

AN INTELLECTUAL STRUCTURE OF POST-PURCHASE REGRET: A BIBLIOMETRIC ANALYSIS AND CONTENT ANALYSIS

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Abstract: *The post-purchase regret is a negative emotion felt by consumers as a result of dissatisfaction. As emotion is a psychological trait and studied in various disciplines, it is necessary to take all research together to get an integrated view of post-purchase regret. This study is conducted using bibliometric analysis followed by content analysis to provide an extant knowledge base to stakeholders. First, this study gives an overview of the literature with yearly publications and citations, top nations, journals, institutions, and authors which depict how research on post-purchase regret evolved over time. The co-citation analysis provides researchers the best authors to collaborate with. Bibliographic coupling provides strong publications cited by other publications, which gives an opportunity to researchers to cite these publications in their own research. Furthermore, this study includes four important clusters identified from existing literature and the theoretical framework developed on the basis of systematic literature review. Therefore, this study concludes with several future research paths for a good pace of progress of research in this area. This study integrates various findings into a single body which helps marketers and policymakers deal with evolving concerns related to consumer behaviour. To the best of the authors' knowledge, this is the first review of its sort, providing unique viewpoints on post-purchase regret.*

Keywords: *Post-Purchase Regret, Consumer Emotions, Bibliometric Analysis, Co-Occurrence, Bibliographic Coupling, Theoretical Framework*

INTRODUCTION

Over the past two decades, it is seen that specialists and academicians have realised the importance of integrating consumer emotions into the analysis of consumer behaviour. Since emotions are becoming more important in the buying process, it is no longer a right way to consider purchasing as a rational act. The multi-emotional consumers show that they are regularly looking for emotional stimulations while making a purchase or engaging in other forms of consumption.

Nowadays, marketers are using a variety of strategies to influence consumer behaviour (Chebab, 2010). The offer is a set that consists of experience components along with functional or utility components, which create value (Holbrook, 1982; Chebab, 2010). Consumers evaluate their purchase decision and purchase outcome to know the precision of their decision (Loomers & Sugden, 2012; Landman, 1987; Boles & Messick, 1995; Shanker et al.,

2006; Simpson et al., 2008), which creates the feeling of either satisfaction or regret. When there is post-purchase satisfaction, consumers will purchase the same product again and again from the same marketer but if there is post-purchase regret then it is an adverse situation for marketers from whom consumers have purchased the product and regretted (Saleh, 2012).

In business, regret is the result of consumption, an emotion which can be felt by consumers in the process of consumption (Ekici & Dogan, 2013). Regret is a consequence of comparison of what outcome occurred and what could have occurred (Bui et al., 2009). It is said that every individual has experienced regret in their life at least once, therefore regret is a universal feeling (Zeelenberg & Pieters, 2004). Post-purchase regret is not only affected by the functions of product and services but also by the personality of consumers (Ekici & Dogan, 2013). Post-purchase regret is a situation in which consumers evaluate their purchase

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How to cite: Chauhan, S., & Shreshtha, M. (2026). An intellectual structure of post-purchase regret: A bibliometric analysis and content analysis. *International Journal on Customer Relations*, 14(1), 9-24.

decision after making the final purchase (Bakshi, 2012). Regret is different from guilt. In the words of Ben-Ze'ev (2000), "when we did something that is forbidden, we feel guilt; when we did something that is a failure, we feel regret". Hence, regret is a stronger emotion than guilt (Roseman, 1991). Every individual possesses different emotions for the same situation due to their particular evaluation behaviour (Chebab, 2010). Hence, all purchases do not necessarily lead to regret (Sweeney, Haushknecht & Souter, 2000). There are two studies which evidence the difference between regret and satisfaction (Boles & Messick, 1995; Tsiros, 1998); they stated that in certain circumstances regret and satisfaction may be experienced simultaneously.

For the conceptualisation of regret, it is essential to study its multidimensional attribution for acknowledgement of its various dimensions (Joseph-Williams et al., 2011). The study of unidimensional attribution of regret does not provide a complete knowledge of considerable quantity of information to researchers, which fails the researchers in fully evaluating the concept of regret (Tzeng & Shiu, 2019). Connolly and Zeelenberg (2002) presented two constructs of post-purchase regret; these are 'process regret' and 'outcome regret'. When a consumer makes a comparison between what has been bought and what could have been bought, this is called outcome regret and when they compare the adopted decision process with the alternate decision process, it is known as process regret. On the basis of these two constructs, Lee and Cotte (2009) confirmed a four-dimensional post-purchase regret scale which includes: (i) regret due to foregone alternatives, (ii) regret due to a change in significance, (iii) regret due to under-consideration, and (iv) regret due to over-consideration. Among the four dimensions, the first two are related to the outcome regret and the other two to process regret. The researchers delineated this scale, but there is no study conducted to examine the scale empirically. Marketers need to be concerned about unpleasant feelings that arise after a purchase (Jayasimha & Srivastava, 2017; Harrison-Walker, 2012; Buietal, 2011; Lee & Cotte, 2009). Boredom, fear, guilt, anxiety, jealousy, disappointment, sadness, regret, and anger are examples of negative emotions. Saffrey and Roese (2008) state that among other things, regret ranks top in terms of intensity and second in terms of frequency. After a purchase, disillusionment might lead to regret. Regret is described by Landman (1993) as "an emotion which is more or less painful and a feeling of sorry for limitations, misfortunes, losses, mistakes, shortcomings, and transgressions". In the context of business, regret is the outcome of consumption – a feeling that customers may experience both during and after a purchase (Ekici & Dogan, 2013). "Regret is a negative feeling when comparing or imagining options for the future and realising that one could have been in a more favourable situation had they chosen a different option," state Bell (1982) and Zeelenberg

(1999). The investigation of customer regret offers insight into the unfavourable consumer behaviour brought on by dissatisfaction.

It is evident from existing literature that due to blurry boundaries among these conceptualisations there is lack of clarity of concept of post-purchase regret in the field of literature. In fact, academics have been working very hard to delve deeply into particular ideas. Among the examples of this type of study are systematic literature review on consumer emotions (Lievonon, 2017), on negative emotions (Khatoon & Rehman, 2021), on consumer dissonance (Yap & Gaur, 2014), and on post-purchase consumer complaint behaviour (Panda, 2014). These studies are based on qualitative approach to report the existing literature but do not provide the quantitative information of the literature published on post-purchase regret. To fill this gap this study is conducted using bibliometric analysis which is based on numeration of evident literature and cluster analysis provides automatic identification of themes. This study is conducted to address the following research questions:

RQ 1. How has the research on post-purchase regret evolved over time?

RQ 2. What are the top nations, institutions, journals, and authors in the field of research on post-purchase regret?

RQ 3. What are the key clusters defining the most discussed topics on post-purchase regret?

RQ 4. What is the theoretical contribution of research on post-purchase regret?

RQ 5. What are the pathways for future research on post-purchase regret?

