

Unveiling Service Quality Trends in Public Sector Banks: A Bibliometric Study Leveraging Scopus Database

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Abstract: *This bibliometric study examines research trends in Service Quality in Public Sector Banks from 2003 to 2023. This study is significant for its capacity to combine extensive academic work, revealing trends, identifying major contributors, and emphasizing the increasing emphasis of research in the banking industry. The research utilizes the Scopus database to delineate annual trends, identify leading contributing nations, noteworthy journals, influential authors, significant connections, and investigate co-authorship patterns. The survey indicates an increasing interest in the issue over the last decade, with nations like India, Malaysia, and Pakistan demonstrating significant contributions. A notable increase in publications has been seen in recent years, indicating a growing academic emphasis on the subject. The research examines average citation patterns, identifying the most-cited authors and publications, therefore emphasizing significant contributions in the area. The study provides a thorough quantitative analysis while acknowledging its limitations, such as database limits and possible bias from restricted keyword searches. This study offers significant insights for academics and practitioners aiming to comprehend the evolution of service quality research in public sector banking; nonetheless, more qualitative research is advised for a more profound comprehension of contextual elements*

Keywords: Service Quality, Public Sector, Banks, Research Trends, Exponential Growth Model

I. INTRODUCTION

The backbone of the Indian economy mainly lies in its services sector, which has witnessed considerable growth with a humongous US\$ 83.14 billion Foreign Direct Investment from April 2000 to June 2020. Service sector has evolved as one of the main employment-generating industries, accounting for nearly 32% of the whole employment scenario (ILO, 2021; Services Industry in India, 2021; Shetty, D. K., et.al 2022). In this services framework, the banking sector is of prime importance because it contributes 7.7% to India's gross domestic product (GDP) (Singh, K. 2024). The fast track growth trajectories of the new economies have significantly contributed to the evolution of the banking sector. This process is further accelerated by the changes in lifestyles, technology, and income levels (G.Ramu, & V.Anbalagan. 2017). Economic development in the modern world is closely associated with the effective working of the banking system, particularly by channelling savings into productive sectors of the economy (Agrawal, Mittal, Gupta, 2016). The dynamic market conditions and the increased competition in banking have raised the challenges for retaining and satisfying customers. The key lies in developing high-technology applications and quality services, especially for public sector banks (Prakash, V., & Singh, S. P. 2023). The strategy tool that will emerge strongly to influence services toward raising the perception level of its customers and hence its perceived satisfaction is service quality - highly critical competitive advantage in such a highly dynamic environment whereby the consumers' expectations go on increasing with every move (Parasuraman et al., 1985).

The individual analysis of the 'service' and 'quality' components has provided an advanced conceptual understanding of service quality (Kiran & Singh, 2016). Sustainable research work has established that service quality maintains the competitive advantage (Murugiah & Akgam, 2015) and enables the survival of the organizations through customer



satisfaction (Khafafa & Shafii, 2013c). As service quality optimizes in the banking sector, which operates on demand-driven models (Mishkin, 2001), market share growth and profitability enhancement become paramount.

In light of the increasing scope of research avenues in Service quality in Public Sector Banks, Bibliometric Analysis has become an essential instrument for measuring and evaluating the burgeoning trend of this phenomena and its associated issues. Bibliometric Analysis has surged in popularity within the study domain, becoming as a favoured technique for academics investigating several subjects (Tran N. Sa & Ha T. T. Dao, 2023). This approach provides a rigorous and methodical assessment, aiding academics in comprehending the evolution of literature within a certain domain, such as Service Quality. Bibliometric Analysis enables researchers to get precise information on a study subject, delineate its attributes, and monitor the developmental trajectory of scientific material within that domain (Amirbagheri et al., 2018). It serves as a potent instrument for scholars to examine disciplinary hotspots and trends across diverse fields. (Donthu et al. 2022) used Bibliometric to evaluate the impact and contributions of the Journal of Business Research (JBR) over a span of 50 years. (Dwekat et al.2020) performed a Bibliometric analysis using VOSviewer (Khan, M. H., & Muktar, S. N. 2020) to investigate the correlations among board characteristics.

Furthermore, the study applied Exponential Growth Model (EGM) for examining tentative research article publications for the period 2025 to 2027, which will provide significant insights into forthcoming research directions, assisting academics and practitioners in anticipating and addressing emerging service quality concerns in the public banking sector. This extensive bibliometric study will enhance the area by delineating conceptual frameworks, pinpointing significant works and authors, and emphasizing nascent research horizons in service quality within public sector banks. This research is essential due to the sector's significant impact on economic growth and the growing focus on customer-oriented service delivery in public institutions.

II. SIGNIFICANCE OF STUDY AND LITERATURE REVIEW

Service quality boosts a company's bottom line and gives it a competitive edge. This is why perceived service surpasses consumer expectations (Caruana, 2002; Chumpitaz, 2004). It is the discrepancy between a customer's pre-service expectations and their post-service views (Asubonteng et al., 1996). Service quality is key to competitive advantage and customer satisfaction (Zeithaml et al. 2000). Companies must be able to create a strong service character through corporate correspondence systems because the more positive the service personality is seen by customers, the better their opinion of the service technique. Customer perception of service quality shapes their perception of it. Some studies demonstrate that service quality affects reliability (McKecnie, et al., 2011). Service quality can be understood as the correlation between the company's presentation and client's desires. When disconfirmation is negative, disappointment is caused; when it is sure, consumer satisfaction is created, increasing customer loyalty. According to Lewis & Booms (1983), service quality is determined by comparing a provider's performance to customer expectations. They say "service quality is a measure of how well the service level delivered matches customer expectations." Delivering exceptional service requires consistently meeting consumer expectations."

Banking sector growth and development rely on customer service quality, like any other service company. The Indian banking system has 20 public banks. Public-sector banks have 92,708 offices nationwide as of March 2020. In FY19, public sector banks contributed US\$ 1,038.76 billion to India's banking sector assets of US\$ 1,350.29 (India Brand Equity Foundation, 2021; Shetty, D. K., et al. 2022). Public sector banks dominate the banking business, thus it's crucial to identify and enhance their service quality to retain customers (Shetty, D. K., et al. 2022). Hence, Service Quality research holds a high value for public sector banks since it directly defines the customer satisfaction and loyalty toward the banks, hence determining their competitive advantage and efficiency. In an increasingly customer-centric banking environment, such service quality factors have emerged as imperative in order to sustain growth and customer base (Al-Tit, 2015).

