

---

## **Turbo Remarketing by E-Commerce Start-ups: Converting Abandoned Carts into Sales**

---

*Submitted 28/03/24, 1st revision 18/04/24, 2nd revision 22/05/24, accepted 18/06/24*

Naveen Kumar R<sup>1</sup>, Janani M<sup>2</sup>, John William A<sup>3</sup>, Pavithra R<sup>4</sup>, Maharajan T<sup>5</sup>

### **Abstract:**

**Purpose:** "Turbo Remarketing by E-commerce Start-ups: Converting Abandoned Carts into Sales" aims to analyze effective remarketing strategies for e-commerce startups to recapture lost sales from customers abandoning their shopping carts. The research targets new or young businesses in the online retail space, focusing on winning back customers who add items but don't complete the purchase.

**Design/Methodology/Approach:** The study gathered data from 398 individuals in South India through online questionnaires targeting those who encountered cart abandonment on new e-commerce sites. Using convenience and snowball sampling methods, the final dataset included 386 responses after excluding outliers. This data collection, from January to April 2024, ensured the quality and validity of the research findings.

**Findings:** The study reveals that email, display, social media, search engine, and video remarketing strategies significantly impact brand attachment, accounting for 86.2% of variance. Brand attachment also positively impacts cart abandonment recovery, accounting for 38.4%. These strategies, including targeted messages and advertisements, are crucial for recovering abandoned products, enhancing sales performance, and reinforcing strategic remarketing efforts in the digital marketplace.

**Practical Implications:** The study highlights the significance of online strategies like email, display ads, and social media in enhancing brand attachment and preventing cart abandonment in e-commerce, highlighting factors like high shipping costs, checkout processes, and technical glitches.

**Originality/Value:** "Turbo" remarketing techniques for startups, focusing on new technologies, personalization methods, and campaign triggers. It will also explore startup-specific strategies, analyzing real-world data to identify trends and correlations between remarketing tactics and abandoned cart recovery. The study will also explore the importance of brand attachment and common abandonment reasons, such as high shipping costs and unclear return policies.

**Keywords:** Remarketing strategies, consumer behavior, brand attachment, cart abandonment, conversion rates.

---

<sup>1</sup>Corresponding author, Kristu Jayanti College, India, <https://orcid.org/0009-0002-6566-0862>, E-mail: [naveen.austin@gmail.com](mailto:naveen.austin@gmail.com);

<sup>2</sup>Kristu Jayanti College, India, E-mail: [janani.m@kristujayanti.com](mailto:janani.m@kristujayanti.com)

<sup>3</sup>Kristu Jayanti College, India, E-mail: [william.aj@kristujayanti.com](mailto:william.aj@kristujayanti.com)

<sup>4</sup>Kongunadu Arts & Science College, India, E-mail: [pavithrachandrasekar22@gmail.com](mailto:pavithrachandrasekar22@gmail.com)

<sup>5</sup>TIPS College, India, E-mail: [modelimits@gmail.com](mailto:modelimits@gmail.com)

---

**JEL Classification:** M13, M31, L81, L82, L84.

**Paper type:** Research article.

## 1. Introduction

Remarketing is a strategic marketing strategy that targets customers who have previously interacted with a brand but did not complete a desired action, aiming to increase conversion rates. A study examined various remarketing strategies, including email, display, social media, search engines, and video, to determine their impact on consumer brand attachment. The results showed that all tested strategies had a significant positive impact on brand attachment.

Additionally, brand attachment positively influenced cart abandonment recovery, suggesting that consumers with a strong emotional connection to a brand are more likely to return and complete their purchases.

Remarketing is a marketing approach that involves using Google ads and cookies to reach a broader audience. In contrast, remarketing uses a more extensive strategy to target potential customers. However, consumers tend to reject remarketing ads and techniques due to various reasons (Christino *et al.*, 2020). To optimize online sales, businesses can use automatic testing and targeting of content versions. This approach helps measure key performance indicators such as conversion rate, order value, visitor revenue, and website turnover. The REAN model was utilized, increasing visitor revenue and shopping cart success (Heinonen, 2010).

The use and evolution of digital technologies and media have transformed customer interactions, but their journeys vary significantly worldwide (Nam *et al.*, 2020; Kadlubek *et al.*, 2022; Grima *et al.*, 2023; Norena-Chavez and Thalassinos, 2023). Wan *et al.* (2023) found that generic product recommendations boost early conversion rates, while retargeted ones increase late purchase funnel sales. Marketing professionals invest in digital devices to digitalize the point of sale, with mobile phones potentially renewing consumer representations. However, domesticating physical geography remains a challenge (Thomas *et al.*, 2020).

Remarketing involves reminding potential customers of previously expressed interest in services or products through digital methods (Isoraite, 2019). Remarketing campaigns are a popular marketing technique used by various websites, including e-commerce platforms, corporate sites, and information portals. Companies typically employ three different strategic approaches to execute these campaigns. Remarketing strategies play a crucial role in encouraging consumers to make purchases efficiently, both in terms of cost and time (Isoraite, 2019).

Advertising professionals can use various techniques to reach their desired audience, such as uploading email lists to Google Ads. This allows them to target potential customers through Google Search, Gmail, or YouTube logins.

Additionally, cookies can be utilized in emails to display specific advertising to recipients when they open the email. As highlighted by Bubenheim (2018), these multifaceted approaches demonstrate the versatility and effectiveness of remarketing in optimizing customer engagement and conversion rates.

## **2. Literature Review**

### **2.1 Remarketing Strategies**

Though there are many remarketing strategies that are adopted by the business to reach the potential customer and the existing customer and remind them about the brand, thus selling the products to them, this study focuses on five remarketing strategies: email remarketing, display remarketing, social media remarketing, search engine remarketing, video remarketing, and the change in the brand attachment of the consumer, which then initiates the removal of the product from the cart and the purchase the product.

