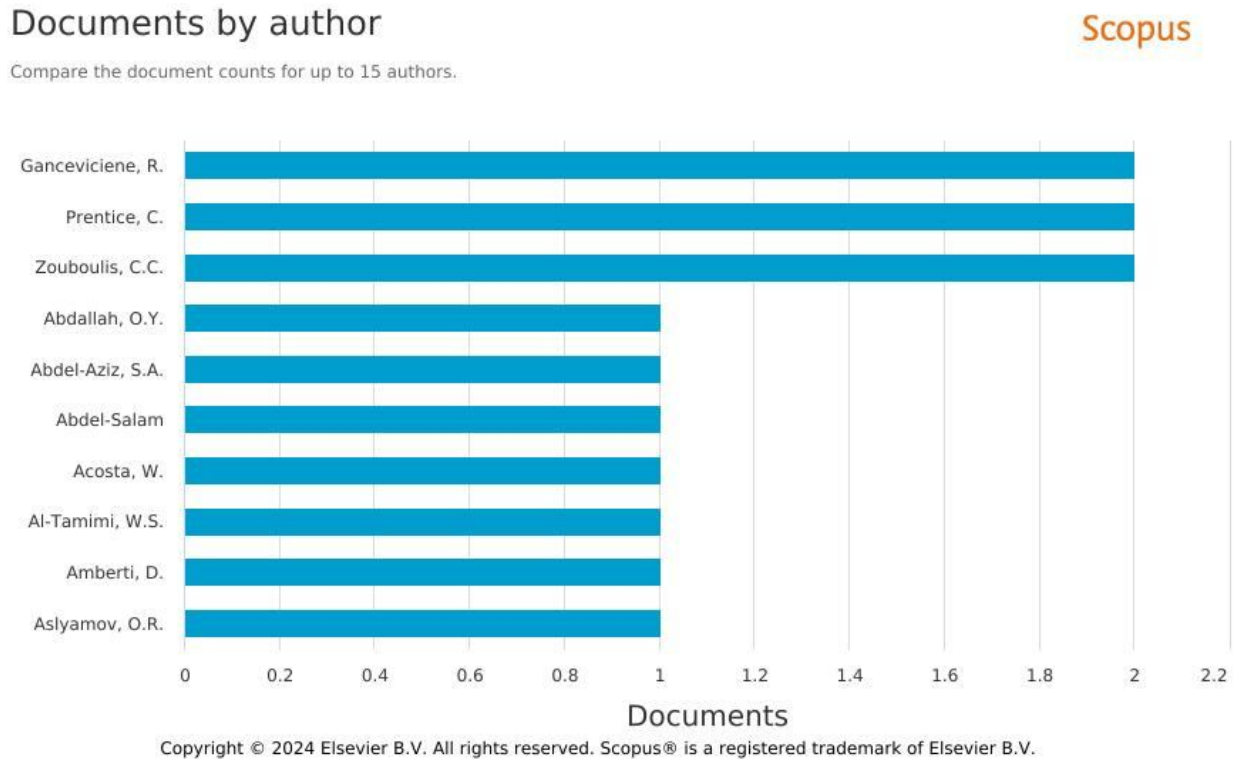


Figure10: Publications by Author

Co-authorship analysis examines the interactions among scholars in a research field. Since co-authorship is a formal form of intellectual collaboration among scholars, With the increasing methodological and theoretical complexity of research, collaborations among scholars have become commonplace. We can see which articles and authors have multiple citations through the analysis of the co-authors. Table 12 shows the top ten authors with the highest citations. Kassinis, George I., ranks first, tied with Soteriou, Andreas C., with 260 citations, followed by Kim, Yong Pyo, Moon, Il, Moon, Kil-Choo, Ling, Qian, and Abdallah, Ossama Y., with 139 citations.

Table12: Number of Citations by Authors

SL.No.	Authors	Citations
1.	Kassinis, George I.	260
2.	Soteriou, Andreas C.	260
3	Kim, Yong Pyo	162
4.	Moon, Il	162
5.	Moon, Kil-Choo	162