A bibliometric study, particularly in the context of trends of research for service quality by public sector banks becomes significant because it is very important for the proper structuring and systematic presentation of existing literature and identifies themes and patterns of what kind of work is there on research, with a potential space where some gap remains due to less coverage in relation to existing work on those subjects, hence providing an essential view as to how such a field has shaped throughout (Donthu, Kumar, & Pattnaik, 2020). The researchers may use bibliometric tools to identify



the important authors, influential journals, and dominant topics that have surfaced in the discussion of service quality within public sector banking. The bibliometric study on service quality in public sector banks has important implications both for academia and industry. It acts as a guide for future research, not only by indicating existing gaps but also by emerging trends, especially in the context of digital banking. In addition, the insights can be translated into strategic decisions for practitioners, thus making service improvement initiatives and training programs even more effective. This will encourage interdisciplinary research collaboration to solve complex service quality problems. At the end, it will be in the best interest of the banking industry to have improved customer satisfaction and loyalty.

III. METHODS AND APPROACH

In marketing research, Bibliometric Analysis is used to analyze the evolving notion of Service Quality in Public Sector Banks. The widespread use of Bibliometric Analysis is due to two main factors: (1) the development and accessibility of visual data representation software like Biblioshiny, Gephi, Leximancer, and VOSviewer, and (2) the transfer of bibliometric methodologies from information science to business research. Scientific databases like Scopus and Web of Science highlight the relevance of Bibliometric Analysis in managing enormous datasets and producing substantial research results. Many literature studies have used bibliometric methods to apply this strategy (Khan & Muktar, 2020). These Scopus keywords from 2013 to 2023 will be examined in MS Excel, Biblioshiny, and VOSviewer. Data was sourced from Scopus owing of its correctness and trustworthiness. In transdisciplinary bibliometric research, Scopus is the most popular because to its comprehensive peer-reviewed content (López-Illescas et al., 2008; Sánchez, 2017). Scopus of Elsevier is the finest source for trustworthy and comprehensive statistical information with over 69 million entries in different sectors (Salmerón-Manzano et al., 2017; Briones-Bitar, 2020). Researchers often utilize Scopus to do Bibliometric Analysis, hence it will be the most used database in this study. Quantification, analysis of often-cited authors, cooperation networks, and coordination across nations, institutions, keywords, and other theme aspects are done in MS Excel, VOSviewer, and Biblioshiny (Hoppen & de Souza Vanz, 2016). It visualizes geographical networks with comprehensive co-authorship and co-occurrence patterns using cluster analysis on matrices (Van Eck & Waltman, 2009; Khan & Muktar, 2020). Based on recent publishing patterns, exponential growth models indicate high-growth research fields for 2024–2027, allowing academics to follow and target field-specific advancements for planning and international cooperation. Understanding these processes is crucial to shaping the scientific research environment across fields (Hanif et al., 2022; Musa, 2020).

IV. FINDINGS AND INTERPRETATIONS

4.1 Data retrieval process

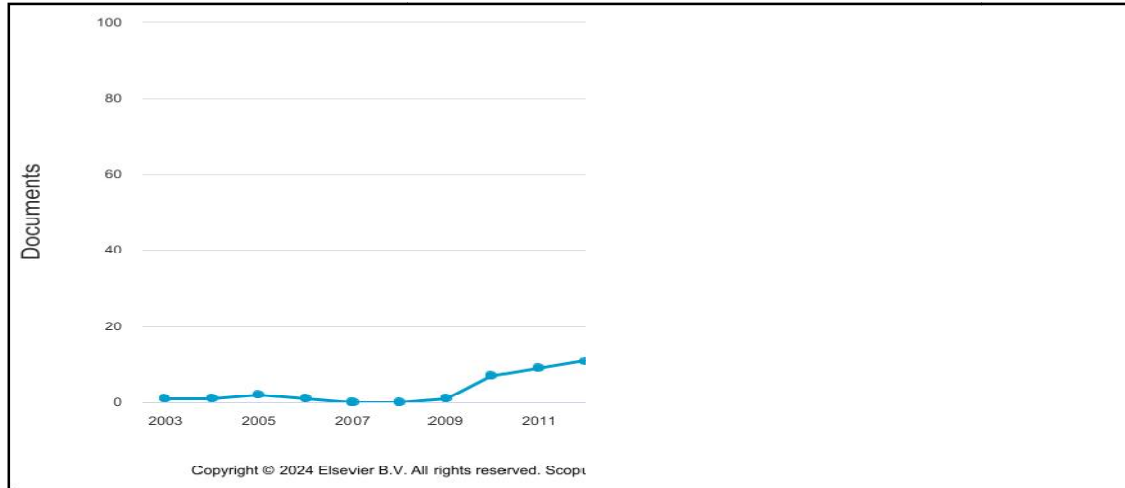
| Sl. No. | Syntax | Number of documents |
|---------|--|---------------------|
| 1 | TITLE-ABS-KEY ("Service Quality" AND "Public Sector Banks") | 749 |
| 2 | TITLE-ABS-KEY ("Service Quality" AND "Public Sector Banks") AND PUBYEAR > 2002 AND PUBYEAR < 2024 | 647 |
| 3 | TITLE-ABS-KEY ("Service Quality" AND "Public Sector Banks") AND PUBYEAR > 2002 AND PUBYEAR < 2024 AND (LIMIT- (LANGUAGE , "English") | 638 |
| 4 | TITLE-ABS-KEY ("Service Quality" AND "Public Sector Banks") AND PUBYEAR > 2002 AND PUBYEAR < 2024 AND (LIMIT- (LANGUAGE , "English") AND (PUBSTAGE , "final") | 527 |

Source: *Scopus Data Base, Inclusion & Exclusion Criteria: Author's own*

The Data retrieval process involved four steps. Initially, 2 keywords were used : TITLE-ABS-KEY ("Service Quality" AND "Public Sector Banks"), that yielded 749 documents. Accordingly, the analysis covered 647 research papers published between 2003 and 2023, a period of twenty years . The search excluded other language type and procured

only ENGLISH version documents, that resulted in 638 documents. Lastly, Study included only those publications with are in final stage, that fetched final 527 research papers.