METHODOLOGY

Database Selection and Search Process

As discussed earlier, the evolution of post-purchase regret is older but the multidimensional framework of post-purchase regret discussed in literature has been propounded by Lee and Cotte (2009). Therefore, this study is conducted on the literature on post-purchase regret published during the period from 2010 to 2024 (till date of the extraction of data) as it provides the analysis of research published after the introduction of the multidimensions of post-purchase regret. The data were extracted from Scopus as this is a reputed and among the biggest abstract and citation databases and has the capacity to index a large number of excellent journals. Based on the domain of this study 'post-purchase regret', 'consumer or customer or buyer', and 'regret or disappointment or dissatisfaction' are used as keywords. These keywords are identified from research papers published in this area and

selected on the basis of the goal of this study. The search with these keywords resulted in 5,216 research papers from Scopus. Data were filtered by limiting time span and subject area and there were 4,433 papers, which reduced to 783

after limiting the keywords filter and these 783 papers were included in this study. Table 1 and Fig. 1 present the data extraction process in a systematic way.

Table 1: Delimitations

Delimitation	Explanation
Keywords search query	'post-purchase regret' or 'consumer' or 'customer' or 'buyer', and 'regret' or 'disappointment' or 'dissatisfaction'
Database	Scopus
Inclusion Criteria	<i>Document type:</i> articles published in journals <i>Time:</i> 2010–24 <i>Language:</i> English <i>Subject areas:</i> business, management and accounting, social sciences, decision sciences, and psychology
Exclusion Criteria	Many keywords appeared on Boolean operator excluded as not being relevant for the topic of this study – kano model, electronic commerce, profitability, retailing, text mining, e-commerce, COVID-19, airline industry, machine learning, supply chain management, SERVQUAL, revenue management, hotels, data mining, air transportation, trip advisor, hotel industry, user-generated content, supply chains, tourism management, game theory, humans, artificial intelligence, learning algorithms, entrepreneurship, tourism destination, tourist behaviour, reverse logistics, numerical model, hospitality, ecotourism, big data

Systematic Process of Data Extraction

Fig. 1 depicts a systematic process followed for extracting data from the Scopus database. This database is well recognised in the research community and has a wide range of research papers published in the area of post-purchase regret. The first section includes topic of research (post-purchase regret), scope of research (Scopus database), keywords string (TITLE-ABS-KEY ("post-purchase

regret" OR ("consumer" OR "customer" OR "buyer") AND ("regret" OR "disappointment" OR "dissatisfaction"))). The second section describes the date of data extraction (1 May 2024), number of research papers identified initially (n = 5,216) from Scopus database and records removed on the basis of time span, subject areas, and keywords (n = 4,433), and the third section shows final number of research papers included in the study (n = 783).

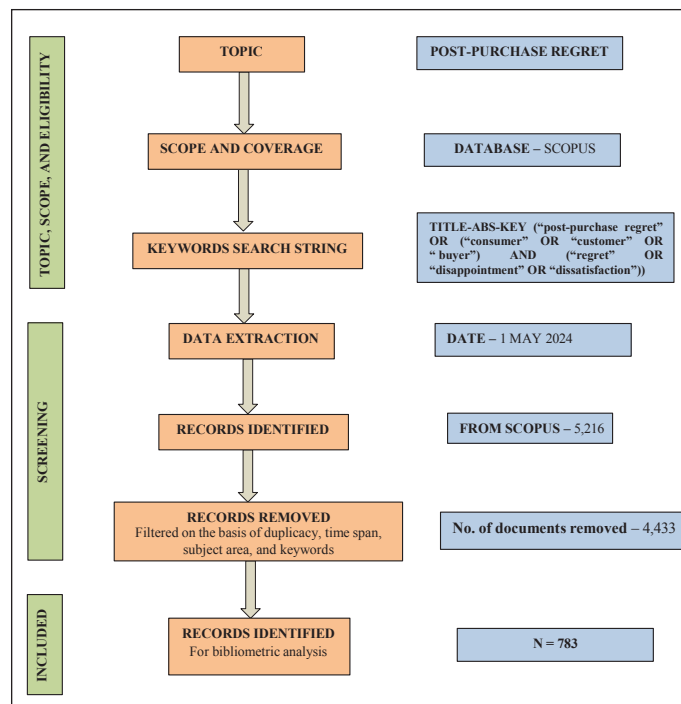


Fig. 1

Scheme of Analysis and Tools Used

The analysis of this data was performed in R Studio (‘Bibliometrix’) and VOSviewer software. A number of tables, figures, and clusters were created with the help of these software and the tables customised to meet requirement of analysis for achievement of the goals of this study. The line chart has been drawn in MS Excel for presentation of the trends of annual publications and citations of literature in the Scopus database in the domain of post-purchase regret as MS Excel gives a better format of charts.

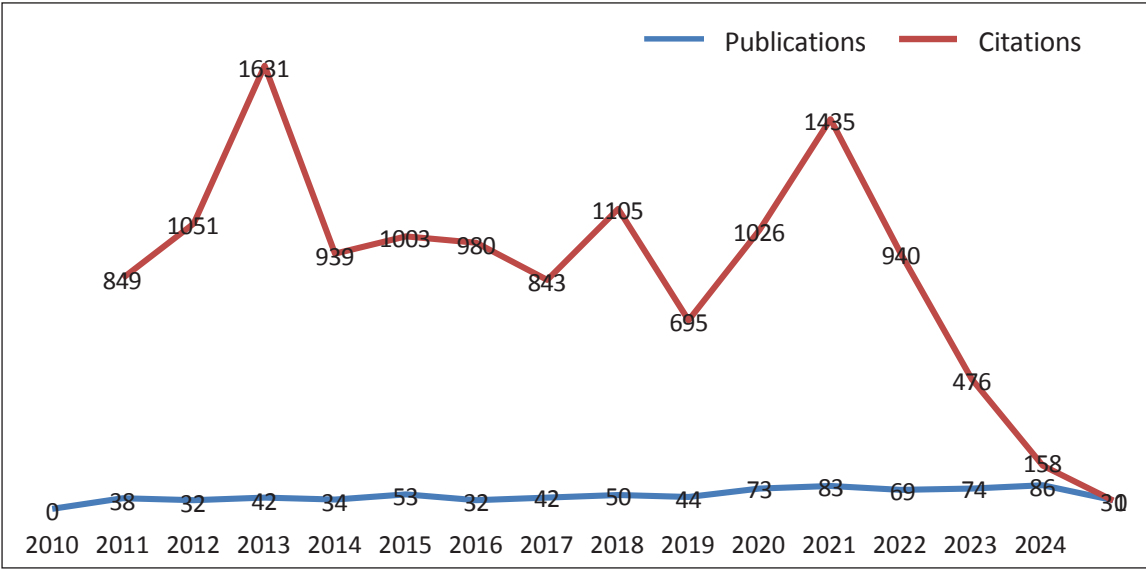
RESULTS

This study has been conducted majorly to identify top publishing and influential nations, organisations, journals, and authors and interpret the intellectual structure of research on post-purchase regret. For achievement of these goals,

data were extracted from Scopus database published from 2010 to 2024. The data were analysed using R Studio and VOSviewer software. The results of this study are presented with the help of various tables, figures, and clusters and discussed in detail.

