



Review

Service Quality in Tourism: A Systematic Literature Review and Keyword Network Analysis

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Abstract: The tourism industry has received increasing attention as it has become one of the fastest developing business sectors around the world. Service quality in tourism has come to be regarded as an important impetus for economic growth; however, the focus on tourism service quality has not yet been satisfactorily or comprehensively reviewed. Therefore, we conducted a systematic literature review combining bibliometric, citation network and keyword network analysis. We selected the top five tourism journals from the SCOPUS database and then collected papers according to their keywords. Our results revealed the critical issues, topics, and changes over time regarding research on tourism service quality. The critical issues included the important impact of service quality on tourist behavior and service quality evaluation, and topics comprised (1) tourist satisfaction, (2) sustainable issues in tourism, (3) value of service quality for customers, (4) restaurant service quality, (5) customers' perceptions of tourism, (6) service quality evaluation in tourism, and (7) service quality's influence on customer behavior. Furthermore, the keyword network analysis results revealed the most influential keywords.

Keywords: service quality; systematic literature review; keyword network analysis

1. Introduction

During the last few decades, the tourism industry has become extremely economically relevant, as it has become one of the fastest developing areas in the contemporary business environment. For example, global international tourist arrivals in 2013 reached a record of 1.087 billion, whereas international tourism revenue constituted a record US \$1.159 billion in the same year [1]. This shows that tourism can significantly contribute to the economic growth of tourist destinations by increasing employment opportunities, developing infrastructure, and attracting foreign exchange earnings [2]. Tourism's economic impetus can be investigated using various perspectives, which include, for example, (1) its direct effects such as "sales, employment, tax revenues, and income levels", which come from the immediate impacts of tourist spending [2–4], (2) its indirect effects such as "prices, quantity and quality of products and services, taxes and property, and social and environmental impacts" [2–4], and (3) its efficiency and productivity due to economic resources being allocated to promote cost reductions in tourism sectors [2,5–7]. As a result, previous literature has regarded tourism as an important cause of variation in economic growth in many countries.

Among the factors related to tourism, service quality in tourism has received increasing academic attention. For example, research papers have been published in academic journals that utilize SERVQUAL, the most representative model for measuring service quality [8,9]. Nevertheless, service quality in tourism has not yet been satisfactorily reviewed despite its impact on tourists' destination choice. Furthermore, because of tourism's wide-ranging scope, which extends to various business

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settings, few studies have used a comprehensive perspective to examine service quality in tourism. Therefore, our study's main objective was to identify the most influential studies as well as both broad and specific issues regarding tourism service quality and explore this research field's current and future directions and trends through a systematic literature review.

2. Literature Review

Identifying the themes of a given field for the purpose of improving our understanding of it, and therefore stimulating further research is a proactive effort. Through the process of mapping and evaluating the body of literature, scholars can identify potential research gaps and opportunities for future research [10].

With regards to conducting such literature reviews, researchers have adopted various approaches. One influential perspective is the "popularity-based approach," which includes the technique of bibliometric analysis. This method was created to investigate authors' keywords and titles of published articles in various research fields. Specifically, bibliometric analysis can provide insights not captured or evaluated by other reviews because it offers additional data regarding authors, affiliation, popular words, and keywords and their frequency of use. However, while the popularity-based approach can indicate the importance of titles or keywords in a given research area by investigating their frequency of use in papers, significant information can only be obtained post-publication [11]. Moreover, this approach is considered unsuitable for identifying shared topical content due to its inability to assess relationships among published papers within a certain field.

Another literature review method involves the "network-based approach," which uses citation and co-citation analysis to investigate the network structure that exists among articles in a given field by mapping and visualizing the citations generated among papers. Citation analysis has been used to determine the popularity of a publication [12]; that is, a network analysis of commonly used citations aims to identify the popularity of a published paper by counting how frequently a paper is cited by other papers. Unlike citation analysis, co-citation analysis has been implemented to identify topics in a given area by constructing a co-citation network comprising a set of nodes (journal papers) and a set of links (co-occurrences of the papers in other papers). That is, if two publications appear together in other publications' reference lists, they represent a co-citation relationship [13]. Co-citation can be used to explore data structure by applying mapping as a form of exploratory data analysis. In other words, a co-citation network constructed based on papers that are more frequently co-cited indicates that the included papers have similar subject areas [14]. However, those network-based analyses have mainly been conducted on published papers, rather than specified keywords. Therefore, a network of commonly used citations or co-citations does not directly represent a specified knowledge network for a given area from a comprehensive perspective. To comprehensively identify issues and topics pertaining to tourism service quality, it is therefore essential to include papers not involved in the network.

Lai et al. [15] performed a systematic literature review on service quality in Hospitality and Tourism using the pathfinder network approach. This study differs from the present study in two significant ways. First, Lai et al. used citation counts to identify the most influential papers for content analysis. While citation counts are an important indicator of a paper's impact, a highly cited paper can not necessarily indicate a prestigious paper, as measured by the number of times a paper is cited by other highly cited papers. In contrast, we used PageRank in the present study as an indicator of both "popularity, measured by citation count, and "prestige" to identify the most impactful papers and to analyze the contents of selected papers. Second, Lai et al. conducted a network-based study involving citation and co-citation analysis to identify research gaps and suggest directions for future research. Here, we adopted a systematic literature review approach that combined a network-based approach with bibliometric and keyword network analysis. The results are significantly different.

Considering these perceived drawbacks in the existing literature, we resolved to conduct a systematic literature review that combined the traditional systematic literature review approach Sustainability **2019**, 11, 3665 3 of 21

(bibliometric and citation analysis) with keyword network analysis for a more comprehensive evaluation of research on service quality in tourism. As part of our method, we identified and investigated the keyword network linking an author's keywords to comprehensively map knowledge of tourism service quality and identify important issues and topics and their change over time.

In our study, we first conducted rigorous bibliometric (i.e., frequency analysis) and network analysis on service quality in tourism research (e.g., citation, co-citation, and keyword network analysis) to map the knowledge structure of the issue and topic, and then carried out a content analysis of the key papers. In order to examine the structural characteristics of the network and identify critical issues and topics regarding service quality in tourism from a comprehensive perspective, we selected influential papers and extracted keywords. We performed a citation analysis to identify critical content in the existing literature and conducted a co-citation analysis to explore topical content based on classification of the existing studies. Finally, in order to carry out a systematic content analysis of the theme, we constructed a network based on keywords extracted from the selected publications and investigated changes in important keywords over time.

3. Research Methodology

As a first step, we selected tourism-related journals from the SCOPUS database. To extract the most influential papers, we reduced the journals to only the top five using the categories and impact factor (SJR, SCImago journal rank) provided by SCOPUS. We used "service quality" as the main search keyword.

We located papers with the identified keywords from the selected major journals by using the "article title, abstract, keywords" search in SCOPUS. To select the most influential papers, only journal articles written in English were used; conference papers, book series, commercial publications, and magazine articles were excluded. Search results included essential information such as title, author(s), abstract, paper keywords, and references.

Given that various tourism scholars might have differing perspectives in terms of which journals publish tourism-related articles, this study attempted to collect data from a diverse range of top tourism journals. The initial search attempts resulted in 178 papers. Due to a higher number of published papers in 2007 compared to 2008, we collected papers published during a 12-year period from 2008 to 2019. The results from the selected journals are summarized in Table 1. Figure 1 shows the quantity of publications per year.

Journals	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
Annals of Tourism Research					1	1							2
International Journal of Hospitality Management	4	4	8	9	13	11	9	11	7	8	6	6	96
Journal of Hospitality and Tourism Research	2	1	6	1		1	1	1	2	6	2		23
Journal of Travel Research	1	4			1	1	1	1		2	1	1	13
Tourism Management	3	2	1	4	3	1	3	5	6	4	10	2	44
Total	10	11	15	14	18	15	14	18	15	20	19	9	178

Table 1. Selected journals (2008–2019).

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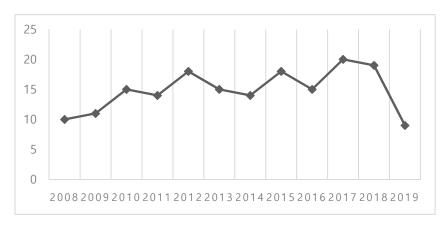


Figure 1. Quantity of publications per year (2008–2019).

Table 2 lists the journal, year, title, and author keywords associated with 178 research paper used in this research analysis. Using Excel, the data set was first arranged by journal name in ascending order. Then, the data set was arranged in ascending order by year and then title.

Table 2. Title and Author Keywords (2008–2019).