Figure. 1 Trends of Research Publication from 2003 to 2023



Source: Scopus Data Base Search

The Bibliometric Analysis of the research trend in Service Quality in Public Sector Banks revealed that publication volumes fluctuated over the years, which showed significant trends and shifts in focus. In fact, the most notable increase in the number of publications is observed in 2023 with a total of 79 research papers, the highest output for the two-decade span of the study. This trend could most probably be a direct consequence of mounting demands for the upgrading of service quality because of the growing emergence of customer needs and competitive intensity, particularly as a reaction to digitalization in banking. There was a second peak year in 2019 with 75 publications. This growth may have been catalysed by the growing awareness among researchers and practitioners about the critical role that service quality plays in fostering customer satisfaction and loyalty in an increasingly competitive landscape. The trend suggests that banks were probably under regulatory pressure and customers' voice, to respond thus leading to a phenomenon of increased scholarly activity to meet such concerns. On the other hand, some years are strikingly more restrained, like 2009 and 2010, that only reported one and seven publications, respectively. Such downturns may indicate that research interest has waned and perhaps temporarily abandoned this topic for more newly exciting topics in banking or finance. The years 2012 and 2015 also show modest levels of publication, which may further be indicative of the research community's search for new themes or perhaps the intensity of service quality relevance was relatively lesser during those periods.

Table 4.2 Top 10 Countries Research Contribution

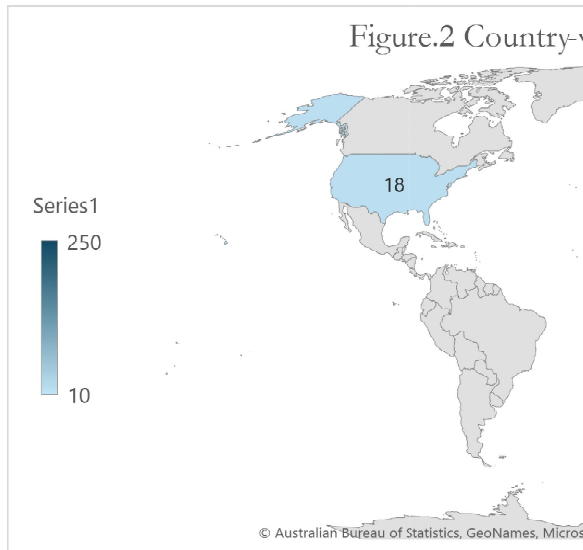
| India | Malaysia | Pakistan | China | US | Vietnam | Bangladesh | Indonesia | S. Arabia | Ghana |
|-------|----------|----------|-------|----|---------|------------|-----------|-----------|-------|
| 250 | 48 | 43 | 33 | 18 | 17 | 16 | 16 | 12 | 10 |

Source: Scopus Data Base Search/ Heat Map- Excel

Table 4.2 shed lights on the analysis of research contribution made by top 10 countries. It reveals the concentration of scholarly output around Service Quality in Public Sector Banks; here India is significantly leading the chart with 250 publications, India stands atop the list and is therefore most focused in its research interest and academic investment in public banking sectors to better understand and improve service quality. This is consistent with India's large public banking sector where service quality is a prime determinant for customer satisfaction and competitive positioning. Distantly, Malaysia follows with 48 publications, which indicates moderate but dedicated research engagement. The next ranks involve Pakistan, China, and the United States, respectively, at 43, 33, and 18, showing a diversified yet more minor scale of research interest. This spread reflects the variances that exist across regions in research focus, possibly due to the differences in the peculiar characteristics of each country's public banking framework, regulatory



environments, and customer expectations. Below in rank, Vietnam, Bangladesh, and Indonesia with between 16 and 17 articles illustrate developing academic interest toward service quality in public banks of Southeast Asia.



That reflects regional interest toward service quality in financial services from these nations as they switch to more modern systems and try to have higher quality banking. Accordingly, Saudi Arabia and Ghana with 12 and 10 publications, respectively, complete the list of countries that show early research activity. Though lower by comparative standards, both countries in this list point toward an increasing research interest in improving the public banking service quality of the regions. Overall, the geographical dispersion of research publication reflects a blend of high-output nations alongside emerging contributors. These indicate the fact that this area is recognized as something critically important by both developed economies as well as developing ones, which tends to influence the levels of investment in the banking industry, the maturity of these sectors, and regional capacity for conducting research. In this sense, Asian countries have an especially great deal to say about how the region will take the lead in service quality challenges confronting public banking and other macroeconomic imperatives.

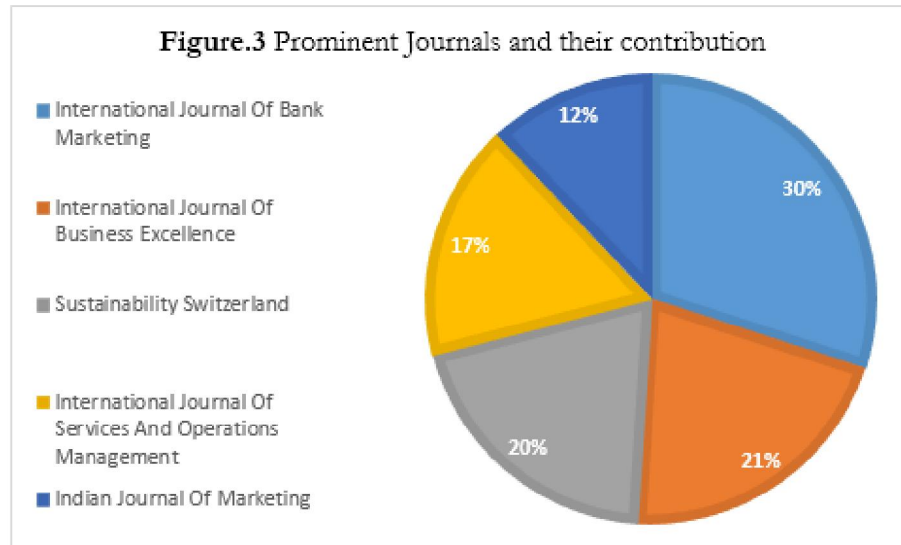
Table 4.3 Prominent Journals and their contribution

| Sources | Articles | % of Contribution |
|---|----------|-------------------|
| International Journal of Bank Marketing | 23 | 30% |
| International Journal of Business Excellence | 16 | 21% |
| Sustainability Switzerland | 15 | 20% |
| International Journal of Services and Operations Management | 15 | 17% |
| Indian Journal of Marketing | 9 | 12% |

Source: Scopus Data Base Search

Table 4.3 indicate the top five prominent journals that contributed towards Service Quality research publication. International Journal of Bank Marketing leads with 23 articles, which constitutes 30% of the total contributions in top five journals. This journal is very relevant to the study on service quality in banking since it focuses on customer satisfaction, marketing strategies, and quality improvements. While, the International Journal of Business Excellence has contributed 16 articles or 21%. It has put much focus on business performance and standards on quality operations because it sees importance in its relation to discussion on service quality, most especially in the banking sector where service excellence stands out as a competitive advantage which needs to be sustained. One of the esteemed journals

Sustainability from Switzerland with 15 articles which show an emerging interdisciplinary concern on sustainable banking practices, offering quality service.



