

Mapping the intellectual landscape of consumer purchase intention toward remanufactured products: A bibliometric analysis using Scopus and VOSviewer

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Abstract

As circular economy principles gain prominence in sustainability scholarship and policymaking, consumer acceptance of remanufactured products has emerged as a strategically significant research area. Yet the intellectual structure of this field, its key contributors, thematic clusters, and collaborative patterns, remains insufficiently mapped. This study addresses that gap through a systematic bibliometric analysis of 106 Scopus-indexed publications spanning 2010 to 2025, employing VOSviewer to examine publication volume trends, citation dynamics, co-authorship networks, source impact, keyword co-occurrence, bibliographic coupling, and co-citation patterns. The findings reveal a pronounced acceleration in research output after 2020, driven by growing institutional and academic interest in sustainable consumption. The Journal of Cleaner Production and Sustainability (Switzerland) emerge as the most influential outlets in terms of both volume and citation impact. Keyword co-occurrence analysis identifies two dominant research clusters: one oriented toward environmental sustainability, remanufacturing processes, and circular economy governance, and a second centered on consumer behavior, purchase intention, and psychological decision-making factors including perceived quality, risk, trust, price sensitivity, and eco-consciousness. Country-level analysis shows China as the most prolific contributor by publication volume, while Sweden commands the highest citation impact relative to output. Co-authorship mapping reveals pronounced fragmentation, with most researchers operating in small, isolated clusters and organizational-level collaboration approaching zero in terms of cross-institutional link strength. The study synthesizes the field's thematic evolution, highlights persistent gaps in longitudinal research, cross-cultural investigation, and underrepresented product categories, and offers a structured agenda for future inquiry. The findings carry implications for researchers seeking collaboration opportunities, for practitioners communicating remanufacturing value propositions, and for policymakers designing demand-side instruments to support circular economy transitions.

Keywords: Remanufactured Products, Consumer Purchase Intention, Circular Economy, Bibliometric Analysis, Vosviewer, Scopus, Sustainability, Perceived Quality, Co-Authorship Network, Sustainable Consumption

JEL Classification: O57, M31, D12

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1. Introduction

The increasing global focus on sustainability and circular economy principles has made remanufacturing a crucial strategy for addressing environmental challenges while maintaining economic viability. Remanufacturing can be defined as the industrial process of returning end-of-life products to like-new condition through comprehensive restoration and quality assurance (Chen et al., 2020). It represents a significant opportunity to reduce resource consumption and waste generation. In recent times, the concept of refurbishing is also emerging. Even though a lot of times remanufacturing and refurbishing terms are used interchangeably, they are different concepts (Wallner et al., 2022a). Refurbishment refers to the process of taking a previously used product, such as a smartphone, and restoring it to proper working order by cleaning it, repairing or replacing key components that are malfunctioning, damaged, or nearing failure, and enhancing its appearance through cosmetic improvements (Mugge et al., 2017). Refurbishing is different from remanufacturing because remanufacturing involves restoring used items to a condition that is equivalent to, or even surpasses, that of a new product. In contrast, refurbishing does not necessarily achieve this "like-new" standard (Rathore et al., 2011). However, the success of remanufacturing or refurbished initiatives fundamentally depends on consumer acceptance and purchase intentions, making this area vital for both academic research and industry practice (Patwa et al., 2021).

Consumer purchase intention towards remanufactured products involves complex psychological, economic, and social factors that influence decision-making processes (David et al., 2024; Alyahya et al., 2023). Quality perceptions consistently emerge as primary determinants, with consumers expressing concerns about performance reliability and warranty coverage compared to new products (Wallner et al., 2024). Consumers often exhibit uncertain attitudes towards remanufactured products. It balances potential benefits such as cost savings and environmental impact reduction against concerns about quality, performance, and social acceptance (Miliotis & Matsumoto, 2019). Understanding these relationships has become increasingly important as businesses and policymakers seek to promote circular economy transitions (Bremene et al., 2025). Recent research has explored innovative approaches, including strategies to address contamination concerns and information provision roles (Wallner et al., 2022b).

Although previous studies have studied what influences the buying intent of consumers towards remanufactured or refurbished products, they only provide a general overview. As a result, the companies need specific insights to understand the benefits that will increase the overall purchase inclination of consumers towards these products (Mugge et al., 2017). A lot of businesses think remanufacturing or upcycling is a niche market which acts as a challenge in changing customer perception and mainstream adoption (Singh et al., 2019). Despite significant progress, research gaps persist, particularly in longitudinal studies and emerging product categories. Hence, this bibliometric analysis synthesises existing knowledge while identifying key research trends in this

dynamic field, combining theoretical insights with practical applications. This study aims to identify and analyze key research trends, authors, and themes in studies on consumer purchase intention toward remanufactured product. Additionally, this study explores the main factors influencing consumers' intention to buy remanufactured products.

2. Literature Review

Consumers' willingness to buy remanufactured products is shaped by a variety of motivational, cognitive, and contextual factors. One major theme is environmental and ethical concern. Studies report that consumers who perceive remanufacturing as sustainable are more likely to intend to purchase such products. For example, (Kaluvilla et al., 2025) found that "*perceived sustainability*" positively influences purchase intentions for refurbished furniture. This means that highlighting environmental benefits can boost interest. However, this pro-environmental motive often competes with other considerations. Kabel et al., (2021) highlights that even when consumers have sufficient environmental *knowledge*, it "cannot be fully translated into positive purchases of remanufactured products. Furthermore, a consumer-choice experiment in China showed that those *attaching importance to environmental protection* tended to choose remanufactured versions of hedonic products (Chen et al., 2020), whereas consumers focused on price instead preferred non-green alternatives. In short, environmental concern can motivate remanufactured purchases, but its influence varies; some consumers embrace remanufacturing for its green attributes, while others prioritize non-environmental factors.

