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(IJEMP)**www.gaexcellence.com/ijemp**DECODING EMOTIONAL INTELLIGENCE IN CUSTOMER
RESEARCH: A BIBLIOMETRIC STUDY OF GLOBAL
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Abstract:

This study aims to examine global scholarly trends, intellectual structure and emerging themes in Emotional Intelligence (EI) in customer research with emphasis on the growing integration of Artificial Intelligence (AI), emotionally responsive technologies and digital customer interaction environments. A bibliometric analysis was conducted using 464 journal articles retrieved from the Scopus database from 2001 to 2025. A systematic screening process was applied using predefined inclusion criteria, including English-language journal articles at the final publication stage. The analysis identified major publication trends, influential publication sources, leading authors, geographical research contributions, prominent keyword networks, and emerging thematic directions shaping EI research within customer contexts. The findings reveal a substantial increase in publications after 2020, reflecting growing scholarly interest in emotionally intelligent customer interaction and AI-enabled service technologies. EI and AI emerged as dominant themes, highlighting a transition from traditional emotional labour research toward hybrid human-AI service ecosystems. The analysis identified influential publication sources, leading scholarly

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contributors, international research participation, and interconnected thematic clusters centred on customer satisfaction, customer experience, empathy, service quality, chatbots, emotion recognition, and AI-mediated customer interactions. Emerging research directions further indicate increasing attention to emotionally responsive technologies, service robots, and intelligent customer engagement systems.

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Keyword:

Artificial Intelligence, Bibliometric, Customer Research, Emotional Intelligence



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Introduction

Emotional Intelligence (EI) has emerged as a significant research domain across psychology, management, marketing and customer behavior studies. Following the conceptualisation of Emotional Intelligence (EI) by Mayer and Salovey (1997) and made popular by Goleman (1995), researchers have increasingly explored the role of emotions in influencing human interaction, organizational behavior and customer decision-making. In customer research, EI is particularly crucial as customer experiences are highly influenced by emotional engagement, empathy, trust, communication quality and relational satisfaction.

As customer interaction environments are becoming more sophisticated, especially with the advent of Artificial Intelligence (AI), digital customer service and omnichannel platforms, has stimulated academic interest in EI research. Thus, bibliometric analysis is an important methodological approach to study publication trends, influential authors, thematic evolutions and collaboration networks in EI literature.

The literature review below summarizes previous studies on EI, customer behavior, AI-mediated customer interaction and bibliometric studies. It serves as theoretical and empirical background to this study titled, “Decoding Emotional Intelligence (EI) in Customer Research: A Bibliometric Study of Global Scholarly Trends.”

Literature Review

Emotional Intelligence in Customer Research

EI is the ability to recognize, understand, regulate, and manage emotions effectively in oneself and others (Mayer & Salovey, 1997). Goleman (1995) has extended the concept by adding

emotional competencies such as empathy, social awareness, self-regulation, motivation and relationship management. In customer research, EI impacts customer satisfaction, perceptions of service quality, emotional attachment, trust and loyalty.

Research indicates that emotionally intelligent organizations are better at establishing long-lasting relationships with their customers. EI enhances service recovery performance, complaint management, communication effectiveness and personalized customer experiences. Wang et al. (2025) revealed that EI moderates the relationship between interpersonal rapport and customer loyalty during service recovery. This study found that interactions which are emotionally intelligent significantly increase customer trust and emotional connection.

The application of EI in AI enabled customer interaction has also expanded the scope of customer research. The inclusion of emotion recognition, emotional responses and adaptive communication into AI systems has advanced to make it easier to simulate emotionally intelligent service interactions. These developments indicate that EI is no longer confined to interpersonal communication between humans. It has, however, become relevant in the digital, automated customer environments.

Theoretical Foundations

There are many theoretical perspectives in EI research pertaining to customer and service settings. One of the most influential models is the Ability Model proposed by Mayer and Salovey (1997), which defines EI as a cognitive ability that involves emotional perception, understanding, facilitation and regulation. Another dominant paradigm is Goleman's Emotional Competency Theory which emphasizes practical emotional competencies that can be applied in the workplace and service contexts. This framework is mostly used in customer relationship management and service marketing research as it focuses on empathy, communication and social interaction.

Moreover, customer-centric EI studies have gained more traction in Service-Dominant Logic (S-D Logic). This theory explains how value is co-created through interactions among customers, employees, organizations and technologies. Value creation in emotionally intelligent customer interactions is based on empathy, responsiveness, personalization and emotional engagement. Besides, the commonly used theories to explain the relational outcomes of emotionally intelligent communication are Relationship Marketing Theory, Social Exchange Theory and Customer Engagement Theory. In summary, these theories imply that emotional interactions are positively associated with customer trust, loyalty, satisfaction and long-term quality of relationship.

Bibliometric Studies on Emotional Intelligence

Bibliometric analysis is a popular approach for evaluating the development and intellectual structure of EI research. Bibliometric methods enable researchers to examine publication growth, citation networks, keyword co-occurrence, thematic development and collaboration patterns. A bibliometric review of EI research was carried out by Krishnan et al. (2020) and it indicated substantial growth in publication output during the last decade. Psychology, education, organizational behavior and leadership were the most dominant research areas. In the same way, Manjarres et al. (2023) performed a bibliometric and systematic review of emotional skills in the Web of Science and Scopus databases. The results showed growing

international cooperation and increasing focus on empathy, communication skills and interpersonal relations.

There is also growing scholarly interest in EI and leadership. A bibliometric analysis on the relationship between EI and leadership effectiveness was published by Linan et al. (2024). Results showed that EI has a positive contribution to leadership communication, teamwork, employee engagement and organizational performance. Recent bibliometric studies explored EI in the fields of innovation and consumer behavior. Baburao et al. (2025) also pointed to the increasing integration of EI with innovation and organizational adaptability. Furthermore, a bibliometric study of sensorial marketing by Rodríguez-Ulcuango et al. (2025) found an increasing interest in emotional responses, sensory experiences, and consumer behavior patterns in marketing studies. Taken together, these results show that EI research has become a multi-disciplinary research field, spanning psychology, management, marketing, education, consumer behavior and AI.

Emotional Intelligence and Customer Loyalty

Customer loyalty is one of the most important outcomes of EI in customer research. EI helps to facilitate emotional attachment, customer trust, relationship quality and service satisfaction. Wang et al. (2025) investigated that EI enhances customer loyalty through rapport-building and empathetic communication where businesses that show they have empathy, authenticity and emotionally responsive are more likely to keep customers in the long run. Furthermore, the benefits of emotional intelligence are reflected in employees' service-related competencies that contribute to positive customer outcomes. Emotionally intelligent service employees have the ability to understand the customer expectations, manage complaints well and deliver customized experiences. These capabilities positively influence customer retention and repurchase intentions via positive word of mouth. There has been an increase in the creation of AI systems with emotional intelligence for digital customer settings, to enhance customer experiences through empathetic responses and flexible communication strategies. However, researchers also highlight the need for authenticity and ethical considerations in AI-mediated emotional interaction.