This can be seen from the kind of contributions presented in Sustainability Switzerland, demonstrating an interest in sustainable development in banks. This takes the essence further toward giving the service the social and environmental dimensions needed in this quality analysis. Accordingly, contributing 15 articles (17%) to the International Journal of Services and Operations Management also focuses on efficiency and service standards in operations. Such work in this journal promotes a better understanding of service quality, including the operational base it is founded upon: namely, how internal public sector bank processes impact external customers. Lastly, the Indian Journal of Marketing publishes 9 articles (12%) in the marketing strategy and customer-oriented practices, as the role emphasizes service quality specifically in the context of the Indian public sector banks with respect to customer engagement and marketing practices to upgrade the service standards. Overall, the top five journals thus constitute a well-rounded endeavor towards studying service quality of public sector banks, both through marketing and sustainability streams of thought and operational management with regional input. In publishing sources, this range captures the breadth of work and its multifaceted scholarly commitment towards advancing dimensions of service quality in public sector banking.

Table 4.4 Notable Authors and their contribution

| Authors | Articles | Articles Fractionalized |
|--------------|----------|-------------------------|
| Jaiswal, D. | 5 | 1.39 |
| Kant, R. | 5 | 1.18 |
| Paul, J. | 5 | 1.05 |
| Dhir, S. | 4 | 0.89 |
| Gandhi, S.K. | 4 | 0.81 |
| Gupta, A. | 4 | 1.25 |
| Sachdeva, A. | 4 | 0.99 |
| Ahmad, A. | 3 | 2.18 |
| Bose, S.K. | 3 | 0.91 |
| Burdeos, A. | 3 | 1.44 |

Source: Scopus Data Base Search



Table 4.4 focus on the notable authors by number of research contributions towards Service Quality in Public Sector Banks with total articles and fractionalized contribution. The authors with five contributions to the research are Jaiswal, D., Kant, R., and Paul, J. Jaiswal's fractional contribution is 1.39, which indicates he is highly contributing to multi-authored papers, and so are Kant and Paul, with their respective fractional contributions of 1.18 and 1.05. This depicts their leading roles in taking the discussion on service quality forward. Four authors have written articles, and among them is Dhir, S. Gandhi, S.K.; Gupta, A.; Sachdeva, A; Gupta has the highest fractionized contribution of 1.25. The fact that Gupta frequently works together on influential studies in this discipline is indicated by the above value. Similarly, contributions of Dhir and Sachdeva are found within the range of or almost close to 0.9, which suggests good contributions to the collaborative work environment in this area. Ahmad, A. is very impressive with a fraction contribution of 2.18 even though he has three articles. The high value of the fraction indicates independent contribution or leadership contribution in each publication, which clearly shows Ahmad's influence in research work concerning the service quality of public sector banks. Finally, Bose, S.K. and Burdeos, A., with three articles each, and fractionalized contributions of 0.91 and 1.44 respectively, also show significant participation, especially the latter whose higher fractionalized score indicates notable input in collaboration works. Overall, the range of contributions from these authors reflects a strong collaborative network, where some researchers, such as Ahmad, play leading roles, while others work within co-authorship frameworks to push forward knowledge in public banking service quality. These contributions collectively strengthen the field, reflecting diverse perspectives and expertise dedicated to enhancing service standards in public sector banks.

Table 4.5 Top 10 Most Cited Authors

| Authors | Citations | Year |
|---------------------|-----------|------|
| pakurár (2019) | 212 | 2019 |
| rahi (2019) | 201 | 2019 |
| shahid iqbal (2018) | 131 | 2018 |
| jyoti (2015) | 114 | 2015 |
| garg (2017) | 114 | 2017 |
| zameer (2015) | 106 | 2015 |
| turkyilmaz (2011) | 103 | 2011 |
| paul (2016) | 102 | 2016 |
| kant (2017) | 97 | 2017 |
| van (2020) | 88 | 2020 |

Source: Scopus Data Base Search

Table 4.5 has analysis of most-cited authors on Service Quality in Public Sector Banks. The authors made great influence on the work conducted here. Pakurár received the highest citation, at 212 citations; this study appeared in 2019. High citations indicate that works are scientifically sound and relevant to current scenario. Such an impact might has occurred based on how the author established the research frameworks and methodologies to solve specific needs in the proposed research domain. Further, Rahi (2019) with 201 citations, whose work from 2019 has achieved rapid recognition, pointing to its crucial role in pushing recent discourse on service quality. Since this research was published in tandem with Pakurár's, it can be inferred that 2019 was a critical year for novel contributions in this field. Accordingly, Shahid Iqbal, with 131 citations in 2018, and Jyoti, with 114 citations in 2015, are two significant, long-term contributions; Iqbal's research was a highly cited one since 2018. Jyoti and Garg, both with 114 citations, show studies that had an impact and were relevant for several years, implying that their work have been the foundational or models often referred to by researchers. In addition, Zameer (2015) and Turkyilmaz (2011) had 106 and 103 citations, respectively. Turkyilmaz, though published in 2011, is still being used, suggesting that some research in this area have



long-term utility due to the theories or frameworks espoused. Long-term value makes Turkyilmaz a seminal reference for more recent studies on public sector bank service quality. Furthermore, Paul (2016) with 102 references and Kant (2017) with 97 references highlight that the studies around the middle of 2010 have importance, suggesting that studies in this particular time period remain a foundational base for more contemporary academic discourse. The last author referenced is Van (2020), who cited 88 times. This shows there is recent growing interest in the works of this last author and reflects how relatively new ideas are starting to inform more recent research into public sector service quality. These authors together represent diversified influential contributions across nearly ten years from 2011 to 2020. A high citation count reflects both the academic importance of every study and the changing trend of research interest in public sector banking service quality over time. The works outline the critical underpinnings, methodologies, and theories guiding and supporting research paths that are currently taken and in the future direction of this field.