2.1 Attitudinal and Motivational Drivers

Closely linked to environmental motivations are general attitudinal and psychological drivers. Across the literature, consumers' attitudes and perceived benefits emerge as key predictors of intention to buy remanufactured products. Adapting the Theory of Planned Behavior and Protection Motivation Theory, Sharkasi et al., (2025) show that both experiential and instrumental components of attitude (how a consumer feels about the product and its practical benefits) are present in all configurations that predict high purchase intention. In their UK consumer sample, strong positive attitudes coupled with a sense of self-efficacy and belief in the benefits of remanufacturing were consistently found among high-intent groups. Similarly, Kabel et al., (2021) found that consumers' attitudes and evaluations of a remanufactured product powerfully influence their willingness to buy it. In their Swedish survey on robotic lawn mowers, they found that consumers who were expecting high quality, low risk, and lower price gave the strongest positive evaluation. In summary, a favourable product attitude, which often evolves from personal values or experience, enhances one's ability to judge remanufactured goods, hence playing a critical role in shaping purchase intentions.

2.2 Perceived Quality and Risk

Perceptions of product quality and associated risks is another major theme. Consumers naturally worry about remanufactured products being inferior or unreliable, and higher perceived risk typically reduces purchase intent. In the Indonesian study of remanufactured auto parts conducted by Chinen & Matsumoto, (2021) Perceived risk had a significant negative effect on intention, while perceived benefit had a positive effect. These results underscore that when consumers feel a higher chance of something going wrong (e.g. product failure), they are less inclined to buy remanufactured items. However, some research suggests that in certain markets consumers have internalized the idea that remanufactured goods may not match new-product quality, so risk becomes less of a deciding factor. In Sweden, Milios & Matsumoto, (2019) report that car owners “*recognize the benefits of using such parts, without showing a significant risk aversion in their purchase decision.*” Despite limited knowledge about remanufacturing, respondents did not act as if fear of defects was a strong barrier. This implies that for some consumers, uncertainty about quality is accepted, probably due to trust in after-sales support or a belief that remanufacturing standards are adequate. Overall, quality concerns remain salient, which means that wherever the perceived risk is high, purchase intention drops, but the extent of that effect can depend on consumers’ baseline expectations and market trust levels (Chinen & Matsumoto, 2021).

2.3 Trust, Certification and Information

Quality perceptions are linked to the factors of trust and information. A recurring insight is that credible information about remanufactured products can boost consumer confidence. Consumers’ trust in certified remanufacturing positively correlated with their purchase intentions for both domestically and foreign made parts (Chun et al., 2022). In other words, a formal certification or endorsement – which signals consistent quality – helped assuage doubts and encouraged buying. Similarly, a large majority of consumers trust a quality certification scheme for remanufactured smartphones; though interestingly, they noted this certification alone was not the most critical factor in the final purchase decision (Mugge et al., 2017). This suggests that while quality labels and information make consumers more comfortable, other elements such as price or convenience often carry equal or greater weight. Nonetheless, it is clear across studies that better product information can reduce perceived risk and thus support intentions to buy remanufactured goods (Mugge et al., 2018)

2.4 Economic and Price Factors

Economic considerations, such as price savings, are some of the major drivers of remanufactured purchases. Many consumers turn to remanufactured options primarily for their lower cost. (Kaluvilla et al., 2025) found that economic motivation, such as saving money, had a significant positive effect on consumers’ intention to purchase refurbished furniture. This finding aligns with the idea that if remanufactured products offer enough of a price discount relative to new ones, many buyers will go for them. Toth-Peter et al., (2025) also observed that expecting a low price

made consumers evaluate a circular product more positively. In consumer choice experiments, price-sensitivity often tips the decision. Chen et al., (2020) found that those who “*pay more attention to price*” were much more inclined to choose remanufactured or refurbished alternatives over new products. Conversely, when consumers focus on cost, they may even prefer a cheaper refurbished item to a remanufactured one if that offers the best deal (Chen et al., 2020). In summary, perceived cost-benefit—getting acceptable quality at a reduced price—is a consistent and powerful factor influencing remanufactured purchase intentions.

2.5 Product Attributes and Market Context

Finally, the nature of the product itself and the market context can influence intention. One common finding is that the type of product shapes consumer choices. Lv et al., (2021) suggest that consumers are willing to buy remanufactured versions of everyday essentials more readily than they are for luxury or prestige items. The entry of refurbished competitors also plays a role; in the same study, the presence of refurbished alternatives significantly affected willingness-to-pay (WTP) and choice behavior, indicating that consumers consider the relative pricing and availability of all used options when deciding (Wallner et al., 2024). In short, market factors like product category, available alternatives (refurbished vs. new), and brand reputation can modulate purchase intentions for remanufactured products.

3. Research Methodology

The study implements bibliometric analysis, which is a form of systematic literature study carried out to examine the existing body of literature to understand the patterns, trends and impact within a particular field (Zhang et al., 2022). Scopus has become one of the primary databases to find credible and authentic works of literature (Awan et al., 2021). In this paper, the articles are retrieved from Scopus using a search string: TITLE-ABS-KEY (("purchase intention" OR "buying intention" OR "consumer behavior" OR "consumer attitude" OR "willingness to buy" OR "purchase decision") AND (remanufactured OR refurbished OR reconditioned OR reused OR "remanufactured products" OR "remanufactured goods" OR "remanufactured electronics") AND (sustainable OR sustainability OR "circular economy")). It exported a total of 106 articles consisting of research articles, book chapters and review papers. Although no time range was set, there were no documents found before 2010. Hence, the articles considered for the analysis are within the date range of 2010-2025, which fulfils the crucial 10-year timeline needed for bibliometric analysis.