Remarketing is bringing back the attention of customers who have already purchased the product or who have an interest in the product. It focuses on the differences between Gen Y and Gen Z and their responses to the remarketing strategy adopted by the business in bringing back customers, focusing on the impact of the various digital marketing strategies adopted by the company and the changes in the purchase behavior of customers from Gen Y and Gen Z (Israfilzade and Guliyeva, 2023).

Analyzing qualitative and quantitative data on remarketing strategy indicates that the impacts of the impacts of the remarketing strategy adopted by the company vary among the two generations of customers, requiring the remarketing strategy to be adopted effectively for a better response from the customer.

Remarketing is used by marketers to target existing customers, provide them with offers to complete the sales, and in turn make them loyal customers. Using different promotional activities for different customer bases will eventually bring a change in customer preference, and thus segmenting the customer base before making an online sale is essential for completing the sale.

The segregation of product reviews by the consumer and the sales information—the combination of these—would help in focusing on a specific group of customers and remarketing the brand and the product (Ahmadiyah *et al.*, 2020).

---

## 2.2 Remarketing E-mail Strategies

E-mail remarketing works with the information available about the customer, where the customer is receiving the email from the brands that are specifically focusing on the products that were recently visited by the customer (Grad-Gyenge and Filzmoser, 2016).

As the targeted email remarketing impacts the customer, an observable change in their purchase behavior is seen (Sabbagh, 2021). Display remarketing is widely used as most consumers in this generation are surfing the internet. By using the advertisements on the websites that the consumers are surfing, this gains their attention, reminds them about the specific brand, and thus makes them click on those advertisements and move to their website, providing them with all the necessary information (Yoon *et al.*, 2023).

This remarketing retargets customers who have already purchased the products from a specific brand or who have shown interest by surfing the product details on the internet. Thus, this would be an effective way of attracting customers back to the brand (Munsch, 2021). This study investigates the impact of ethics, privacy, and perceived benefits of ads on consumers' attitudes towards online advertising, specifically re-targeting.

The results show that ad effectiveness and relevance influence consumers' attitudes towards re-targeting, with consumers willing to trade privacy for better search quality. Perceptions of the ethicality of re-targeting ads moderate the relationship between attitudes and purchase intentions. The study aims to extend consequential theory in online advertising and assist companies in using effective re-targeting strategies (Arli, 2024).

This study investigates the effectiveness of onsite retargeting, specifically wishlist-based retargeting compared to view-based retargeting, on a leading online retailer's homepage. Results show wishlist-based retargeting generates more clicks and conversions for retargeted products but diminishes for recommended products over time (Tsekouras, 2021).

## 2.3 Social Media Remarketing

Social media is the place where most individuals spend 135 minutes a day on average (Farman *et al.*, 2020). Social media remarketing connects the customers who are spending their time on social media by showing an upfront advertisement.

This is social retargeting, as the customer who has spent time on the brand or the product on the internet has moved out without making a purchase to purchase the product. (Mude and Undale, 2023). Social media platforms like Facebook and Instagram at the backend provide the provision to retarget the customers more

effectively. As the differential users make use of these social media platforms. This study investigates the effectiveness of retargeting advertisements (RTA) in persuading online shoppers to buy.

The research, which included interviews with experts and three studies, found that retargeted ads are effective, low-cost, and efficient in communicating with interested online shoppers. These ads are a reliable tool for boosting e-commerce businesses' sales (Mohan, 2020).

Social media advertising has revolutionized marketing, allowing businesses to reach wider audiences. A study reveals that retargeted and returning audiences have higher conversion rates and revenue per user. Time spent on the website also positively influences conversion rates and revenue per user (Hölli, 2019). Internet technology advances have shifted marketing to digital communication. Research on remarketing techniques aims to boost sales for PT Waysata Indonesia Bahagia. While current strategies lack segmentation, plans to implement STP strategies emphasize soft selling to avoid customer saturation (Dadang *et al.*, 2024).

## **2.4 Search Engine Remarketing**

Search engine remarketing is the process of targeting people, not only those who have shown interest in the brand or the product, but also those who have never visited or purchased the product (Bhattacharyya *et al.*, 2023). As this target every individual who is on the internet, this is differentiated from social media marketing, as social media marketing targets only specific customers who have already visited their websites, whereas search engine marketing targets every individual and is not segmented (Bhattacharyya *et al.*, 2023).

This technique allows them to brand reach customers with more personalized advertising and focuses on a on a larger segment of the population. This paper explores retargeting strategies for online consumers who search but don't purchase. Using a structural search model, an estimator is proposed to evaluate preferences.

Results highlight varying consumer responses, with seller recommendations proving more effective than coupons for increasing conversion rates (Jiang *et al.*, 2021). This study delves into the role of Search Engine Optimization (SEO) and Search Engine Marketing (SEM) in bolstering brand visibility in E-commerce. It elucidates how SEO optimizes organic search results while SEM utilizes paid advertising, both vital for E-commerce success amidst intense digital competition (Ologunbe *et al.*, 2023).

## **2.5 Video Remarketing**

Video remarketing is the process of engaging customers with video advertisements, as the video advertisement makes the customer feel livelier than the poster advertisement, as the inclusion of interactive video in the advertisement engages the

---

customer throughout and impresses the consumer to purchase the product (Israfilzade and Baghirova, 2022). Using video to remarket the products in-stream, out-stream, and in-app in real-time. Personalized content in the video engages the viewer, moving them to the website and completing the sale.

The study explores customer perceptions of Facebook retargeting ads, finding discount, past visit references, and ad frequency impact purchase intention, suggesting minimalist, relevant, and infrequent ads (Pinasang *et al.*, 2020).