Table 4.6 Average Citations per Year

| Year | N | MeanTCperArt* | MeanTCperYear** | CitableYears |
|------|----|---------------|-----------------|--------------|
| 2003 | 1 | 189.30 | 9.96 | 19 |
| 2004 | 1 | 171.11 | 9.50 | 18 |
| 2005 | 2 | 156.25 | 9.19 | 17 |
| 2006 | 1 | 161.10 | 10.06 | 16 |
| 2009 | 1 | 159.21 | 10.61 | 15 |
| 2010 | 7 | 171.10 | 12.22 | 14 |
| 2011 | 9 | 149.10 | 11.46 | 13 |
| 2012 | 11 | 141.00 | 11.75 | 12 |
| 2013 | 22 | 109.10 | 9.91 | 11 |
| 2014 | 13 | 98.22 | 9.98 | 10 |
| 2015 | 26 | 91.26 | 10.14 | 09 |
| 2016 | 22 | 89.28 | 11.16 | 08 |
| 2017 | 43 | 71.10 | 10.15 | 07 |
| 2018 | 38 | 56.11 | 9.35 | 06 |
| 2019 | 75 | 32.08 | 6.41 | 05 |
| 2020 | 60 | 24.04 | 6.01 | 04 |
| 2021 | 53 | 19.06 | 6.35 | 03 |
| 2022 | 63 | 8.10 | 4.05 | 02 |
| 2023 | 79 | 5.56 | 5.56 | 01 |

Source: Scopus Data Base Search (Biblioshiny)/ * denotes Mean total Citation /Articles **Mean total Citation/year.

Note- MTCPA denotes Mean total Citation/Articles & MTCPY denotes Mean total Citation/year

Table 4.6 is the segmentation of the average number of citations per year in studies regarding Service Quality in Public Sector Banks, portraying the pattern of the number of citations and what it represents after each year. One can find an obvious declining mean number of total citations per paper and per annum over time. This seems to imply that levels of impacts and also acknowledgments for papers published are actually shifting over the years. The earlier years, such as 2003 and 2004, have considerably higher average citations per article: 189.30 and 171.11, respectively, suggesting foundational works in this field had much influence and were frequently cited. The average total citations per year for

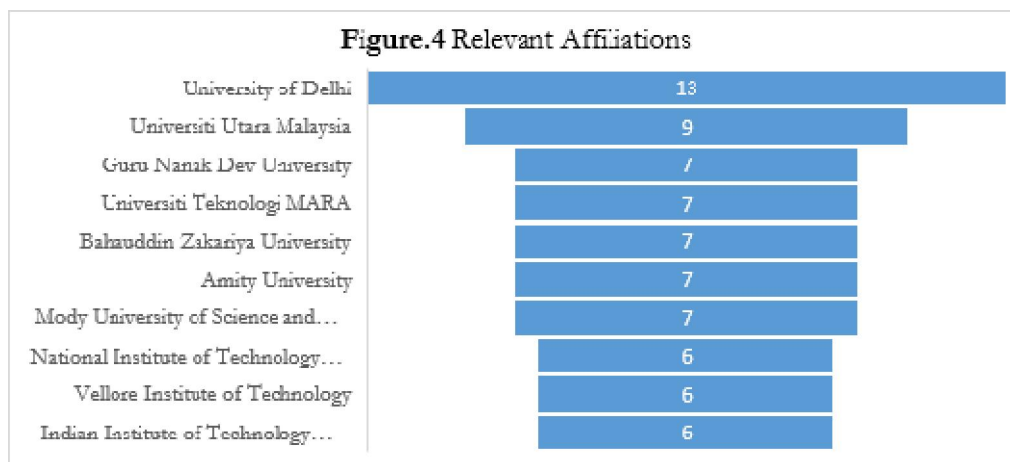


these years are also robust - 9.96 and 9.50. The peak in the timeline is at 2010, which clearly points out that the average number of total citations per article is 171.10 arising from seven publications, proving there was impact during the years. From 2011 onwards, a constant diminution in citations suggests reduction in novelty or applicable values of research outputs the later years have. For instance, by 2019, the mean total citations per article had drastically declined to 32.08 from 75 publications, showing a massive decline in the average rate of citations against the articles published. The decline continues up to 2023 where the average citations per article had fallen to an all-time low of 5.56. This decline can be interpreted in different ways; it could mean saturation in themes or topics for research or probably new areas that one had to focus on. Or maybe it was that it simply meant that the published facts were gradually becoming outdated with new perspectives coming into focus. In terms of years that are citable, the analysis shows that there are far more years which are citable for the older articles, with, for example, 2003 providing 19 years that are citable, and more recent publications, such as those from 2021, show that years are now dropping to a single year for the 2023 cohort. It is therefore a growing issue for contemporary research to establish quick foundational relevance, while trying to maintain citation impact within an evolving field. Overarching the data, there's a dynamic landscape of contribution to academia that shows there's a periodic influence for research-based publications in service quality by public sector banks within time. The marked reductions in citations, especially about the current articles, present a case of ongoing innovations and topicality in conducting more research in this area towards keeping it interesting and of continued academic influence.

Table 4.7 Relevant Affiliations

| Affiliation | Articles |
|--|----------|
| University of Delhi | 13 |
| Universiti Utara Malaysia | 9 |
| Guru Nanak Dev University | 7 |
| Universiti Teknologi MARA | 7 |
| Bahauddin Zakariya University | 7 |
| Amity University | 7 |
| Mody University of Science and Technology | 7 |
| National Institute of Technology Tiruchirappalli | 6 |
| Vellore Institute of Technology | 6 |
| Indian Institute of Technology Roorkee | 6 |