NT.	Journals				
No.	Title (Year)	Author Keywords			
	Annals of Tourism Re	esearch			
1	Tourist experience and Wetland parks: A case of Zhejiang, China (2012)	China; Post-trip behavioral intention; service quality; Tourist experience; Wetland parks			
2	Value Co-creation significance of tourist resources (2013)	Effort; Involvement; Time spent; Tourist resources; Value perception			
	International Journal of Hospita	lity Management			
3	Customer value in the hotel industry: What managers believe they deliver and what customer experience (2008)	Business hotels; Customer value; Hospitality industry; service quality			
4	Determinants of dining satisfaction and post-dining behavioral intentions (2008)	Emotions; Loyalty; Recommendation; Restaurant services; Satisfaction; service quality			
5	Does bureaucracy kill individual initiative? The impact of structure on organizational citizenship behavior in the hospitality industry (2008)	Bureaucracy; Centralization; Formalization; Hotel industry; Organizational citizenship behavior; service quality			
6	The interaction of major resources and their influence on waiting times in a multi-stage restaurant (2008)	Capacity management; Restaurant resource; service quality; Simulation; Waiting time			
7	Customers' cognitive, emotional, and actionable response to the servicescape: A test of the moderating effect of the restaurant type (2009)	Emotion; Perceived service quality; Revisit intention; servicescape; Theme restaurant			
8	From public to private: Has employment practice changed in Bulgarian hotels? (2009)	Bulgaria; Emerging economies; Employment policy and practice; Hotels			
9	Influence of institutional DINESERV on customer satisfaction, return intention, and word-of-mouth (2009)	Customer satisfaction; Food quality; Institutional DINESERV; Return intention; Word-of-mouth endorsement			
10	Tipping behavior in Canadian restaurants (2009)	Canadian restaurant industry; CREST data; Gratuities; Tipping			
11	An investigation of green hotel customers' decision formation: Developing an extended model of the theory of planned behavior (2010)	Decision-making; Extended theory of planned behavior; Green hotel; Revisit intention			
12	Applying loss aversion to assess the effect of customers' asymmetric responses to service quality on post-dining behavioral intentions: An empirical survey in the restaurant sector (2010)	Customers' post-behavioral intentions; DINESERV; Loss aversion			
13	Effects of organizational/occupational characteristics and personality traits on hotel manager emotional exhaustion (2010)	Burnout; Emotional exhaustion; Hotel; Personality traits			
14	Effects of service quality and food quality: The moderating role of atmospherics in an ethnic restaurant segment (2010)	Atmospherics; Ethnic restaurant; Food quality; Korean restaurant; Loyalty; Moderating effect; Satisfaction; service quality			
15	Exploratory assessment of the Macao casino dealers' job perceptions (2010)	Casino dealers; Front-line employees; Job perceptions; Macao			

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Table 2. Cont.

Na	Journals					
No.	Title (Year)	Author Keywords				
	International Journal of Hospita	lity Management				
16	Lifestyle businesses: Insights into Blackpool's hotel sector (2010)	Blackpool hotels; Lifestyle entrepreneurs; Micro-businesses				
17	Pay for performance and work attitudes: The mediating role of employee-organization service value congruence (2010)	P-O fit; Pay for performance; service value congruence; Work attitudes				
18	Supply management practices and performance in the Canadian hospitality industry (2010)	Hospitality; Performance; Purchasing strategy; service; Supply management				
19	An examination of electronic video clips in the context of hotel Websites (2011)	E-VISQUAL; Experiential services; Video clip; Virtual human interaction; Visual image				
20	Customers' perceptions of service quality: Do servers' age stereotypes matter? (2011) Foreign travelers' satisfaction with traditional Korean	Age stereotypes; Perceptions of service quality; Server Customer satisfaction; Expectation; Korean				
21	restaurants (2011) Luxury marketing: The influences of psychological	restaurants; service quality; Value for money				
22	and demographic characteristics on attitudes toward luxury restaurants (2011)	Demographics; Hedonism; Luxury marketing; Materialism; Perfectionism; Uniqueness				
23	Restaurant consumers repeat patronage: A service quality concern (2011)	Cleanliness; Consumers; Repeat patronage; Restaurant; service quality				
24	Restaurant experiences triggering positive electronic word-of-mouth (eWOM) motivations (2011)	Electronic word-of-mouth (eWOM); EWOM motivations; Perceived service quality; Restaurant experiences				
25	Reward climate and its impact on service quality orientation and employee attitudes (2011)	Job satisfaction; Organizational commitment; Reward climate; service quality orientation (SQO)				
26	Strategic alignment leverage between hotels and companies: The buyer-supplier relationship perspective (2011)	Environment uncertainty; service vision; Strategic alignment				
27	When will customers care about service failures that happened to strangers? The role of personal similarity and regulatory focus and its implication on service evaluation (2011)	Attribution; Personal similarity; Regulatory focus; service failures				
28	Customer opportunistic complaints management: A critical incident approach (2012)	Complaining behavior; Critical incident technique; Opportunistic complaint; Unethical consumer behavior				
29	Development and validation of the casino service quality scale: CASERV (2012)	Casino; Macau; Scale development; service quality				
30	Does better service induce higher profitability? Evidence from Taiwanese Hospitality Industry (2012) Enhancing service quality improvement strategies of	International tourist hotel; Profitability; service quality				
31	fine-dining restaurants: New insights from integrating a two-phase decision-making model of IPGA and DEMATEL analysis (2012)	DEMATEL; IPGA; Restaurant service quality				
32	Factorial validation of hospitality service attitude (2012)	Customer satisfaction; Hotel industry; Interaction quality; service attitude; service quality				
33	It is all about the emotional state: Managing tourists' experiences (2012)	Customer satisfaction; Emotional state; Hotel setting Leisure experience; servicescape				
34	Measurement scale for eco-component of hotel service quality (2012) Relationship quality between exhibitors and organizers:	Eco-component; Eco-label; Ecological expectations; Hotel service quality; Wellness hotels				
35	A perspective from Mainland China's exhibition industry (2012)	China; Exhibitions; Relationship quality				
36	service guarantees in the hotel industry: Their effects on consumer risk and service quality perceptions (2012)	Corporate reputation; Hotel; Perceived quality; Perceived risk; service guarantees				
37	service quality and tipping: The moderating role of the quality of food (2012)	Quality of food; service quality; Tipping behavior				
38	service-leadership competencies for hospitality and tourism management (2012)	Competency model; Hospitality and tourism; Leadership; service quality				
39	The underlying dimensions of tipping behavior: An exploration, confirmation, and predictive model (2012) When I put on my service mask: Determinants	Consumer behavior; Motivation; Restaurants; service quality; Social norms; Tipping				
40	When I put on my service mask: Determinants and outcomes of emotional labor among hotel service providers according to affective event theory (2012)	Affective event theory; Emotional labor; Hotel service employees; Negative emotions; service quality				
41	Corporate social responsibility practices in four and five-star hotels: Perspectives from Hong Kong visitors (2013)	Corporate social responsibility; Customer perceptions; Hong Kong; Hotels				

Table 2. Cont.

No.	Journa	ls				
	Title (Year) Author Keywords					
	International Journal of Hospita	lity Management				
42	Emotional intelligence and adaptability-service encounters between casino hosts and premium players (2013)	Adaptability; Casino hosts; Casino industry; Emotional intelligence; Premium player; service performance				
43	Factors influencing internal service quality at international tourist hotels (2013)	Hospitality service; Internal service quality; Leadership; Organizational culture				
44	Factors influencing the effectiveness of online group buying in the restaurant industry (2013) Is satisfaction enough to ensure reciprocity with upscale	Discount; Group buying; Restaurant; Return intention; Satisfaction; service quality				
45	restaurants? The role of gratitude relative to satisfaction (2013)	Gratitude; Reciprocal behaviors; Relationship benefits; Satisfaction; Upscale restaurant				
46	Justice perceptions and drives of hotel employee social loafing behavior (2013)	China hotel industry; Commitment; Justice perceptions; Social loafing; Turnover intention				
47	Multi-dimensions of patrons' emotional experiences in upscale restaurants and their role in loyalty formation: Emotion scale improvement (2013)	Commitment; Emotion measurement; Image; Loyalty intentions; Satisfaction; service quality; Trust; Upscale restaurant				
48	The effect of regulatory focus and delay type on consumers' reactions to delay (2013)	Affective response; Delay type; Expectancy model; Field theory; Regulatory focus; service quality				
49	The effects of restaurant servers' perceptions of customers' tipping behaviors on service discrimination (2013)	Buyer monitoring; Employee control mechanisms; Restaurant; service discrimination; service quality; Tipping				
50	The influence of customer brand identification on hotel brand evaluation and loyalty development (2013)	Brand loyalty; Brand trust; Identification; Perceived value; service quality				
51	The role of frequency of patronage and service quality of all-you-can-eat buffet restaurant: A perspective of socio-economic and demographic characteristics of African American consumers (2013)	African American consumers; Blacks; Buffet restaurant marketing; Food consumption; Restaurant patronage; service quality				
52	A patron, a referral and why in Macau casinos -The case of mainland Chinese gamblers (2014)	Attitudinal loyalty; Behavioural loyalty; Casino service quality; Chinese gamblers; Loyalty programme; Macau casinos; Membership				
53	Applying service Profit Chain model to the Korean restaurant industry (2014)	Customer constructs; Employee constructs; Internal service quality; Korean restaurant; Organizational commitment; service Profit Chain				
54	Attitudinal dimensions of professionalism and service quality efficacy of frontline employees in hotels (2014)	Customer orientation; Knowledge; Professionalism; Self-efficacy; Self-management; Sense of calling				
55	Becoming an ambidextrous hotel: The role of customer orientation (2014)	Customer orientation; Exploitation; Exploration; service improvement; service innovation				
56	Effective restaurant rating scale development and a mystery shopper evaluation approach (2014) Job standardization and service quality: The mediating	Mystery shopper; Restaurant; Restaurant rating; Scale development; service quality Job standardization; Prosocial service behaviors;				
57 58	role of prosocial service behaviors (2014) Linking service quality, customer satisfaction and loyalty	service quality Casino marketing, Macau; Customer loyalty;				
59	in casinos, does membership matter? (2014) Why do customers switch? More satiated or less satisfied (2014)	Customer satisfaction; Membership; service quality Atmospheric quality; Food quality; Satiation; Satisfaction; service quality; Switching intention				
60	Wine attributes, perceived risk and online wine repurchase intention: The cross-level interaction effects of website	Hierarchical linear modeling; Multilevel analysis; Online wine repurchase intention; Perceived risk;				
61	quality (2014) A conflict of choice: How consumers choose where to go for dinner (2015)	Website quality; Wine attributes Food quality; Multi-attribute decision making; Restaurant choice experiment; service quality				
62	A segmentation of online reviews by language groups: How English and non-English speakers rate hotels differently (2015)	Language; Online ratings; Reputation; Satisfaction difference; Traveler distribution				
63	Antecedents of mandatory customer participation in service encounters: An empirical study (2015)	Customer participation; Loyalty; Purchase importance; Role clarity; Self-efficacy; service quality				
64	Applying mixed methods to identify what drives quick service restaurant's customer satisfaction at the unit-level (2015)	Customer satisfaction; Kano's model; Performance optimization; Product quality; Quick service restaurants; service quality				
65	Consumer-based chain restaurant brand equity, brand reputation, and brand trust (2015)	Brand equity; Brand reputation; Brand trust; Chain restaurant; Visit purpose				
66	Does uncertain demand affect service quality? (2015)	Capital-labor ratio; Hotel industry; service quality; Uncertain demand				
67	Impacts of cruise service quality and price on vacationers' cruise experience: Moderating role of price sensitivity (2015)	Cruise; Loyalty; Novelty; Price; Price sensitivity; service quality; Value				