Companies are increasingly investing in e-commerce cart retargeting (ECR) ads to recover abandoned carts. However, a study reveals that early reminders within 30 minutes to an hour post-abandonment decrease purchase likelihood, while late reminders after 1-3 days have a positive effect (Li *et al.*, 2021). In the digital age, e-commerce thrives as a primary avenue for businesses. To stand out amidst competition, effective digital marketing strategies are imperative. Qualitative research emphasizes the significance of techniques like SEO, content marketing, and user experience optimization in boosting sales conversions (Purnomo *et al.*, 2023).

## **2.6 Brand Attachment**

Branding allows the same expected thought processes from the customer. Brand attachment is the emotional connection between people and the brand (Arya *et al.*, 2019). When people start using a product, they develop a strong connection with the brand and show an emotional connection with the specific brand (Sciarrino, 2021). Once the customers use the product from a specific brand, they become passionate ambassadors of the brand and maintain the emotional connection for a longer period of time (Chopik *et al.*, 2019; Thomson *et al.*, 2005).

As the brand preference changes from each customer to the brand, the customer shares a great sense of association with the brand, which allows the customer to remain attached to the brand (Park *et al.*, 2007). The corporate house believes that retaining customers with the strength, reasoning, and emotional bond creates an emotional connection between the individual and the brand (Malär *et al.*, 2011).

Customers attached to the brand would be involved in spending their time and money to be consumers of a specific brand. The social interaction of an individual with the community changes the customer's attitude and behavior towards the brand. The specific brands are also benefiting from the interaction of social communities, as they develop strong emotional connections with the specific social group.

The customers also show an interest in sharing their perspective about the brand on social platforms. The attachment to the branded mobile apps is increasing as the user interface is more convenient with the digital mobile applications, and customers enjoy the efficiency of using the same. The customer would prefer to maintain a high level of involvement with the specific brand if they are satisfied with the appeal and

the picture portraying the product in the image. The better experience with the usage of applications influences the customer's positive perception (Proksch *et al.*, 2015).

## 2.7 Cart Abandonment Recovery

The study aimed at studying the strategies that could be adopted by the business present on the e-commerce platform, as the consumer who is surfing through would have an interest in a product that is making him visit the product, and due to various noises, the prospective customer would leave the product in the cart (Sondhi, 2017). Customers find it entertaining to visit an online store and look at the product, but later they end up moving the product to the cart and purchasing it (Song, 2019; Kukar-Kinney and Close Scheinbaum, 2009).

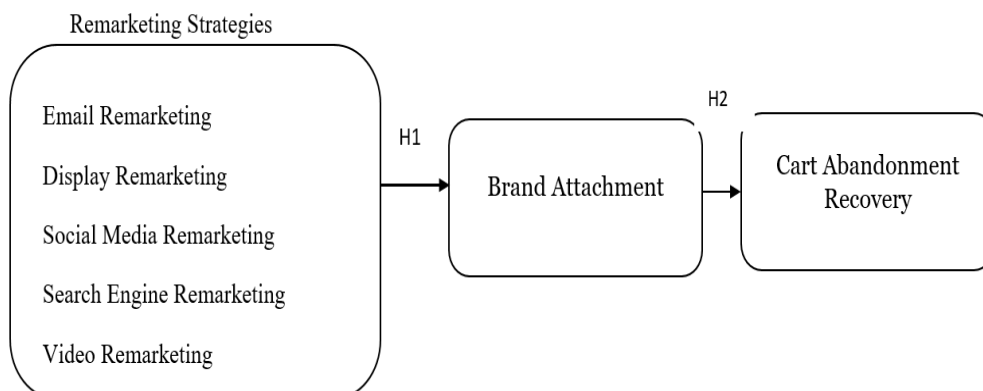
The business makes many efforts to reach the customer and move him back to the cart to purchase the product (Mittal, 2023), and even the pre-decisional conflict of the consumer also has an impact on the cart abandonment of the product (Erdil, 2018).

The techniques adopted by the e-commerce business include targeted email, remarketing through advertisements on YouTube, and native advertising, where the business would collaborate with an advertisement company to create web content that would grab the attention of the visitor and bring them to the cart to make the sale complete (Jiang *et al.*, 2021). The customer with an abstract mind setup is less likely to leave the product in the cart and complete the purchase process (Rubin *et al.*, 2020).

## 2.8 Conceptual Model

The conceptual model of the research is shown in Figure 1.

**Figure 1.** Authors' own construct from the Literatures Review 2024



Remarketing strategy → Brand attachment → Cart Abandonment Recovery

**Source:** Own study.

### 3. Hypotheses Development

Consumers pay significant attention to the sender's name, subject line format, personalization level, and frequency of receiving promotional e-mails (Tastsidou, 2023). Permission-based e-mail marketing, focusing on its impact on non-purchase behaviors and the influence of relational factors on consumer behavior, aims to deepen our understanding of e-mail marketing (Mannelqvist *et al.*, 2022).

*H1a: E-mail remarketing has a positive influence on the brand attachment of the consumer.*

The link between consumers' use of branded mobile apps and brand engagement, highlighting the positive impact of digital footprint, social media intensity, and engagement on brand attachment and self-connection (Siddiqui, 2021). The effectiveness of 216 dynamic retargeting ads compared to 216 non-dynamic, manually created product ads in Facebook Ads Manager and Google Ads highlights the challenges of human marketing in online marketing (Semerádová *et al.*, 2022).

*H1b: Display remarketing has a positive influence on the brand attachment of the consumer.*

To boost brand awareness and website traffic through Facebook advertising and remarketing. The campaign effectively reached Lahti's target audience, resulting in engagement and page likes, demonstrating the potential of Facebook advertising and remarketing for sales leads (Pusa, 2017). Social media advertising has significantly improved marketing by increasing clicks on ads, boosting conversion rates, and enhancing brand-consumer relationships, thereby boosting revenue and purchase intention (Hölli, 2019).