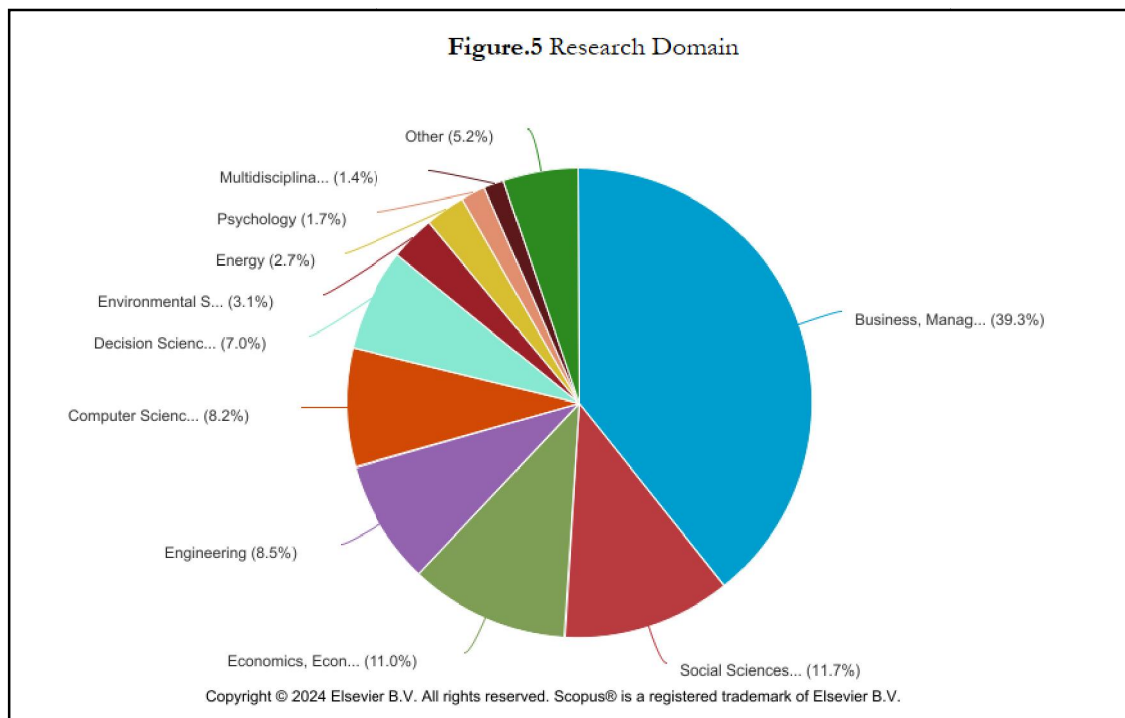
Source: Scopus Data Base Search



Top 10 Academic affiliations that support research publication on Service Quality of Public Sector Banks are presented in the Table 4.7. With strong presence of study at universities/institutions top academic affiliation includes The University of Delhi -13- which is more like an epicenter, producing large-scale research contributions on service quality in Indian public sector banking. With this quantity of output also points out to the interest area in concentrated focus by some of these researchers affiliated at such university. Universiti Utara Malaysia is second with nine articles, which means a massive contribution from Malaysia regarding this area of research. Closely following are Guru Nanak Dev University, Universiti Teknologi MARA, Bahauddin Zakariya University, Amity University, and Mody University of Science and Technology, each with seven articles. The multi-fold number of institutions from India and Malaysia reveals an interesting regional level and the encouragement of an academic community environment that fosters research about banking service quality. Here, these affiliations play a crucial role in building the discourse. National Institute of Technology Tiruchirappalli, Vellore Institute of Technology, and the Indian Institute of Technology Roorkee with six articles each concluded the list. Their inclusion pointed to the interdisciplinary nature of research on service quality, since these institutions have traditionally focused on technical and managerial studies. This distribution of affiliations suggests that the study of service quality in public sector banks is not only of great interest to a handful of institutions but also a topic of wide-ranging academic engagement across different regions and fields, especially within Asia. Here are the affiliations, which played an important role in extending the frontiers of this research, providing much to the literature, and influencing banking service standards development.

4.2 Domain Wise Research Publications

The subject area analysis in the figure.5 reflects a wide range of disciplines that are conducting research on Service Quality in Public Sector Banks, thereby indicating the multidisciplinary nature and diversified appeal of the research. Business, Management, and Accounting are the most dominant disciplines with 363 articles, which reflect a strong focus on management and operational perspectives in banking. This focus indicates the strategic importance of service



quality in improving business performance and customer satisfaction in the banking sector. Social Sciences and Economics, followed by 108 and Econometrics with 102 pieces of articles are the next group, showing their



applicability and the way, sociological analyses and economics can be presented in relation to service quality. Those articles from both fields give greater importance to the social dynamics regulation frameworks and influence of economic factors to sway the criteria of service within public banking services. The technological and structural sides that need strengthening to improve service delivery and efficiency in the operations of public sector banks are engineering (79 articles) and computer science (76 articles). Contributions from these fields can include innovation in banking technology, process reengineering, and systems integration to enhance service quality. Decision Sciences (65 articles) underlines the analytical aspect as this field is generally involved in researches related to the models of decision-making, service operations, and techniques of quality management. The other two fields, Environmental Science (29 articles) and Energy (25 articles), indicate an increasing trend toward environmentally and energy-friendly banking practices to alter the industry's common mode of operations according to the environment-friendly norms. Psychology contributed the second largest article number at 16 pieces, followed by Multidisciplinary studies with its 13 articles, arts and humanities at 10 articles, and Mathematics and medicine at 9 articles respectively. It clearly indicates service quality research complexity. On one hand, psychological streams may include customer behavior and attitude, while on the other side, multidisciplinary perspectives and arts contribute diversified method and cultural insights. The inclusion of research in disciplines such as Biochemistry, Genetics and Molecular Biology, Agricultural and Biological Sciences, Earth and Planetary Sciences, and Materials Science, although limited, reflects the dynamic and occasionally unexpected point of intersection in research, possibly through collaborative or interdisciplinary work. In brief, spread over 18 subject areas reflects an integrated and holistic study on the service quality of public sector banks, driven by business and social considerations along with technology input and supported by multidisciplinary research. Such involvement broadens the subject, creating comprehensive insight into enhancing the quality of service.