Publications and Citations Trends

Fig. 3 shows annual publications and citations of primary articles on post-purchase regret published during the period from 2010 to 2024. It is clear from the chart that the trend of publication is growing steadily every year from 2010 which is shown by a blue line in the line graph. The citations of articles had grown from 2010 to 2012, after which there is a downfall from 2013 to 2019 and then the figure shows a rapid growth in 2020 and 2021. The trend depicts that the post-purchase regret is a new phenomenon in research and is important to study further.



Source: Scopus database.

Fig. 2: Publications and Citations Trends

Top Publishing and Influential Nations, Institutions, Journals, and Authors

The tables in this section show top nations, institutions, journals, and authors that have the maximum number of publications and citations. The data for this are extracted from the Scopus database and software such as R Studio and VOSviewer. Table 2 explains countries having maximum

papers published on post-purchase regret and maximum citations received. There are 10 such countries found from literature which are included in the table on the basis of the objectives of the study. The US has the maximum number of publications (n = 226) and number of citations (n = 5,246) followed by China with TP = 81 and TC = 1,299 and India with TP = 80 and TC = 1,196.

Table 2: Top Publishing and Influential Nations

Publications		Total Citations	
Country	TP	Country	TC
US	226	US	5246
China	81	China	1299
India	80	UK	1196
UK	72	Germany	979
South Korea	48	South Korea	933
Australia	40	Hong Kong	709
Canada	33	France	699
Germany	30	Australia	693
Taiwan	29	Canada	673
France	26	India	641

Notes: TP – total publications, TC – total citations.

Table 3 shows the institutions identified in the literature that have maximum papers published and total citations. Among these institutions the Indian Institute of Management, Raipur, India, is at the top in total publications with three publications having 51 citations, and in total citations, the School of Hospitality Management, The Pennsylvania State University, the United States, is on top with 126 citations in three publications.

Table 4 shows top journals having maximum publications and citations. Asia pacific Journal of Marketing and Logistics and European Journal of Marketing are the two on top having total publications of 13 and 11, total citations 148 and 278, and PY_start of 13 and 11 respectively. These are followed by the International Journal of Hospitality Management, Journal of Business Research, Journal of Consumer Marketing, Journal of Consumer Satisfaction, Dissatisfaction and Complaining Behavior, etc.

Table 3: Top Publishing and Influential Institutions

Most Productive Institutions (Published at Least Two Articles)				Most Impactful Institutions (TC > 50)			
Institution	Country	TP	TC	Institution	Country	TP	TC
Indian Institute of Management, Raipur, India	India	3	51	School of Hospitality Management, The Pennsylvania State University, United States	US	3	126
Rosen College of Hospitality Management, University of Central Florida, United States	US	3	52	Department of Marketing, University of Missouri, Columbia, United States	US	2	99
School of Hospitality Management, The Pennsylvania State University, United States	US	3	126	University of Valencia, Spain	Spain	2	75
Carlson School of Management, University of Minnesota, United States	US	2	36	Kyung Hee University, Department of Sports Taekwondo, Graduate School of Physical Education, Yongin, South Korea	South Korea	2	64
Czestochowa University of Technology, Faculty of Management, Poland	Poland	2	18	Department of Industrial and Manufacturing Systems Engineering, University of Missouri, United States	US	2	61
Department of Industrial and Manufacturing Systems Engineering, University of Missouri, United States	US	2	61	Indian Institute of Management, Lucknow, India	India	2	58
Department of International Business, Tunghai University, Taichung, Taiwan	Taiwan	2	11	Rosen College of Hospitality Management, University of Central Florida, United States	US	3	52
Department of Marketing, University of Missouri, Columbia, United States	US	2	99	Indian Institute of Management, Raipur, India	India	3	51

Most Productive Institutions (Published at Least Two Articles)				Most Impactful Institutions (TC > 50)			
Institution	Country	TP	TC	Institution	Country	TP	TC
Department of Marketing, University of Nevada, United States	US	2	2				
Dept. of Business Administration, Seoul Digital University, Seoul, South Korea	South Korea	2	37				
Essec Business School, France	France	2	4				
Faculty of Business Administration, University of Macau, Macao	Macao	2	16				
Indian Institute of Management, Lucknow, India	India	2	58				
Iowa State University, United States	US	2	19				
Kingston Business School, London, United Kingdom	UK	2	11				
Kwame Nkrumah University of Science and Technology, Kumasi, Ghana	Ghana	2	3				
Kyung Hee University, Department of Golf Industry, College of Physical Education, Yongin, South Korea	South Korea	2	3				
Kyung Hee University, Department of Sports Taekwondo, Graduate School of Physical Education, Yongin, South Korea	South Korea	2	64				
Kyung Hee University, Seoul, South Korea	Korea	2	31				
Leonard N. Stern School of Business, New York University, New York, United States	US	2	2				
North Dakota State University, United States	US	2	36				
Purdue University, West Lafayette, United States	US	2	2				
School of Economics and Management, South-west Jiaotong University, China	China	2	23				
School of Industrial Engineering, College of Engineering, University of Tehran, Iran	India	2	46				
School of Management, Huazhong University of Science and Technology, Wuhan, China	China	2	45				
Universitas Gadjah Mada, Indonesia	Indonesia	2	5				
Universiti Putra Malaysia, Malaysia	Malaysia	2	15				
University of Valencia, Spain	Spain	2	75				
Warrington College of Business, University of Florida, Gainesville, United States	US	2	31				
Indian Institute of Management, Raipur, India	India	3	51				

Notes: TP – total publications, TC – total citations.

Table 4: Most Productive and Impactful Journals (Published at least 10 Documents)

Journals	TP	TC	PY_Start
Asia Pacific Journal of Marketing and Logistics	13	148	2010
European Journal of Marketing	11	278	2011
International Journal of Hospitality Management	11	715	2012
Journal of Business Research	26	629	2011

Journals	TP	TC	PY_Start
Journal of Consumer Marketing	14	226	2012
Journal of Consumer Satisfaction, Dissatisfaction and Complaining Behavior	10	19	2018
Journal of Retailing and Consumer Services	11	298	2012
Journal of Services Marketing	14	270	2010
Production and Operations Management	11	346	2011
Psychology and Marketing	11	387	2010

Notes: NP – number of publications, TC – total citations, PY_start – the year in which first article on post-purchase regret was published.

Top authors found from literature having maximum publications and citations are shown in Table 5. It depicts that Mattila, Anna S. is on top of this list in both publications and citations identified from the literature with TP = 8, TC = 394, AC = 49.25, and PY_start is 2012. This is noteworthy

that some authors appear on both sides of the table, such as Mattila Anna S. and Diamantopoulos Adamantios, which indicates they are most prolific and impactful in their publication and citations in the field.

