Second-hand products: the role of motivations and barriers on word-of-mouth and purchase intention

Abstract :

Second-hand products have gained prominence as sustainable alternatives, driven by digital platforms such as Vinted and Wallapop, which offer greater security and convenience to consumers. In the context of resource scarcity and growing environmental concerns, a circular economy plays a crucial role in extending product lifecycles and reducing waste. However, this type of consumption faces challenges such as barriers related to a lack of security, social embarrassment, and financial risk. This study analyses the motivations and barriers that influence attitudes, word-of-mouth intention, and purchase intention for second-hand products on digital platforms. Through partial least squares structural equation modelling (PLS-SEM), it was concluded that motivational factors such as perceived value, ethical and ecological awareness, thrill of discovery, and uniqueness promote positive attitudes, while security, social barriers, and financial risk have a negative impact, albeit with less relevance. In addition, positive attitudes significantly influenced both purchase and word-of-mouth intentions.

Key words: second-hand products; circular economy; sustainability; word of mouth; purchase intention

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INTRODUCTION

In recent years, sustainable consumption practices have gained significant relevance, with the circular economy (CE) emerging as an alternative to traditional linear economic models (Ghisellini, Cialani, & Ulgiati 2016). This shift is evident in the substantial change in consumer behaviour, as individuals increasingly opt to purchase second-hand products for economic and ecological reasons (Allwood et al. 2006). This trend is particularly noticeable with the rise of online transactions, which have facilitated the acquisition of used goods across various categories such as fashion and technology (Muller 2022). The global second-hand market is growing rapidly, with projections indicating a compound annual growth rate of approximately 10% through 2029, driven by increased environmental awareness and the expansion of digital platforms (ThredUp 2025). Furthermore, the COVID-19 pandemic has led to a notable reconfiguration of consumer behaviour and is often cited as a driving factor behind the growth of C2C (consumer-to-consumer) e-commerce (Zahara, Rini, & Sembiring 2021).

Despite the growing acceptance of these practices, certain barriers persist, such as a lack of trust in product quality (Sandes & Leandro, 2019). However, this is only one of several reasons that justify the present research. There is still a notable gap in the literature regarding studies that analyse both the motivations for and barriers to second-hand consumption in an integrated manner. Most previous studies have focused on one of these dimensions in isolation, overlooking the complex interplay between what drives consumers and what holds them back. For example, Padmavathy et al. (2019) and Gupta et al. (2023) focused only on motivations, while Faria et al. (2022) examined only barriers.

Understanding this interaction is crucial because consumer behaviour is rarely influenced by a single factor. Purchasing decisions often result from a mental trade-off between benefits and perceived risks. Therefore, simultaneously analysing both sides allows for a more realistic and nuanced understanding of the dynamics underlying second-hand consumption. This dual perspective is particularly valuable for businesses and platforms, as it not only helps promote key motivators but also informs strategies to mitigate perceived barriers—an essential step towards encouraging more sustainable and widespread adoption.

This study stands out for its holistic approach in integrating motivational factors and perceived barriers into a single conceptual model. This integration enables a more comprehensive understanding of consumer behaviour towards second-hand products, especially in the digital context. Additionally, it introduces less-explored constructs, such as 'social embarrassment' and the desire to escape the system, which reflect the emotional and ideological layers of decision-making. These dimensions are increasingly relevant in today's consumption landscape but remain underexamined in the academic literature. By filling these gaps, this study aims to generate actionable insights in both academic and managerial contexts, ultimately supporting the growth and consolidation of second-hand markets.

LITERATURE REVIEW

CE, second-hand products and C2C platforms

The CE

The CE has been gaining increasing prominence globally and is emerging as an essential approach to addressing environmental challenges. The CE advocates for a production and consumption model centred on sharing, reusing, repairing, refurbishing, and recycling materials and products (European Parliament 2023). Purchasing second-hand items to minimise waste and extend product lifespans plays a key role in promoting sustainable practices (Lee et al. 2017). According to the Intergovernmental Panel on Climate Change (IPCC), the industrial sector accounted for approximately 24% of global greenhouse gas emissions in 2019 (IPCC 2022), reinforcing the urgent need to adopt more circular and regenerative economic systems. In this context, mitigating the environmental damage caused by the still dominant linear model is crucial (Korhonen, Honkasalo, & Seppälä 2018).

For decades, the dominant economic system has followed a unidirectional flow, extracting resources from nature, transforming them into goods, and ultimately discarding them after use (Shahzabeen et al. 2023). However, this linear approach results in excessive waste and environmental degradation. In contrast, a CE proposes a systemic shift that prioritises the reduction of pollution, the continuous circulation of products and materials, and the restoration of natural ecosystems (Shahzabeen et al. 2023).