Table 4.8 Country wise co-authorship citation

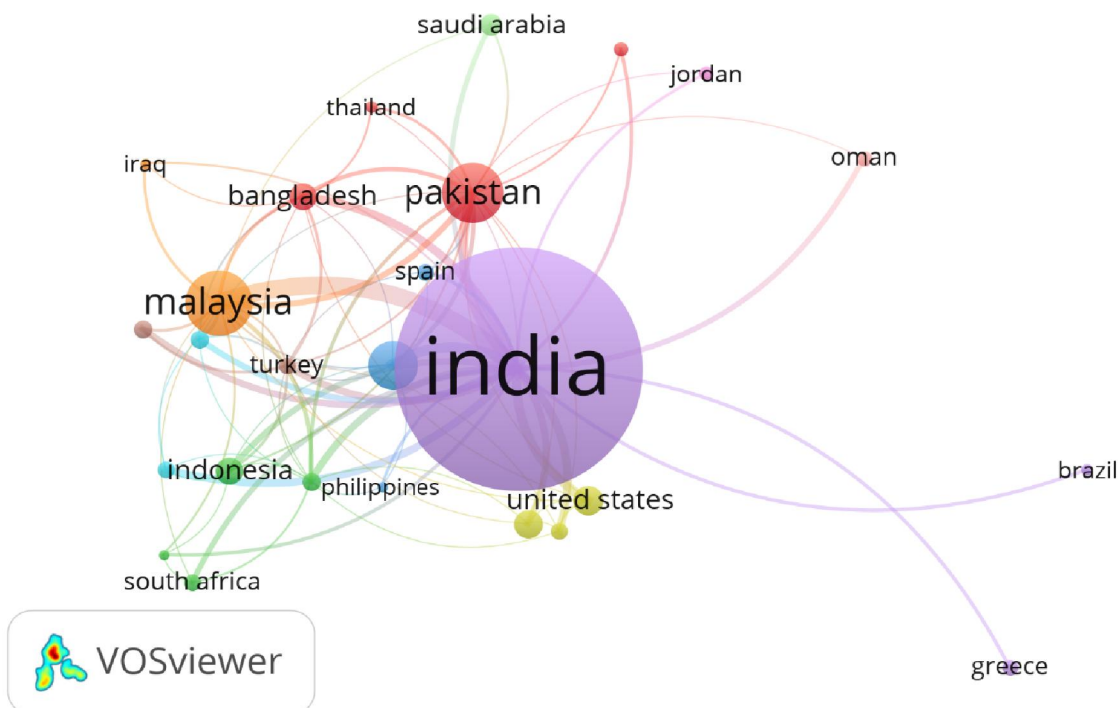
| Country | Citations | Total Link Strength |
|----------------|-----------|---------------------|
| India | 3178 | 211 |
| Pakistan | 930 | 55 |
| Malaysia | 792 | 69 |
| United States | 470 | 19 |
| China | 416 | 27 |
| Vietnam | 290 | 14 |
| Bangladesh | 263 | 32 |
| Turkey | 222 | 30 |
| Ghana | 199 | 29 |
| United Kingdom | 180 | 17 |
| Greece | 168 | 4 |
| Indonesia | 165 | 17 |
| Jordon | 156 | 4 |
| South Korea | 138 | 15 |
| Spain | 131 | 8 |
| Taiwan | 125 | 15 |
| UAE | 119 | 6 |
| South Arabia | 116 | 9 |
| Iran | 106 | 19 |
| South Africa | 106 | 11 |

Source: Scopus Data Base Search

DOI: 10.48175/IJAR SCT-27544



Figure.6 Country wise co-authorship citation



Source: VOSviewer

The analysis of leading nations and co-authorship in the domain of Service Quality in Public Sector Banks is presented in the table 4.8. It identifies India as a prominent contributor, amassing 3,178 citations and a total link strength of 211, signifying significant collaborative research endeavors and impactful contributions. Pakistan (930 citations, link strength 55), followed by Malaysia (792 citations, link strength 69), highlighting South Asia's substantial contribution to this field of research. This robust regional presence presumably indicates the significance of public banking services and quality assurance within the socio-economic frameworks of these nations. Accordingly, The United States, although having less citations (470) than India, has active engagement with a link strength of 19, indicating significant but more focused connections. China, with 416 citations and a link strength of 27, demonstrates significant participation and substantial collaborations, especially in Asia. Similarly, Vietnam, Bangladesh, Turkey, and Ghana have significant linkages and citations, indicating an increasing interest and collaborative research output from developing nations where public sector banks are crucial for financial inclusion and economic advancement. For example, Bangladesh (263 citations, link strength 32) and Turkey (222 citations, link strength 30) demonstrate an emphasis on service quality as a strategic element of banking reform and customer service improvement. The contributions from developed countries, including the United Kingdom (180 citations, link strength 17), Greece (168 citations, link strength 4), and Spain (131 citations, link strength 8), although limited in quantity, demonstrate focused research interest, frequently indicative of collaborations that introduce international perspectives and methodologies to the field. Additional contributors are South Korea, Taiwan, the UAE, Saudi Arabia, and South Africa, each exhibiting moderate citation counts and link strengths. This signifies the emergence of collaborative networks in these locations, where the quality of public sector banking is attracting academic scrutiny, maybe influenced by globalization and common issues in improving service standards. The distribution of co-authorship link strength reveals a strong network of collaborative research across regions, underscoring that service quality in public sector banking is a globally pertinent and actively examined field, characterized by substantial cross-border knowledge exchange and partnerships.



V. EXPONENTIAL GROWTH MODEL (EGM)

The exponential growth model helps Bibliometric predict future research trends, citations, and cooperation networks. Many fields utilise this constant-growth model to study and forecast growth. Growth models, particularly exponential models, are vital for assessing research output across disciplines and predicting scientific publication patterns, (Bansal & Tiwari 2023). Bibliometric' Exponential growth model measures research output acceleration, particularly in new disciplines. Global concerns encourage rapid research in renewable energy and environmental sciences, therefore this model must represent quick development. (Hanif et al. 2022) related the exponential rise in renewable energy research articles to global sustainability efforts. For instance, in health research, the exponential model forecasts disease spread and academic output. (Musa et al. 2020) approximated COVID-19 reproduction using the exponential growth model, demonstrating how it may reflect scientific research growth during health catastrophes. Additional (Singh 2021) emphasised exponential models in anticipating the pandemic's spread in India, matching the rapid surge in COVID-19 research. Hence, considering following methodology of linear regression model, we are predicting the research publication for the year 2024-2027:

The exponential growth model formula is: $P(t) = P_0 \times e^{kt}$

where:

P_0 is the initial publication count (estimated as the approximate publication count at the start of the trend),

k is the growth rate,

t is the number of years from the start year,

$P(t)$ is the projected publication count at year t

Step 1: Identify Values for P_0 , k , and t

Based on the data from 2003 to 2023, the values are:

$$P_0 \approx 3.97 \quad P_0 \approx 3.97$$

$$k \approx 0.152 \quad k \approx 0.152 \text{ (growth rate)}$$

For projections:

$$2024: t = 2024 - 2003 = 21$$

$$2025: t = 2025 - 2003 = 22$$

$$2026: t = 2026 - 2003 = 23$$

$$2027: t = 2027 - 2003 = 24$$

Step 2: Calculate $P(t)$ for Each Year

$$\text{For } 2024 (t=21): P(21) = 3.97 \times e^{0.152 \times 21}$$

$$P(21) = 3.97 \times e^{3.192} = 3.97 \times 24.34 \approx 96.66$$

So, the projected publication count for 2024 is approximately **97**.