Methodological Trends

The most used quantitative methodologies in EI studies are surveys, bibliometric analysis, Structural Equation Modeling (SEM), experimental design and machine learning. Bibliometric studies are often conducted using databases such as Scopus and Web of Science due to their comprehensive indexing capabilities. Tools such as VOSviewer, CiteSpace, Biblioshiny and Gephi are widely used in bibliometric studies for performance analysis and science mapping. This includes citation analysis, co-citation analysis, co-authorship mapping, keyword co-occurrence analysis and visualization of thematic evolution. Today's customer research is increasingly leveraging AI analytics, emotional recognition systems and Natural Language Processing (NLP) technologies to investigate emotional interaction patterns. These methodological developments illustrate the interdisciplinary and technologically advanced nature of EI research.

Research Gaps and Future Directions

While the literature on EI is growing rapidly, several important gaps remain. Past bibliometric research has been mainly limited to EI from a broad disciplinary perspective, e.g., psychology, education, leadership, organisational behavior, innovation and emotional skills. Thus, EI has been studied in-depth as an independent construct with limited attention paid to its specific function in customer-related studies. The increased focus on customer-oriented EI research is directed at customer satisfaction, service quality, customer experience, customer loyalty, emotional labour and service interactions; however, these intertwined research streams have seldom been analyzed together using a specific bibliometric approach. In addition, most of the current reviews are based on a single database and offer limited insights into the longitudinal evolution of EI themes in customer-oriented research.

The development of research in the area of EI, customer experience and digital technologies has increased the importance of a systematic bibliometric review. The advent of AI, emotion recognition systems, chatbots, service robots and digitally mediated customer service environments has transformed the nature of customer interactions and created new research frontiers. However, the integration of EI and AI-mediated customer interaction is still relatively underexplored, especially from a bibliometric perspective. As a result, the intellectual architecture, thematic elaboration and nascent research trajectories of this developing field are poorly synthesised.

As such, the present study aims to fill these gaps by conducting a dedicated bibliometric analysis on EI in the domain of customer research. Previous bibliometric studies have looked at EI from a general multidisciplinary perspective, but this study looks at the development of EI from the perspective of customer-centric research. It provides a complete picture of the intellectual makeup and current development of the discipline by examining publication patterns, most prolific authors, geographic distribution, keyword analysis, thematic clusters, collaboration networks and most cited articles. The findings are expected to be useful to researchers, practitioners and policy makers. It also aims to identify avenues for future research on emotionally intelligent AI systems, customer trust, perceptions of authenticity, ethical concerns and long-term customer loyalty.

Methods

A systematic and transparent search procedure was applied to identify and select the relevant publications for bibliometric analysis. The data collection process was divided into several stages, namely database selection, identification of keywords, document screening, eligibility assessment and final article inclusion. This systematic process assured inclusion of only pertinent, high quality scholarly publications on customer and EI in the analysis. Figure 1 shows the search strategy applied in this study, based on the framework suggested by Zakaria et al. (2020).

The study started with the identification stage where data was retrieved from Scopus database using the search string TITLE-ABS-KEY (“customer and emotional intelligence”). The researchers set some inclusion criteria to ensure the quality and relevance of the retrieved documents. English language publications, final publication stage, article document type was included, while publications from 2026 were excluded. The search, conducted on 4 May 2026, initially identified 1,056 records. In the screening and filtering, 592 records were excluded as

irrelevant, duplicates or not meeting the study eligibility criteria. Thus, a final dataset of 464 articles was retained and used for bibliometric analysis. The systematic screening procedure improves the reliability, transparency and reproducibility of the bibliometric review process following the methodological approach proposed by Zakaria et al. (2020).

A bibliometric analysis was conducted using a combination of performance analysis and science-mapping techniques to offer a holistic view of the intellectual structure and evolution of EI research in customer-related contexts. The performance analysis was carried out by using indicators such as annual publication trends, active source titles, subject areas, influential countries, authorship patterns and highly cited publications. On the other hand, science-mapping techniques were used to investigate relationships and structures of knowledge within the field. Analyses consisted of citation analysis to identify influential publications, keyword co-occurrence analysis to investigate dominant and emerging research themes and network visualisation of author keywords to depict thematic interconnections in the literature. The findings were then interpreted to identify thematic developments, intellectual trends and emerging directions in research on EI, customer experience and AI.