*H1c: Social media remarketing has a positive influence on the brand attachment of the consumer.*

The influence of digital remarketing strategies on Generation Y and Generation Z's purchasing behaviors promotes generation-specific marketing campaigns for improved digital marketplace performance (Israfilzade *et al.*, 2023). Digital marketing involves internet-based efforts using search engines, social media, and websites to connect with customers. Understanding jargon like remarketing and retargeting is crucial for effective marketing (Pathak *et al.*, 2020).

*H1d: Search engine remarketing has a positive influence on the brand attachment of the consumer.*

The use of remarketing, a marketing strategy that combines sales data and product reviews to create personalized promotional media (Ahmadiyah *et al.*, 2022). Display



advertising, particularly YouTube video ads, helps companies reach their target audience and increase sales (Bludova *et al.*, 2019).

*H1e: Video remarketing has a positive influence on the brand attachment of the consumer.*

Online shopping cart abandonment (OSCA) in e-retailers reveals that consumers' wait for lower prices increases checkout hesitation, with perceived transaction inconvenience strengthening the relationship (Wang *et al.*, 2022). Escapism motives and attitudes towards online shopping influence e-cart abandonment. Online sellers should understand consumer motives and develop strategies to reduce this issue (Mazhar *et al.*, 2024).

*H2: Brand attachment has a positive influence on cart abandonment recovery.*

The study assesses the impact of email remarketing, display remarketing, social media remarketing, search engine remarketing, and video remarketing on the brand attachment of the consumer, thus recovering the product left abandoned in the cart.

### **3.1 Problem Statement**

Hidden fees, complex checkout processes, and security concerns can lead to customers abandoning their carts. A complex process can be frustrating for first-time customers, while product availability issues can be frustrating. Price comparisons can also lead to customers abandoning their carts. E-commerce startups face issues such as lost revenue, wasted marketing efforts, inaccurate website data, ineffective targeting, and increased customer acquisition costs. Understanding these issues can help both customers and startups improve their online shopping experience.

## **4. Research Methodology**

The data for this study was gathered from individuals who had encountered remarketing initiatives in various forms. To obtain a representative sample, a convenience sampling method was employed. The survey instrument, in the form of a questionnaire, was disseminated online to prospective participants in South India.

Respondents were presented and mentioned in the questionnaires specifically targeting individuals who encountered cart abandonment issues while using new e-commerce sites, and they were chosen using the snowball sampling method within the online communities. In total, responses were collected from 398 individuals.

However, in order to enhance the robustness and reliability of the dataset, outliers were identified and subsequently excluded from the analysis. After the removal of outliers, a final dataset comprising 386 responses was utilized for the subsequent analytical procedures.

This meticulous data preparation process aimed to ensure the quality and accuracy of the information used in the study, thereby enhancing the validity of the research findings. The study period was between January and April 2024.

## 5. Empirical Results and Discussion

This study analyzes the impact of remarketing strategies in e-commerce businesses to sell abandoned products. Validity measures include Cronbach's alpha, composite reliability, convergent validity, discriminant validity, the discriminant validity, the T-test, and ANOVA. Data normality is measured using skewness and kurtosis. Factor loadings are considered, and factors with less loading are removed. Cronbach's alpha, composite reliability, and AVE values exceed the threshold limit (Tables 1-3).

**Table 1.** Results of Reliability, Internal Consistency, and Convergent Validity

Constructs	Indicators	Factor Loadings	VIF	CA	CR	AVE
Remarketing Strategy	Email Remarketing	.814	1.76	.874	0.756	0.5202
	Display Remarketing	.872	1.85	.887	0.813	0.507
	Social Media Remarketing	.865	1.16	.876	0.768	0.5579
	Search Engine Remarketing	.816	1.72	.820	0.849	0.5866
	Social Media Remarketing	.872	1.56	0.871	0.826	0.5684
Brand Attachment	BA1	.856	1.68	.748	0.845	0.684
	BA2	.837	1.49			
	BA3	.847	1.26			
	BA4	.942	1.64			
	BA5	.817	1.49			
Cart Abandonment Recovery	CAR1	.868	1.36	.798	0.856	0.598

	CAR2	.826	1.54			
	CAR3	.846	1.72			
	CAR4	.830	1.65			
	CAR5	.854	1.16			

**Note:** VIF = Variance Inflation Factor, CA = Cronbach Alpha, CR = Composite Reliability, AVE = Average Variance Extracted.

**Source:** Own study.

The test results from Table 1 indicate that the data collected from the samples is reliable, with Cronbach's alpha values exceeding 0.80. The composite reliability CR is over 0.7, indicating internal consistency. Factor loadings are over 0.70, allowing all construct indicators to be considered. Convergent validity is measured using AVE, which explains nearly half of the variance in indicators. AVE values above 0.5 indicate unobserved constructs.

**Table 2.** T-test & ANOVA - Demographic of the Customer and the Brand Attachment

**H<sub>01</sub>:** There is no significant difference between demographic profile of the Customer and the Brand Attachment.

Factors	Groups	N	Mean	Std. Deviation	F value	P value	Sig
Gender	Male	322	2.8394	1.20843	-1.184	.012	S
	Female	64	3.0379	1.30813			
Marital Status	Single	106	2.8733	1.20258	.010	.340	NS
	Married	280	2.8719	1.23685			
Age	Below 25 years	78	2.9048	1.17209	.080	.923	NS
	26 – 50 years	171	2.8830	1.26867			
	Above 50 years	137	2.8405	1.20971			
Educational Qualification	Up-to School level	87	2.0197	.75504	38.987	.000	S
	Graduate	132	2.6991	1.19004			
	Post-Graduate	127	3.3026	1.17164			
	Professional	40	3.9321	.95420			
Family Type	Nuclear family	216	2.8790	1.23890	.120	.333	NS
	Joint family	170	2.8639	1.21296			

**Note:** Significant at 5% level of significance.

**Source:** Own study.

The test results from Table 2 indicate that there is a significant difference between the gender (.012), educational qualification (.000), and brand attachment of the customer, as the p-value is less than .05.