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Table 2. Cont.

No.	Journals					
110.	Title (Year)	Author Keywords				
	International Journal of Hospita	lity Management				
68	Positive emotions and behavioral intentions of customers in full-service restaurants: Does aesthetic labor matter? (2015)	Aesthetic labor; Behavioral intention; Full-service restaurant; Positive emotion				
69	The cross-impact of network externalities on relationship quality in exhibition sector (2015)	Customer loyalty; Exhibition; Network externalitie Relationship quality; service quality				
70	Understanding service experience and its impact on brand image in hospitality sector (2015)	Brand image; Customer experiences; Customer Satisfaction; India; service quality				
71	Value dimensions in consumers' experience: Combining the intra- and inter-variable approaches in the hospitality sector (2015)	Extrinsic vs. intrinsic values; Loyalty; Perceived value; Satisfaction; Value dimensions				
72	Adaptation of hospitality service quality scales for marina services (2016)	Marinas; service quality; Turkish marinas; Yachtsmen's satisfaction				
73	An emotional labor perspective on the relationship between customer orientation and job satisfaction (2016)	Customer orientation; Emotional labor; Job satisfaction				
74	Do competitive strategy effects vary across hotel industry cycles? (2016)	Advertising expenditure; Business cycle; Hotel industry; Pricing strategy; Quality strategy				
75 76	Embracing or fighting the urge: A multilevel investigation on casino service, branding and impulsive gambling (2016) Hedonic adaptation and satiation: Understanding	Brand attachment; Brand equity; Casinos; Impulsi gambling; Loyalty; service quality Hedonic adaptation; Restaurants; Satiation;				
77	switching behavior in the restaurant industry (2016) Internal branding process: Exploring the role of mediators in top management's leadership-commitment relationship (2016)	Satisfaction; Switching Brand commitment; Employee brand knowledge; Employee-brand fit; Psychological contract; Top management's brand-oriented leadership				
78	The influences of restaurant menu font style, background color, and physical weight on consumers' perceptions (2016)	Menu background color; Menu font style; Menu weight; Restaurant scale; Restaurant service				
79	Exploring the nonlinear impact of critical incidents on customers? general evaluation of hospitality services (2017)	Critical incident technique; Hospitality industry; Kano model; service quality; TripAdvisor				
80	Extending the scope of hotel client reactions to employee injustice: Hotel employer reviews on the Internet (2017)	Client satisfaction; Hotel employee (mis)treatmen Hotel management; Organizational justice; The Internet				
81	Impact of hotel-restaurant image and quality of physical-environment, service, and food on satisfaction and intention (2017)	Customer satisfaction; Food quality; Intentions; Luxury hotel restaurant; Physical environment quality; service quality				
82	The effects of teppanyaki restaurant stimuli on diners? Emotions and loyalty (2017) The impact of personal and functional aspects of	Chef's image; Diners; Emotions; Loyalty; Teppany				
83	restaurant employee service behaviour on customer satisfaction (2017)	Customer satisfaction; Personal aspects; Restaurar service quality; service behaviour; service encoun				
84	The impact of the social servicescape, density, and restaurant type on perceptions of interpersonal service quality (2017)	Density; DINESERV; Restaurant; service quality; Social servicescape				
85	Understanding the dimensions of customer relationships in the hotel and restaurant industries (2017)	Customer lifetime financial value; Customer relationships; Hospitality marketing strategy; Relationship marketing				
86	Willingness to pay in negative restaurant service encounters (2017)	Ambiance; Food quality; service encounter; service quality; Value; Willingness to pay				
87	Projecting service quality: The effects of social media reviews on service perception (2018)	Social media reviews; Social media popularity; Service quality; Credibility; Service attributes; Facebook				
88	Less is more: A new insight for measuring service quality of green hotels (2018)	and GLSERV scale; Carbon reduction; Environmer protection; Green hotel; service quality				
89	On the relationship between intellectual capital and financial performance: A panel data analysis on SME hotels (2018)	Dynamic panel data; Financial performance; Intellectual capital; Small and medium-sized enterprise hotels				
90	Projecting service quality: The effects of social media reviews on service perception (2018)	Credibility; Facebook; service attributes; service quality; Social media popularity; Social media reviews				
91	The effects of organizational and personal resources on stress, engagement, and job outcomes (2018)	Customer orientation; Engagement; Hotel employe Job outcomes; Job stress; Management commitme to service quality				
92	The Integration between service Value and service Recovery in the Hospitality Industry: An Application of QFD and ANP (2018)	Analytic network process; Customer satisfaction; Quality function deployment; service failure; service recovery				

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 Table 2. Cont.

NT-	Journals					
No.	Title (Year) Author Keywords					
	International Journal of Hospita	lity Management				
93	Changing tires on a moving car: the role of timing in	Hospitality industry; Recovery; Retrenchment;				
94	hospitality and service turnaround processes (2019) Consumer values and service quality perceptions of food truck experiences (2019)	service industry; Turnaround process DINESERV; Food truck; Hedonic value; Importance-performance analysis; Utilitarian value				
95	Developing and validating a mobile catering app success model (2019)	E-commerce system success model; eWOM; Mobile catering app; Perceived price; Perceived promotions;				
96	Exploring Airbnb service quality attributes and their asymmetric effects on customer satisfaction (2019)	Product quality Airbnb; Customer satisfaction; Impact asymmetry analysis; Impact range performance analysis; Mixed				
97	Good discounts earn good reviews in return? Effects of price promotion on online restaurant reviews (2019)	method; service quality Image; Online consumer review; Price promotion; Restaurant; Review rating; Textual content				
98	The impact of green practices in coastal tourism: An empirical investigation on an eco-labelled beach club (2019)	Beach club; Behavioral intention; Coastal tourism; Ecolabel; Green practices; PLS-SEM				
	Journal of Hospitality and Tou	urism Research				
99	Relationships Among Experiential Marketing, Experiential	customer satisfaction; experiential marketing;				
100	Value, and Customer Satisfaction (2008) Tourists' Satisfaction Judgments: An Investigation of Emotion, Equity, and Attribution (2008)	experiential value; structural equation modeling attribution; culture; emotion; equity; package tour; satisfaction				
101	Stakeholder service perspectives: A triadic analysis of service quality in south Mississippi fine dining restaurants (2009)	Quality perceptions; service quality; Stakeholders				
102	Does cultural difference affect customer's response in a crowded restaurant environment? A comparison of American versus Chinese customers (2010)	Attribution; Crowdedness; Cultural differences				
103	Influence of the Quality of Food, service, and Physical Environment on Customer Satisfaction and Behavioral Intention in Quick-Casual Restaurants: Moderating Role of Perceived Price (2010)	behavioral intention; perceived price; quality dimensions (food service and physical environment); quick-casual restaurants; satisfaction				
104	The role and effect of job satisfaction and empowerment on customers' perception of service quality: A study in the restaurant industry (2010)	Customer satisfaction; Employee empowerment; Employee job satisfaction; HRM-service quality link; Restaurant services management; service quality				
105	Tipping and service quality: A within-subjects analysis (2010)	Equity; Incentive; Reward; service quality; Tipping				
106 107	Tour guide performance and tourist satisfaction: A study of the package tours in Shanghai (2010) Toward a Theory of Restaurant Décor: An Empirical Examination of Italian Restaurants in Manhattan	service quality; Tour experience; Tour guide performance; Tour operator; Tourist satisfaction New York restaurants; restaurant décor; theory of reasoned action				
108	Synthesizing the effects of service quality, value, and customer satisfaction on behavioral intentions in the motel industry: An empirical analysis (2011)	behavioral intentions; customer satisfaction; motel industry; service quality; value				
109	An Exploratory Examination of Supervisor Undermining, Employee Involvement Climate, and the Effects on Customer Perceptions of service quality in Quick-service Restaurants (2013)	customer service; employee involvement; quick-service restaurants; undermining				
110	The Influence of Hotel Price on Perceived service quality and Value in E-Tourism: An Empirical Investigation Based on Online Traveler Reviews (2014)	online reviews; perceived quality; perceived value; price effects				
111	Enhancing Consumer Value in Wine Tourism (2015)	consumption values; experiential marketing;				
112	A quality-Value-Attitude Model: The Case of Expo 2010 Shanghai (2016)	marketing; service quality attitude; economic value; emotional value; mega-event quality; Shanghai Expo				
113	Socially Responsible Customers and the Evaluation of service quality (2016)	customer expectations; dimensions of social responsibility; ethical consumers; service quality; social responsibility dimension scale; socially responsible consumers				
114	Construction and Validation of the Customer Participation Scale (2017)	customer loyalty; customer roles; mandatory customer participation; scale development; service quality				
115	Signaling service quality via Website e-CRM Features: More Gains for Smaller and Lesser Known Hotels	Signaling theory; electronic customer relationship management; e-CRM, website quality				