Table 5: Top Publishing and Influential Authors

Publications (Top 10 having at Least Three Articles)					Total Citations (Top 10)				
Authors	TP	TC	AC	PY_Start	Authors	TP	TC	AC	PY_Start
Mattila, Anna S.	8	394	49.25	2012	Mattila, Anna S.	8	394	49.25	2012
Butori, Raphaëlle	3	47	15.66	2015	Wieseke, Jan	2	263	131.5	2012
Davvetas, Vasileios	3	96	32	2017	Kim, Bona	2	139	69.5	2016
Diamantopoulos, Adamantios	3	134	44.66	2017	Diamantopoulos, Adamantios	3	134	44.66	2017
Ashworth, Laurence	3	22	7.33	2016	Atwal, Glyn	2	125	62.5	2013
Philp, Matthew	3	19	6.33	2016	Bryson, Douglas	2	125	62.5	2013
Ro, Heejung	3	51	17	2014	Hultén, Peter	2	125	62.5	2013

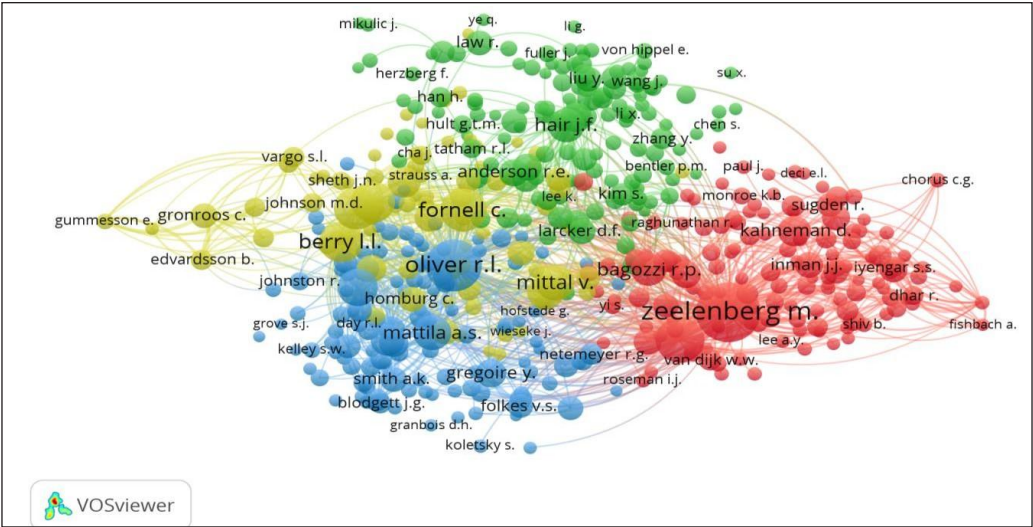
Notes: NP – number of publications, TC – total citations, AC – average citations, PY_start – year in which first article on post-purchase regret was published.

Co-Citation Analysis of Authors

In co-citation analysis (Fig. 3), key contributors are identified. Small (1973) had first developed co-citation analysis. With the help of co-citation analysis researchers can identify key themes and predict future paths in various field of study. This refers to the occurrence of citing two papers simultaneously, which indicates that the content of two publications is probably connected. We have conducted co-citation analysis using VOSviewer which provides a best visual map of connections (Van Eck & Waltman, 2013).

With a total of 476 authors illustrated in the figure, this study validates the existence of four clusters. According to

the analysis, top 10 co-cited authors are Zeelenberg M. (474 citations, 222 total link strength), Oliver R. L. (368 citations, 18,220 total link strength), Pieters R. (269 citations, 13,773 total link strength), Fornell C. (243 citations, 11,508 total link strength), Berry L. L. (217 citations, 10,342 total link strength), Parasuraman A. (235 citations, 9,937 total link strength), Zethml V. A. (224 citations, 9,462 total link strength), Bitner M. J. (182 citations, 9,082 total link strength), Mattila A. S. (162 citations, 8,732 total link strength), and Bagozzi R. P. (149 citations, 8,198 total link strength). Researchers can identify the best authors to collaborate with by using the co-citation analysis.



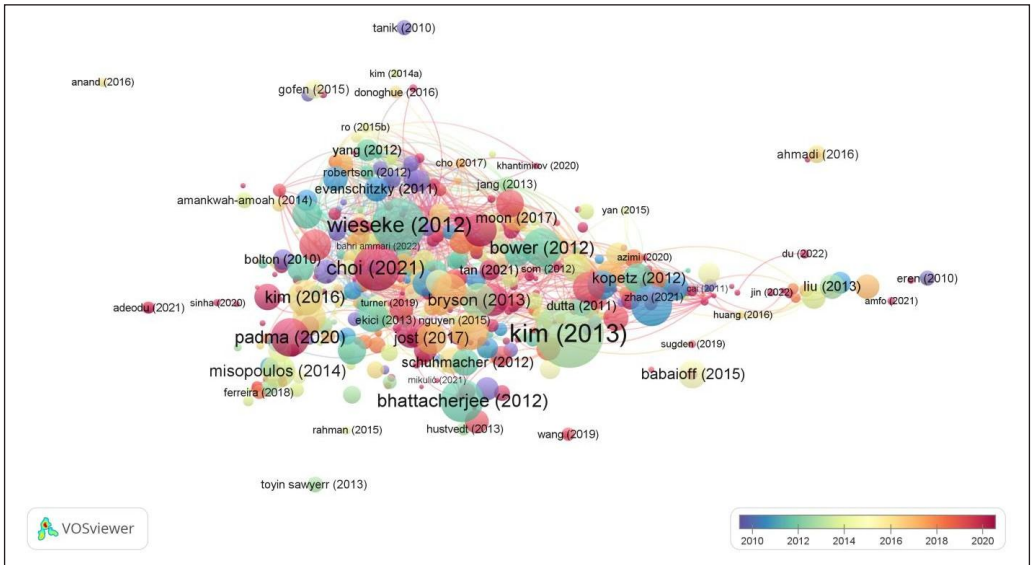
(Total number of authors – 48,155; Minimum number of citations – 20; Number of authors meeting threshold – 476)

Fig. 3: Co-Citation of Authors

Bibliographic Coupling of Documents

When a document is cited in two different documents, this is known as bibliographic coupling (Cavalcante et al., 2021; Mulet-Forteza et al., 2018), and it can be used to gauge how strong a particular publication is in comparison to a group of related publications. This is a science mapping technique that works under the notion that two papers with identical references are similar in their content (Kessler, 1963; Weinberg, 1974). The clusters formulated in the map help in identifying similar works done by various researchers. This method can be used with articles, publications, authors,

organisations, and nations. It is feasible to identify which articles are associated by multiple citations by analysing the bibliographic coupling of documents. The bibliographic coupling of documents is depicted in Fig. 8, which enables us to view and quantify the strength of the relationship between them. Thirteen distinct groups (13 clusters) are shown on the map differentiated by colours, and the lines indicate concurrent citations among the documents. As Table 6 shows the article titled *Retail Therapy: A Strategic Effort to Improve Mood* (Atalay, 2011) is the most important document – in cluster 1, total citations 144, and total link strength 71.