While often conflated with recycling, the CE encompasses a broader scope, emphasising the circulation of resources and the creation of new products from existing materials (Singh & Ordonez 2016). According to the Ellen MacArthur Foundation (2013), the CE operates on the principles of restoration and regeneration, delivering both environmental advantages as well as economic and social benefits. The adoption of circular business models offers

substantial opportunities for both companies and consumers (Planing 2015). Reuse, particularly through the acquisition of second-hand goods, is essential for reducing the ecological footprint of a product throughout its life cycle (Farrant, Olsen, & Wangel 2010).

Second-hand products and C2C platforms

The purchase of second-hand products is understood as the transaction of goods that previously belonged to others (Roux & Guiot 2008), meaning the acquisition of a product that is used but remains functional and was initially purchased by a previous owner (Mukherjee et al. 2020). Thus, products that have, at some point, been in someone else's possession are considered second-hand (Padmavathy et al. 2019; Williams & Paddock 2003). Purchasing second-hand items lowers production demand and can therefore be regarded as a sustainable consumer practice (Raszka & Borusiak 2020). Circular business models are regarded as an effective approach to reducing industrial environmental impacts while simultaneously creating new business opportunities focused on repair and reuse (Valor et al. 2022).

Although Bauhain-Roux and Guiot (2001) highlighted the limited academic attention given to second-hand product consumption, more recent studies continue to reinforce the need for deeper and more up-to-date investigations into consumer behaviour in this domain (Faria et al. 2022).

While research on second-hand shopping is limited, its growing acceptance can be attributed to the convenience of finding and comparing products, the economic advantage of lower prices, and ideological motivations, such as the desire for uniqueness (Faria et al. 2022). Moreover, easy access to products drives online purchases (Xu et al. 2014). This market existed long before digitalisation, with little third-party intermediation. However, digital platforms have significantly expanded this by generating network effects, strengthening buyer-seller connections, and reducing transaction and market entry costs (Hinojo et al. 2022).

The global shift towards more sustainable and affordable options has driven the growing use of digital platforms for second-hand products, known as online C2C marketplaces (Moriuchi & Takahashi 2022). These platforms have transformed the market by promoting sustainability, ethical consumption (Papaoikonomou 2012), and the CE. They also simplify transactions, offer faster and more localised services, expand product variety, and encourage technological innovations, such as secure payments and user feedback systems.

In the era of modern consumption, people consume a large amount of materials, which is also a result of the excessive purchase of products that ultimately go unused. With the growth in the circulation of second-hand goods, this market has brought both challenges and new opportunities (Ge et al. 2023). Second-hand markets can be beneficial for valuing customer complaints, effectively resolving disputes, ensuring payment security, improving return and exchange processes, and protecting consumer privacy. These markets also have the potential to optimise group negotiations and promote significant advances in interaction, sharing, and exchange among friends and consumers, thus providing a more enjoyable shopping experience. Therefore, it is essential to study this phenomenon in depth (Ge et al. 2023).

According to a study by McKinsey et al. (2021) on data collected in 2020 and 2021 from more than 3,000 respondents using C2C marketplaces in Germany, the Netherlands, and the United Kingdom, digital adoption in Europe increased by nearly 14%—an increase that would typically take two to three years in most sectors with pre-pandemic growth rates. Online C2C platforms such as British Gumtree and French Leboncoin have grown by more than 50% since the beginning of 2020. Horizontal sites offer a wide range of products, unlike vertical sites, which specialise in a specific category.

The same study reported that as of February 2021, Vinted was among the top five shopping apps in France, Germany, Italy, the Netherlands, Poland, and the United Kingdom, with more than 75 million users (McKinsey & Company 2021). Poland's OLX has nearly 15 million active users, with one in two Poles over the age of 14 years using the site. For eBay, Kleinanzeigen, Germany's largest C2C site, had more than 28 million users in 2021, representing approximately 40% of Germans over the age of 14 (McKinsey & Company 2021). According to the report, the purchase fee model also attracted investor interest, with Vinted's valuation rising from over $1 billion after a funding round in November 2019 to over $4.2 billion following a funding round in May 2021 (McKinsey & Company 2021). Another example is Wallapop, which was valued at €690 million in February 2021 after raising €157 million in new funding (McKinsey & Company 2021).