6.	Na, Kwangsam	162
7.	Lin, Meizhen	145
8.	Ling, Qian	145
9.	Wu, Xiaoyi	145
10.	Abdallah, Ossama Y.	139

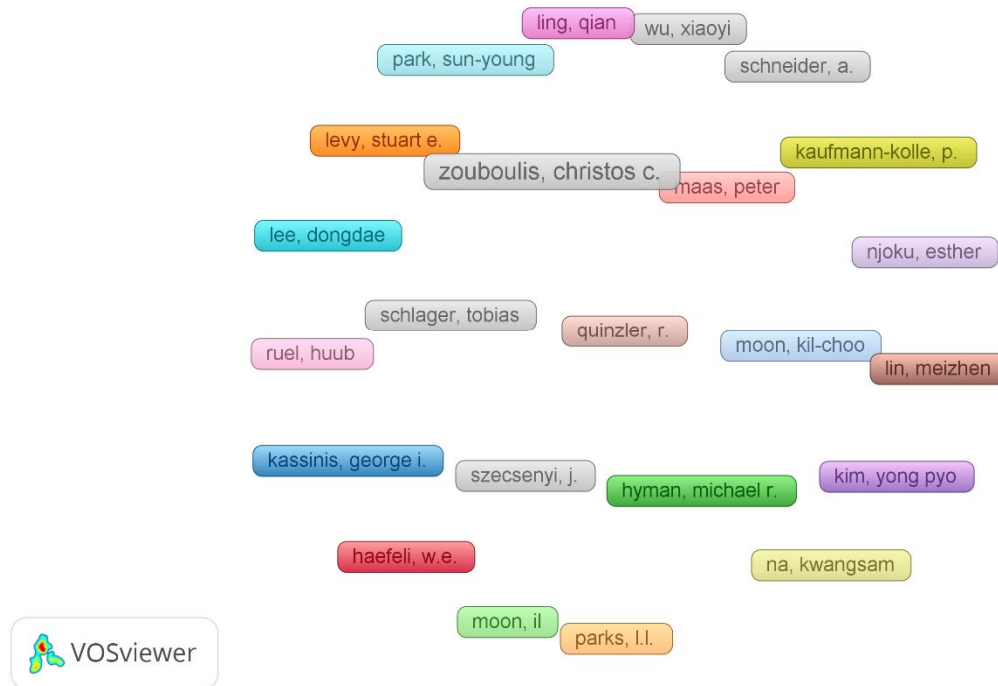


Figure 11: Citations by Author

Bibliographic coupling is a technique for science mapping that operates on the assumption that two publications sharing common references are also similar in their content. The analysis concentrates on the division of publications into thematic clusters based on shared references, and is best used within a specific timeframe (Donthu et al., 2021). This approach can be applied to papers, journals, authors, institutions, and countries. We can identify correlated articles and authors by analyzing their bibliographic coupling. Figure 12 represents the bibliographic coupling of authors, allowing us to observe and measure the intensity of the connection between them. The map uncovers nine well-defined clusters.