(Total number of documents – 783; Minimum number of citations of a document – 5; Number of documents meeting threshold – 481)

Fig. 4: Bibliographic Coupling of Documents

Table 6: Top Documents having Mminimum 100 Citations

Document	Title	Cluster	Source	TC	TLS
Atalay (2011)	Retail Therapy: A Strategic Effort to Improve Mood	1	Psychology and Marketing	144	71
Bhattacharjee (2012)	User Switching of International Technology: A Theoretical Synthesis and Empirical Test	7	Information and Management	155	12
Misopoulos (2014)	Uncovering Customer Service Experiences With Twitter: The Case of Airline Industry	3	Management Decisions	104	6
Bower (2012)	Return Shipping Policies of Online Retailers: Normative Assumptions and The Long-Term Consequences of Free and Free Returns	1	Journal of Marketing	133	384
Bryson (2013)	Towards the conceptualisation of the antecedents of extreme negative affect towards luxury brands	4	Qualitative Market Research: An International Journal	106	136
Wieseke (2012)	On the Role of Empathy in Customer-Employee Interactions	5	Journal of Service Research	213	142
Kim (2013)	Anticipated Emotions in Consumers' Intentions to Select Eco-Friendly Restaurants: Augmenting the Theory of Planned Behavior	1	International Journal of Hospitality Management	325	157
Jun (2016)	Examining the Key Dimensions of Mobile Banking Service Quality: An Exploratory Study	3	International Journal of Bank Marketing	100	115
Kim (2016)	Analysis of Satisfiers and Dissatisfiers in Online Hotel Reviews on Social Media	3	International Journal of Contemporary Hospitality Management	115	182
Hegner (2017)	Using the Theory of Planned Behavior to Understand Brand Love	9	Journal of Product and Brand Management	115	100
Sirieux (2017)	Understanding the Antecedents of Consumers' Attitudes Towards Doggy Bags in Restaurants: Concern About Food Waste, Culture, Norms and Emotions	2	Journal of Retailing and Consumer Services	109	36
Fan (2020)	When does technology anthropomorphism help alleviate customer dissatisfaction after a service failure? – The moderating role of consumer technology self-efficacy and interdependent self-construal	4	Journal of Hospitality Marketing and Management	100	216
Choi (2021)	To Err Is Human(-oid): How Do Consumers React to Robot Service Failure and Recovery?	5	Journal of Service Research	172	255

Notes: TC – total citations, TLS – total link strength.

Content Analysis

The analysis of co-occurrences of author keywords discloses four clusters which are related to each other and provides theoretical knowledge in post-purchase regret. The following sections present the four most important clusters out of the nine, which define the concept of post-purchase regret and its related dimensions.

Cluster 1: Psychological Factors Influencing Consumer Decision-Making

According to this cluster, the emotions are an undeniable element in the study of consumption behaviour (Chebab, 2010). Consumers evaluate their purchase decision and

purchase outcome to know the precision of their decision (Loomers & Sugden, 1982; Landman, 1987; Boles & Messick, 1995; Shanker et al., 2006; Simpson et al., 2008), which creates a feeling of either satisfaction or regret. In the words of Landman (1993), “regret is an emotion which is more or less painful and a feeling of sorry for limitations, misfortunes, losses, mistakes, shortcomings, and transgressions”. In business, regret is the result of consumption, an emotion that can be felt by consumers in the process of consumption (Ekici & Dogan, 2013). It is said every individual has experienced regret in their life at least once, therefore regret is a universal feeling (Zeelenberg & Pieters, 2004). The psychological factors include consumers' emotion patterns and impulse buying behaviour as identified from keyword analysis of the literature.

Cluster 4: Consumer Relationships: Navigating Emotions and Regulatory Landscape

This cluster explains that the emotions play a vital role in formulating a relationship with consumers. When consumers are satisfied with the product of a marketer, it is a favourable condition as it results in the consumer purchasing the product again and again, which creates loyalty and better relationships among consumers and marketers (Saleh, 2012). According to the regulation focus theory, customers are regretful. They make their decision based on the conviction that there will be little regret afterwards and a rational consumer is assumed to make decisions with the least amount of regret. The study of Mookherjee et al. (2021) concluded that highly loyal consumers having high expectations from the seller undoubtedly experience greater disappointment compared with consumers with low loyalty. However, their high loyalty resists the occurrence of switching behaviour. The overall rate of switching was found to be higher for high-loyalty consumers (11% and 6%) compared with consumers having low loyalty (9% and 3%).

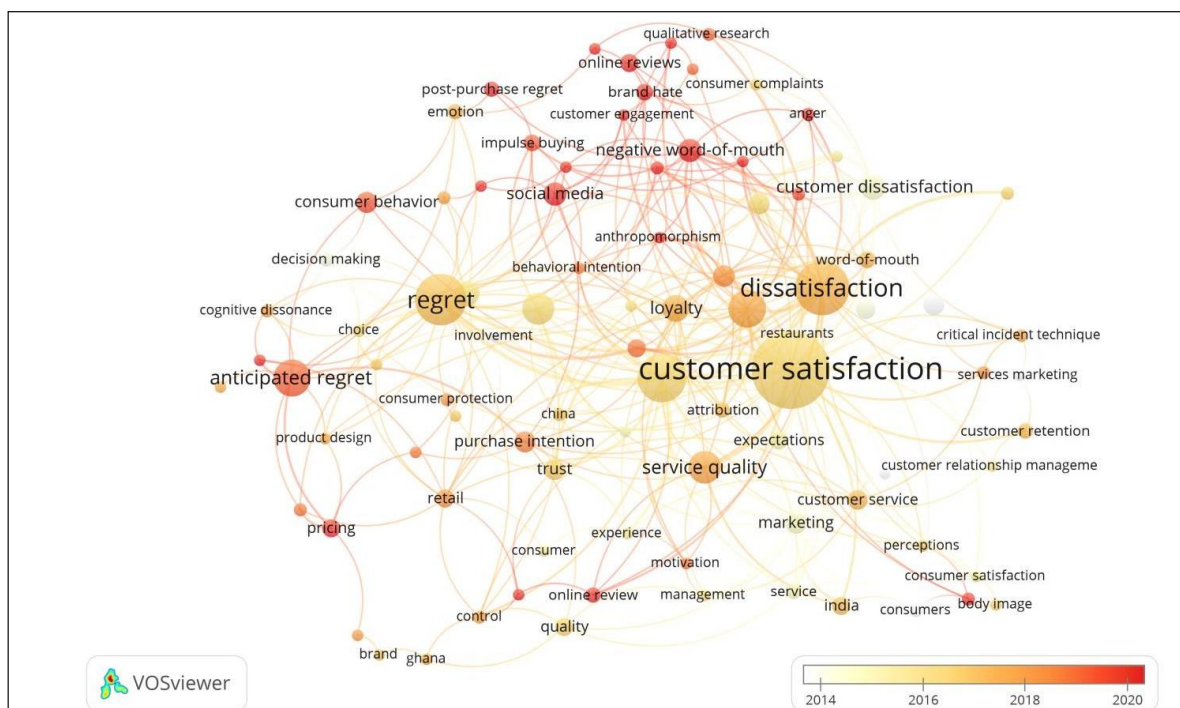
Cluster 5: Consumer Perception and Dissatisfaction

This cluster talks about the behavioural intention of consumers related to complaints. The purpose of complaining

is to communicate dissatisfaction not for the reason of seeking remedy but to affect future behaviours, to persuade others by word-of-mouth, etc. (Jagdish Singh, 1988). Tsiros and Mittal (2000) stated that consumers may complain if the choice does not fulfil expectations but not when it performs worse than alternatives. Although in some situations, when the decisions are uncontrollable and the seller is made responsible, such customers have complaint intention.