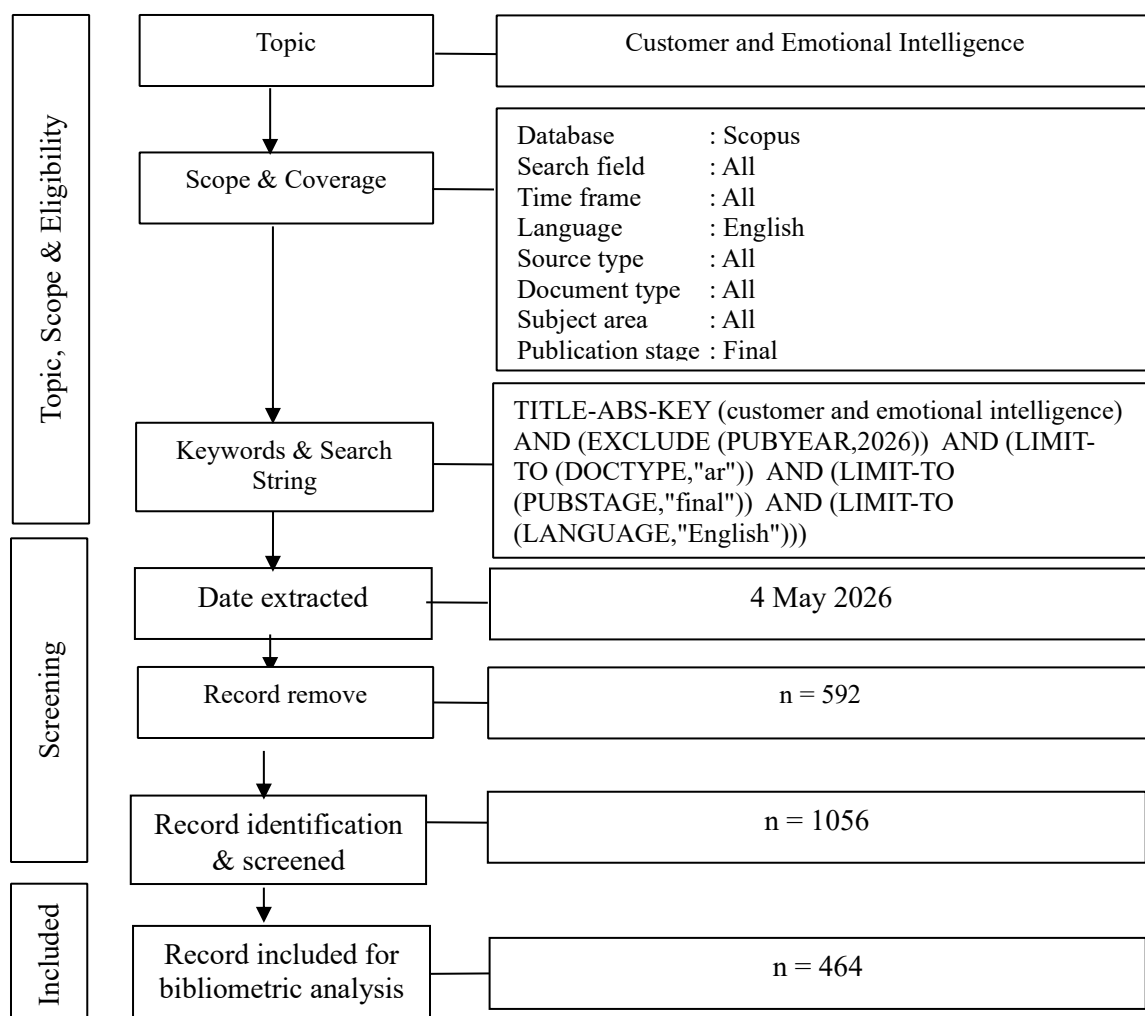


Figure 1: Flow Diagram of the Search Strategy

Source: (Zakaria et al., 2020)

Findings

This section presents the results of the bibliometric analysis of EI in customer research based on the selected publications drawn from the Scopus database. The analysis provides a complete picture of publication patterns, document and source types, annual growth of publications, language of publication, subject areas, active source titles, occurrence of keywords, geographical distribution and authorship patterns in the research domain. The results contribute to the knowledge of intellectual structure, growth of research and emerging themes of EI and customer-related research across the world.

Document and Source Types

The findings indicate that the dataset consisted exclusively of 100% of journal articles, for all 464 publications retrieved from the Scopus database. This implies that the study relied on peer-reviewed scholarly articles to guarantee the reliability, quality, and academic credibility of the bibliometric dataset. As the researchers wanted to keep the analysis consistent, they excluded conference papers, reviews, editorials and other document types. This also meant that only completed empirical and conceptual contributions were included in the study.

Regarding the source type, journals were the most frequent with 461 documents (99.35%), followed by book series with only three publications (0.65%). The predominance of journal articles reflects the researchers' strong preference for disseminating the EI and customer-related studies through established academic journals. This finding further suggests that the research domain has matured enough to be recognized in high-impact scholarly journal of multiple disciplines. The document types and their source types are summarized in Tables 1 and 2 below.

Table 1: Document Type

Document Type	Total Publications (TP)	Percentage (%)
Article	464	100.00
Total	464	100.00

Table 2: Source Type

Source Type	Total Publications (TP)	Percentage (%)
Journals	461	99.35
Book Series	3	0.65
Total	464	100.00

Year of Publications/Evolution of Published Studies

Table 3 and Figure 2 depict the yearly distribution of publications of EI in customer research from 2001 to 2025. The results show a steady but increasing trend in the number of publications over the years with a growing interest in the field among the scholars. The first publications dated from 2001 and 2002, with one publication each (0.22%). This indicates the lack of interest of in EI customer-related studies in the early stages of the development of the research.

Between 2003 and 2015, the trend of publications was relatively low and inconsistent, with most of the annual publications being less than 10.

With the rising number of publications after 2016, EI research became more prominent in customer behavior, service management, and marketing research. In 2019, the number of publications were 28 (6.03%) and it catapulted significantly in 2021 and 2022. The highest publication output was seen in 2025 with 123 publications (26.51%) followed by 2024 with 71 publications (15.30%). This is an upward trend which reflects the increasing academic and industry interest in EI especially in the area of digital customer interaction, AI, chatbot services, customer experience management and emotionally responsive technologies.

The growth in recent years may also be connected to the fast-paced adoption of AI-enabled customer service systems, digital transformation initiatives, and the growing importance of customer-centric strategies in competitive business environments. The advent of technologies such as machine learning, sentiment analysis, emotion recognition and generative AI has further opened research avenues to connect EI to customer interaction and service innovation. In general, the publication trend suggests that EI in customer research has developed into a more important and multidisciplinary field of scholarly investigation.

Table 3: Year of Publications

Year	TP	%
2025	123	26.51%
2024	71	15.30%
2023	35	7.54%
2022	37	7.97%
2021	28	6.03%
2020	17	3.66%
2019	28	6.03%
2018	15	3.23%
2017	15	3.23%
2016	18	3.88%
2015	7	1.51%
2014	7	1.51%
2013	8	1.72%
2012	8	1.72%
2011	15	3.23%
2010	4	0.86%
2009	3	0.65%
2008	8	1.72%
2007	4	0.86%
2006	1	0.22%
2005	2	0.43%
2004	6	1.29%
2003	2	0.43%

2002	1	0.22%
2001	1	0.22%

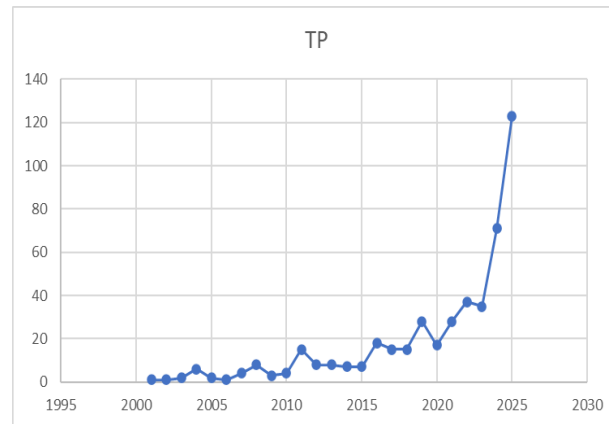


Figure 2: Documents By Year

Languages of Documents

The results show that all the publications included in this study is in English, which is 100% presented in Table 4. The selection of English-language documents was largely due to the search restrictions imposed during the data collection. English is still the main language for international scholarly works and is widely used in high-impact indexed journals, especially in Scopus.

The choice of English-language publications provided consistency in data extraction and analysis and enhanced the accessibility and comparability of scholarly findings across countries and disciplines. Moreover, focusing on the English language articles enabled the study to capture the globally recognised research contributions and influential publications in EI and customer research.

Table 4: Languages Used for Publications

Language	Total Publications*	Percentage (%)
English	464	100.00
Total	464	100.00

*one document has been prepared in dual languages

Subject Area

The subject area analysis indicates that EI research in customer contexts is multidisciplinary. The findings of the subject area analysis are summarized in Table 5. The most significant contribution came from the field of Business, Management and Accounting, with 275 publications (59.27%). Findings indicate that EI is significantly associated with customer relationship management, service quality, customer satisfaction, marketing strategies and organisational performance.