Antecedents

Various factors and barriers influence the intention to purchase second-hand products. According to Solomon (2020), the motivation for this behaviour begins when the consumer identifies a need driven by individual values, goals, and needs (Santo & Marques 2021).
Westbrook and Black (1985) divided purchase motivation into three aspects: the desire to acquire the product, the

satisfaction of needs not directly related to the product, and the aim of achieving specific goals through the purchase.

In this context, the present research adopts Katz et al.'s (1974) Uses and Gratifications (U&G) Theory, a crucial framework for analysing how consumers use the information received, especially in media and digital environments (Ferreira et al. 2018). This theory is particularly relevant in digital C2C contexts, as it helps to understand how individuals actively seek and use digital content and platforms to satisfy specific needs, including the acquisition of second-hand products. With increasing access to digital devices and social networks, the U&G theory explains how consumers' motivations, grounded in expected gratifications — functional/utilitarian, social/value-oriented, and hedonic — based on the gratifications they expect to obtain, influence their purchasing behaviour (Ferreira et al. 2018).

Thus, this theory supports the conceptual model of the research by linking consumer motivation to perceived value, which, in turn, positively influences behavioural intentions to purchase (Huang 2008; Aycock et al. 2023). In this study, each motivational category is directly associated with a specific form of gratification outlined in U&G theory: economic motivations correspond to functional/utilitarian gratifications; critical motivations relate to social and valueoriented gratifications (e.g., ethical and ecological awareness or escaping the system); and hedonic motivations correspond to emotional gratifications linked to pleasure, discovery, and the search for authenticity. Applying U&G Theory in this study allows for a deeper understanding of the reasons why consumers choose second-hand products on digital platforms, considering not only the direct satisfaction of consumption needs but also other emotional, social, and functional gratifications associated with this behaviour.

Motivations

The intention to buy second-hand products is influenced by several factors, with economic motivation being one of the most dominant (Guiot & Roux 2010). Consumers seek lower prices and functional, utilitarian values, with perceived value serving as a central factor that connects price to the gratification achieved (Ferraro et al. 2016; Guiot & Roux 2010). In this case, economic motivation reflects a functional/utilitarian gratification, as the consumer seeks efficiency, savings, and convenience. Studies highlight that financial gratification, such as negotiating better prices and the convenience of saving time and effort, encourages consumers to opt for digital second-hand shopping platforms (Hinojo et al. 2022; Padmavathy et al. 2019). Thus, consumers seek to maximise value by purchasing more products for the same amount or by securing the most advantageous price possible (Guiot & Roux 2010). Thus, this study proposes the following hypotheses:

H1a. Perceived value positively influences attitudes towards these products. H1a1. Attitude towards these products mediates the relationship between perceived value and purchase intention.

H1b. The feeling of gratification obtained positively influences attitudes towards these products.
H1b1. Attitude towards these products mediates the relationship between the feeling of gratification and purchase intention.

Critical motivations for consuming second-hand products include ethical and environmental awareness. According to Guiot and Roux (2010), these motivations reflect the desire to bypass conventional market systems and allow consumers to adopt sustainable practices that minimise waste and promote reuse. In this sense, these motivations are linked to social and value-oriented gratifications, as consumers gain satisfaction by aligning their behaviour with ethical, justice-driven, and sustainability values. However, other studies mention that second-hand consumption is also seen as a way to combat consumerism and prolong the usefulness of products (Belk 2010; Botsman & Rogers 2010; Roux & Guiot 2008). Additionally, consumers are becoming increasingly aware of the importance of reducing the production of new goods to protect the environment (Gupta et al. 2023). Accordingly, the following hypothesis was formulated:

H2a. Ethical and ecological awareness positively influence attitudes towards these products.
H2a1. Attitude towards these products mediates the relationship between ethical and ecological awareness and purchase intention.
H2b. Escaping the system has a positive influence on attitudes towards these products.
H2b1. Attitude towards these products mediates the relationship between escaping the system and purchase intention.

Finally, hedonic motivations also play a crucial role. Guiot and Roux (2010) state that consumers are driven by the thrill of discovery and the desire to find unique items. Buying second-hand products offers recreational and emotional experiences, allowing consumers to discover unexpected 'treasures' and express their individuality through the acquisition of unique items (Ferraro et al. 2016; Muller 2022; Roux & Guiot 2008). These motivations fit within the hedonic gratifications

proposed by U&G theory, related to pleasure, enjoyment, and self-expression. For example, "treasure hunting" can be clearly understood as a form of hedonic gratification. This behaviour is motivated by the search for authenticity and uniqueness that differentiates consumers on both personal and social levels (Tian et al. 2001). Based on this reasoning, the following hypothesis is formulated:

H3a. Treasure hunting positively influences attitudes towards these products. H3a1. Attitude towards these products mediates the relationship between treasure hunting and purchase intention.