Cluster 9: Managing Customer Expectations and Satisfaction: Insights from Word-of-Mouth and Behavioural Intention

Following a purchase, customers who experience regret have post-purchase behavioural intentions that explain the consequences of post-purchase regret. Consumers may have repurchase intention, complaint intention, and switching intention which we have studied earlier. Moreover, customers share their experiences with others through word-of-mouth (Zeelenberg & Pieters, 2004). Through word-of-mouth communication, customers can learn about both the good and bad aspects of their direct or indirect experiences with a certain product (Kim et al., 2016). For businesses to attract and keep clients, word-of-mouth marketing is crucial. The loyalty of consumers to a marketer is also impacted by it (Ahmad et al., 2022).



(Total number of keywords – 2,772; Minimum number of occurrences of a keyword – 4; Number of keywords meeting the threshold – 91)

Fig. 5: Co-Occurrence of Author Keywords

Table 7 provides most common keywords used by various authors in their research articles in the field of post-purchase regret. These keywords include anticipated regret (cluster 1, links 11, total link strength 14, and occurrence 25), emotions (cluster 4, links 13, total link strength 13, and occurrence 13),

consumer behaviour (cluster 1, links 5, total link strength 5, and occurrence 10), purchase intention (cluster 4, links 7, total link strength 8, and occurrence 10), and dissatisfaction (cluster 9, links 30, total link strength 54, and occurrence 47).

Table 7: Most Common Keywords Used in Literature

Item	Cluster	Links	Total Link Strength	Occurrence
Anticipated regret	1	11	14	25
Cognitive dissonance	1	5	5	5
Consumer behaviour	1	5	5	10
Decision making	1	5	6	6
Post-purchase regret	1	3	3	6
Emotions	4	13	13	13
Negative emotion	4	5	7	4
Purchase intention	4	7	8	10
Regulatory focus	4	3	3	5
Switching intention	4	5	5	5
Complaints	5	11	15	9
Consumer satisfaction	5	5	5	4
Behavioural intention	9	7	8	4
Disappointment	9	7	11	8
Dissatisfaction	9	30	54	47
Word-of-mouth	9	6	7	7
Expectations	9	8	10	8

Table 8: Theoretical Framework

Sr. No.	Models/Theories	Authors/Researchers	Title of Study	Explanation
1.	Regret Theory	Sai Vijay Tata, Sanjeev Prashar, Chandan Parsad	Examining the influence of satisfaction and regret on online shoppers' post-purchase behavior	The experience of regret happens in case individuals think if they had chosen different it would have given them more pleasure than the actual choice.
		Sergio Barta, Raquel Gurrea and Carlos Flavian	The role of flow consciousness in consumer regret	
		Melika Ben M'Barek and Abderrazak Gharbi	Management of post-purchase regret	
		Vasileios Davvetas, Adamantios Diamantopoulos	Regretting your brand-self? The moderating role of consumer-brand identification on consumer responses to purchase regret	
2.	Regret Regulation Theory	MyBui, Anjala S. Krishen, Kenneth Bates	Modeling regret effects on consumer post-purchase decisions	The regret regulation theory depicts that consumers are regret detrimental.
		Jooyoung Lim, Minhi Hahn	Regulatory focus and decision rules: Are prevention-focused consumers regret minimizers?	They choose on the basis of the belief that results will be minimal future regret. The assumption of rational consumer shows that they make choices with minimum anticipated regret.

Sr. No.	Models/Theories	Authors/Researchers	Title of Study	Explanation
3.	Random Regret Minimization Model	Caspar Chorus, Sander van Cranenburgh and Thijs Dekker	Random regret minimization for consumer choice modeling: Assessment of empirical evidence	This model assumes that when a consumer is given a set of choices he chooses the alternative that has minimum regret, therefore this model is based on the belief of regret-based decision making in non-risky choice sets.
4.	Cognitive Dissonance Theory	Sara Salimi, Ali Hajiha, Hamid Reza Saeednia, Kambiz Heidarzadeh; Aihua Tseng	Designing a post-purchase regret model and determining online business strategies Why do online tourists need sellers' ratings? Exploration of the factors affecting regretful tourist e-satisfaction	Post-purchase cognitive dissonance occurs when consumers create conflicting cognitions for the product during the period from pre-purchase to post-purchase phase.
5.	Expectancy Disconfirmation Model	Chechen Liao, Chuang- Chun Liu, Yu-Ping Liu, Pui-Lai To, and Hong-Nan Lin	Applying the Expectancy Disconfirmation and Regret Theories to Online Consumer Behavior	According to expectancy disconfirmation theory, satisfaction depends on disconfirmation and expectation jointly, among which disconfirmation has an instantaneous impact on satisfaction. When expectations of consumers are negatively disconfirmed indicating the actual performance of product is less than expected results of comparison

DISCUSSION

As the results of this study show the research on post-purchase regret is significantly growing across nations, institutions, journals, authors, and also across different subject areas such as business, management and accounting, social sciences, decision sciences, and psychology. It provides a direction to more productive research in this area in future. This study is based on bibliometric analysis which gives a comprehensive objective view of the topic and also provides cluster development with a theoretical understanding of the concepts and theories/models related to post-purchase regret. Therefore, this study provides the quantitative as well as qualitative view of the research on post-purchase regret. By using R Studio ('Bibliometrix') and VOSviewer, this study bridges the gap by giving a wholesome and all-encompassing knowledge of the research on post-purchase regret. This paper includes co-citation analysis of authors indicating how frequently authors are cited together in publications. Early career researchers can find relevant material and collaborate with other researchers by having a logical awareness of influential authors and research groups. It also informs journals and academic institutions about the significance of research output. Within post-purchase regret research, co-occurrence of author keywords and bibliographic coupling help in identifying clusters of relevant research subjects and

the structure of knowledge domains. As the multidimensional framework is propounded by Lee and Cotte (2009), there is lack of empirical analyses which examine this phenomenon in these dimensions as found from this review study. The study of multidimensions of regret may provide a complete knowledge of the concept and impact of different types of regrets on the consequential behavioural intention of consumers. Therefore, it is important to study this concept in different dimensions of regret developed by Lee and Cotte for proper conceptualisation of post-purchase regret (Tzeng & Shiu, 2019). The concepts/theories/models discussed in this study can be used by researchers to find new areas of interest, research gaps, and cross-disciplinary relationships. It directs the course of future study and promotes multidisciplinary collaboration. This study draws attention to the use of particular approaches or conceptual models in the study of post-purchase regret. Furthermore, when it comes to consumer behaviour, loyalty, and happiness in the context of post-purchase regret, industry practices and regulatory decisions might be influenced by the findings of bibliometric analysis. As it is known that customer satisfaction is the centre point for all profit-making firms, it is becoming more important to understand emotions of consumers whether it is positive or negative. Every customer evaluates the purchase decision and experiences emotions with the process and outcome of the decision. It is important to understand that

the negative emotions must be primary for the marketer to understand the customer's behaviour towards the product as discussed in Table 9; the random regret minimisation model shows that consumers always choose the alternate having minimum regret. By bringing the whole research work on post-purchase regret under one roof, our study provides an advanced understanding of the concept along with the theoretical framework examined by different authors from different nations and institutions that published their studies in various well-reputed journals.