The factors of marital status (.340), age (.923), and family type (.333), with a p value of more than.05, indicate that there is no significant difference between these variables and the brand attachment of the customer. There is a significant difference between gender (.012), educational qualification (.000), and the brand attachment of the customer.

**Table 3.** T-test & ANOVA - Demographic Profile of the Customer and the Cart Abandonment Rate

**H<sub>02</sub>:** There is no significant difference between demographic profile of the Customer and the Cart abandonment rate.

Factors	Groups	N	Mean	Std. Deviation	F value	P value	Sig
Gender	Male	322	2.7570	1.07459	-1.234	.000	S
	Female	64	2.9453	1.30359			
Marital Status	Single	106	2.8632	1.14753	.812	.410	NS
	Married	280	2.7598	1.10479			
Age	Below 25 years	78	3.0321	1.10735	2.457	.027	S
	26 – 50 years	171	2.4003	1.14166			
	Above 50 years	137	2.8591	1.07632			
Educational Qualification	Up-to School level	87	2.9138	1.12376	.497	.685	NS
	Graduate	133	2.7707	1.09235			
	Post-Graduate	126	2.7401	1.11283			
	Professional	40	2.7250	1.20735			
Family Type	Nuclear family	216	2.7662	1.11453	.436	.088	NS
	Joint family	170	2.8162	1.12086			

**Note:** Significant at 5% level of significance.

**Source:** Own study.

The test results from Table 3 indicate that there is a significant difference between the gender (.000) and age (.027) of the customer, as the p-value is less than.05. The factors of marital status (.410), family type (.088), and educational qualification (.685) with a p value of more than.05 indicate that there is no significant difference between these variables and the cart abandonment rate. There is a significant difference between gender (.000) and age (.027) and the cart abandonment rate.

The test results from Table 4 reveal that email remarketing significantly influences consumer brand attachment, which in turn improves cart abandonment recovery. Other channels like display, social media, search engines, and video remarketing also positively impact brand attachment, thereby enhancing cart abandonment recovery.

**Table 4. Hypothesis Results**

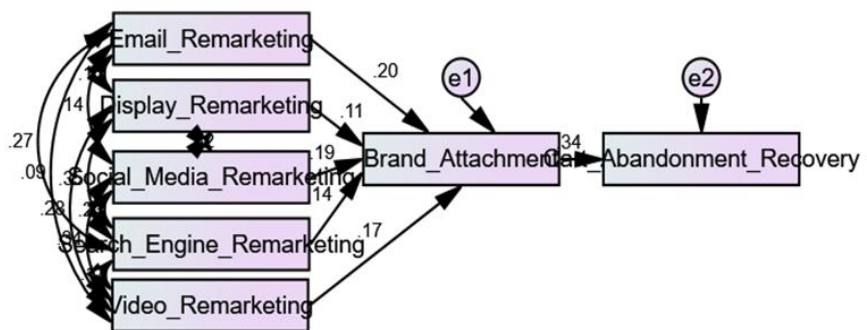
Hypothesis	P Value	
H1a: Email Remarketing has positive influence on the Brand attachment of the consumer	***	Supported
H1b: Display Remarketing has positive influence on the Brand attachment of the consumer	.027	Supported
H1c: Social Media Remarketing has positive influence on the Brand attachment of the consumer	.018	Supported
H1d: Search Engine Remarketing has positive influence on the Brand attachment of the consumer	.027	Supported
H1e: Video Remarketing has positive influence on the Brand attachment of the consumer	.023	Supported
H2: Brand attachment has positive influence on the Cart Abandonment Recovery	.042	Supported

Source: Own study.

### 5.1 SEM Analysis

SEM analysis is used to evaluate the impact of remarketing strategies on customer brand attachment and product completion. The model is assessed using goodness-of-fit indices, such as GFI Indices, TLI, and CFI. The fit indices of the structural equation model are in an acceptable range, with values between 0.05 and 0.08 and a standardized root mean square residual value below 0.05.

**Figure 2. Calculated Values from the Factor Loadings, 2024**



Source: Own study.

The study found that email remarketing, display remarketing, social media remarketing, search engine remarketing, and video remarketing had positive and significant impacts on brand attachment, accounting for 86.2% of the variance. Additionally, brand attachment positively impacted cart abandonment recovery, accounting for 38.4% of the variance. These findings support the hypotheses H1a, H1b, H1c, H1d, and H1e.

The study reveals the positive impact of various remarketing strategies on consumer brand attachment. Email remarketing, which involves targeted messages and advertisements, has a significant positive influence on brand attachment. Display remarketing, which presents advertisements to users as they browse the internet, also fosters brand attachment.

Social media remarketing, which uses targeted advertisements on platforms like Facebook and Instagram, also positively influences brand attachment. Search engine remarketing, targeting users through search engine ads, also has a positive impact on brand attachment. Video remarketing, which includes interactive content, also positively influences brand attachment. The study emphasizes the importance of brand attachment in the recovery of abandoned products in the cart, enhancing sales performance, and reinforcing the importance of strategic remarketing efforts in the digital marketplace.

## **6. Conclusion**

The study concludes that remarketing is a powerful tool in digital marketing. It can help to reconnect with potential customers and improve conversion rates. The research analyzed the impact of five remarketing tactics—email, display, social media, search engine, and video—and provided insights into consumer behavior in the dynamic digital marketplace. The findings reveal that these strategies play a significant role in both brand attachment, accounting for 86.2% of the variation, and cart abandonment recovery, responsible for 38.4% of the variation.