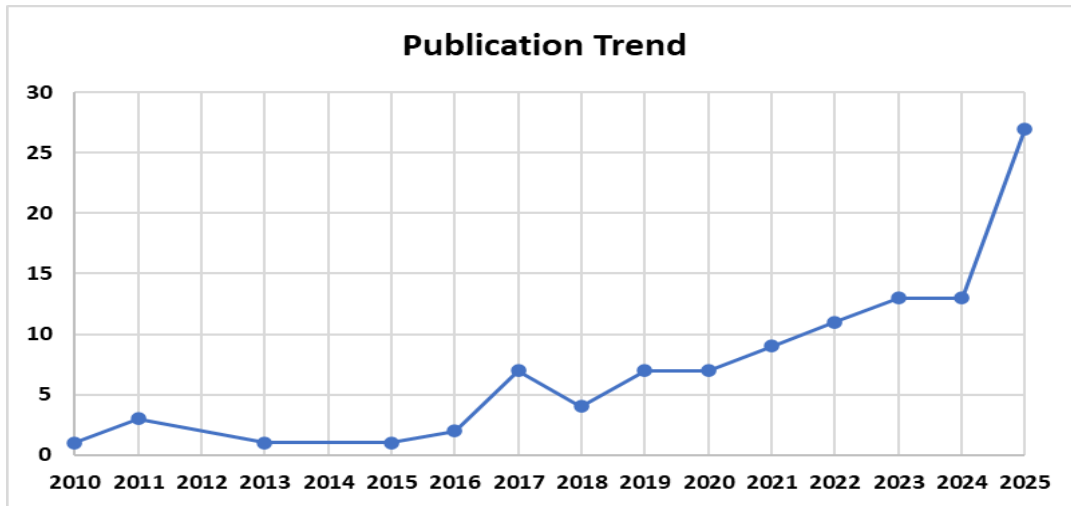
3.1 Data Analysis

The data was analysed using Vosviewer software. It is a bibliometric software that utilises data mining to visualise bibliometric networks such as maps of relationships between publications, authors or journals (Hashem E et al., 2023) . In this paper, the data is analysed based on authorship, co-authorship, citation, bibliometric coupling and co-citation.

4. Results and Discussions

4.1 Year-wise publication trend of articles published in the field of consumer purchase intent

Figure 1. Year-wise publication trend of articles published

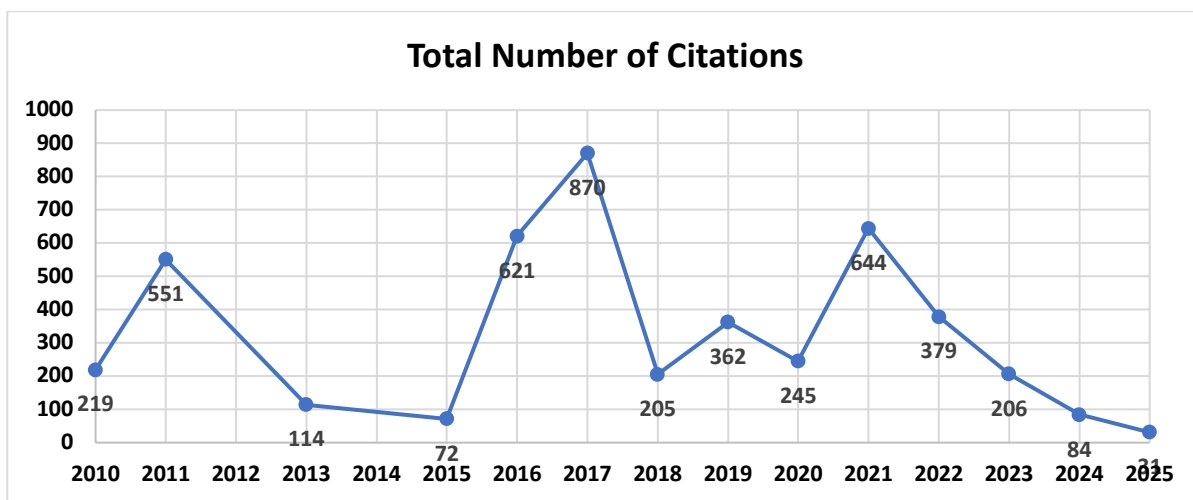


Source: Based on the author’s calculation

Figure 1 shows the trend of the number of articles published from 2010-2025 in the field of consumer purchase intent towards remanufactured products. From 2010 to 2015, the number of publications remained very low, showing a limited interest towards the particular topic. However, the significant increase in the number of publications from 2020 suggests that there is an increasing recognition of remanufacturing as a crucial area of interest within sustainability and consumer behaviour research.

4.2 Year-wise distribution of total citations received by different authors in each year

Figure 2. Year-wise distribution of total citations received by different authors in each year



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Source: Based on the author’s calculation

In Figure 2, it can be seen that during 2010-2011 citation counts were moderate, but from 2012 to 2015 citation counts dropped significantly, suggesting a limited amount of academic impact and fewer highly cited publications. However, during 2016-2017 citation counts increased rapidly from 621 to 870, marking it to be the most influential year. After 2017, citation count declined but showed a recovery trend in 2019 and 2021 with 362 and 644 citations, respectively. However, the decline from 2022 onwards, with just 31 citations in 2025, can be seen as a typical trend, as recent publications have not had sufficient time to accumulate citations.

4.3. Most Influential Sources in terms of Publication

Table 1. Most influential articles published in terms of publications

Sl No	Source Title	Number of Articles Published	Total Number of Citations Received
1	Journal of Cleaner Production	14	1044
2	Sustainability (Switzerland)	8	639
3	Resources, Conservation and Recycling	5	399
4	Sustainable Production and Consumption	4	354
5	International Journal of Environmental Research and Public Health	4	298
6	Business Strategy and the Environment	4	283
7	Procedia CIRP	3	219
8	Circular Economy and Sustainability	3	158
9	Springer Proceedings in Business and Economics	2	121
10	Production and Operations Management	2	117