H3b. The search for uniqueness positively influences attitudes towards these products.
H3b1. Attitude towards these products mediates the relationship between the search for uniqueness and purchase intention.

Barriers

Buying second-hand products on digital platforms offers numerous opportunities, but it also presents underlying challenges in the consumer's mind. The impossibility of testing products before purchase generates distrust and hesitation, which is aggravated by the C2C model, as unknown sellers increase the perception of risk (Faria et al. 2022; Gefen 2002). Additionally, financial risk arises when the price does not reflect perceived value, leading to potential investment losses or additional costs (Kim et al. 2021). Another barrier is social embarrassment, which affects purchases since buying second-hand products is sometimes associated with low social status, leading to fear of judgment and stigmatisation (Liang & Xu 2018; Valor et al. 2022). These factors negatively impact consumer attitudes towards the market (Sandes & Leandro 2019). Based on this reasoning, the following hypothesis is proposed:

H4a. A lack of security negatively influences attitudes towards these products. H4a1. Attitude towards these products mediates the relationship between a lack of security and purchase intention.

H4b. Financial risk negatively influences attitudes towards these products. H4b1. Attitude towards these products mediates the relationship between financial risk and purchase intention.

H4c. Social embarrassment negatively influences attitudes towards these products. H4c1. Attitude towards these products mediates the relationship between social embarrassment and purchase intention.

### Attitude, purchase intention, and WOM

Blackwell et al. (2005) define attitude as the fundamental orientation of likes and dislikes in relation to people, objects, or phenomena, and it is a central element in consumer behaviour. In the context of second-hand products, attitude refers to the overall evaluation (positive or negative) that consumers make of these products (Kim et al. 2021). Padmavathy et al. (2019) and Edbring et al. (2016) highlighted the relevance of studying the adoption of alternative trade models in which motivations and barriers directly influence attitudes towards second-hand products.

Consumers tend to share information about their purchase experiences, and buying decisions are often influenced by these shared experiences (Kim et al. 2021). This phenomenon is referred to as WOM. WOM intention refers to consumers' willingness to share information about a specific product with which they are satisfied without having any financial interests (Kim et al. 2021). In this study, WOM intention refers to the willingness to share positive opinions and information about second-hand items and to recommend them to others, with a focus solely on the dissemination of positive feedback.

Purchase intention is a consumer's predisposition to buy a product in the near future (Blackwell et al. 2005; Wu et al. 2011). Studies have confirmed that a positive attitude towards sustainable products significantly influences purchase intention (Kang et al. 2013; Park & Oh 2014). Thus, a favourable attitude towards second-hand products increases the likelihood that consumers will demonstrate behavioural intentions such as buying (Ajzen 1991). Therefore, a subsequent proposition is presented alongside the proposed conceptual model (Figure 1).

H5a: Positive attitudes towards second-hand products on digital platforms positively influence WOM intention.

H5b: Positive attitudes towards second-hand products on digital platforms positively influence purchase intention.

H6: The greater the WOM intention, the stronger the intention to buy second-hand products on digital platforms.