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Table 2. Cont.

N.T	Journals					
No.	Title (Year) Author Keywords					
	Journal of Hospitality and Tou	ırism Research				
116	Examination of Restaurant Quality, Relationship Benefits, and Customer Reciprocity from the Perspective of Relationship Marketing Investments (2017)	customer reciprocity; relationship benefit; relationship marketing investment; restaurant quality				
117	Psychological Capital in the Quick Service Restaurant Industry: A Study of Unit-Level Performance (2017) Signaling service quality via Website e-CRM Features:	customer satisfaction; psychological capital; quick service restaurants; revenues; service quality e-CRM; electronic customer relationship				
118	More Gains for Smaller and Lesser Known Hotels (2017) The Effect of Tourist Relationship Perception on	management; signaling theory; website quality				
119	Destination Loyalty at a World Heritage Site in China: The Mediating Role of Overall Destination Satisfaction and Trust (2017)	destination image; loyalty; satisfaction; service fairness; service quality; trust				
120	The Effect of Event Supportive Service Environment and Authenticity in the Quality-Value-Satisfaction Framework (2018)	authenticity; customer satisfaction; festival; perceived value; program quality; service environment				
121	Tourist Shoppers??Evaluation of Retail service: A Study of Cross-Border Versus International Outshoppers (2018)	cross-border outshoppers; evaluation of retail service international outshoppers; tourist shopping behavio				
	Journal of Travel Res	search				
122	The effects of quality and satisfaction on awareness and behavioral intentions: Exploring the role of a wine festival (2008)	Awareness; Behavioral intentions; Perceived quality Satisfaction; Wine festival				
123	"You felt like lingering": Experiencing "real" service at the winery tasting room (2009)	Hospitality; service experience; service quality; Windowski tourism				
124	A mediation model of tourists' repurchase intentions for packaged tour services (2009) Small-business owners' knowledge and rural tourism	Packaged tour services; Perceived value; Repurchas intentions; Satisfaction; service quality Knowledge; Objective quality; Perceived quality;				
125 126	establishment performance in Spain (2009) Tip-Collection strategies, service guarantees,	Rural tourism; Small-business owner Consumer evaluations; Group package tours; service				
127	and consumer evaluations of group package tours (2009) The role of cybermediaries in reputation building	guarantee; Tip-collection strategy cybermediary; online hotel market; online travel				
128	and price premiums in the online hotel market (2012) A Systematic Approach to Scale Development in Tourist Shopping Satisfaction: Linking Destination Attributes and Shopping Experience (2013)	agent; reputation experience; satisfaction; scale development; tourism shopping; tourist facility				
129	Guests and Hosts Revisited: Prejudicial Attitudes of Guests toward the Host Population (2014)	cultural bubble; host-guest relationships; prejudice; tourism's impact; tourist attitudes				
130	Perceived Destination Image: An Image Model for a Winter Sports Destination and Its Effect on Intention to Revisit (2015)	destination image model; SEM; service quality; spor events; visitor management				
131	Enhancing service Loyalty: The Roles of Delight, Satisfaction, and service quality (2017)	delight; experience; loyalty; PLS path modeling; quality; satisfaction				
132	Service Quality Perceptions, Online Visibility, and Business Performance in Rural Lodging Establishments (2017) Medical Tourism Experience: Conceptualization, Scale	business performance; online comments; qualitative content analysis; rural tourism; web visibility health tourism; tourist perception; travel experience				
133 134	Development, and Validation (2018) Flying to Quality: Cultural Influences on Online	wellness tourism airlines; cultural differences; electronic WOM; online				
	Reviews (2019)	reviews; service quality; structural topic model				
	Tourism Managem A service quality measurement architecture for hot spring	Analysis network process (ANP); Hot spring hotels,				
135	hotels in Taiwan (2008) Developing a multidimensional and hierarchical service	service quality Multidimensional and hierarchical structure; service				
136 137	quality model for the travel agency industry (2008) Do airline self-service check-in kiosks meet the needs of	quality; Travel agencies industry Importance-performance analysis; Ridit analysis;				
138	passengers? (2008) A multi-criteria assessment of tourist farm service	Self-service kiosks DEXi; Multi-criteria modeling; Rural tourism; servic				
139	quality (2009) Understanding the relationships of quality, value, equity, satisfaction, and behavioral intentions among golf	quality; Tourist farm Behavioral intention; Customer loyalty; Equity; Golf traveler; Satisfaction; Value				
140	travelers (2009) A visitors' evaluation index for a visit to an archaeological site (2010)	Archaeological site; Formative index; service convenience; service experience; service quality				
141	An exploratory inquiry into destination risk perceptions and risk reduction strategies of first time vs. repeat visitors to a highly volatile destination (2011)	Motives; Repeat visitors; Risk perception; Risk reduction strategies; Volatile destination				

Table 2. Cont.

No.	Journals					
110.	Title (Year) Author Keywords					
	Tourism Managem	nent				
142	Critical issues affecting the service quality and professionalism of the tour guides in Hong Kong and Macau (2011)	Entrepreneur role; Professional habitus; Professionalism; Role conflict; service quality; Tour guide				
143	Customer satisfaction using low cost carriers (2011)	Behavioral intentions; Customer satisfaction; Low cost carriers; Perceived service quality				
144	Using a modified grey relation method for improving airline service quality (2011)	Airline; Customers' needs; Grey relation; Multiple-criteria decision-making (MCDM); servi- quality; SERVQUAL				
145	Comment on "Using a modified grey relation method for improving airline service quality" (2012)	Airline; Grey relation; MCDM; service quality; VIKOR				
146	Passengers' perceptions of airline lounges: Importance of attributes that determine usage and service quality measurement (2012)	Airline lounge; Atmosphere; F&B service; service quality				
147	Reply to "Comment on using a modified grey relation method for improving airline service quality" (2012)	Grey relation; service quality; TOPSIS; VIKOR				
148	Quality deterioration in package tours: The interplay of asymmetric information and reputation (2013)	Asymmetric information; China; Package tours; Quality deterioration; Reputation Customer satisfaction; Importance-performance				
149	A novel framework for customer-driven service strategies: A case study of a restaurant chain (2014)	analysis; service quality; Signal-to-noise ratio; The Kano model				
150	Examining strategies for maximizing and utilizing brand prestige in the luxury cruise industry (2014)	Brand consciousness; Brand identification; Brand prestige; Luxury cruise; Well-being perception				
151	Improving importance-performance analysis: The role of the zone of tolerance and competitor performance. The case of Taiwan's hot spring hotels (2014)	Benchmarking; Hot spring hotels; services quality Zone of tolerance				
152	Developing similarity-based IPA under intuitionistic fuzzy sets to assess leisure bikeways (2015)	Bikeway; Importance-performance analysis; Intuitionistic fuzzy set; Pattern recognition; servic quality; Similarity				
153	Ensuring corporate travel compliance-Control vs. commitment strategies (2015)	Case study; Commitment; Control; Corporate tra- service quality; service triad; Travel policy compliance				
154	service quality and the training of employees: The mediating role of organizational commitment (2015)	Commitment; Hotels; India; service quality; Touri Training				
155	The determinants of recommendations to use augmented reality technologies: The case of a Korean theme park (2015)	Augmented reality; DeLone and McLean model; Personal innovativeness; Process theory; Satisfacti Smartphone				
156	Using a randomised experiment to test the causal effect of service quality on visitor satisfaction and loyalty in a remote national park (2015)	Interventions; Loyalty; Protected areas; Randomis experiment; Visitor satisfaction				
157	A comparison of service quality attributes for stand-alone and resort-based luxury hotels in Macau: 3-Dimensional importance-performance analysis (2016)	Importance-performance analysis; Luxury hotel; service quality measurement scale; Three-factor theory				
158	Hotel attributes: Asymmetries in guest payments and gains—A stated preference approach (2016)	Discrete choice experiments; Discrete choice mod- Hotel choice; Willingness to accept; Willingness				
159	Police culture, tourists and destinations: A study of Uttarakhand, India (2016)	to pay Leader behavior; Police organization culture; serv quality of police; Tourists' confidence in police				
160	The effects of perceived service quality on repurchase intentions and subjective well-being of Chinese tourists: The mediating role of relationship quality (2016)	Customer satisfaction; Customer-company identification; Repurchase intentions; service qual Subjective well-being				
161	The trickle-down effect of servant leadership on frontline employee service behaviors and performance:	Hospitality; Servant leadership; service climate; service quality; service-oriented behavior;				
162	A multilevel study of Chinese hotels (2016) Travel web-site design: Information task-fit, service quality and purchase intention (2016)	Trickle-down model Empirical research; Information-task fit; Product quality; Purchase intentions; Website design quali				
163	An ant colony based optimization for RFID reader deployment in theme parks under service level consideration (2017)	Ant colony optimization; Reader deployment; serv level index; Theme parks; Tracking systems				
164	Assessing the effectiveness of empowerment on service quality: A multi-level study of Chinese tourism	Cross-level; Empowerment climate; Psychologica empowerment; service behavior-based evaluation				
165	firms (2017) Festival attributes and perceptions: A meta-analysis of relationships with satisfaction and loyalty (2017)	(SBE); service quality; Tourism firms Attributes; Festival; Loyalty; meta-analysis; Perceptions; Satisfaction				