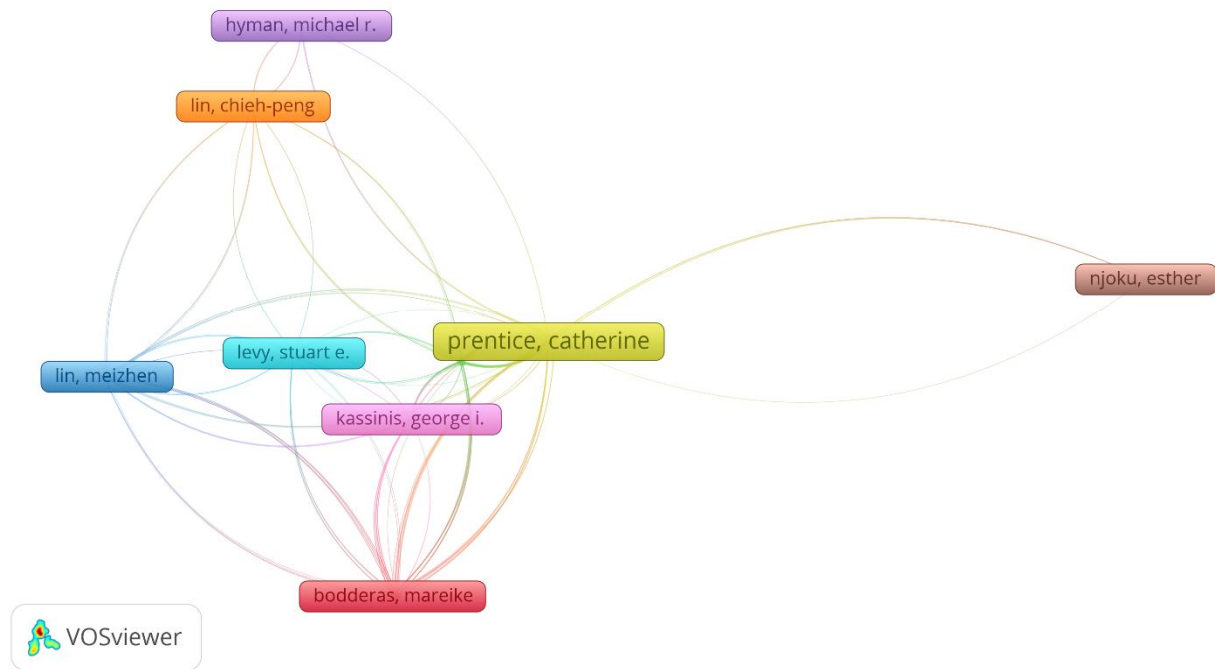


Figure12: Bibliographic Coupling of Authors

5.0.Key Discussion:

The techniques for bibliometric analysis manifest across two categories: (1) performance analysis and (2) science mapping. In essence, performance analysis accounts for the contributions of research constituents, whereas science mapping focuses on the relationships between research constituents(Donthu et al., 2021).

5.1. Performance Analysis:

Performance analysis examines the contributions of research constituents to a given field.In this research studies Ganceviciene, R., emerged as the most prominent author, tied with Prentice, C., and Zouboulis, C.C., who each contributed two publications, accounting for 3.508% of the total. According to the institutional performance, the University of Cyprus, Princeton University, University of Southern California, EwhaWomans University, South China Normal University, and University of San Francisco have significantly contributed to the role of the service profit chain in the hospitality industry, receiving the highest number of citations.In terms of country-wise publications, the USA, China, Australia, Germany, Egypt, and India have the highest contribution to publications on this topic. The United States published 13 articles, equivalent to 22.807% of the total. China published six publications on this topic, accounting for 10.526% of the total, while Australia published four publications, representing 7.017% of the total. But **Bangladesh** has the sixth position in the publications on this topic, with 1 publication, equivalent

to 1.754% of total publications. According to the country-wise citations, the American continent (USA) has achieved the first rank, but the Asian continent (South Korea and China) has secured the second position (highest citations). Germany has been ranked third in Europe. Egypt, located on the African continent, boasts the fourth highest number of citations related to service-profit chains and the hospitality industry. Among the top ten countries, American and European countries have the highest contribution to the citations on this topic. Based on source-wise publications, the International Journal of Contemporary Hospitality Management published the highest number of articles, accounting for three, or 5.263% of the total. "Development in Marketing Science" published the second-highest number of articles, with two, which accounted for 3.508% of the total. Worldwide Hospitality and Tourism Themes published 1 article, equivalent to 1.754% of the total in the service profit chain and hospitality industry. However, in terms of source-wise citations, the International Journal of Hospitality Management has the highest number of citations (42 citations). The two journals with the second highest citation count are the International Journal of Contemporary Hospitality Management, with 37 citations, and the Journal of Marketing, also with 37 citations. Harvard Business Review is in fourth place with 29 citations on this topic.

5.2. Science Mapping:

Science mapping investigates the relationships between research components. The techniques for science mapping include citation analysis, co-citation analysis, bibliographic coupling, co-word analysis, and co-authorship analysis. The total of 958 keywords initially appeared in the study on service-profit chain and hospitality. Among the 57 publications, the most influential keywords are "human" (10 times), "customer satisfaction" (7 times), "service profit chain" (7 times), "customer loyalty," and "service quality" (4 times). In terms of the author's influential keywords, they are: customer satisfaction, service profit chain, customer loyalty, employee performance, and hospitality. Among the 153 authors, George I. Kassinis ranks first, tied with Soteriou, while Andreas C. is associated with 260 citations based on co-authorship affiliation. Bibliographic coupling is ideal for business scholars who want to uncover a broad spectrum of themes and their latest developments. Through the analysis, the nine clusters provide a representation of the research study on the service profit chain and the hospitality industry. The number of citations the service-profit chain and the hospitality industry receive determines their impact. The analysis facilitates the identification of the most influential publications within a research field. The most cited in this area is "Greening the Service Profit Chain: The Impact of Environmental Management Practices," which has a total of 260 citations. And the second most cited document, "The trickle-down effect of servant leadership on frontline employee service behaviours and performance: A multilevel study of Chinese hotels," has 145 citations in the journal Tourism Management. We can state that the influence of service profit chain (SPC) on hospitality industry represents one of the most important challenges facing the industry's sustainable growth, which is crucial for a nation's economic progress.