The idea of brand attachment refers to the emotional connection that consumers develop with a brand, which is significantly influenced by the remarketing strategies used by businesses. The study emphasizes the crucial role these tactics play in creating and strengthening this emotional bond.

Moreover, it is evident that these strategies have a positive impact on addressing the problem of cart abandonment in e-commerce. This is because successfully retrieving abandoned customers can lead to increased sales and potential revenue for businesses.

The study confirms that the remarketing strategies implemented, which include email, display, social media, search engines, and video, have a positive impact on consumer behavior. This substantiates the hypotheses H1a, H1b, H1c, H1d, and

H1e. The results show that these strategies significantly influence both brand attachment and product abandonment recovery.

They are effective in converting abandoned products into actual purchases and in driving sales in the digital landscape. As businesses compete in the digital marketplace, incorporating these remarketing strategies is not only relevant but also essential to ensuring sustained success. Structural Equation Modeling (SEM) analysis supports the findings, with 86.2% of the variance in brand attachment attributed to the remarketing strategies.

Brand attachment is identified as a crucial driver for cart abandonment recovery, explaining 38.4% of the variance. The research provides valuable insights for businesses to optimize their digital marketing strategies and enhance their performance in the dynamic digital marketplace.

**Conflict of interest statement:** On behalf of all authors, the corresponding author states that there is no conflict of interest.

**Declaration of interests:** The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper. There is no funding. The article has been published for free as part of the CSR policy of the publisher, ISMA.

## **References:**

- Ahmadiyah, A.S., Aidah, F., Meutia, N., Rahmadina, D., Lumbantobing, D., Anggraini, R. 2020. Remarketing media alternatives based on customer preferences *JUTI: Jurnal Ilmiah Teknologi Informasi*, 18(2), 188-196.
- Arli, D. 2024. Consumer perceptions of the ethicality of re-targeting online advertising. *Asia Pacific Journal of Marketing and Logistics*, Vol. 36, No. 4, pp. 878-898. <https://doi.org/10.1108/APJML-10-2022-0841>.
- Arya, V., Verma, H., Sethi, D., Agarwal, R. 2019. Brand Authenticity and Brand Attachment: How Online Communities Built on Social Networking Vehicles Moderate the Consumers' Brand Attachment. *IIM Kozhikode Society & Management Review*, 8(2), 87-103. <https://doi.org/10.1177/2277975219825508>.
- Beauvisage, T., Mellet, K. 2020. Mobile consumers and the retail industry: the resistible advent of a new marketing scene, *Journal of Cultural Economy*, 13(1), 25-41. DOI:10.1080/17530350.2019.1611623.
- Bentler, P.M. 1990. Comparative fit indexes in structural models. *Psychological Bulletin*, 107(2), 238-246. <https://doi.org/10.1037/0033-2909.107.2.238>.
- Bhattacharyya, S., Banerjee, J.S., Köppen, M. (Eds.). 2023. *Human-Centric Smart Computing: Proceedings of ICHCSC 2022*, Vol. 316. Springer Nature. <https://doi.org/10.1007/978-981-19-5403-0>.
- Bludova, T., Chuzhykov, A., Leshchenko, K. 2019. Modeling the function of advertising reviews from media ads on the YouTube channel. *Innovative marketing*, 15(3), 26.
- Bubenheim, A. 2018. The power of email remarketing: connecting with past customers through personalized campaigns. *Marketing & Advertising*, 45(2), 67-72.

- Çetintürk, N. 2019. Temel dijital pazarlama kavramları ve remarketing reklam modeli. İstanbul: Seçkin Yayıncılık.
- Chopik, W.J., Edelstein, R.S., Grimm, K.J. 2019. Longitudinal changes in attachment orientation over a 59-year period. *Journal of Personality and Social Psychology*, 116(4), 598-611. <https://doi.org/10.1037/pspp0000167>.
- Christino, J.M.M., Cardozo, É.A.A., Silva, B.G.C., Silva, T.S. 2020. Analysis of reasons for remarketing tool rejection. *REMark*, 19(3), 642.
- Dadang Dwi Sunjoko, Drs. Dr. Albari M.Si. 2024. The Application of Remarketing Techniques on Social Media to Increase Sales of PT Waysata Indonesia Bahagia. *International Journal of Education, Vocational and Social Science*, 3(01), 362-376. <https://doi.org/10.99075/ijevss.v3i01.644>.
- Ekelik, H., Şenol, E.M.İ.R. 2021. A comparison of machine learning classifiers for the evaluation of remarketing audiences in e-commerce. *Eskişehir Osmangazi Üniversitesi İktisadi ve İdari Bilimler Dergisi*, 16(2), 341-359.
- Erdil, M. (2018). Factors Affecting Shopping Cart Abandonment: Pre-Decisional Conflict as a Mediator. *Journal of Management, Marketing, and Logistics (JMML)*, 5(2), 140-152. <https://doi.org/10.17261/Pressacademia.2018.845>.
- Farman, L., Edwards, J., Comello, M.L. 2020. Are consumers put off by retargeted ads on social media? Evidence for Perceptions of Marketing Surveillance and Decreased Ad Effectiveness. *Journal of Broadcasting & Electronic Media*, 64. <https://doi.org/10.1080/08838151.2020.1767292>.
- Grad-Gyenge, L., Filzmoser, P. 2016. Recommendation Techniques on a Knowledge Graph for Email Remarketing. In: *eKNOW 2016, The Eighth International Conference on Information, Process, and Knowledge Management (Vol. 1, pp. 51-56)*. IARIA.
- Grima, S., Thalassinou, E.I., Cristea, M., Kadlubek, M., Maditinos, D., Peiseniece, L. (Eds.). 2023. Digital transformation, strategic resilience, cyber security and risk management. Emerald Publishing Limited.
- Hair, J.F., Black, W.C., Babin, B.J., Anderson, R.E. 2009. *Multivariate Data Analysis (7th edition)*. Pearson.
- Hair, J.F., Black, W.C., Babin, B.J., Anderson, R.E. 2014. *Multivariate Data Analysis*, Pearson New, International ed. Pearson Education Limited, Harlow, UK.
- Heinonen, K. 2010. Optimizing sales of online shopping carts within the digital customer life cycle. <https://urn.fi/URN:NBN:fi:amk-201101071081>.
- Hölli, M. 2019. How Social Media Advertising and Repetitive Marketing Messages Affect the Online Purchasing Behavior? Master Thesis, Master of Science in Economics and Business Administration. <https://urn.fi/URN:NBN:fi:aalto-201909225423>.
- Isoraite, M. 2019. Remarketing features. *International Journal of Trend in Scientific Research and Development (IJTSRD)*, 3(6), 48-51. Retrieved from: <https://www.ijtsrd.com/management/marketing-management/28031/remarketingfeatures/m-isoraite>.
- Israfilzade, K., Baghirova, S. 2022. Comparing the Impact of Brand and User-Generated Video Content on Online Shoppers' Purchasing Intentions. *Management of Organizations: Systematic Research*, 88(1), 69-84.
- Israfilzade, K., Guliyeva, N. 2023. The Cross-Generational Impacts of Digital Remarketing: An Examination of Purchasing Behaviors among Generation Z and Generation Y. *Futurity Economics and Law*, 3(2), 73-94. <https://doi.org/10.57125/FEL.2023.06.25.06>.
- Jiang, D., Zhang, G., Wang, L. 2021. Empty the shopping cart. The Effect of Shopping Cart Item Sorting on Online Shopping Cart Abandonment Behavior. *Journal of*