Table 2. Cont.

Nie	Journals						
No.	Title (Year)	Author Keywords					
	Tourism Management						
166	Sources of satisfaction with luxury hotels for new, repeat, and frequent travelers: A PLS impact-asymmetry analysis (2017)	Frequent travelers; Impact-asymmetry analysis; Luxury hotels; Satisfaction; service quality					
167	Contemplating museums??service failure: Extracting the service quality dimensions of museums from negative on-line reviews (2018)	Museum management; Museum tourism; On-line review; service failure; service quality; Social media; TripAdvisor; Visitor experience					
168	Does a happy destination bring you happiness? Evidence from Swiss inbound tourism (2018)	Happiness; Life satisfaction; Switzerland; Tourist destination					
169	In-flight NCCI management by combining the Kano model with the service blueprint: A comparison of frequent and infrequent flyers (2018)	Airline industry; Flying frequency; In-flight NCCI; Kano model; service blueprint					
170	Innovation and 19th century hotel industry evolution (2018)	Hotel industry history; Niche cumulation; Technological transition; Tourism history; Tourism methodology					
171	Is culture of origin associated with more expressions? An analysis of Yelp reviews on Japanese restaurants (2018)	Cross-cultural difference; Online restaurant review; Sentiment analysis; Vocabulary range Challenge-hindrance stressors; Employee					
172	Is role stress always harmful? Differentiating role overload and role ambiguity in the challenge-hindrance stressors framework (2018)	psychological empowerment; Hierarchical linear modeling; Organizational supportive leadership climate; Role ambiguity; Role overload; service quality					
173	Mobile social tourism shopping: A dual-stage analysis of a multi-mediation model (2018)	Artificial Neural Network analysis; Mobile social tourism shopping; Multiple mediation analysis; Partial Least Squares Structural Equation Modelling; Stimulus-Organism-Response framework; Tourism products and services					
174	Past themes and future trends in medical tourism research: A co-word analysis (2018)	Bibliometric analysis; Co-word analysis; Health tourism; Medical tourism; Thematic evolution					
175	Predicting determinants of hotel success and development using Structural Equation Modelling (SEM)-ANFIS method (2018)	Critical Success Factors (CSFs); HOT-fit Model; Hotel success and development; SEM-ANFIS; TOE framework; Tourism					
176	Quality assessment of airline baggage handling systems using SERVQUAL and BWM (2018)	Baggage handling; Best worst method; BWM; Quality; SERVQUAL					
177	Cooperation and competition between online travel agencies and hotels (2019)	competition; Cooperation; hotel; O2O commerce; Online travel agency					
178	What do hotel customers complain about? Text analysis using structural topic model (2019)	Customer dissatisfaction; Online hotel reviews; Structural topic model; Text mining; Trip advisor					

4. Bibliometric and Network Analysis

We briefly conducted a two-part data analysis comprising bibliometric analysis and network analysis (which included citation analysis and keyword network analysis) using NetMiner 4.0, a network analysis software that enables the analysis of not only network data but also unstructured text data. Using the bibliometric approach, we analyzed the frequency of titles and keywords in paper texts and abstracts to reveal a given paper's importance and then identify critical issues and trends. Unlike bibliometric analysis, the network analysis was performed to investigate core research issues and topics by constructing networks based on the co-citation of papers and co-occurrence of keywords.

4.1. Bibliometric Analysis

To perform the bibliometric analysis, we used additional data, such as the frequency of titles, authors, journals, and keywords. NetMiner was used to extract frequent words in the titles and keywords in selected papers and analyze the constructed networks.

The results of the bibliometric analysis are summarized in Table 3. Initially, 539 words were extracted from titles and 1595 words from abstracts. We determined the importance of these words based on their frequency of appearance. Words identified as important, shown in Table 3, include "service quality," "service," "hotel," "model," and "satisfaction." These results indicate that the included tourism service quality studies are mainly focused on the hotel industry and service satisfaction.

No.	The Most Freq Words in	•	No.	The Most Freq Words in A	•
	Word	Frequency		Word	Frequency
1	service quality	42	1	service quality	259
2	customer	21	2	study	239
2	service	21	3	service	154
4	effect	20	4	customer	145
5	role	19	5	result	132
6	restaurant	18	6	hotel	116
7	hotel	16	7	research	108
8	perception	11	8	relationship	106
9	model satisfaction	9	9 10	satisfaction model	97 95

Table 3. The most frequently used words.

4.2. Network-Based Analysis: Citation Network Analysis

Citation analysis has become more widespread because of its ability to objectively identify influential papers in a given area [16–18]. According to Ding and Cronin [12], citation analysis is primarily focused on identifying the popularity and significance of a published paper by counting how frequently that paper is cited by other papers [19].

To continue with our systematic literature review, we constructed a local citation network for analysis that determined how many times a published paper had been cited by other published papers within a local network comprised of the 178 initially selected papers. Then, we examined three structural characteristics of the citation network: density, distance, and clustering. Density measures the proportion of actual connections in a network relative to the number of connections possible, thereby revealing the size of the network. A large network is generally sparser. Distance refers to the average number of steps along the shortest paths for all pairs of published papers, indicating the degree of information efficiency on a network. Finally, the clustering coefficient reflects the degree of connection between a published paper and neighboring papers. This coefficient is based on the ratio of the number of existing links to the number of possible links among neighboring published papers. As shown in Table 4, the local citation network of published papers on service quality in tourism is relatively sparse and highly clustered.

Table 4. The characteristics of network structure.

	Papers	Density	Distance	Clustering Coefficient
All	178	0.01	1.397	1.614

We used the PageRank measure to further identify core papers within the subset of 178 papers. PageRank, introduced by Brin and Page [20], was created to prioritize web pages in the Google search engine [19]. PageRank can be used to measure "prestige," an important indicator of webpage quality, by revealing the number of times a paper is cited by other highly cited papers. The PageRank of paper A (denoted by PR(A)) in a network constructed with N papers can be computed as follows:

$$\frac{(1-d)}{N} + d\left(\frac{PR(T_1)}{C(T_1)} + \dots + \frac{PR(T_n)}{C(T_n)}\right)$$

where paper T_i has citations $C(T_i)$ and d is a damping factor representing the fraction of random walks that continue to propagate along the citations. In our study, the parameter d was chosen to be 0.85 based on Brin and Page [20].

Table 5 indicates the top 10 papers as analyzed by PageRank. These papers can be regarded as core papers in the field of tourism service quality and mainly address the importance of service quality

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for customer satisfaction and its relationship with customer behavior. For example, Kim et al. [21] investigated the impact of tourism service quality on customer behavior according to customer satisfaction. Chen et al. [22] examined the determinants of customer participation in service encounters and their impact on customer loyalty. Ladhari et al. [23] analyzed the importance of service quality as a factor in dining satisfaction with regard to restaurant services. Ha and Jang [24] also studied the relationship between service quality and customer satisfaction regarding its effect on loyalty in Korean restaurants. Hutchinson et al. [25] attempted to clarify the impacts of service quality and customer satisfaction on customer behavioral intention. Additionally, some of the 10 papers dealt with service quality evaluation. For instance, Hsieh et al. [26] devised a service quality evaluation framework for hot spring hotels, and Martínez Caro and Martínez García [27] researched a comprehensive model to measure service quality in tourism-related sectors.

Table 5. Top 10 papers according to the PageRank algorithm.