The results of this study can be used by companies to enhance product offers, improve customer care tactics, and create efficient customer support systems. This study, by bringing together the findings of research, provides marketers an understanding of the factors affecting consumer regret and consequences of regret (behavioural intention). Consumers' dissatisfaction is well known to marketers as well as researchers but regret is getting significant attention over the past two decades. Therefore, a comprehensive knowledge of regret of consumers helps marketers provide a seamless positive experience and satisfy the expectations of consumers. Regulations which protect customers against regret after a purchase or enhance consumer insights can be drafted by policymakers using evidence-based insights. Managers can utilise the information to train staff on the value of comprehending consumer psychology and practical methods for managing and minimising regret after a purchase. When everything is taken into account, this study offers insightful information that can help firms and management practitioners make better decisions, raise customer satisfaction, and strengthen strategic approaches.

LIMITATIONS AND FUTURE RESEARCH DIRECTIONS

This study takes diversified literature on post-purchase regret to analyse and get important insights on post-purchase regret. Our study combines the features of both bibliometric analysis as well as systematic literature review. Future research may focus on one of the two, i.e., bibliometric analysis or systematic literature review, which may provide a holistic view of knowledge base available in past research and easy to make assertions on post-purchase regret. This study is conducted on the data extracted from the Scopus database only; therefore, future studies may be conducted on other databases such as Google Scholar and Web of Science, among others, or combine two or three databases. This bibliometric analysis provides various future scopes for further research in the particular area. Examining various literature, it was found that there is not a universal definition of post-purchase regret. Every researcher and author has defined the term on the basis of their own perception, which creates some confusion for readers. Furthermore, it is found that there are conflicts among various studies about unidimensional and multidimensional framework of post-purchase regret. Some researchers consider only outcome regret (unidimension) and others define the importance of both outcome regret and process regret (multidimension). Therefore, future research may be conducted to clearly define the concept and to understand the dimensions of regret prevailing among consumers by empirical analysis. This study explains various concepts and keywords which can be used in further studies as concepts relating them to the post-purchase regret in empirical analysis. The important trends on the basis of keywords, related concepts/models/theories, and important articles are explained in Table 9.

Table 9: Future Research Trends, Related Concepts/Models/Theories and Important Articles

Sr. No.	Future Research Trends	Related Concepts/Models/Theories	Important Articles
1	Anticipated regret and decision making	Consumer choices, behavioural intention	Guo et al., 2023; Zhang and Shang, 2023; Jin et al., 2022
2	Cognitive dissonance and post-purchase regret	Cognitive dissonance theory	Jamwal and Mishra, 2023; Sharma et al., 2023; Kushwaha et al., 2021; Zhao et al., 2021; Ferreira and dos Santos, 2020; Stroe, 2012; Barari et al., 2020
3	Impulse buying and decision making	Factors influencing impulse buying	Zhao et al., 2023; Su et al., 2022; Choi and Bum, 2020; Choi and Bum, 2021; Hetharie et al., 2019; Do et al., 2016; Lee et al., 2014
4	Negative emotion and behavioural intention	Repurchase intention, complaint intention, switching	Sultana et al., 2023; Sthapit et al., 2024; Kurtoglu et al., 2022; Herjanto et al., 2022; Luo and Mattila, 2020; Le and Ho, 2020; HOANG, 2020; Michalkó et al., 2015; Moon et al., 2017

Sr. No.	Future Research Trends	Related Concepts/Models/Theories	Important Articles
5	Regulatory focus theory and consumer behaviour	Regulatory focus theory	Chugh et al., 2023; Kuzgun et al., 2022; Lim and Hahn, 2020; Barari et al., 2020; Som and Lee, 2012; Dutta et al., 2011
6	Expectations and consumer satisfaction	Expectancy-disconfirmation model	Quach et al., 2023; Ashworth and Bourassa, 2020; Wingett and Turnbull, 2017
7	Word-of-mouth and customer loyalty	Value co-destruction, NWOM, failure stability	Mostafa et al., 2024; Sthapit et al., 2024; Shankar et al., 2024; Kushwah and Srivastava, 2023; Bahri et al., 2022; Philp and Ashworth, 2020; Kim et al., 2019; Bastos et al., 2019; Doyle and Heslop, 2018; Yang et al., 2017

Furthermore, this study gives direction to the review studies. It is suggested that researchers carry out more analysis to find new developments in the field of post-purchase regret and examine how influential authors have contributed in the field. Scholars and researchers can create a strong conceptual framework for comprehending post-purchase regret by expanding on the co-citation and co-occurrence networks that already exist. Authors may combine knowledge from a variety of fields, including psychology, economics, and marketing, to offer a thorough grasp of the variables affecting post-purchase regret.

CONCLUSION

This bibliometric study has given an extensive overview of research trends, significant contributors, and theme development in post-purchase regret from 2010 to 2024. This study has identified key authors, prestigious journals, and prolific nations that have influenced the landscape of post-purchase regret by examining an extensive compilation of articles. The findings reveal that the US has a major contribution in research in this area followed by China and India. Among institutions, the Indian Institute of Management, Raipur, India, has most of the publications and *Asia Pacific Journal of Marketing and Logistics* is top among journals. Mattila, Anna S. is found to have the highest number of publications and citations. On the basis of bibliographic coupling, the research paper *Retail Therapy: A Strategic Effort to Improve Mood* is the most cited paper. Our research highlights the significance of recent developments that have received a lot of attention from academics including negative emotions, anticipated regret, cognitive dissonance, regulatory focus, behavioural intention, word-of-mouth, etc. The gaps identified in the literature and delineation of intellectual structure provide important new insights to funding agencies, researchers, and policymakers. These results can be expanded in future studies to investigate under-researched topics and foster

collaborations to induce innovation and develop advance knowledge in post-purchase regret.