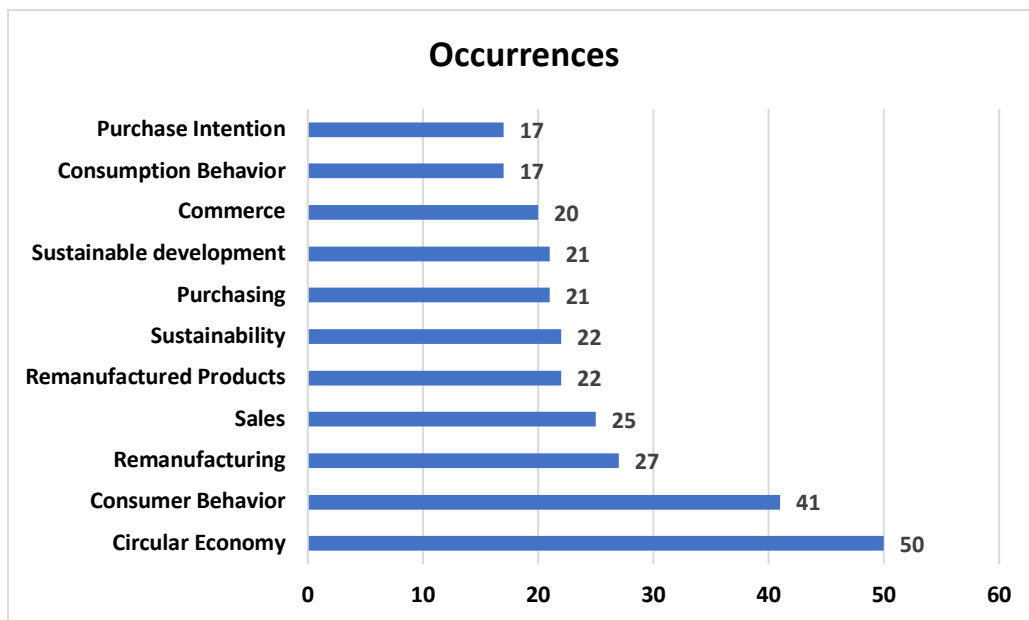
Source: Calculated from VOSviewer

Table 1 shows some of the most influential sources where the maximum number of articles related to consumer purchase intent towards remanufactured products have been published. The table has been calculated according to the number of articles published and citations received by them. It

can be seen that Journal of Cleaner Production has the highest number of publications with 14 articles and 1044 citations, followed by Sustainability (Switzerland) with 8 articles and 639 citations. It indicates that these two are the most influential sources with impactful publications contributing to the current field of research in consumer buying intent and sustainability practices. Some of the influential sources are Resources, Conservation and Recycling, Sustainable Production and Consumption, and International Journal of Environment Research and Public Health.

4.4. Most Occurred Keywords in the Field of Consumer Purchase Intent

Figure 3. Most commonly used keywords



Sources: Data retrieved from VOSViewer

Figure 3 highlights the most commonly occurring keywords in this field. In the above table, the analysis indicates that *circular economy* and *consumer behaviour* are the most widely used keywords, with a total occurrence of 50 and 41, respectively. It highlights that most studies are done in a broader framework of the *Circular Economy* and *Sustainable Production*. Keywords such as *Remanufacturing*, *Remanufactured Products* and *Sustainability* suggest that researchers are also interested in how these products are made and their impact on the environment. Moreover, keywords such as *Sales*, *Purchasing* highlight the business aspect, whereas keywords like *Purchase Intention* and *Consumption Behaviour* show what factors influence the purchase intention of consumers towards remanufactured products.

4.5 Most Influential Authors

Table 2 shows the most influential authors calculated on the basis of total citations received by them. Hazen, Benjamin Thomas and Wang, Y.C ranks at the top with 863 citations each followed by Mugge, Ruth with 513 citations. Some of the other prominent authors are Sivarajah, Uthayasankar, Hingorani, Kunal, Maiti, Kausik and Patwa, Nitin.

Table 2. Most influential authors in the field of Consumer Purchase Intent

SI No	Author	Number of Documents	Total Number of Citations
1	Hazen, Benjamin Thomas	4	863
2	Wang, Y. C.	4	863
3	Mugge, Ruth	7	513
4	Sivarajah, Uthayasankar	2	404
5	Hingorani, Kunal	1	399
6	Maiti, Kausik	1	399
7	Patwa, Nitin	1	399
8	Sarkar, Sabyasachi	1	399
9	Seetharaman, Arumugam	1	399
10	Mollenkopf, Diane A.	1	345

Source: Data retrieved from VOSviewer

4.6 Year-Wise Distribution of Articles Published by the Top Countries

Table 3 highlights that China has the highest number of articles in the given field, with 23 publications indicating a strong research contribution. However, Sweden, with only six publications, has the highest number of citations with a total count of 1189, indicating that their studies are more connected and influential. The United States and Japan, with 19 and 11 publications, also show a significant research engagement, even though they have lower citation counts. Countries like India and Turkey are emerging but limited contributors with 11 and 5 publications, respectively.

Table 3. Top Countries in Terms of Publications and Citations Received

SI No	Country	Total Number of Articles Published	Total Number of Citations Received
1	Sweden	6	1189
2	Japan	11	248
3	United States	19	81
4	United Kingdom	9	79
5	Germany	5	66
6	Italy	5	63
7	China	23	60
8	India	11	17
9	Turkey	5	17
10	Netherlands	9	15

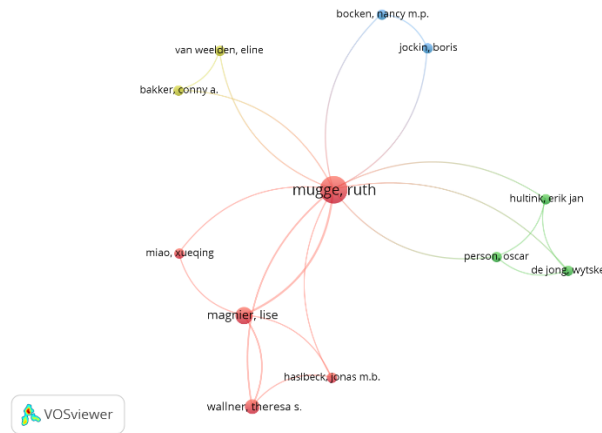
Source: Data retrieved from VOSviewer

4.7 Co-authorship

4.7.1 Co-authorship and Authors

Figure 4 highlights 12 authors divided into four colour-coded clusters: red, blue, green and yellow. Each cluster shows small groups of researchers who have worked together on similar topics. For the analysis, articles with more than 25 authors were excluded to maintain clarity and focus. Moreover, the diagram shows a total link strength of 24, indicating that while some collaboration exists, most authors work independently or in small teams. However, the presence of a few closely connected clusters indicates emerging cooperation among researchers, but the overall trend remains fragmented.