No.	Title	Dago Dagi
		PageRank
1	[21] Influence of institutional DINESERV on customer satisfaction, return intention, and word-of-mouth	0.018510
2	[22] Antecedents of mandatory customer participation in service encounters: An empirical study	0.007353
3	[28] Construction and validation of the customer participation scale	
4	[23] Determinants of dining satisfaction and post-dining behavioral intentions	0.006856
5	[24] Effects of service quality and food quality: The moderating role of atmospherics in an ethnic restaurant segment	0.005837
6	[29] Customer value in the hotel industry: What managers believe they deliver and what customer experience	0.004211
7	[26] A service quality measurement architecture for hot spring hotels in Taiwan	0.003915
8	[30] Using a modified grey relation method for improving airline service quality	0.003915
9	[25] Understanding the relationships of quality, value, equity, satisfaction, and behavioral intentions among golf travelers	0.003845
10	[27] Developing a multidimensional and hierarchical service quality model for the travel agency industry	0.003835

Note: This selection was taken from the 178 papers that were initially selected.

Likewise, we further conducted a co-citation analysis to identify prevalent topics through the co-occurrence of two given papers in other papers [31]. The papers comprising the co-citation network were classified into several clusters, in which the links between the articles in the given cluster were greater than those of other clusters [31–33]. In our study, clusters' index Q was calculated by using the algorism [32] as follows:

$$Q = \frac{1}{2m} \sum_{vv} \left[A_{vw} - \frac{k_v k_w}{2m} \right] \delta(c_v, c_w)$$

where A_{vw} represents the weight of the edge between nodes v and w, k_v expresses the sum of the weights of the edges attached to node v ($k_v = \sum_w A_{vw}$), c_v is the community to which node v is assigned, $\delta(i, j)$ is equal to 1 if i = j and 0 otherwise, and $m = \frac{1}{2} \sum_{vw} A_{vw}$.

Table 6 shows the local citation network's division into seven topical issue clusters. To identify the core topical issues for each cluster, we determined the lead papers in each cluster by using the PageRank algorithm. Then, a general description for each cluster's topic was ascertained using these lead papers.

Table 6. The lead papers using the PageRank algorithm for each cluster.

Clusters	Top Three Lead Papers According to the PageRank Algorithm					
1	[34]	A systematic approach to scale development in tourist shopping satisfaction: destination attributes and shopping experience				
	[35]	Enhancing service loyalty: The roles of delight, satisfaction, and service quality				
	[36]	Festival attributes and perceptions: A meta-analysis of relationships with satisfaction and loyalty				
	[37]	An investigation of green hotel customers' decision formation: Developing an extended model of the theory of planned behavior				
2	[13]	Less is more: A new insight for measuring service quality of green hotels				
	[38]	The impact of green practices in coastal tourism: An empirical investigation on an ecolabeled beach club				
	[29]	Customer value in the hotel industry: What managers believe they deliver and what customer experience				
3	[25]	Understanding the relationships of quality, value, equity, satisfaction, and behavioral intentions among golf travelers				
	[39]	Pay for performance and work attitudes: The mediating role of employee-organization service value congruence				
4	[40]	Influence of the quality of food, service, and physical environment on customer satisfaction and behavioral intention in quick-casual restaurants: Moderating role of perceived price				
1	[41]	Restaurant consumers repeat patronage: A service quality concern				
	[42]	Foreign travelers' satisfaction with traditional Korean restaurants				
	[43]	Relationships among experiential marketing, experiential value, and customer satisfaction				
5	[44]	The role and effect of job satisfaction and empowerment on customers' perception of service quality: A study in the restaurant industry				
	[45]	An exploratory examination of supervisor undermining, employee involvement climate, and the effects on customer perceptions of service quality in quick-service restaurants				
	[26]	A service quality measurement architecture for hot spring hotels in Taiwan				
6	[27]	Developing a multidimensional and hierarchical service quality model for the travel agency industry				
	[46]	An examination of electronic video clips in the context of hotel Websites				
	[21]	Influence of institutional DINESERV on customer satisfaction, return intention, and word-of-mouth				
7	[22]	Determinants of dining satisfaction and post-dining behavioral intentions				
	[24]	Effects of service quality and food quality: The moderating role of atmospherics in an ethnic restaurant segment				

Cluster 1 corresponded to tourist satisfaction from various perspectives. For example, Wong and Wan [34] explored tourists' shopping satisfaction and examined its dimensionality. Ahrholdt et al. [35] also investigated tourists' satisfaction and loyalty according to prior experience. Tanford and Jung [36] evaluated the factors contributing to tourists' festival satisfaction.

Cluster 2 related to sustainable issues in tourism. Han and Kim [37] examined tourists' intention to revisit a green hotel. Lee and Cheng [13] investigated tourists' decision-making process in terms of staying at a green hotel. Most recently, Merli et al. [38] addressed tourists' perception of green practices and the impact of these practices on their satisfaction and loyalty.

Cluster 3 corresponded to the value customers place on tourism service quality. For example, Nasution and Mavondo [29] viewed customer value from two perspectives: that of the service provider, and that of the customer. Hutchinson et al. [25] addressed the effect of service evaluations, including value, on customer intentions. Chiang and Birtch [39] researched the effect of service value congruence between the employee and organization on pay-for-performance and work attitudes.

Cluster 4 mainly focused on service quality in restaurants and its impact on customer satisfaction. For example, Ryu and Han [40] examined the effect of restaurant food and service quality on customer intention. Barber et al. [41] aimed to determine the relationship between restaurant cleanliness and customers' repeated patronage. Nam and Lee [42] investigated the factors related to foreign tourists' satisfaction with traditional Korean restaurants.

Cluster 5 generally included customer perceptions regarding service quality. For example, Yuan and Wu [43] focused on the emotional and functional values made by service quality. Gazzoli et al. [44] discussed the relationship of empowerment and job satisfaction to customers' perception of service quality. Mathe and Slevitch [45] explored the factors impacting customers' perception of service quality.

Cluster 6 contained various assessments of service quality to identify service quality's effect on customer satisfaction. For example, Hsieh et al. [26] analyzed customers' expectations for hotel service quality according to its five dimensions. Likewise, Martínez Caro and Martínez García [27] developed a comprehensive model to measure service quality in tourism. Kim and Mattila [46] also studied customer evaluations regarding hotel service through six distinct dimensions.

Lastly, Cluster 7 corresponded to how service quality affects customer behavior. For instance, Kim et al. [21] analyzed the effect of service quality on customers' intention to return and word-of-mouth endorsement. Ladhari et al. [23] determined dining satisfaction factors in terms of restaurant service and its relationship to customer behaviors such as loyalty and willingness to pay more. Similarly, Ha and Jang [24] examined the relationship between perceived quality by customers and restaurant loyalty.

To understand the evolution of tourism service quality research over time, we also conducted a dynamic co-citation analysis of analyzed articles to indicate the evolution/development of each cluster over time. (Table 7)

Cluster	Main Topic				
1	Tourist satisfaction				
2	Sustainable issues in tourism				
3	Value of service quality for customers				
4	Restaurant service quality				
5	Customer perception of tourism service quality				
6	Tourism service quality assessment				
7	Customer behavior				

Table 7. Research focus of each cluster.

As seen in Table 8, earlier publications corresponded to Clusters 1, 3, 5, 6, and 7. Significantly, development of the topics corresponding to Clusters 1, 5, and 7 has diminished while that of Clusters 2 and 4 has continued to grow. Furthermore, the number of research papers focusing on the topics in Clusters 2 and 3 has steadily increased.

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Year	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5	Cluster 6	Cluster 7
2008	1		1		1	2	1
2009			2				1
2010		1	1	1	1	2	3
2011			2	3		2	1
2012							3
2013	1	1	1	1	1		2
2014				1	1	1	3
2015			2	1			3
2016			1			2	1
2017	2		1	3	1	1	2
2018		1	1	1		2	1
2019		1		1			
Total	4	4	12	12	5	12	21

Table 8. The number of published papers in each cluster (2008–2019).

4.3. Network-Based Analysis: Keyword Network Analysis

After performing the citation network analysis, we executed a keyword network analysis based on 608 keywords extracted from 178 papers.

To conduct the keyword network analysis, we followed the process summarized in Table 9. First, we (1) constructed a keyword network using keywords extracted from premiere international tourism-focused academic journals (namely, *The Annals of Tourism Research, International Journal of Hospitality Management, Journal of Hospitality and Tourism Research, Journal of Travel Research*, and *Tourism Management*). We then (2) investigated the issues and topics related to service in the tourism sector utilizing network analysis. Finally, we (3) observed the changes in the issues and topics that occurred from 2008 to 2019.

Analysis ProcessNetwork constructionKeyword network constructionRefinement of search keywordsConstruction of keyword network based on the frequency of keyword co-occurrenceConstruction of commonly addressed keyword network based on component analysisNetwork analysisNetwork centrality analysis (degree, betweenness, closeness)Cluster analysisNetwork centrality analysis by year

Table 9. Keyword network analysis process.

More specifically, in the afore-mentioned step 1, we used 608 keywords to form a network for tourism service quality. Before constructing a keyword network, we refined the keywords extracted from 178 papers by standardizing keywords that had the same fundamental meaning. The rules used to refine the keywords [11] are as follows:

- Standardization into a singular form
- Removing redundant keywords
- Removing hyphens
- Avoidance of abbreviations
- Unification of synonyms
- Separation of multiple terms in a single keyword

Thus, standardization resulted in 604 relevant keywords from the original list of 629 keywords. To construct the network consisting of the most important, commonly referenced keywords, we then

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performed component analysis using NetMiner. A component in a network indicates a group of nodes (papers) that are all connected to each other, representing commonly addressed issues and topics in the network.