Figure 1
Conceptual model
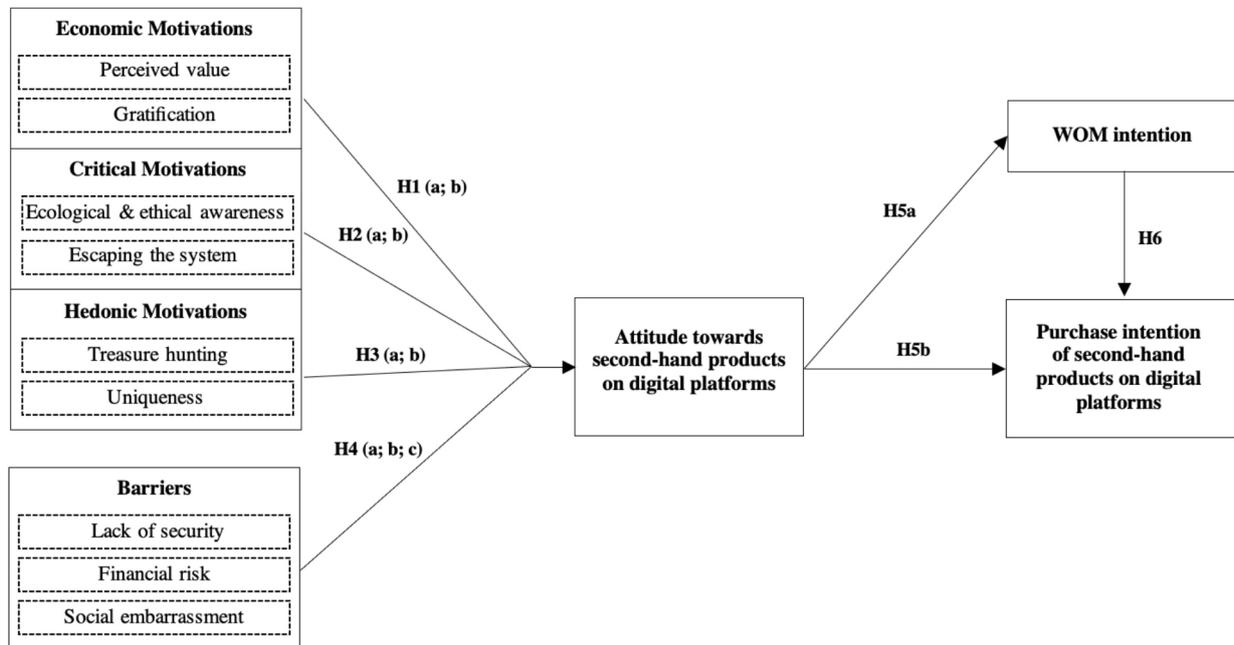
METHOD

Primary data were collected through an online survey developed on the Qualtrics platform and disseminated between 27 May and 23 June 2024 via social media (WhatsApp,

Facebook, Instagram, and LinkedIn) and email. In total, 366 valid responses were obtained. The Portuguese questionnaire included 26 mandatory questions (excluding the last section) divided into eight sections covering motivations, barriers, attitudes, behavioural intentions, sociodemographic data, and behavioural patterns. The constructs were measured using fivepoint Likert scales based on agreement or frequency, following validated scales from prior studies that were translated and adapted to the context. The order of the items was structured according to the theme to ensure clarity and flow. A pretest was conducted with seven participants aligned with the target population, resulting in refinements to the wording and structure.

Quantitative data were processed and analysed in two stages. IBM SPSS Statistics software was used to clean the data, analyse sociodemographic and behavioural characteristics, and conduct a descriptive analysis of the constructs. Regarding sample characterisation, 71% of the respondents were female, 53.3% were aged between 18 and 29 years, and 42.3% had a university degree. The most frequently used behavioural data were Vinted (35.8%) and OLX (33.9%), with most consumers purchasing second-hand products approximately three times a year (55.8%).

In the second phase, partial least squares structural equation modelling (PLS-SEM) was performed using SMART PLS 4 software. Twelve constructs were considered in the analysis and calculated using the mean of the items for each construct (Marôco 2018). Although the mean of the items for each construct was used for the descriptive statistics (Marôco 2018), the structural model was estimated using latent variables, which allows for the incorporation of measurement errors. Table 1 presents the descriptive statistics, including the mean, standard deviation, skewness, and kurtosis. The latter two coefficients are used to assess the normality of the variables. According to Kline (2016), absolute skewness values greater than two and kurtosis values greater than seven indicate a violation of normality. All the constructs met these assumptions. The measurement items were adopted from previous studies (Table 2).

Table 1
Descriptive analysis

Construct	Mean	Standard deviation	Skewness	Kurtosis
Perceived value	3.757	0.630	-0.385	0.086
Gratification	3.762	0.603	-0.161	0.173
Ecological and ethical awareness	3.902	0.735	-0.480	0.006
Escaping the system	2.960	0.949	0.102	-0.494
Treasure hunting	3.850	0.862	-0.897	1.057
Uniqueness	2.715	0.939	0.137	-0.429
Lack of security	3.155	0.833	-0.328	-0.108
Financial risk	3.150	0.731	-0.144	-0.003
Social embarrassment	1.785	0.860	1.202	1.307
Attitude towards products	3.869	0.694	-0.206	0.029
Word-of-mouth intention	3.914	0.684	-0.567	0.578
Purchase intention	4.022	0.640	-0.381	0.517

Table 2
Analysis of the measurement model—indicator reliability, construct reliability, and convergent validity