Computer Science was the second most prevalent subject area with 117 publications (25.22%) illustrating the growing integration of AI, machine learning, chatbots, sentiment analysis and emotion recognition technologies in customer interaction studies. Social Sciences had 91 (19.61%) publications, followed by Engineering with 57 (12.28%) publications and Psychology with 49 (10.56%) publications. The number of disciplines is indicative of the development of EI research, particularly in terms of technological advances and customer-centric digital transformation.

To enhance the clarity, readability, and interpretability of the bibliometric findings, only subject areas contributing more than 5% of the total publications were included in Table 5. The subject areas with less than 5% contribution were dropped, since their publication frequencies were relatively small and had little impact on the overall research landscape. By concentrating on the major subject areas, the study better identifies the most dominant disciplinary contributions and core research domains shaping EI research in customer contexts. This approach is a common practise in bibliometric studies to avoid excessive fragmentation of data presentation. In turn, it helps to keep the analysis concise, meaningful, and focused on the most significant research trends.

Table 5: Subject Area

Subject Area	Total Publications	Percentage (%)
Business, Management and Accounting	275	59.27
Computer Science	117	25.22
Social Sciences	91	19.61
Engineering	57	12.28
Psychology	49	10.56
Decision Sciences	42	9.05
Economics, Econometrics and Finance	36	7.76
Total	464	100%

Most Active Source Titles

A review of source titles showed a number of top journals that publish research on EI and customer research. The most prolific source was the Journal of Retailing and Consumer Services with 13 publications (2.80%) followed by International Journal of Hospitality Management and Journal of Services Marketing with nine publications (1.94%).

The dominance of marketing, hospitality and service-oriented journals shows that EI is increasingly perceived as an important factor affecting customer experience, service interaction, customer satisfaction and loyalty. Interdisciplinary is also evident in journals such as Psychology and Marketing, Journal of Business Research and Technological Forecasting

and Social Change, which draw together the behavioural sciences, technology and customer analytics.

Only source titles that contributed more than 1% of the total publications are shown in Table 6 as the most influential publication sources in the research domain. Source titles with less than 1% contribution were not included because the publication frequencies were comparatively low and is not significant to the overall publication pattern of EI research in customer contexts. The inclusion of all source titles would lead to excessive fragmentation and reduce the readability of the analysis due to the large number of journals with little contributions. Therefore, the study focused on the most active and influential journals to better identify the dominant publication venues and the main disciplinary directions of the field.

Table 6: Most Active Source Title

Source Title	Total Publications	Percentage (%)
Journal of Retailing and Consumer Services	13	2.80%
International Journal of Hospitality Management	9	1.94%
Journal of Services Marketing	9	1.94%
International Journal of Contemporary Hospitality Management	8	1.72%
Journal of Service Research	8	1.72%
Journal of Business Research	7	1.51%
Journal of Hospitality and Tourism Management	7	1.51%
Frontiers in Psychology	6	1.29%
Psychology and Marketing	6	1.29%
Sustainability Switzerland	6	1.29%
IEEE Access	5	1.08%
Technological Forecasting and Social Change	5	1.08%
Journal of Retailing and Consumer Services	13	2.80%
International Journal of Hospitality Management	9	1.94%

Keywords Analysis

The keyword analysis of both Figure 3 and Table 6 provides important insights into the dominant themes and emerging directions of research on the EI and customer-related studies. The most frequent keyword was EI with 190 occurrences (40.95 %) followed by AI with 123 occurrences (26.51 %). The result indicates that recent studies show an increased interest in investigating the association between emotional capabilities and AI-based systems for customer interaction.

Other keywords with high recurrence were "Sales", "Customer Satisfaction", "Emotion", "Chatbots", "Customer Experience", "Sentiment Analysis", "Service Quality" and "Emotion Recognition". Keywords like "Machine Learning," "Natural Language Processing," "Deep Learning," and "Generative AI" signal that more sophisticated technologies are increasingly being integrated into emotionally responsive customer service systems. Hence, the network visualisation map illustrates the interconnection between EI, customer service, empathy, service recovery, and customer loyalty. The results show that the current research trends are

leading towards emotionally intelligent digital interactions, AI-mediated communications and customer-centric service innovation.



Figure 3: Network Visualization Map of the Author Keywords

Table 6: Keyword Analysis

Keywords	TP	100%
Emotional Intelligence	190	40.95%
Artificial Intelligence	123	26.51%
Sales	44	9.48%
Human	35	7.54%
Customer Satisfaction	29	6.25%
Emotion	25	5.39%
Chatbots	24	5.17%
Emotions	24	5.17%
Article	23	4.96%
Humans	23	4.96%
Customer Experience	21	4.53%
Sentiment Analysis	20	4.31%
Service Quality	20	4.31%
Emotional Labor	18	3.88%
Adult	17	3.66%
Emotion Recognition	16	3.45%
Female	16	3.45%
Machine Learning	16	3.45%
Psychology	16	3.45%
Male	15	3.23%
Customer Service	14	3.02%

Job Satisfaction	14	3.02%
Marketing	14	3.02%
Consumer Behavior	13	2.80%
Customer Loyalty	13	2.80%
Deep Learning	12	2.59%
Empathy	12	2.59%
Learning Systems	12	2.59%
Consumption Behavior	11	2.37%
Decision Making	11	2.37%
Electronic Commerce	11	2.37%
Emotional Exhaustion	11	2.37%
Emotional Labour	11	2.37%
Natural Language Processing	11	2.37%
Ai	10	2.16%
Behavioral Research	10	2.16%
Customer Orientation	10	2.16%
Customer-service	10	2.16%
Hospitality Industry	10	2.16%
Service Sector	10	2.16%
Burnout	9	1.94%
Chatbot	9	1.94%
Data Mining	9	1.94%
Job Performance	9	1.94%
Middle Aged	9	1.94%
Performance	9	1.94%
Service Failure	9	1.94%
Service Recovery	9	1.94%
Trust	9	1.94%
Cognition	8	1.72%
Communication	8	1.72%
Generative Artificial Intelligence	8	1.72%
Perception	8	1.72%
Purchase Intention	8	1.72%
Questionnaire	8	1.72%
Satisfaction	8	1.72%
Service Encounter	8	1.72%
Social Media	8	1.72%
Algorithm	7	1.51%
Anthropomorphism	7	1.51%
Consumer Behaviour	7	1.51%
Controlled Study	7	1.51%
Generative Ai	7	1.51%