Figure 4. Visual representation of co-authorship between various authors

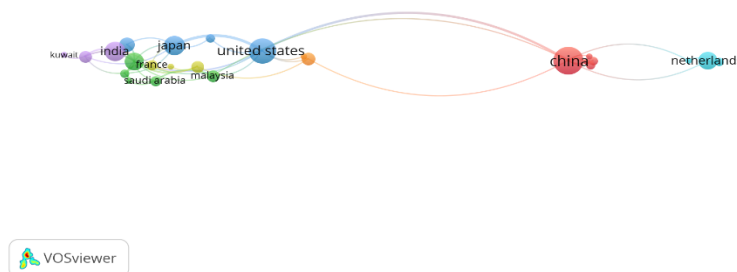


Source: Data retrieved from VOSviewer

4.7.2 Co-authorship and Countries

Figure 5 shows the co-authorship between countries, highlighting the collaboration between authors of various countries in the given field of research. The mapping of this figure shows a total of 25 countries with 7 clusters and a total link strength of 66. The figure indicates that China is the most central and well-connected country, collaborating actively with the United States and the Netherlands, showing its strong international presence in this field. Moreover, the United States also shows a strong connection with several countries, including Japan, India, and Malaysia, reflecting its influential role in cross-country research. However, smaller regional clusters, particularly in Asia and Europe, indicate growing but limited collaboration among emerging research communities.

Figure 5. Visual representation of co-authorship between various countries



Source: Data retrieved from VOSviewer

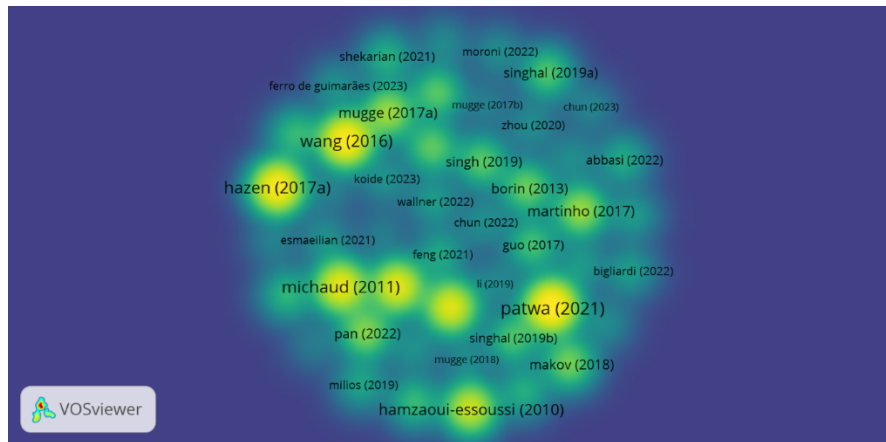
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4.8. Citations

4.8.1 Citations and Articles

Figure 6 shows the citation analysis with documents as a unit of analysis. It shows that a few key papers have received the highest number of citations. The bright yellow areas in the map indicate that these are highly cited documents, while the green and blue areas show studies with fewer citations.

Figure 6. Visual representation of citations with articles as a unit of analysis



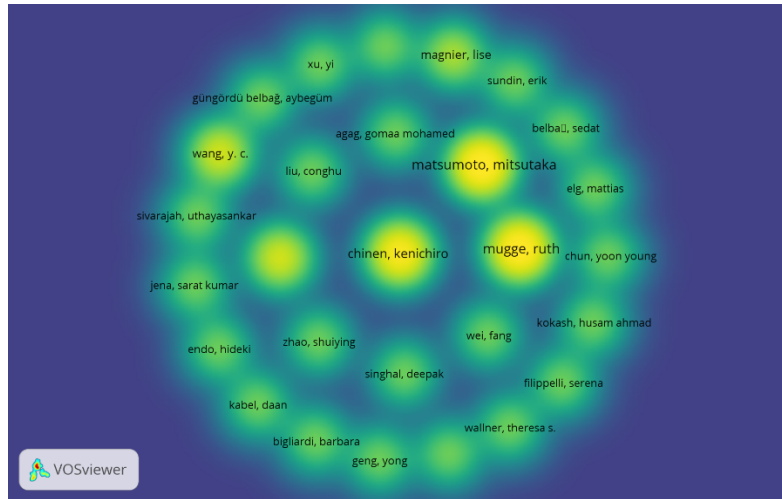
Source: Data retrieved from VOSviewer

Furthermore, most of the highly cited works were published between 2011 and 2017. It indicates that this period contributed significantly to this field of research. However, recent papers from 2021 to 2023 are beginning to gain attention but have not yet reached the same citation level.

4.8.2 Citations and Authors

In the analysis of citations and authors, a filter was applied where articles with more than 25 authors were excluded. Authors with a minimum of 2 articles and 10 citations were considered for the study. Out of 303 authors, only 28 met this threshold. Figure 7 shows the most cited authors in this field of study. The bright yellow nodes represent the authors who have the highest number of citations, and the smaller nodes with a light yellow colour represent the authors with lower citations.