				Indicator reliability	Internal construct reliability		Convergent validity
Scale	Itel ref.	Item wording	Source authors	Outer loadings > 0.4	Cronbach's (α) > 0.6	Jöreskog Rho > 0.6	Average Variance Extracted (AVE) > 0.5
Perceived value	PV3	3. It's often not worth paying more to get something new.	Roux and Guiot (2008)	0.674	0.728	0.732	0.483
	PV4	4. Buying second-hand, I can get the same thing at a decent price.		0.830			
	PV5	5. Shopping second-hand allows you to get products that are often sold new at exorbitant prices.		0.552			
Gratification	G1	6. I can afford more things because I pay less second-hand.	Guiot and Roux (2010); Roux and Guiot (2008)	0.583	0.816	0.824	0.549
	G2	7. One can have more things for the same amount of money if one buys second-hand.		0.866			
	G3	8. I feel that I have lots of things for not much money by buying them second-hand.		0.867			
	G4	9. I feel that I'm getting power while buying second-hand products.		0.593			

Ecological and ethical awareness	EA1	12. I enjoy buying second-hand because I don't like objects being thrown away that can still be of use.	Guiot and Roux (2010); Silva et al. (2021)	0.779	0.851	0.854	0.599
	EA2	13. By buying second-hand, I feel I'm helping to fight against waste.		0.915			
	EA3	14. When I purchase, I take sustainability issues into consideration.		0.760			
	EA4	15. I am aware of clothing products effects has on the environment.		0.613			
Escaping the system	ES1	16. By buying second-hand, I feel like I'm escaping the (consumption) system.	Guiot and Roux (2010)	0.963	0.846	0.845	0.651
	ES2	17. Buying second-hand is for me a revenge on the consumption system.		0.658			
	ES3	18. Buying second-hand enables me to distance myself from the consumer society.		0.769			
Treasure hunting	TH1	19. I like strolling around these second-hand channels because I always hope to come across a find.	Roux and Guiot (2008)	0.857	0.926	0.926	0.759
	TH2	20. I go to such places to ferret around and discover something.		0.816			
	TH3	21. I'm often on the look-out for a find when going to some second-hand channels.		0.909			
	TH4	22. In some of these second-hand channels, I feel a bit like I'm treasure hunting.		0.900			
Uniqueness	U1	23. By buying second-hand products (online), I can express my individuality.	Padmavathy et al. (2019)	0.951	0.888	0.880	0.650
	U2	24. By buying second-hand products (online), I can buy an unusual second-hand product to tell people that I'm different.		0.774			
	U3	25. By buying second-hand products (online), I buy unusual second-hand items to create a more distinctive personal image.		0.733			
	U4	26. By buying second-hand products (online), An important goal in buying a second-hand product that I like is to communicate my uniqueness.		0.748			

Lack of security	LS1	27. Security or privacy loss due to disclosing personal information such as credit card details and addresses.	Rasty et al. (2020)	0.819	0.852	0.851	0.544
	LS2	28. Lack of security of Internet infrastructure against the hackers' attacks (such as uncertainty of payment methods and legal frameworks.		0.923			
	LS3	29. Inability to judge product/ service quality.		0.782			
	LS4	30. The impossibility of direct interaction with the e-vendor.		0.555			
	LS5	31. Intrinsic propensity to think that e-vendors are lack of truth.		0.526			
Financial risk	FR2	33. This clothing is likely to be expensive because it is not mass-produced.	Kim et al. (2021)	1.484	0.720	1.111	1.173
	FR4	35. There would be a price bubble in this clothing.		0.479			
Social embarrassment	SE1	36. Purchasing SHC is only for lower-income person.	Rasty et al. (2020); Silva et al. (2021)	0.924	0.894	0.894	0.738
	SE2	37. I am/I feel I would be judged if I purchase SHC.		0.857			
	SE3	38. Being judged mistakenly by friends and acquaintances.		0.791			
Attitude towards products	A1	39. I like this clothing.	Kim et al. (2021); Padmavathy et al. (2019)	0.849	0.908	0.908	0.711
	A2	40. I have a positive emotion regarding this clothing.		0.826			
	A3	41. I am interested in this clothing.		0.840			
	A4	42. I think positively about this clothing.		0.858			
Word-of-mouth intention	WI1	43. I want to introduce this clothing to people around me.	Kim et al. (2021)	0.822	0.877	0.876	0.639
	WI2	44. I am willing to recommend this clothing to people around me.		0.780			
	WI3	45. I want to tell others about the experience and feeling of wearing this clothing.		0.747			
	WI4	46. If anyone asks me for advice on these products, I recommend them.		0.846			
Purchase intention	PI1	47. I would like to buy this clothing.	Kim et al. (2021)	0.889 0.860	0.867	0.867	0.765
	PI2	48. I am willing to buy this clothing when I shop my clothing in the near future.					

The collected data were analysed using PLS-SEM (SmartPLS 4). A preliminary Principal Component Analysis (PCA) was conducted, including all scales and Cronbach's alpha measures, which confirmed the reliability and validity of the selected constructs. Six items were removed during this process.