- Theoretical and Applied Electronic Commerce Research, 16(6), Article 6.  
<https://doi.org/10.3390/jtaer16060111>.
- Jiang, Z., Chan, T., Che, H., Wang, Y. 2021. Consumer search and purchase: An empirical investigation of retargeting based on consumer online behaviors. *Marketing Science*, 40(2), 219-240.
- Kadłubek, M., Thalassinou, E.I., Domagała, J., Grabowska, S., Saniuk, S. 2022. Intelligent transportation system applications and logistics resources for logistics customer service in road freight transport enterprises. *Energies*, 15(13), 4668.
- Kapoor, A.P., Vij, M. 2021. Following you wherever you go: mobile shopping 'cart-checkout abandonment. *Journal of Retailing and Consumer Services*, 61, 102553.
- Kukar-Kinney, M., Close Scheinbaum, A. 2009. The determinants of consumers' shopping cart abandonment. *Journal of the Academy of Marketing Science*, 38, 240-250.  
<https://doi.org/10.1007/s11747-009-0141-5>.
- Li, J., Luo, X., Lu, X., Moriguchi, T. 2021. The Double-Edged Effects of E-Commerce Cart Retargeting: Does Retargeting Too Early Backfire? *Journal of Marketing*, 85(4), 123-140. <https://doi.org/10.1177/0022242920959043>.
- Malär, L., Krohmer, H., Hoyer, W.D., Nyffenegger, B. 2011. Emotional brand attachment and brand personality: the relative importance of the actual and ideal selves *Journal of Marketing*, 75(4), 35-52. <https://doi.org/10.1509/jmkg.75.4.35>.
- Mannelqvist, A., Mårtensson, I. 2022. Permission-based Email Marketing for Customer Engagement: A Qualitative Study on How Email Marketing and Relational Factors Influence Consumers' Non-Purchase Behaviors. PhD., Thesis. <https://www.diva-portal.org/smash/record.jsf?pid=diva2%3A1677812&dswid=-7068>.
- Mazhar, R., Qayyum, A., Jamil, R.A. 2024. The dimensional impact of escapism on users' e-cart abandonment: mediating role of attitude towards online shopping. *Management Research Review*, Vol. 47 No. 3, pp. 374-389. <https://doi.org/10.1108/MRR-02-2022-0099>.
- Mittal, B. 2023. The psychology of online shopping cart abandonment: A scrutiny of the current research framework and building an improved model of the online shopper journey. *Electronic Commerce Research*. <https://doi.org/10.1007/s10660-022-09667-0>.
- Mohan, G. 2020. The role of retargeted advertisements in dealing with deflecting customers and its impact on the online buying process. *International Journal of Internet Marketing and Advertising*, 14(4), 417-432.
- Mude, G., Undale, S. 2023. Social Media Usage: A Comparison Between Generation Y and Generation Z in India. *International Journal of E-Business Research*, 19, 1-20.  
<https://doi.org/10.4018/IJEER.317889>.
- Munsch, A. 2021. Millennial and generation Z digital marketing communication and advertising effectiveness: A qualitative exploration. *Journal of Global Scholars of Marketing Science*, 31(1), 10-29. <https://doi.org/10.1080/21639159.2020.1808812>.
- Nam, H., Kannan, P.K. 2020. The Digital Environment in Global Markets: Cross-Cultural Implications for Evolving Customer Journeys. *Journal of International Marketing*, 28(1), 28-47. <https://doi.org/10.1177/1069031X19898767>.
- Norena-Chavez, D., Thalassinou, E.I. 2023. Impact of big data analytics in project success: Mediating role of intellectual capital and knowledge sharing. *Journal of Infrastructure, Policy and Development*, 7(3).
- Nunnally, J.C. 1978. *Psychometric Theory*. McGraw-Hill.
- Ologunbe, J., Taiwo, E.O. 2023. The Importance of SEO and SEM in improving brand visibility in E-commerce industry: A study of Decathlon, Amazon and ASOS.