Human Computer Interaction	7	1.51%
Intelligence	7	1.51%
Intelligent Robots	7	1.51%
Loyalty	7	1.51%
Semantics	7	1.51%
Tourism	7	1.51%
Chatgpt	6	1.29%
Competition	6	1.29%
Computer Interaction	6	1.29%
Empirical Analysis	6	1.29%
Gender	6	1.29%
Hotels	6	1.29%
Human Experiment	6	1.29%
Human Robot Interaction	6	1.29%
Humans-robot Interactions	6	1.29%
Innovation	6	1.29%
Internet	6	1.29%
Machine-learning	6	1.29%
Man Machine Systems	6	1.29%
Patient Satisfaction	6	1.29%
Physiology	6	1.29%
Public Relations	6	1.29%
Rapport	6	1.29%
Robotics	6	1.29%
Self-efficacy	6	1.29%
Speech Recognition	6	1.29%
Surface Acting	6	1.29%
Affective Computing	5	1.08%
Artificial Intelligence (AI)	5	1.08%

Table 7 shows the most used author keywords in the selected publications and highlights the main research themes and focus areas in the field. The most dominant keyword was “web accessibility” with 328 occurrences (8.4%) followed by “accessibility” with 281 occurrences (7.2%). This finding indicates that the research field is mainly concerned with enhancing accessibility and inclusivity within digital and online contexts. Other common keywords like “usability”, “WCAG”, “disability”, “internet” is indicative of the importance of user-friendly web design, accessibility standards and inclusive digital communication.

The inclusion of keywords such as "WCAG 2.0", "W3C", "guidelines" and "Section 508" shows the influence of international standards and regulatory standards on the research trends of the field. Also, keywords like “people with disabilities”, “universal design”, and “assistive technology” reflect the growing concern of scholars with equitable access to digital technologies and inclusive technology development for people with diverse needs and disabilities.

The keyword analysis indicates that the research landscape is strongly oriented towards improving digital accessibility, increasing web usability and promoting inclusive online experiences. The results also reflect the interdisciplinary nature of the field, with inputs from information technology, human computer interaction, policy making, digital communication and accessibility research.

Table 7: Top Keywords

Author Keywords	Total Publications (TP)	Percentage (%)
web accessibility	328	8.4
accessibility	281	7.2
usability	67	1.7
wcag	61	1.6
disability	48	1.2
internet	40	1
wcag 2.0	40	1
web	40	1
e-government	33	0.8
evaluation	33	0.8
disabilities	30	0.8
w3c	30	0.8
people with disabilities	24	0.6
guidelines	23	0.6
wai	22	0.6
world wide web	20	0.5
universal design	19	0.5
assistive technology	18	0.5
automated evaluation	18	0.5
section 508	18	0.5

Geographical Distribution of Publications - Most Influential Countries

The analysis of the geographical distribution shows that a few countries play a key role in the development of EI research in customer-related contexts, as summarized in Table 8. Spain was the most active contributor, with 125 publications (9.84%), followed by Brazil with 64 publications (5.04%) and Portugal with 52 publications (4.09%). Other significant countries were Germany, Italy, France, Japan and Australia.

The results indicate that the EI research has been widely discussed in international scientific community, especially in countries devoted to developing research environments and growing interest in customer experience, AI and service management. Asian countries such as China, India, South Korea and Malaysia, further signify the global growth of emotionally intelligent customer research. The geographical distribution, in general, reflects the multidisciplinary and international collaborative nature of EI studies. This is particularly so in response to the digital transformation and AI-enabled customer interaction environments.

Table 8: Top 20 Countries Contributed to the Publications

Country	Total Publications	Percentage (%)
Spain	125	9.84
Brazil	64	5.04
Portugal	52	4.09
Germany	48	3.78
Italy	46	3.62
France	39	3.07
Japan	34	2.68
Australia	33	2.60
Norway	27	2.13
Greece	26	2.05
South Korea	26	2.05
Austria	24	1.89
China	21	1.65
India	21	1.65
Turkey	19	1.50
Canada	18	1.42
Malaysia	18	1.42
Ecuador	15	1.18
Switzerland	11	0.87
Belgium	10	0.79

Authorship

The authorship analysis in Table 9 demonstrates collaborative research trends in EI and customer-related research. Most of the publications were carried out in multi-authored collaborations, implying that EI research often involves interdisciplinary teamwork of researchers from business, psychology, marketing, technology and service management. Further analysis of authorship and citation data was performed using the software tool Publish or Perish developed by Harzing.com.

The most active authors were Prentice, C., who published the highest number of articles - 10 articles (2.16%), followed by several influential scholars who contributed significantly to the development of EI and AI-related customer research. Citation analysis also identified several ground-breaking studies on emotional labor, AI chatbots, customer satisfaction, service recovery, empathy, and emotional customer interaction. The increasing collaboration among researchers is indicative of the complexity and interdisciplinary nature of EI studies. This is particularly the case with the advent of AI and emotionally responsive digital technologies in customer service environments.

Table 9: Authorship

Author Name	TP	%
Prentice, C.	10	2.16%
Maamari, B.E.	4	0.86%
Vrontis, D.	4	0.86%

Wirtz, J.	4	0.86%
Agnihotri, R.	3	0.65%
Amani, D.	3	0.65%
Belanche, D.	3	0.65%
Casaló, L.V.	3	0.65%
Flavián, C.	3	0.65%
Hardesty, D.M.	3	0.65%
Kidwell, B.	3	0.65%
King, B.	3	0.65%
Koc, E.	3	0.65%
Tsarenko, Y.	3	0.65%
Wei, J.	3	0.65%
Amenuvor, F.E.	2	0.43%
Angayarkanni, R.	2	0.43%
Boxer, I.	2	0.43%
Boz, H.	2	0.43%
Chatterjee, S.	2	0.43%
Chaudhuri, R.	2	0.43%
Chen, Q.	2	0.43%
Christofi, M.	2	0.43%
Delpechitre, D.	2	0.43%
Feng, Y.	2	0.43%
Firdaus, F.	2	0.43%
Gabbott, M.	2	0.43%
Ghalandari, K.	2	0.43%
Gong, Y.	2	0.43%
Hou, Z.	2	0.43%
Humphrey, R.H.	2	0.43%
Jogh, M.G.G.	2	0.43%

Citation Analysis (Most Cited Publications)

Table 10 of citation analysis shows the top 20 most cited publications in the chosen data set. The most cited article (cited 977 times) was the study by Hülshager and Schewe (2011) entitled On the Costs and Benefits of Emotional Labor: A meta-analysis of 30 years of research published in the Journal of Occupational Health Psychology. This was followed by Crolic et al. (2022) Blame the Bot: Anthropomorphism and Anger in Customer-Chatbot Interactions, Journal of Marketing, with 574 citations.

The number of citations ranged from 145 to 977, showing the different levels of academic influence of the publications. Some studies from 2020 to 2024 have relatively high citation counts, including Belanche et al. (2021), Lv et al. (2022), Chandra et al. (2022), and Huang and Rust (2024). This indicates that in the last few years research has been directed more to AI, chatbots, service robots, customer interaction, and emotionally responsive technologies. The table also indicates that the influential articles were published in a number of prominent

journals such as Journal of Marketing, International Journal of Hospitality Management, Computers in Human Behavior, Journal of Occupational Health Psychology, and Psychology and Marketing. Additionally, the publication years ranged from 2007 to 2024, emphasizing the ongoing development of research within this field over time.