6.0. Conclusions:

The service-profit chain helps managers target new investments to develop service and satisfaction levels for maximum competitive impact, widening the gap between service leaders

and their merely good competitors. It has visualised the importance of searching for a metric of service-profit chain performance by highlighting the importance and role of employee satisfaction, customer perceptions, and mainly demonstrating the centrality of end customers and tourists in the adoption of service-profit chain and hospitality actions. Researchers are processing the perceived satisfaction of the guest's experience, which contributes to brand personality and the value of a tourist destination, for future research projects. Therefore, we can adapt the service-profit chain concept to specific sectors of the hospitality industry, including hotels, service quality, employee performance, and hotel equipment management. At the same time, researchers identified the role of stakeholders in service-profit chain and hospitality research, aiming to understand their diverse perspectives, their involvement, and their connection to service-profit chain issues. Future research suggests addressing service-profit chain variables in specific bibliometric studies and examining their correlation with target marketing variables in academic literature. Another suggestion for future bibliometric analyses could be to address the potential decline in academic research in the tourism field in 2021 and 2022, which could lead to a decrease in hospitality activity due to the insufficient number of tourists worldwide. The validity of the results from 2024 extends to the month of May, when the data collection took place. In order to provide a complete overview of scientific production in 2024, future research may cover the whole year. Bibliometric analysis relies on technical decisions, such as choosing language and investigation fields, which may exclude relevant papers from the analysis. Another limitation lies in the decision to exclusively use the SCOPUS database, despite consulting other databases. A multisource method for comparing different databases could provide a broad overview of the investigation in this field of service-profit chains and the hospitality industry, as well as a better understanding of the main differences and implications of using different databases. A bibliometric approach primarily focuses on descriptive analysis, potentially lacking content analysis to enhance explanation capacity and provide a more in-depth understanding of the results and implications.

7.0 Practical Implications for Hospitality Industry:

Hospitality professionals should take note of the findings of this study. The tourism destinations and hospitality businesses, practitioners, academicians as well as researchers can now make a distinctive worldwide impression thanks to the economic prosperity that has propelled the region's ascent. The application of the service profit chain (SPC) in this study considers the moving center of gravity of modern hospitality and tourism toward businesses. For every organization, especially in the service industry, maintaining a client base and drawing in new ones depend heavily on customer pleasure and loyalty. We anticipate that hotel managers will develop and execute a marketing plan that will generate, sustain, and improve customer pleasure, thereby cultivating strong customer loyalty to their hotel services, given the fierce and competitive competition that exists among all hotel firms. Indonesia is still attracting an increasing number of visitors, both domestically and internationally, despite its present economic difficulties. Corresponding to this, there is an increasing need for hotel services. The goal of creating a long-term competitive edge has led Malaysian hotels to concentrate more and more on quality enhancement. The elements influencing Malaysian hotel guests' views of service quality were not well-documented in the past. This research has increased in popularity since service

quality in the hospitality industry is becoming more and more important. In the highly competitive market, this is essential for gaining a lasting competitive edge via client happiness and loyalty. Therefore, it is believed that in the hospitality sector, the direct and indirect links among customer pleasure, loyalty, and service quality are crucial success elements. Hotels always have an advantage in the hospitality sector when they provide exceptional service and win over consumers' trust. United States, Australia, Germany, Switzerland and United Kingdom are the leading users of service profit chain on the hospitality industry in the world.

The topic of how much the marketing function interacts with the production and HRM functions is pertinent since both service production and marketing require human connection between producer and customer. A specific area of study examines the connection between consumer and staff happiness. In the hotel sector, production, HRM, and marketing managers work together to drive employee motivation. The link between customer and staff happiness and how both affect profitability is examined by the influence of the service profit chain on the hotel sector. In the hospitality sector, China, India, Malaysia, Indonesia, Hong Kong, Thailand, and South Korea are the leading users of the service profit chain in Asia. By applying the service profit chain model to the tourist and hospitality industries, several Asian nations are reaping enormous riches. In summary, there is a good association between consumer and staff happiness, and both have a beneficial impact on profitability. Employee loyalty and delivery of the services consumers want from the business lead to a greater return on employee investment when satisfied workers are happy. Increased profitability and customer happiness can result from controlling staff quality and raising employee satisfaction. Because staff happiness is positively correlated with consumer satisfaction, the hospitality business in Asia has developed a sustainable competitive edge.

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