Measurement errors were considered through the use of reflective latent variables within the PLS-SEM modelling approach.

The reliability of all constructs was confirmed, with Cronbach's alpha coefficients and Jöreskog Rho (composite reliability) values exceeding 0.7, as shown in Table 2. The average variance extracted for each construct was above 0.5, except for perceived value and gratification, where PV1, PV2, and G5 were removed. Additionally, composite reliability met the required thresholds. According to established guidelines (Fornell & Larcker 1981), all external item loadings were significant ($p < 0.001$) and greater than 0.4 (except for items FR1, FR3, and G6, which were removed), thereby establishing convergent validity. Discriminant validity was confirmed using both the Fornell-Larcker and HTMT criteria (Table 3), as the items were more strongly correlated with their intended constructs than with competing constructs (Henseler et al. 2016).

Table 3
Fornell–Lacker & HTMT criteria—discriminant validity

Fornell–Lacker	Attitude towards products	Ecological and ethical awareness	Escaping the system	Financial risk	Gratification	Lack of security	Perceived value	Purchase intention	Social embarrassment	Treasure hunting	Uniqueness	WOM intention
Attitude towards products	0.843											
Ecological and ethical awareness	0.427	0.774										
Escaping the system	0.281	0.468	0.807									
Financial risk	0.106	0.049	0.134	1.083								
Gratification	0.383	0.328	0.306	0.040	0.741							
Lack of security	-0.216	0.031	0.140	0.302	0.015	0.737						
Perceived value	0.488	0.277	0.243	0.086	0.484	-0.071	0.695					
Purchase intention	0.728	0.375	0.280	0.091	0.371	-0.169	0.517	0.875				
Social embarrassment	-0.220	-0.087	0.170	0.102	0.028	0.264	-0.114	-0.229	0.859			
Treasure hunting	0.464	0.252	0.228	0.139	0.356	0.051	0.177	0.390	-0.143	0.871		
Uniqueness	0.330	0.195	0.286	0.193	0.235	0.105	0.102	0.264	0.295	0.303	0.806	
Word-of-mouth intention	0.710	0.415	0.227	0.119	0.313	-0.136	0.366	0.806	-0.310	0.396	0.231	0.800

HTMT	Attitude towards products	Ecological and ethical awareness	Escaping the system	Financial risk	Gratification	Lack of security	Perceived value	Purchase intention	Social embarrassment	Treasure hunting	Uniqueness
Ecological and ethical awareness	0.427										
Escaping the system	0.279	0.478									
Financial risk	0.146	0.088	0.194								
Gratification	0.385	0.333	0.340	0.085							
Lack of security	0.212	0.078	0.157	0.538	0.072						
Perceived value	0.486	0.282	0.238	0.119	0.501	0.089					
Purchase intention	0.728	0.381	0.276	0.118	0.378	0.157	0.512				
Social embarrassment	0.218	0.088	0.185	0.200	0.057	0.269	0.117	0.231			
Treasure hunting	0.464	0.250	0.233	0.198	0.362	0.066	0.168	0.391	0.143		
Uniqueness	0.325	0.183	0.296	0.288	0.247	0.121	0.094	0.258	0.306	0.297	
Word-of-mouth intention	0.709	0.420	0.225	0.163	0.317	0.135	0.362	0.804	0.308	0.395	0.225

FINDINGS

To assess whether the formulated hypotheses were supported, the bootstrapping technique was applied as recommended in the PLS analysis, using the p-value to determine the significance of the relationships (Hair et al. 2022). Relationships with p-values below .05 were considered significant. Based on direct paths and effects, 10 of the 12 hypotheses were validated, while two were not (Tables 4–6; Figure 2).

Table 4
Test of the hypothesis (direct and total effects)