The titles of articles also indicate several recurring themes, including emotional labor, EI, customer satisfaction, customer experience, chatbot interaction, service robots, AI, empathy, and employee service performance. The number of studies on AI, chatbots and robots in the publications from 2020 onwards indicate an increased interest in technology-mediated customer interaction in the research area. An analysis of these highly cited papers shows that there is a considerable academic interest in understanding the interaction of EI, AI, customer interaction and service performance across a variety of service-oriented industries (Hülshager & Schewe, 2011; Prentice & Nguyen, 2020; Huang & Rust, 2024).

Most studies have focused on the role of emotional and social competencies in customer satisfaction, employee well-being, service recovery, customer loyalty, and service interactions mediated by technology. Some studies have examined the implementation of AI technologies such as chatbots, service robots, voice shopping systems and conversational AI into customer service environments in particular. The reviewed articles have always examined the potential of AI systems to mimic emotional and empathetic capabilities typically associated with human employees. Another central research theme is emotional labor and its impact on employee performance and mental health outcomes. Research on burnout, emotional exhaustion, job satisfaction, service sabotage, workplace incivility and emotional regulation among frontline service employees, particularly in hospitality and tourism. On the other hand, technology-oriented studies examined anthropomorphism, trust, empathy, emotional expression, and customer engagement in AI-enabled customer interactions. Overall, the studies point to a shift in customer research from traditional employee-centric EI to hybrid human-AI emotional service ecosystems.

Table 10: Top 20 Authors

No.	Cites	Authors	Year	Title	Source
1	977	Hülshager & Schewe	2011	On the costs and benefits of emotional labor: A meta-analysis of three decades of research	Journal of Occupational Health Psychology
2	574	Crolic et al.	2022	Blame the Bot: Anthropomorphism and Anger in Customer Chatbot Interactions	Journal of Marketing
3	341	Johnson & Spector	2007	Service With a Smile: Do Emotional Intelligence, Gender, and Autonomy Moderate the Emotional Labor Process?	Journal of Occupational Health Psychology

4	324	Belanche et al.	2021	Examining the effects of robots' physical appearance, warmth, and competence in frontline services: The Humanness-Value-Loyalty model	Psychology and Marketing
5	317	Prentice & Nguyen	2020	Engaging and retaining customers with AI and employee service	Journal of Retailing and Consumer Services
6	282	Lv. et al.	2022	Artificial intelligence service recovery: The role of empathic response in hospitality customers continuous usage intention	Computers in Human Behavior
7	269	Prentice et al.	2020	Emotional intelligence or artificial intelligence—An employee perspective.	Journal of Hospitality Marketing and Management
8	264	Lee & Ok	2012	Reducing burnout and enhancing job satisfaction: Critical role of hotel employees' emotional intelligence and emotional labor	International Journal of Hospitality Management
9	249	Chandra et al.	2022	To Be or Not to Be Human? Theorizing the Role of Human-Like Competencies in Conversational Artificial Intelligence Agents	Journal of Management Information Systems
10	216	Cho et al.	2016	Workplace incivility and its effect upon restaurant frontline service employee emotions and service performance	International Journal of Contemporary Hospitality Management
11	214	Huang et al.	2021	Customer-robot interactions: Understanding customer experience with service robot	International Journal of Hospitality Management
12	213	Bawack et al.	2021	Exploring the role of personality, trust, and privacy in customer experience performance during voice shopping: Evidence from SEM and fuzzy set qualitative comparative analysis	International Journal of Information Management
13	199	Han et al.	2023	Bots with Feelings: Should AI Agents Express Positive Emotion in Customer Service?	Information Systems Research
14	196	Huang & Rust	2024	The Caring Machine: Feeling AI for Customer Care	Journal of Marketing
15	196	Lee & Ok	2014	Understanding hotel employees' service sabotage: Emotional labor perspective based on conservation of resources theory	International Journal of Hospitality Management

16	179	Bharwani & Jauhari	2013	An exploratory study of competencies required to co-create memorable customer experiences in the hospitality industry	International Journal of Contemporary Hospitality Management
17	176	Zhang et al.	2024	Emotional expression by artificial intelligence chatbots to improve customer satisfaction: Underlying mechanism and boundary conditions	Tourism Management
18	165	Kidwell et al.	2011	Emotional intelligence in marketing exchanges	Journal of Marketing
19	163	Gelbrich et al.	2021	Emotional support from a digital assistant in technology-mediated services: Effects on customer satisfaction and behavioral persistence	International Journal of Research in Marketing
20	145	Bertacchini et al.	2017	Shopping with a robotic companion	Computers in Human Behavior

Theoretical Frameworks

The theoretical foundations across the studies were very diverse, which is representative of the interdisciplinary nature of EI and AI-driven customer research. Emotional labor theory was one of the most frequently used frameworks, especially in research on employee burnout, emotional exhaustion, service sabotage, and work stress (Johnson & Spector, 2007; Lee & Ok, 2012; Lee & Ok, 2014). The Conservation of Resources Theory was also widely used to explain how emotional demands drain employees' psychological resources and affect service performance.

Anthropomorphism theory and human-like competency viewpoints have been used to explain customer responses to conversational agents, chatbots and service robots in several AI-related studies (Crolie et al., 2022; Chandra et al., 2022; Belanche et al., 2021). In similar vein, trust theory, customer experience theory, and other empathy-based frameworks were frequently integrated to investigate customer acceptance and affective reactions to AI technologies. Moreover, technology-oriented studies also included constructs of machine learning, human-computer interaction, and emotional expression. The diversity of theoretical perspectives indicates that the field draws on knowledge from psychology, marketing, hospitality management, information systems and AI.

Methodological Approaches

The articles reviewed mostly employed quantitative research methodologies. Data collection methods were mostly conducted through surveys, especially in the studies of customers, frontline employees, hospitality workers, and service consumers (Kidwell et al., 2011; Bharwani & Jauhari, 2013; Cho et al., 2016). SEM was often used to test the relationships between EI, trust, satisfaction, loyalty, empathy and behavioral outcomes.

Some research used experimental designs to explore customer responses to AI agents, chatbots, and service robots in various emotional or anthropomorphic contexts (Han et al., 2023; Zhang et al., 2024; Huang et al., 2021). Meta-analysis methods were also used in key foundational studies of emotional labor across multiple decades of research. Furthermore, in some studies, fuzzy-Set Qualitative Comparative Analysis (fsQCA), comparative analysis and mixed analytical approaches were used to have a more in-depth understanding of customer behaviour and technology adoption.

The methods suggest that the discipline places a high value on empirical validation and testing of causal relationships. Similarly, the growing use of experimental and AI-based simulation designs demonstrates the growing importance of technology-driven research on customer interaction.