4.3.1. Keyword Network Analysis: Network Centrality Analysis

After performing the component analysis, we were able to observe differences in the classification of the top 10 keywords across three different measures: degree, betweenness, and closeness centrality. As shown in Table 10, the differences in the top-ranked keywords according to the three measures implies that research on tourism service focuses on both broad and specific issues. The top 10 keywords according to the centrality measures are important in terms of their structural positions in the keyword network.

Rank	Degree Centrality	Betweenness Centrality	Closeness Centrality
1	satisfaction	satisfaction	satisfaction
2	customer satisfaction	customer satisfaction	customer satisfaction
3	value	China	value
4	behavioral intention	behavioral intention	behavioral intention
5	online review	emotion	online review
6	equity	online review	equity
7	loyalty	service failure	loyalty
8	emotion	equity	emotion
9	perceived value	electronic word of mouth	perceived value
10	customer loyalty	perceived quality	customer loyalty

Table 10. Top 10 keywords across measures.

The top 10 keywords according to the degree of centrality are "satisfaction," "customer satisfaction," "value," "behavioral intention," "online review," "equity," "loyalty," "emotion," "perceived value," and "customer satisfaction," and these words represent important keywords in terms of their structural position in the keywords network. These keywords have many connections with other keywords, which indicates that they represent major research issues in the field of tourism service quality.

The top 10 keywords according to betweenness centrality—"satisfaction," "customer satisfaction," "China," "behavioral intention," "emotion," "online review," "service failure," "equity," "electronic word-of-mouth," and "perceived quality"—play an important role in bridging separated groups of research themes. In other words, these keywords lie between two distinctive research themes.

Finally, the top 10 keywords in terms of closeness centrality are "satisfaction," "customer satisfaction", "value," "behavioral intention," "online review," "equity," "loyalty," "emotion," "perceived value," and "customer loyalty." These words were used with nearly all other keywords and themes in the network because a keyword with high closeness centrality is located in the center of the keyword network.

4.3.2. Keyword Network Analysis: Changes in Important Keywords Over Time

To address the changes in the important keywords over time, we compared the important keywords from the first nine years (2008–2016) with those from the three most recent years (2017–2019). We then compared high-ranked keywords across the three network measurements (see Table 11). It is important to note that the connections between keywords have accumulated over years, making it inherently difficult to investigate the evolution of keyword networks. In other words, although the keyword network constructed for a certain period of time offers information about the associations among the keywords for the published papers in that specific period, it is possible to exclude significant information regarding keyword associations in other periods [11]. The associations among keywords across different time periods do affect one another; thus, they are correlated [11]. This is a common issue when investigating the evolution of citation, author, and keyword networks. Comparing the keyword

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network corresponding to data obtained from much earlier studies with that from more recent studies can mitigate the potential loss of information concerning recent changes in impactful keywords [11].

	2008–2016	2017–2019	2008–2016	2017–2019	2008–2016	2017–2019
Rank	Degree Centrality		Closeness Centrality		Betweenness Centrality	
1	service quality	service quality	service quality	service quality	service quality	service quality
2	satisfaction	hospitality industry	satisfaction	trip advisor	satisfaction	customer satisfaction
3	customer satisfaction	trip advisor	customer satisfaction	loyalty	China	trip advisor
4	loyalty	loyalty	loyalty	hospitality industry	customer satisfaction	hospitality industry
5	equity	satisfaction	equity	satisfaction	emotion	loyalty

Table 11. Comparison of the top five keywords across three network measurements.

Our comparison reveals some notable findings. "Service quality," "satisfaction," "customer satisfaction," and "loyalty" were the most important keywords for all three measures for both clustered time periods. Significantly, customer satisfaction-related keywords (such as "customer satisfaction," "satisfaction," and "loyalty") have received growing attention over the nine-year time period. Additionally, tourism management-related keywords (such as "trip advisor" and "hospitality industry") have become substantially more prevalent over the years.

5. Conclusions

Service quality has been established as an important economic impetus of tourism. To explore how this factor has been represented in past tourism literature, we conducted a systematic literature review combining bibliometric, citation network, and keyword network analysis. Furthermore, our study attempted to identify how important keywords have changed over time to capture the emerging critical issues and topical trends in tourism service research.

This study has significant implications for both theory and practice in several ways. First, due to the existence of diverse tourism sub-sectors across business settings, previous reviews on service quality have mainly focused on service quality with regard to specific themes pre-identified by the author. In contrast, the present study represents a more comprehensive literature review on service quality in tourism research by applying a systematic approach.

Second, we identified that the keyword network of service quality in tourism is relatively small, characterized by low density, short distance, and fewer clusters. It is possible that new issues and concepts related to service quality in tourism have not emerged as rapidly [11] because relatively large networks with less connectivity to neighboring research areas do not easily facilitate the creation of new issues and concepts.

Third, based on the citation analysis of research on tourism service quality, we identified critical issues most commonly discussed by influential papers. To conduct content analysis, we rigorously identified papers as "more important" by using not only the frequency of citations but also the degree of prestige, established through the PageRank measure. This is a significant methodological development, as previous studies have only used the frequency of citation to assess importance. The critical issues identified in this study concern how service quality affects tourists' behavior and service quality evaluation. Current research on service quality in tourism is still focused on the impact of service quality on customer satisfaction and behavior.

Fourth, this study extends and supports the previous systematic literature review on service quality provided by Lai et al. [15]. Their review suggested 17 research topics that comprise two main research streams: (1) service quality scares, and (2) the consequences of service quality. According to the co-citation analysis presented in this article, research on tourism service quality can actually be classified into seven topic clusters: (1) tourist satisfaction, (2) sustainable issues in tourism, (3) value of service quality for customers, (4) restaurant service quality, (5) customer perception of tourism service quality, (6) tourism service quality evaluation, and (7) service quality's influence on customer behavior.

Fifth, because important issues and topics were selected from a local citation network comprising 136 cited papers within the total 178 papers used in our study, it was difficult to identify comprehensive

issues and topics due to the exclusion of the remaining 42 papers from the network configuration. Therefore, we implemented a keyword network analysis to complement the drawbacks of citation and co-citation analysis. The keyword network analysis revealed differences in the classification of important keywords across centrality measures. Our results reveal some notable findings. "Satisfaction" and "customer satisfaction" are represented as major research issues in the area of service quality in tourism. Also, "satisfaction" and "customer satisfaction" have not only a high degree of centrality but also high betweenness and closeness centrality. These results indicate that these are important service quality issues, and the existing literature has focused on them. Thus, service quality issues related to "satisfaction" and/or "customer satisfaction" might be a good starting point for researching the overall topic of service quality in tourism.

Finally, to identify changes in and the development of topics over time, we performed a dynamic co-citation analysis. These results showed that "sustainable issues in tourism" and "restaurant service quality" have gained researchers' attention in recent years, whereas the focus on topics such as "tourist satisfaction," "customer perception of tourism service quality," and "service quality's influence on customer behavior" has decreased. This current trend suggests an increasing interest in investigating service quality regarding sustainability (green hotel and green practice) and restaurants. Thus, this paper suggests two research areas that deserve further investigation and research: (1) service quality and sustainability, and (2) service quality and restaurants.

Customer satisfaction-related keywords (such as "customer satisfaction," "satisfaction," and "loyalty") have received growing attention over the nine-year period used in the study, while the importance of tourism management-related keywords (such as "trip advisor" and "hospitality industry") has also substantially increased during the same period. The results of this study reveal the most frequently used words in research titles and abstracts in the field of tourism service quality. After using "service quality" as the main keyword to extract significant papers, "service quality" emerged as the most frequently used word in titles and abstracts. Moreover, "hotel" and "restaurant" are also included in the list of popular keywords. This indicates that tourism service quality is largely associated with hotels and restaurants compared to other tourist destinations.

Although our study has interesting implications for service quality tourism research, this study is not free of limitations. Despite providing a comprehensive systematic review of this area, the manual search method used to retrieve the articles may have excluded or overlooked other relevant articles. As the papers were retrieved only from SCOPUS, any related articles that could not be listed in one of these databases were excluded. In addition, we choose our keywords according to our research topic. The keywords used may not be exhaustive. Expanding the keywords to reflect "service quality" could result in a more exhaustive review of the field.