REFERENCES

- Bakshi, S. (2012). Impact of gender on consumer purchase behaviour. *Journal of Research in Commerce and Management*, 1(9), 1–8.
- Bell, D. E. (1982). Regret in decision making under uncertainty. *Operations Research*, 30(5), 961–981.
- Ben-Ze'ev, A., Shtutman, M., & Zhurinsky, J. (2000). The integration of cell adhesion with gene expression: The role of β -catenin. *Experimental Cell Research*, 261(1), 75–82.
- Boles, T. L., & Messick, D. M. (1995). A reverse outcome bias: The influence of multiple reference points on the evaluation of outcomes and decisions. *Organizational Behavior and Human Decision Processes*, 61(3), 262–275.
- Bui, M., Krishen, A. S., & Bates, K. (2011). Modeling regret effects on consumer post-purchase decisions. *European Journal of Marketing*.
- Cavalcante, W. Q. D. F., Coelho, A., & Baira da, C. M. (2021). Sustainability and tourism marketing: A bibliometric analysis of publications between 1997 and 2020 using VOSviewer software. *Sustainability*, 13(9), 4987.
- Chebab, S. (2010). The consumer regret: Moderators, mediators and consequences. *Journal of Business Studies Quarterly*, 1(4), 49.
- Connolly, T., & Zeelenberg, M. (2002). Regret in decision making. *Current Directions in Psychological Science*, 11(6), 212–216.
- Ekici, N., & Dogan, V. (2013). An analysis of the regret concerning the process of purchasing and the regret concerning after the purchasing in the context of characteristic properties. *International Journal of Marketing Studies*, 5(6), 73.

- Harrison-Walker, L. J. (2019). The effect of consumer emotions on outcome behaviors following service failure. *Journal of Services Marketing*, 33(3), 285–302.
- Holbrook, M. B., & Hirschman, E. C. (1982). The experiential aspects of consumption: Consumer fantasies, feelings, and fun. *Journal of Consumer Research*, 9(2), 132–140.
- Jayasimha, K. R., & Srivastava, H. S. (2017). Consumer advocacy: examining the feeling and doing following a failed service encounter. *Journal of Retailing and Consumer Services*, 34, 201–208.
- Joseph-Williams, N., Edwards, A., & Elwyn, G. (2011). The importance and complexity of regret in the measurement of ‘good’ decisions: A systematic review and a content analysis of existing assessment instruments. *Health Expectations*, 14(1), 59–83.
- Khatoon, S., & Rehman, V. (2021). Negative emotions in consumer brand relationship: A review and future research agenda. *International Journal of Consumer Studies*, 45(4), 719–749.
- Lages, C. R., Perez-Vega, R., Kadić-Maglajlić, S., & Borghei-Razavi, N. (2023). A systematic review and bibliometric analysis of the dark side of customer behavior: An integrative customer incivility framework. *Journal of Business Research*, 161, 113779.
- Landman, J. (1987). Regret and elation following action and inaction: Affective responses to positive versus negative outcomes. *Personality and Social Psychology Bulletin*, 13(4), 524–536.
- Landman, J. (1993). *Regret: The persistence of the possible*. Oxford University Press.
- Lee, S. H., & Cotte, J. (2009). Post-purchase consumer regret: Conceptualization and development of the PPCR scale. *Advances in Consumer Research*, 36.
- Lievonon, M. (2017). Consumer Emotions and E-commerce: A Literature Review. University of Maribor Press. Bled eConference. 385–402.
- Mookherjee, S., Lee, J. J., & Sung, B. (2021). Multichannel presence, boon or curse?: A comparison in price, loyalty, regret, and disappointment. *Journal of Business Research*, 132, 429–440.
- Mulet-Forteza, C., Martorell-Cunill, O., Merigó, J. M., Genovart-Balaguer, J., & Mauleon-Mendez, E. (2018). Twenty-five years of the Journal of Travel & Tourism Marketing: A bibliometric ranking. *J. Travel. Tour. Mark.*, 35, 1201–1221.
- Panda, S. (2014). Post purchase consumer complaint behavior: A review of literature. *Business Management Dynamics*, 4(5).
- Patil, T., & Rahman, Z. (2023). A bibliometric analysis of scientific literature on guilt in marketing. *Management Review Quarterly*, 73(3), 1385–1415.
- Roseman, I. J. (1991). Appraisal determinants of discrete emotions. *Cognition & Emotion*, 5(3), 161–200.
- Saffrey, C., Summerville, A., & Roese, N. J. (2008). Praise for regret: People value regret above other negative emotions. *Motivation and Emotion*, 32, 46–54.
- Saleh, M. A. H. (2012). An investigation of the relationship between unplanned buying and post-purchase regret. *International Journal of Marketing Studies*, 4(4), 106–120.
- Saleh, M. A. H. (2012). An investigation of the relationship between unplanned buying and post-purchase regret. *International Journal of Marketing Studies*, 4(4), 106.
- Shankar, A., Cherrier, H., & Canniford, R. (2006). Consumer empowerment: A Foucauldian interpretation. *European Journal of Marketing*, 40(9/10), 1013–1030.
- Simao, L. B., Carvalho, L. C., & Madeira, M. J. (2021). Intellectual structure of management innovation: Bibliometric analysis. *Management Review Quarterly*, 71(3), 651–677.
- Simpson, P. M., Siguaw, J. A., & Cadogan, J. W. (2008). Understanding the consumer propensity to observe. *European Journal of Marketing*, 42(1/2), 196–221.
- Simpson, P. M., Siguaw, J. A., & Cadogan, J. W. (2008). Understanding the consumer propensity to observe. *European Journal of Marketing*, 42(1/2), 196–221.
- Singh, J. (1988). Consumer complaint intentions and behavior: Definitional and taxonomical issues. *Journal of Marketing*, 52(1), 93–107.
- Small, H. (1973). Co-citation in the scientific literature: A new measure of the relationship between two documents. *Journal of the American Society for Information Science*, 24(4), 265–269.
- Suban, S. A. (2023). Bibliometric analysis on wellness tourism—citation and co-citation analysis. *International Hospitality Review*, 37(2), 359–383.
- Tsiros, M., & Mittal, V. (2000). Regret: A model of its antecedents and consequences in consumer decision making. *Journal of consumer Research*, 26(4), 401–417.
- Tzeng, S. Y., & Shiu, J. Y. (2019). Regret type matters: risk Aversion and complaining in a multidimensional post-purchase regret framework. *Asia Pacific Journal of Marketing and Logistics*, 31(5), 1466–1485.
- Van Eck, N. J., & Waltman, L. (2013). VOSviewer manual. Univeristeit Leiden. *Leiden*, 1(1), 1–53.

- Yap, S. F., & Gaur, S. S. (2014). Consumer dissonance in the context of online consumer behavior: A review and research agenda. *Journal of Internet Commerce*, 13(2), 116–137.
- Zeelenberg, M. (1999). Anticipated regret, expected feedback and behavioral decision making. *Journal of Behavioral Decision Making*, 12(2), 93–106.
- Zeelenberg, M., & Pieters, R. (2004). Beyond valence in customer dissatisfaction: A review and new findings on behavioral responses to regret and disappointment in failed services. *Journal of Business Research*, 57(4), 445–455.
- Zhang, J., Quoquab, F., & Mohammad, J. (2024). Plastic and sustainability: A bibliometric analysis using VOSviewer and CiteSpace. *Arab Gulf Journal of Scientific Research*, 42(1), 44–67.