Figure 7. Visual representation of citations with authors as a unit of analysis

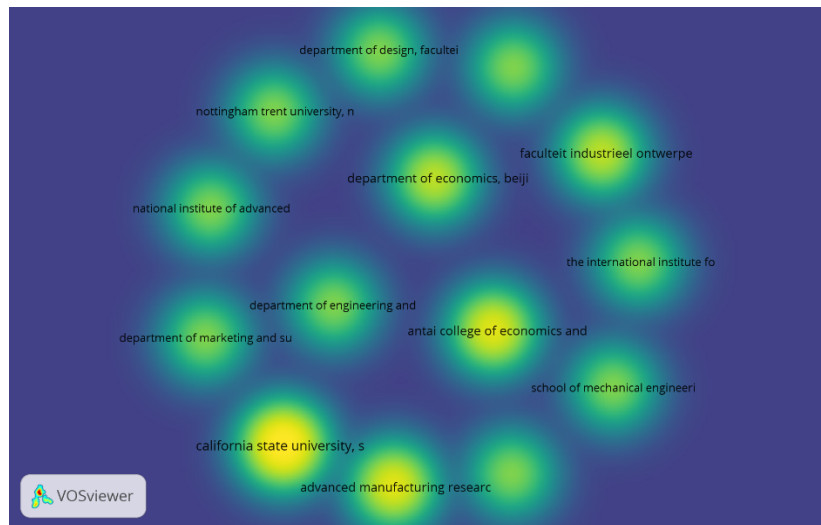


Source: Data retrieved from VOSviewer

4.8.9 Citation and Organisations

To analyse the citations of organisations, articles co-authored by more than 25 countries have been excluded. Organisations with a minimum of 2 articles and 40 citations were considered for the study.

Figure 8. Visual representation of citations with organisations as a unit of analysis



Source: Data retrieved from VOSviewer

Out of 223 organisations, 14 met the threshold. Figure 8 shows the analysis. However, the total link strength among the organisation was zero, which indicates that research has happened

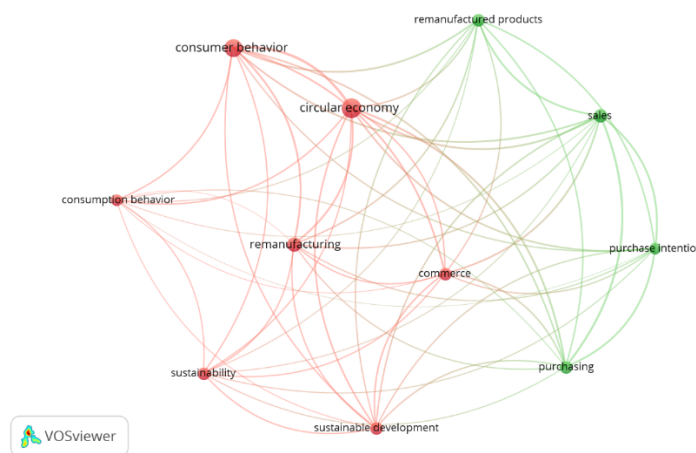
independently without any international collaborations. This can be seen as a gap in the current research field and shows an opportunity for such collaborations in the future.

4.9. Co-occurrence

4.9.1 Co-occurrence of keywords

To analyse the keyword co-occurrence network, keywords with a minimum of 10 occurrences were considered. out of 808 keywords, only 19 keywords met this criteria. the total link strength was 489, which indicates a strong relationship between the major keywords. From Figure 9, it can be seen that the keywords are divided into 2 clusters. the red cluster focuses on keywords such as circular economy, remanufacturing, and sustainable development, which indicates the linkage between production and sustainability goals.

Figure 9. Visual representation of the co-occurrence of keywords



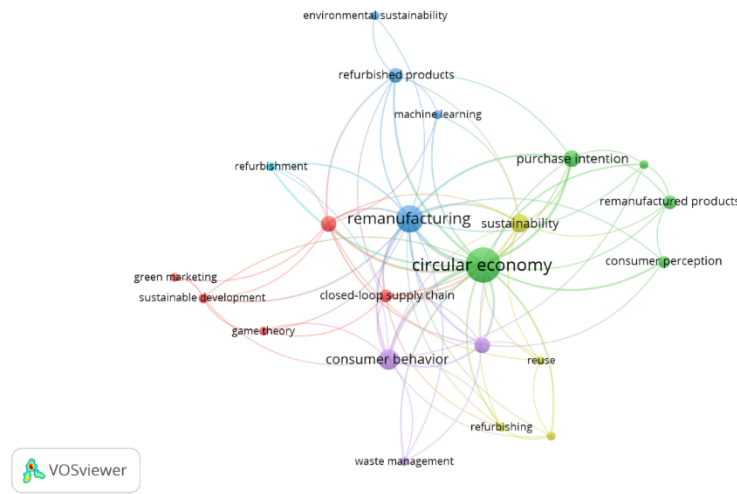
Source: Data retrieved from VOSviewer

On the other hand, the green cluster represents keywords such as consumer behaviour, recycling, indicating the behavioural and social aspects influencing the purchase decisions. Moreover, the close link between circular economy and consumer behaviour shows that studies have been done to understand the perspectives of consumers towards sustainability practices.

4.9.2 Co-occurrence of Author Keywords

Figure 10 shows the co-occurrence of author keywords. For the analysis, keywords with a minimum occurrence of 3 times were considered. Out of 324 keywords, only 22 met the criteria. The analysis gave 6 clusters with a total link strength of 155. The nodes with a larger size show the keywords with high co-occurrence, followed by the keywords with smaller nodes, which indicates a lower co-occurrence trend.

Figure 10. Visual representation of the co-occurrence of author keywords



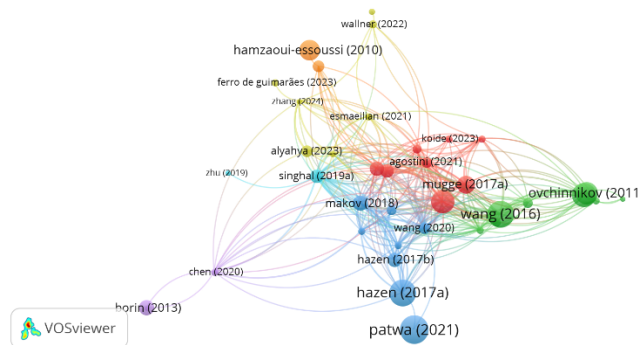
Source: Data retrieved from VOSviewer

4.10. Bibliometric Coupling

Bibliometric Coupling analyses the similarity between two publications by comparing the common citations between them. It highlights the recent findings from the database and shows the extent to which various articles are interconnected in terms of their references. Bibliometric coupling helps in identifying these clusters and research networks (Pavesi et al., 2025).