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References

- 1. UNWTO World Tourism Organization. Available online: http://mkt.unwto.org (accessed on 21 May 2019).
- 2. Li, K.X.; Jin, M.; Shi, W. Tourism as an important impetus to promoting economic growth: A critical review. *Tour. Manag. Perspect.* **2018**, *26*, 135–142. [CrossRef]
- 3. Brida, J.G.; Pereyra, J.S.; Devesa, M.J.S. Evaluating the contribution of tourism to economic growth. *Anatolia* **2008**, *19*, 351–357. [CrossRef]
- 4. Khan, H.; Seng, C.F.; Cheong, W.K. Tourism multiplier effects on Singapore. *Ann. Tour. Res.* **1990**, *17*, 408–418. [CrossRef]

Sustainability **2019**, 11, 3665 20 of 21

5. Chen, C.-F. Applying the stochastic frontier approach to measure hotel managerial efficiency in Taiwan. *Tour. Manag.* **2007**, *28*, 696–702. [CrossRef]

- 6. Dwyer, L.; Forsyth, P.; Spurr, R. Contrasting the uses of TSAs and CGE models: Measuring tourism yield and productivity. *Tour. Econ.* **2007**, *13*, 537–551. [CrossRef]
- 7. Goncalves, O. Efficiency and productivity of French ski resorts. Tour. Manag. 2013, 36, 650–657. [CrossRef]
- 8. Meesala, A.; Paul, J. Service quality, consumer satisfaction and loyalty in hospitals: Thinking for the future. *J. Retail. Consum. Serv.* **2018**, 40, 261–269. [CrossRef]
- 9. Rauch, D.A.; Collins, M.D.; Nale, R.D.; Barr, P.B. Measuring service quality in mid-scale hotels. *Int. J. Contemp. Hosp. Manag.* **2015**, *27*, 87–106. [CrossRef]
- 10. Transfield, D.; Denyer, D.; Smart, P. Towards a methodology for developing evidence-informed management knowledge by means of systematic review. *Br. J. Manag.* **2003**, *14*, 207–222. [CrossRef]
- 11. Choi, J.H.; Yi, S.; Lee, K.C. Analysis of keyword networks in MIS research and implication for predicting knowledge evolution. *Inf. Manag.* **2011**, *48*, 371–381. [CrossRef]
- 12. Ding, Y.; Cronin, B. Popular and/or prestigious? Measures of scholarly esteem. *Inf. Process. Manag.* **2011**, 47, 80–96. [CrossRef]
- 13. Lee, W.-H.; Cheng, C.-C. Less is more: A new insight for measuring service quality of green hotels. *Int. J. Hosp. Manag.* **2018**, *68*, 32–40. [CrossRef]
- 14. Hjørland, B. Citation analysis: A social and dynamic approach to knowledge organization. *Inf. Process. Manag.* **2013**, *49*, 1313–1325. [CrossRef]
- 15. Lai, I.K.W.; Hitchcock, M.; Yang, T.; Lu, T.-W. Literature review on service quality in hospitality and tourism (1984–2014): Future directions and trends. *Int. J. Contemp. Hosp. Manag.* **2017**, *30*, 114–159. [CrossRef]
- 16. Culnan, M.J.; O'Reilly, C.A., III; Chatman, J.A. Intellectual structure of research in organizational behavior, 1972–1984: A cocitation analysis. *J. Assoc. Inf. Sci. Technol.* **1990**, *41*, 453–458. [CrossRef]
- 17. Culnan, M.J. Mapping the intellectual structure of MIS, 1980–1985: A co-citation analysis. *Manag. Inf. Syst. Q.* **1987**, *11*, 341–353. [CrossRef]
- 18. Gundolf, K.; Filser, M. Management research and religion: A citation analysis. *J. Bus. Ethics* **2013**, *112*, 177–185. [CrossRef]
- 19. Fahimnia, B.; Sarks, J.; Davarzani, H. Green supply chain management: A review and bibliometric analysis. *Int. J. Prod. Econ.* **2015**, *162*, 101–114. [CrossRef]
- 20. Brin, S.; Page, L. The anatomy of a large-scale hypertextual Web search engine. *Comput. Netw. ISDN Syst.* **1998**, 30, 107–117. [CrossRef]
- 21. Kim, W.G.; Ng, C.Y.N.; Kim, Y.-S. Influence of institutional DINESERV on customer satisfaction, return intention, and word-of-mouth. *Int. J. Hosp. Manag.* **2009**, *28*, 10–17. [CrossRef]
- 22. Chen, S.C.; Raab, C.; Tanford, S. Antecedents of mandatory customer participation in service encounters: An empirical study. *Int. J. Hosp. Manag.* **2015**, *46*, 65–75. [CrossRef]
- 23. Ladhari, R.; Brun, I.; Morales, M. Determinants of dining satisfaction and post-dining behavioral intentions. *Int. J. Hosp. Manag.* **2008**, *27*, 563–573. [CrossRef]
- 24. Ha, J.; Jang, S. Effects of service quality and food quality: The moderating role of atmospherics in an ethnic restaurant segment. *Int. J. Hosp. Manag.* **2010**, *29*, 520–529. [CrossRef]
- 25. Hutchinson, J.; Lai, F.; Wang, Y. Understanding the relationships of quality, value, equity, satisfaction, and behavioral intentions among golf travelers. *Tour. Manag.* **2009**, *30*, 298–308. [CrossRef]
- 26. Hsieh, L.-F.; Lin, L.-H.; Lin, Y.-Y. A service quality measurement architecture for hot spring hotels in Taiwan. *Tour. Manag.* **2008**, 29, 429–438. [CrossRef]
- 27. Caro, L.M.; García, J.A.M. Developing a multidimensional and hierarchical service quality model for the travel agency industry. *Tour. Manag.* **2008**, *29*, 706–720. [CrossRef]
- 28. Chen, S.C.; Raab, C. Construction and validation of the customer participation scale. *J. Hosp. Tour. Res.* **2017**, 41, 131–153. [CrossRef]
- 29. Nasution, H.N.; Mavondo, F.T. Customer value in the hotel industry: What managers believe they deliver and what customer experience. *Int. J. Hosp. Manag.* **2008**, *27*, 204–213. [CrossRef]
- 30. Liou, J.J.H.; Hsu, C.-C.; Yeh, W.-C.; Lin, R.-H. Using a modified grey relation method for improving airline service quality. *Tour. Manag.* **2011**, 32, 1381–1388. [CrossRef]
- 31. Leydesdorff, L. Bibliometrics/Citation Networks. In *Encyclopedia of Social Networks*; Barnett, G.A., Ed.; SAGE Publications, Inc.: Thousand Oaks, CA, USA, 2011; pp. 73–94.

Sustainability **2019**, 11, 3665 21 of 21

32. Clauset, A.; Newman, M.E.J.; Moore, C. Finding community structure in very large networks. *Phys. Rev. E* **2004**, *70*, 066111. [CrossRef]

- 33. Radicchi, F.; Castellano, C.; Cecconi, F.; Loreto, V.; Parisi, D. Defining and identifying communities in networks. *Proc. Natl. Acad. Sci. USA* **2004**, *101*, 2658–2663. [CrossRef] [PubMed]
- 34. Wong, I.A.; Wan, Y.K.P. A systematic approach to scale development in tourist shopping satisfaction: Linking destination attributes and shopping experience. *J. Travel Res.* **2013**, *52*, 29–41. [CrossRef]
- 35. Ahrholdt, D.C.; Gudergan, S.P.; Ringle, C.M. Enhancing service loyalty: The roles of delight, satisfaction, and service quality. *J. Travel Res.* **2017**, *56*, 436–450. [CrossRef]
- 36. Tanford, S.; Jung, S. Festival attributes and perceptions: A meta-analysis of relationships with satisfaction and loyalty. *Tour. Manag.* **2017**, *61*, 209–220. [CrossRef]
- 37. Han, H.; Kim, Y. An investigation of green hotel customers' decision formation: Developing an extended model of the theory of planned behavior. *Int. J. Hosp. Manag.* **2010**, *29*, 659–668. [CrossRef]
- 38. Merli, R.; Preziosi, M.; Acampora, A.; Lucchetti, M.C.; Ali, F. The impact of green practices in coastal tourism: An empirical investigation on an eco-labelled beach club. *Int. J. Hosp. Manag.* **2019**, 77, 471–482. [CrossRef]
- 39. Chiang, F.F.T.; Birtch, T.A. Pay for performance and work attitudes: The mediating role of employee-organization service value congruence. *Int. J. Hosp. Manag.* **2010**, *29*, 632–640. [CrossRef]
- 40. Ryu, K.; Han, H. Influence of the quality of food, service, and physical environment on customer satisfaction and behavioral intention in quick-casual restaurants: Moderating role of perceived price. *J. Hosp. Tour. Res.* **2010**, *34*, 310–329. [CrossRef]
- 41. Barber, N.; Goodman, R.J.; Goh, B.K. Restaurant consumers repeat patronage: A service quality concern. *Int. J. Hosp. Manag.* **2011**, *30*, 329–336. [CrossRef]
- 42. Nam, J.-H.; Lee, T.J. Foreign travelers' satisfaction with traditional Korean restaurants. *Int. J. Hosp. Manag.* **2011**, *30*, 982–989. [CrossRef]
- 43. Yuan, Y.-H.; Wu, C. Relationships among experiential marketing, experiential value, and customer satisfaction. *J. Hosp. Tour. Res.* **2008**, 32, 387–410. [CrossRef]
- 44. Gazzoli, G.; Hancer, M.; Park, Y. The role and effect of job satisfaction and empowerment on customers' perception of service quality: A study in the restaurant industry. *J. Hosp. Tour. Res.* **2010**, *34*, 56–77. [CrossRef]
- 45. Mathe, K.; Slevitch, L. An exploratory examination of supervisor undermining, employee involvement climate, and the effects on customer perceptions of service quality in quick-service restaurants. *J. Hosp. Tour. Res.* **2013**, *37*, 29–50. [CrossRef]
- 46. Kim, S.; Mattila, A.S. An examination of electronic video clips in the context of hotel Websites. *Int. J. Hosp. Manag.* **2011**, *30*, 612–618. [CrossRef]



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