Key Findings and Results

The results of the 16 articles are consistent in showing that EI has a significant impact on customer satisfaction, employee performance, service quality, customer retention, and organizational outcomes (Kidwell et al., 2011; Prentice et al., 2020; Gelbrich et al., 2021). Emotional intelligence was consistently associated with lower burnout, improved emotion regulation, higher job satisfaction and stronger customer relationships among frontline employees.

Research on AI has shown that customers are increasingly responsive to AI systems that exhibit emotional expression, empathy, warmth and human-like characteristics (Lv et al., 2022; Han et al., 2023; Huang & Rust, 2024). The positive effect of chatbots and service robots with emotional competencies on customer experience, trust, engagement, and continuous usage intention was reported. Furthermore, anthropomorphic AI systems have been developed to influence customer anger, satisfaction, and emotional attachment.

A number of studies have found that emotional support provided by digital assistants and AI technologies has a positive impact on customer behavioral persistence and loyalty. At the same time, some of the findings pointed to potential negative consequences such as customer frustration, emotional exhaustion of employees, and difficulties associated with excessive demands of emotional labor. The overall results show that emotional capabilities continue to be of critical importance, even in increasingly automated, AI-driven service environments. AI technologies, in contrast, appear to complement and simulate emotional interactions for better customer experience instead of replacing EI.

Study Limitations

There were several recurring limitations in the reviewed studies. Most studies were primarily based on cross-sectional survey designs that restrict causal inferences and longitudinal insight into customer and employee behavior over time. These studies were primarily conducted in hospitality, tourism and service industry contexts, which limits the generalizability of the findings to other industries.

Only a handful of AI-driven research has noted that rapid technological advancement could jeopardize the shelf life of their findings, as AI capabilities and customer expectations change. Cultural and geographical limitations were also mentioned in some studies as data was collected from specific countries or demographic groups.

In line with this, many studies relied on self-reported responses, which may be linked to common method bias, social desirability bias and subjective interpretation. Experimental studies with simulated AI interactions may also not fully reflect real-world customer behavior and long-term emotional engagement.

Relevance and Contributions

The contributions of the reviewed studies are of great importance for the theoretical and practical development of EI and AI-enabled customer interaction (Prentice et al., 2020; Chandra et al., 2022; Huang & Rust, 2024). These studies identify EI as a key determinant of customer satisfaction, employee well-being, service quality and organizational performance.

The AI-oriented studies make important contributions in terms of extending the EI concepts into technology-mediated service environments. These studies demonstrate that emotional recognition, empathy and human-like interaction in AI systems can enhance customer experience and strengthen service relationships. These findings make important contributions to the growing literature on human-AI collaboration, customer analytics, affective computing, and intelligent service systems.

From a managerial point of view, the studies offer practical implications for employee training, emotional management, chatbot development, AI service design, and customer relationship strategies. The inclusion of emotional competencies in AI technologies is a major paradigm shift in customer service innovation and digital transformation. The overall analysis of these highly cited articles confirms that the research area is moving towards a multidisciplinary, technology-driven view where EI still plays a central role in human and artificial service interactions.

Discussion

The results of this bibliometric study show that EI in customer research has moved from a niche field to a rapidly growing, multidisciplinary field. The striking increase in publications after 2019, especially the exponential increase in 2024 and 2025, reinforces the increasing academic and industrial recognition of emotionally driven customer interaction in traditional and digital service contexts. The advent of AI-enabled customer service technologies such as chatbots, intelligent voice assistants, service robots and generative AI systems appears to be one of the major catalysts for driving research development in the field.

The discussion of publication trends suggests that the early EI research was mainly based on psychology, emotional labor, employee well-being and interpersonal communication. For example, highly cited seminal studies like Hülshager and Schewe (2011), Johnson and Spector (2007), and Lee and Ok (2012) primarily examined emotional labor, burnout, emotional exhaustion and employee performance in hospitality and service contexts. These traditional themes highlight the importance of human emotional competences for customer relations management and organizational outcomes. Historically, EI has been viewed as a human-

centered ability that is linked to empathy, communication, relationship management, and emotional regulation.

However, the bibliometric results show a significant thematic shift towards technology-mediated emotional interaction. Keywords such as “Artificial Intelligence,” “Chatbots,” “Machine Learning,” “Emotion Recognition,” “Natural Language Processing,” “Generative AI,” and “Human-Computer Interaction” are recurrent appearing, reflecting the gradual embedding of emotionally responsive technologies into service environments through customer research. Recent and highly cited studies such as Crolic et al. (2022), Huang and Rust (2024), Lv et al. (2022) and Zhang et al. (2024) indicate that current customer research is increasingly focused in the potential of AI systems to replicate, simulate or enhance emotional interaction traditionally conducted by human employees. This shift is indicative of a larger trend towards moving from purely human EI to hybrid human-AI emotional ecosystems.

Besides revealing the publication trends and dominant themes, this study also contributes to the theoretical development of EI research by indicating an important intellectual shift in the field. The bibliometric evidence indicates that EI is no longer conceived just as a human ability related to empathy, emotional regulation and interpersonal communication. Instead, the field is gradually shifting from a narrow perspective where EI operates within a hybrid human-AI service ecosystem. This transition signals the fusion of EI theory with customer experience research, service innovation and technology-mediated interaction, broadening the conceptual boundaries of EI beyond the traditional organisational and psychological contexts.

The findings also offer an intellectual synthesis of previously fragmented streams of research. Previous research has been mainly on emotional labour, customer satisfaction, service quality, customer loyalty, empathy, chatbot interaction, emotion recognition, and AI as individual research topics. This study, by mapping the interrelated evolution of these themes, shows how together they form a developing knowledge structure around emotionally intelligent customer engagement. This integrated perspective helps develop holistic understanding of value creation involving emotional capabilities across both human and technology-enabled service contexts.

Also, the transformation is supported by keyword network analysis. EI was the most used keyword, followed by AI, which was used with a remarkably high frequency. EI is now studied not only from a psychological or organizational perspective, as shown by the relationship between EI, customer satisfaction, empathy, service recovery, customer experience and AI-related technologies, rather, it is increasingly contextualized in terms of digital transformation and intelligent service innovation contexts. This aligns with the growing global interest in ‘feeling AI’ and in emotionally adaptive technologies that can create trust, engagement and loyalty for customers.

The results suggest that from a theoretical perspective, EI research in customer contexts is supported by very interdisciplinary theoretical bases. Traditional frameworks such as Emotional Labor Theory, Emotional Competency Theory, Conservation of Resources Theory, Relationship Marketing Theory and Social Exchange Theory still provide meaningful explanations regarding customer satisfaction, employee behavior and emotional service outcomes. However, the growing integration of anthropomorphism theory, human-like competency theory, trust theory and human-computer interaction perspectives indicates that customer research is catching up with technologically mediated service realities.