4.10.1. Bibliometric Coupling and Documents

Figure 11. Visual representation of bibliometric coupling with documents as a unit of analysis



Source: Data retrieved from VOSviewer

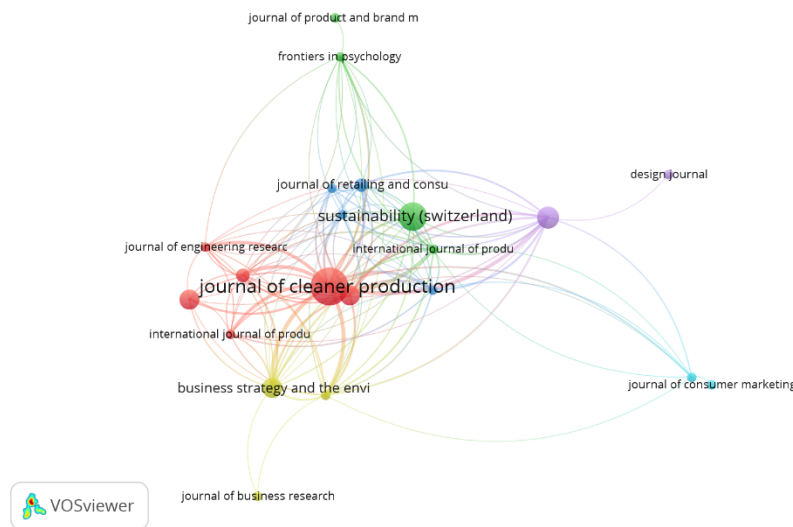
Figure 11 shows how documents are connected through shared references, using documents as the unit of analysis. For the analysis, documents with a minimum of 15 citations were considered. Out

of 106 documents, only 38 met the criteria with a total link strength of 410. In the above figure, each node represents a document, and the connecting lines show the strength of their shared citation links. Moreover, different colours indicate separate clusters of closely related documents. The larger nodes represent documents with stronger connections, while thicker lines show higher coupling strength. Furthermore, the figure also displays several clusters of varying sizes, with visible links among them, indicating moderate connectivity within the network.

4.10.2 Bibliometric Coupling and Source

Figure 12 shows the relationships among academic journals based on shared references, using sources as the unit of analysis. For the analysis, sources with minimum citation of 15 are considered for study. Out of 113 sources, only 21 met the threshold with a total link strength of 492. In the figure, each node represents a journal, and the connecting lines indicate the strength of its citation linkages. It can be seen that the *Journal of Cleaner Production* appears as the largest and most connected node, showing its strong influence and wide citation overlap with other sources.

Figure 12. Visual representation of bibliometric coupling with sources as a unit of analysis



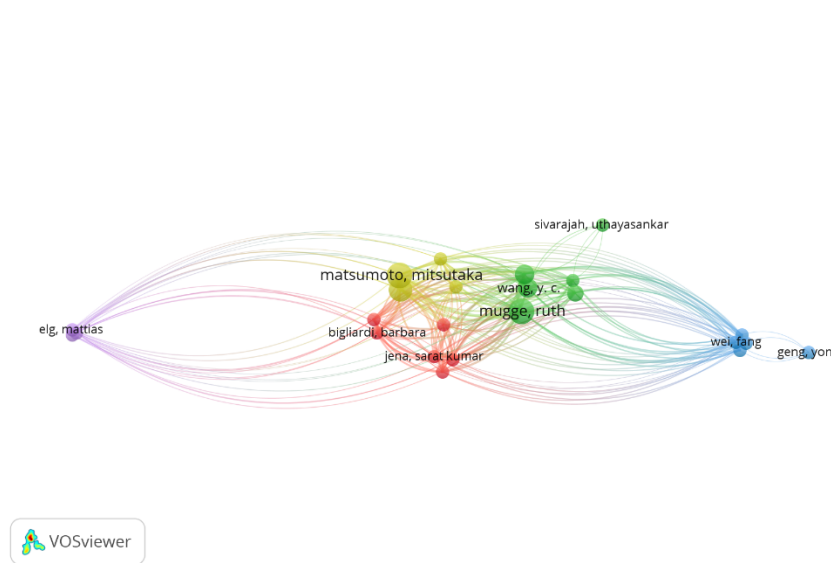
Source: Data retrieved from VOSviewer

Other journals, such as *Sustainability (Switzerland)*, *Business Strategy and the Environment*, and the *International Journal of Production Research*, also show strong connections within the network. Moreover, the figure indicates that several journals are interlinked through shared references, forming a comprehensive structure with a few central and highly influential sources.

4.10.3 Bibliometric Coupling and Authors

Figure 13 represents relationships among authors based on shared references, using authors as the unit of analysis. For the analysis, documents with more than 25 authors were excluded, and only authors with at least two publications and 15 citations were included. Out of 303 authors, only 24 met the criteria, resulting in the formation of 5 clusters with a total link strength of 1,794.

Figure 13. Visual representation of bibliometric coupling with authors as a unit of analysis



Source: Data retrieved from VOSviewer

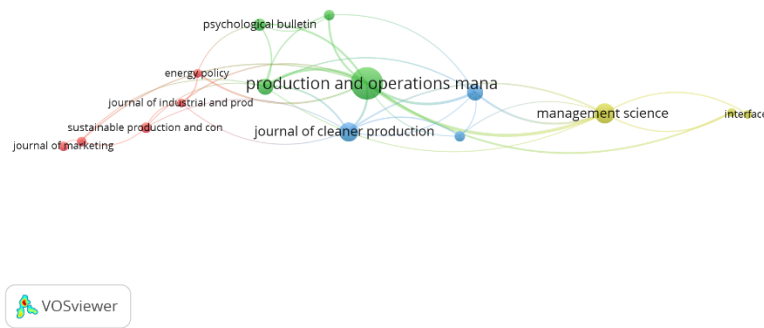
Furthermore, each colour indicates a group of authors who share similar citation and research patterns. It can also be seen that there are interconnected clusters with a few central authors which display a stronger connection. This also suggests collaborative and overlapping areas of study.