$$\text{For } 2025 (t=22): P(22) = 3.97 \times e^{0.152 \times 22}$$

$$P(22) = 3.97 \times e^{3.344} = 3.97 \times 28.23 \approx 112.05$$

So, the projected publication count for 2025 is approximately **112**.

$$\text{For } 2026 (t=23): P(23) = 3.97 \times e^{0.152 \times 23}$$

$$P(23) = 3.97 \times e^{3.496} = 3.97 \times 32.75 \approx 130.83$$

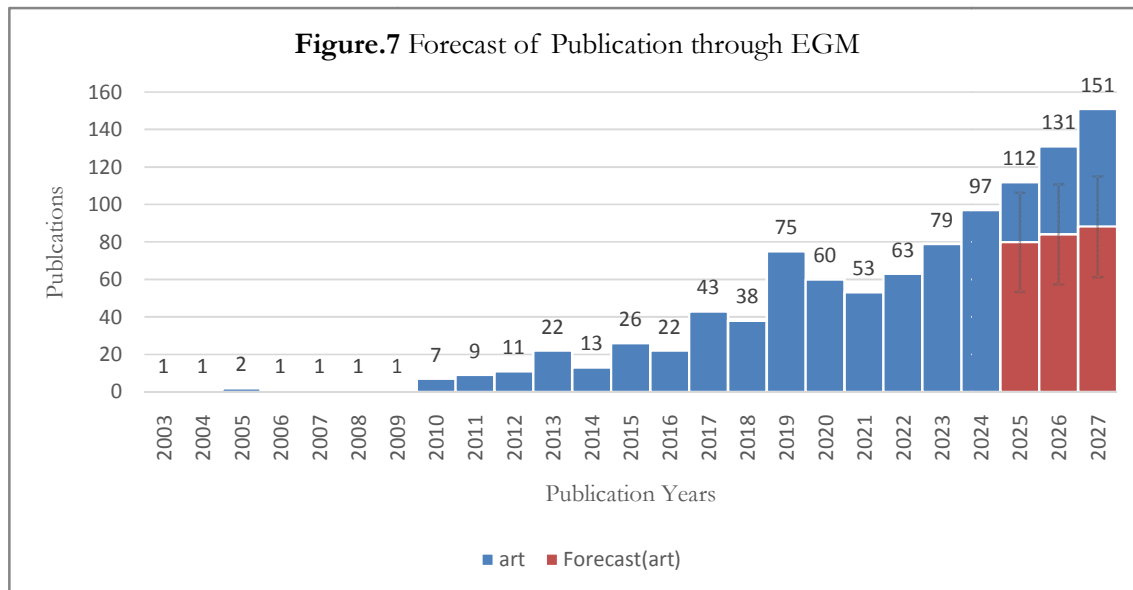
So, the projected publication count for 2026 is approximately **131**.

$$\text{For } 2027 (t=24): P(24) = 3.97 \times e^{0.152 \times 24}$$

$$P(24) = 3.97 \times e^{3.648} = 3.97 \times 37.98 \approx 150.90$$

So, the projected publication count for 2027 is approximately **151**.





VI. CONCLUSION

Service quality research in public sector banks has grown steadily, reflecting its growing academic and practical relevance. Academic interest in research is rising due to public sector banks' changing service quality needs. Rising publications show the importance and significance of addressing regulatory, technical, and consumer demands in banking research. India, Malaysia, and Pakistan are among the top 10 nations funding this study, showing its worldwide reach. This shows that research on service quality in public sector banks is worldwide, recognizing its importance in the financial industry. Publication of study results has been led by key publications including the International Journal of Bank Marketing and Sustainability Switzerland. Their significant contributions demonstrate the continuous interest in this subject and the need for academic platforms that focus on banking, customer service, and operational excellence. Notable writers' contributions underscore the significance of intellectual leadership in research and the cooperation between prominent academics whose works define service quality discourse. The list of top-cited writers shows their legitimacy and influence on public sector bank service quality research. The consistent average citations each year imply that researchers, practitioners, and policymakers are becoming interested in this study topic. Research advances via affiliations, and the best institutions in this subject demonstrate universities and research institutes' academic rigor and dedication to knowledge. Indian and Malaysian universities' constant involvement suggests robust academic environments that support banking service quality research. Research fields include business management, social sciences, economics, and decision sciences, demonstrating the field's multidisciplinary. This wide breadth shows that experts from several academic fields are interested in public sector bank service quality. This multidisciplinary approach enriches the study and makes it applicable to numerous banking sector aspects. Co-authorship patterns show considerable worldwide cooperation, highlighting the topic's global relevance. The links between India, Pakistan, and Malaysia show that information sharing and collaboration drive service quality improvements and solutions. Finally, exponential growth model (EGM) tendencies reveal this domain's future research trajectory. The model predicts rapid expansion in public sector bank service quality research in the next years, with both existing and rising research groups contributing. This shows a rising awareness of banking service quality and the necessity for sustained academic attention as the industry adjusts to new challenges. Overall, public sector bank service quality research has grown from a small discipline to a dynamic one. Global contributions, strong citation rates, multidisciplinary emphasis, and persistent academic attention show that this study will shape public sector banking. The research community will provide insights, ideas, and solutions to improve service quality and fulfil consumer and institutional expectations as the sector evolves.



VII. LIMITATIONS

This Bibliometric Analysis of Public Sector Banks' Service Quality has several limitations but offers useful information. Scopus has a large collection, but Web of Science might have expanded the study's grasp of the area. Thus, major articles may have been overlooked, limiting study depth. The selection of just two keywords to search for papers may have excluded relevant works that use other language or discuss similar topics like banking sustainability. This restriction of search parameters may bias findings and influence Service Quality research interpretation. By only including papers from 2003 to 2023, the analysis misses new trends and scientific advances. The current rise in publication volume may indicate rising interest in the issue, but it may also erode research quality as younger studies must choose between number and quality. This component needs additional study to understand how field research outputs are changing. Limitations include using bibliometric tools like VOSviewer, Microsoft Excel, and Biblioshiny to see trends and linkages. These techniques may not completely account for contextual changes among studies or Service Quality research's multidisciplinary. The quantitative data gives useful insights into trends and patterns, but it must be interpreted cautiously. A qualitative evaluation is needed to grasp the larger implications of Service Quality research in public sector banks since Bibliometric Analysis alone cannot reflect the study field's subtleties and complexity.

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