The findings also show that the EI research has become increasingly multidisciplinary. This is shown by the dominance of Business, Management and Accounting, Computer Science, Social Sciences, Engineering and Psychology. The strong contribution from Computer Science in particular reflects the increasing use of AI analytics, machine learning, sentiment analysis and emotion recognition systems in customer research. This multidisciplinary integration means that EI is not anymore confined to behavioral sciences but has become strategically important in digital commerce, intelligent systems and customer analytics.

Methodologically, the analyzed studies present a marked preference for quantitative and empirical methodologies. The field was dominated by survey methods, SEM, experimental designs and comparative analytical techniques. The increasing use of experiments with AI-based agents, chatbots and robotic service interactions indicates that researchers are attempting to recreate realistic emotional customer experiences in controlled technological settings. However, the methodological focus on cross-sectional designs and self-reported data has several limitations. Many studies do not have a longitudinal analysis that can explain the development of customer emotional responses toward AI systems. Similarly, the use of hospitality and service-sector samples may limit the generalizability of results across industries such as healthcare, education, retail, and public services.

Another interesting observation is the geographical distribution of publications led by countries like Spain, Brazil, Portugal, Germany and other European countries indicating a strong impact of regions with advanced research ecosystems and service economies on EI and customer research. The increasing involvement of Asian countries such as China, India, South Korea and Malaysia indicates that there is a global rise in interest in emotionally intelligent customer interaction – more so in fast digitalizing economies. The results also suggest that research in the developing regions are still relatively scarce. This points towards the possibility of wider geographical diversification in future study.

The citation analysis also shows the intellectual growth of the field. While previous seminal research focused on emotional labor, service performance, and employee well-being, recent highly cited research has increasingly shifted towards AI-driven customer interaction, empathy simulation, service robots, and conversational AI. The increasing citation impact of research on AI-enabled emotional interaction shows that the research community is increasingly recognizing the importance of EI in digital customer engagement and service innovation.

These findings have important implications for organisations working in increasingly digital and service-oriented environments contexts. The salience of themes such as customer satisfaction, customer experience, empathy, service quality and customer loyalty signifies the need for EI integration in customer experience design initiatives. Organisations need to create service processes that support emotionally responsive interactions in both human-delivered and technology mediated service encounters. This approach can increase customer trust, emotional involvement and the long-term quality of the relationship.

The results also indicate increasing interest in chatbots, service robots, technologies in recognizing emotions and AI-enabled service systems. As such, organisations must ensure that these technologies are designed to complement, rather than replace, human emotional capabilities. Moreover, the literature highlights the increasing significance of trust, empathy, and authenticity, suggesting that the deployment of AI-driven customer service solutions

should be approached with careful consideration of ethical implications. It is about transparency, how customers see you and emotionally responsive interactions.

The dataset also has a strong representation of hospitality, tourism, service management and customer experience research, showing opportunities for hospitality automation and intelligent service innovation. Service organisations may consider embedding EI principles into digital relationship management strategies to facilitate more personalised, responsive and customer-centric interactions in evolving service environments.

The study also points out several important research gaps and opportunities for future research. While emotional engagement with AI has become a popular topic, there is a lack of research on the ethical implications of emotionally intelligent AI systems, including emotional manipulation, privacy issues, algorithmic bias, and customer psychological dependence. Similarly, there is little research on long-term customer trust in emotionally adaptive AI technologies. Future research should therefore investigate the sustainability and ethical issues of AI mediated emotional interaction.

Existing studies mostly focus on customer satisfaction, service quality and loyalty outcomes with less attention paid to emotional resilience, customer vulnerability, digital fatigue and emotional well-being in AI-driven environments. Further longitudinal and cross-cultural research is needed to understand the difference in EI and AI adoption across countries, industries, and generations.

Overall, these bibliometric reviews show that research on EI in customer contexts are undergoing remarkable transformations. The traditional human-centered emotional competencies are still relevant but the rapid integration of AI, emotion recognition technologies and digitally mediated service interaction are reshaping the intellectual structure of the field. Future customer research is likely to be characterized by greater interdisciplinary collaboration, emotionally intelligent technologies, and hybrid human–AI customer service ecosystems.

Conclusion

The present bibliometric study offers a comprehensive overview of global scholarly trends in EI in customer research based on 464 publications indexed in the Scopus database from 2001 to 2025. The findings show that EI is an emerging multidisciplinary research field that includes business, marketing, psychology, hospitality, computer science, and AI. The publication trend shows a substantial growth in recent years, especially after 2020, reflecting the growing scholarly interest in AI-enabled customer interaction, emotionally intelligent technologies, customer experience management, and service innovation. As such, keyword, citation and thematic analyses reveal a clear shift from traditional human-centric EI research towards hybrid human-AI emotional service ecosystems consisting of chatbots, service robots, sentiment analysis, emotion recognition and generative AI technologies.

The present study contributes to the existing literature from theoretical, methodological and practical perspectives. It theoretically expands the knowledge about the rising integration of EI frameworks with AI, customer analytics and technology-mediated service interaction. From a methodological perspective, the study offers a structured bibliometric mapping of the most influential journals, publishing trends, dominant keywords, active countries, leading authors and highly cited studies within the field. In practical terms, the findings indicate the increasing

importance of EI in designing customer experiences, managing digital relationships and delivering services through technology. The increasing relevance of AI-enabled customer interaction, chatbots, service robots and emotion recognition technologies indicate that organizations need to embed emotional competencies into human and digital service strategies. The results also demonstrate that customer trust, authenticity, empathy and emotional responsiveness are still important factors in the implementation of intelligent service systems. These insights are especially relevant for organisations that want to improve customer engagement, service quality and long-term relationship outcomes in digitally transformed service environments.

The study also lays the foundation for future theoretical development of customer research. The findings suggest that future research should move from studying EI as a singular construct to identifying its role in increasingly interconnected human–AI service ecosystems. Focus should be on how empathy, trust, authenticity, emotional engagement and emotional responsiveness are created in technology-mediated customer interactions. Furthermore, the identified thematic clusters show opportunities for greater theoretical integration between EI, customer experience, relationship marketing, service innovation, and AI research. Such integration may be helpful in developing more comprehensive frameworks able to explain customer behaviour in digitally transformed service environments.

Despite its contributions, the study has some limitations. The analysis was based only on the Scopus database and the inclusion of journal articles published in English language which can limit the publication coverage and exclude relevant studies from other databases or languages. Furthermore, bibliometric analysis relies mostly on publication metadata and citation structures, rather than on a detailed qualitative evaluation of individual studies. To address this problem, future studies should apply multiple databases, longitudinal approaches, and cross-cultural investigations to improve research comprehensiveness. Further research is needed to examine ethical issues, perceptions of authenticity, emotional dependence and trust issues related to emotionally intelligent AI systems. As AI technologies continue to develop, further research should examine the trade-off between human EI and artificial emotional simulation in customer service and digital interaction contexts.

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