- Available at SSRN: <https://ssrn.com/abstract=4638890> or <http://dx.doi.org/10.2139/ssrn.4638890>.
- Park, C.W., MacInnis, D.J., Priester, J.R. 2007. Beyond Attitudes: Attachment and Consumer Behavior (SSRN Scholarly Paper 961469). <https://papers.ssrn.com/abstract=961469>.
- Pathak, R., Waghmare, G. 2020. Remarketing through social messaging apps is a promotional tool or sales strategy. *Test Engineering and Management*, 83, 14088-14099.
- Pinasang, I.G., Tulung, J.E., Saerang, R.T. 2020. The analysis of e-commerce retargeting strategy toward student purchase intention. *Jurnal EMBA: Jurnal Riset Ekonomi, Manajemen, Bisnis dan Akuntansi*, 8(1).
- Proksch, M., Orth, U.R., Cornwell, T.B. 2015. Competence Enhancement and Anticipated Emotion as Motivational Drivers of Brand Attachment. *Psychology & Marketing*, 32(9), 934-949. <https://doi.org/10.1002/mar.20828>.
- Purnomo, Y.J. 2023. Digital marketing strategy to increase sales conversion on e-commerce platforms. *Journal of Contemporary Administration and Management (ADMAN)*, 1(2), 54-62.
- Pusa, J. 2017. Building brand awareness through Facebook ads and remarketing Case Company: Lukoton Experience Ltd.
- Rausch, T.M., Brand, B.M. 2022. Gotta buy'em all? Online shopping cart abandonment among new and existing customers. *International Journal of Electronic Business*, 17(2), 109-134.
- Rausch, T.M., Derra, N.D., Wolf, L. 2022. Predicting online shopping cart abandonment with machine learning approaches. *International Journal of Market Research*, 64(1), 89-112. <https://doi.org/10.1177/1470785320972526>.
- Rubin, D., Martins, C., Ilyuk, V., Hildebrand, D. 2020. Online shopping cart abandonment: A consumer mindset perspective. *Journal of Consumer Marketing*, ahead-of-print. <https://doi.org/10.1108/JCM-01-2018-2510>.
- Sabbagh, F. 2021. E-mail Marketing: The Most Important Advantages and Disadvantages. *Journal of Economics and Technology Research*, 2, p. 14. <https://doi.org/10.22158/jetr.v2n3p14>.
- Samad, R., Siddiqui, D.A. 2021. Utilization of the marketing adaptability of branded mobile applications: The effect of these apps on brand experience, attachment, and their further impact on brand vocal, loyalty, and satisfaction with the complementarity effect of digital footprint, social media intensity, and engagement. Available at SSRN: <https://ssrn.com/abstract=3941959> or <http://dx.doi.org/10.2139/ssrn.3941959>.
- Sciarrino, J. 2021. Why brand attachment is more important than brand loyalty or preference: Opinion and Ad Age. <https://adage.com/article/opinion/why-brand-attachment-more-important-brand-loyalty/2353951>.
- Semerádová, T., Weinlich, P. 2022. Effectiveness of Automatic Retargeting in Programmatic Advertising. Available at SSRN: <https://ssrn.com/abstract=4113049> or <http://dx.doi.org/10.2139/ssrn.4113049>.
- Sondhi, N. 2017. Segmenting and profiling the deflecting customer: Understanding shopping cart abandonment. *Procedia Computer Science*, 122, 392-399. <https://doi.org/10.1016/j.procs.2017.11.385>.
- Song, J.D. 2019. A Study on Online Shopping Cart Abandonment: A Product Category Perspective. *Journal of Internet Commerce*, 18(4), 337-368. <https://doi.org/10.1080/15332861.2019.1641782>.

- Sonja, B. 2017. How does attachment style influence the brand attachment, brand trust, and brand loyalty chain in adolescents? *International Journal of Advertising*, 36(1), 164-189. DOI: 10.1080/02650487.2016.1172404.
- Tastsidou, S. 2023. Email marketing is effective in grabbing customer attention towards products and services in the retail sector. *Theses & Dissertations* <https://repository.ihu.edu.gr/xmlui/handle/11544/30284>.
- Thomson, M., MacInnis, D.J., Whan Park, C. 2005. The Ties That Bind: Measuring the Strength of Consumers' Emotional Attachments to Brands. *Journal of Consumer Psychology*, 15(1), 77-91. [https://doi.org/10.1207/s15327663jcp1501\\_10](https://doi.org/10.1207/s15327663jcp1501_10).
- Tsekouras, D., Li, T., Gong, J. 2021. Are You Still Interested in This Item? Field Evidence on the Effectiveness of Onsite Retargeting. Available at SSRN: <https://ssrn.com/abstract=3907869> or <http://dx.doi.org/10.2139/ssrn.3907869>.
- Wan, X., Kumar, A., Li, X. 2023. Retargeted Versus Generic Product Recommendations: When Is It Valuable to Present Retargeted Recommendations? *Information Systems Research*.
- Wang, S., Ye, Y., Ning, B., Cheah, J.H., Lim, X.J. 2022. Why do some consumers still prefer in-store shopping? An exploration of online shopping cart abandonment behavior. *Frontiers in Psychology*, 12, 829696.
- Yoon, H.J., Lee, Y.J., Sun, S., Joo, J. 2023. Does congruency matter for online green demarketing campaigns? Examining the effects of retargeting display ads embedded in different browsing contexts. *Journal of Research in Interactive Marketing*, 17(6), 882-900. <https://doi.org/10.1108/JRIM-08-2022-0262>.
- Zhang, F., Chen, H., Xiong, Y., Yan, W., Liu, M. 2021. Managing collecting or remarketing channels: Different choices for cannibalization in remanufacturing outsourcing. *International Journal of Production Research*, 59(19), 5944-5959. <https://doi.org/10.1080/00207543.2020.1797205>.
- Zhao, H., Wang, X., Jiang, L. 2021. To purchase or to remove? Online shopping cart warning pop-up messages can polarize liking and purchase intention. *Journal of Business Research*, 132, 813-836.