4.11. Co-citation

4.11.1 Co-citation and Source

The co-citation map in Figure 14 shows how frequently journals are cited together in the same documents, using sources as the unit of analysis. For the analysis, sources with a minimum of 3 publications are considered for the study. Out of 113 sources, only 15 met the criteria. It indicates that a small number of journals are consistently cited together and form the core references in this field. Moreover, the analysis produced six clusters with a total link strength of 135. Larger nodes, such as *Production and Operations Management* and *Journal of Cleaner Production*, show stronger co-citation links, suggesting their higher influence.

Figure 14. Visual representation of co-citation with sources as a unit of analysis

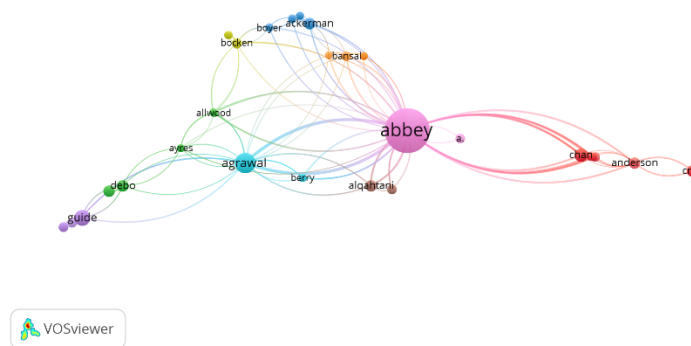


Source: Data retrieved from VOSviewer

4.11.2. Co-citation and Authors

Figure 15 shows how authors are connected based on how frequently they are cited together in the same documents. For the analysis, authors with a minimum of 3 citations are considered for the study. out of 290 authors, only 52 met the criteria. Furthermore, the analysis generated nine clusters with a total link strength of 64. Larger nodes, such as *Abbey* and *Agrawal*, represent authors with higher co-citation frequencies and stronger influence. Moreover, the presence of multiple clusters suggests that the field includes several interconnected subfields, reflecting a diverse yet moderately cohesive body of research literature.

Figure 15. Visual representation of co-citation with authors as a unit of analysis



Source: Data retrieved from VOSviewer

4.12 Discussion

The bibliometric analysis shows that the publication trend in this field was very low until 2015. However, it picked up significantly after 2020. Citation counts peaked in 2016 and 2017, with around 870 total citations. Even though there was some decline after that, recovery occurred in 2019 and 2021 as older works continued to gather citations. The Journal of Cleaner Production, with 14 articles and 1,044 citations, and Sustainability, with 8 articles and 639 citations, stand out as the most influential outlets. Furthermore, key terms such as “circular economy” and “consumer behavior” are some of the most frequently mentioned, showing a focus on sustainability and consumers. Among the authors, Hazen and Wang Y.C. are the most cited, each with 863 citations. Moreover, China has the most articles published, while Sweden’s few publications have the highest total citations (1,189). This indicates that significant research has been conducted by some smaller groups, too.

Collaboration networks seem quite fragmented. Author co-authorship clusters are small and dispersed, with a total link strength of 24, suggesting that most researchers work in isolated groups. Moreover, on a country level, China and the USA are key hubs, strongly connected to each other as well as to countries like Japan and India. Bibliographic coupling shows moderate connectivity, with documents forming several interconnected clusters with shared references. The Journal of Cleaner Production is a prominent node in the source-coupling network. Co-citation analysis reveals a few core journals, like Production and Operations Management and the Journal of Cleaner Production, along with authors such as Abbey and Agrawal, who have strong interconnections.

5. Conclusion, Implications, and Future Research Directions

5.1 Conclusion

This bibliometric analysis provides a clear overview of how research on consumer purchase intention toward remanufactured products is changing. The study shows a steady increase in literature, with more publications over the last ten years. Moreover, key journals and authors have influenced the field, while co-citation and keyword analyses point to two main research areas, where one is focused on sustainability and circular economy and the other one on consumer behaviour and decision-making. Despite the growing interest, patterns of co-authorship and bibliographic coupling indicate that research efforts are still quite scattered, highlighting the need for better integration across fields. The findings also confirm that consumer intention is influenced by several factors, including perceived quality, trust, risk, economic value, and environmental concern. Overall, the analysis shows a field that is actively developing, where both academic study and practical relevance keep growing, providing valuable insights for future collaboration and knowledge building.

5.2 Implications

The bibliometric findings show a rapidly growing interest in remanufactured products, with publications increasing significantly from 2017 to 2025. High-impact journals like the Journal of Cleaner Production and Sustainability lead the field, and influential authors have created distinct citation networks. Data analysis reveals two major research clusters: one focuses on the circular economy and sustainability, while the other looks at consumer behaviour and decision-making. This indicates a combination of technical and psychological perspectives. However, co-authorship patterns are still fragmented, suggesting a need for more collaboration across fields like operations, marketing, and environmental science.

Moreover, the literature highlights that product quality, reliability, and clear information provided through warranties and certifications strongly influence consumer demand. Frequent keywords like “purchase intention” and “consumer behavior” show a clear market focus. Furthermore, businesses can benefit by engaging with the circular economy narrative and building trust through sustainability messaging and verified quality.

5.3 Future Research Directions

The analysis shows that collaboration networks among authors and institutions are quite limited. This indicates a need for future research to encourage multi-author and cross-institutional efforts. Strengthening scholarly connections could lead to better insights.

In terms of methods, changing bibliometric thresholds and using other tools like altmetrics or social network analysis could help bring to light emerging voices and overlooked subfields. Expanding data sources beyond Scopus to include databases like Web of Science, IEEE, and grey literature could enhance future analyses and fill existing gaps, especially regarding language and historical depth.

Apart from that, more investigation is necessary into changing consumer attitudes, less-studied product categories, and other influencing factors such as cultural values and social norms. Finally, the dominance of a few countries in current research suggests the need to concentrate more on underrepresented regions and diverse market contexts. This could uncover unique consumer behaviours and motivations linked to specific settings or product types.

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