		Direct effects					Total effects				
		Original sample	Sample mean	Standard deviation	t	p	Original sample	Sample mean	Standard deviation	t	p
H1a	Perceived value → Attitude towards products	0.238	0.237	0.047	5.020	< .001	0.238	0.237	0.047	5.020	< .001
H1b	Gratification → Attitude towards products	0.067	0.069	0.051	1.307	.191	0.067	0.069	0.051	1.307	.191
H2a	Ecological and ethical awareness → Attitude towards products	0.191	0.190	0.050	3.806	< .001	0.191	0.190	0.050	3.806	< .001
H2b	Escaping the system → Attitude towards products	0.044	0.046	0.043	1.016	.310	0.044	0.046	0.043	1.016	.310
H3a	Treasure hunting → Attitude towards products	0.237	0.234	0.051	4.679	< .001	0.237	0.234	0.051	4.679	< .001
H3b	Uniqueness → Attitude towards products	0.188	0.189	0.045	4.173	< .001	0.188	0.189	0.045	4.173	< .001
H4a	Lack of security → Attitude towards products	-0.225	-0.226	0.045	5.045	< .001	-0.225	-0.226	0.045	5.045	< .001
H4b	Financial risk → Attitude towards products	0.106	0.106	0.049	2.165	.030	0.106	0.106	0.049	2.165	.030
H4c	Social embarrassment → Attitude towards products	-0.149	-0.151	0.040	3.761	< .001	-0.149	-0.151	0.040	3.761	< .001
H5a	Attitude towards products → Word-of-mouth intention	0.634	0.635	0.034	18.570	< .001	0.634	0.635	0.034	18.570	< .001
H5b	Attitude towards products → Purchase intention	0.335	0.334	0.053	6.310	< .001	0.646	0.647	0.036	18.179	< .001
H6	Word-of-mouth intention → Purchase intention	0.491	0.492	0.052	9.410	< .001	0.491	0.492	0.052	9.410	< .001

Table 5
Test of the hypothesis (indirect effects)

		Indirect effects				
		Original sample	Sample mean	Standard deviation	t	p
H1a1	Perceived value → → Attitude towards products → Purchase intention	0.154	0.154	0.035	4.449	< .001
H1b1	Gratification → Attitude towards products → Purchase intention	0.034	0.037	0.034	0.998	.318
H2a1	Ecological and ethical awareness → Attitude towards products → Purchase intention	0.123	0.122	0.033	3.742	< .001
H2b1	Escaping the system → Attitude towards products → Purchase intention	0.027	0.028	0.028	0.955	.340
H3a1	Treasure hunting → Attitude towards products → Purchase intention	0.150	0.148	0.033	4.484	< .001
H3b1	Uniqueness → Attitude towards products → Purchase intention	0.125	0.126	0.030	4.144	< .001
H4a1	Lack of security → Attitude towards products → Purchase intention	-0.143	-0.142	0.030	4.720	< .001
H4b1	Financial risk → Attitude towards products → Purchase intention	0.067	0.064	0.040	1.656	.098
H4c1	Social embarrassment → Attitude towards products → Purchase intention	-0.107	-0.107	0.027	4.007	< .001

Table 6
Summary of the validation of the research hypotheses

Research hypotheses	
H_{1a}: Perceived value positively influences attitudes towards these products.	**Supported**
H_{1a1}: Attitude towards these products mediates the relationship between perceived value and purchase intention.	**Supported**
H_{1b}: The feeling of gratification obtained positively influences attitudes towards these products.	**Not supported**
H_{1b1}: Attitude towards these products mediates the relationship between the feeling of gratification and purchase intention.	**Not supported**
H_{2a}: Ethical and ecological awareness positively influence attitudes towards these products	**Supported**
H_{2a1}: Attitude towards these products mediates the relationship between ethical and ecological awareness and purchase intention.	**Supported**
H_{2b}: Escaping the system has a positive influence on attitudes towards these products.	**Not supported**
H_{2b1}: Attitude towards these products mediates the relationship between escaping the system and purchase intention.	**Not supported**
H_{3a}: Treasure hunting positively influences attitudes towards these products.	**Supported**
H_{3a1}: Attitude towards these products mediates the relationship between treasure hunting and purchase intention.	**Supported**
H_{3b}: The search for uniqueness positively influences attitudes towards these products.	**Supported**
H_{3b1}: Attitude towards these products mediates the relationship between the search for uniqueness and purchase intention.	**Supported**
H_{4a}: A lack of security negatively influences attitudes towards these products.	**Supported**
H_{4a1}: Attitude towards these products mediates the relationship between a lack of security and purchase intention.	**Supported**
H_{4b}: Financial risk negatively influences attitudes towards these products.	**Supported**
H_{4b1}: Attitude towards these products mediates the relationship between financial risk and purchase intention.	**Not supported**
H_{4c}: Social embarrassment negatively influences attitudes towards these products.	**Supported**
H_{4c1}: Attitude towards these products mediates the relationship between social embarrassment and purchase intention.	**Supported**
H_{5a}: Positive attitudes towards second-hand products on digital platforms positively influence word-ofmouth intention.	**Supported**
H_{5b}: Positive attitudes towards second-hand products on digital platforms positively influence purchase intention.	**Supported**
H_6: The greater the WOM intention, the stronger the intention to buy second-hand products on digital platforms	**Supported**

Figure 2
Results
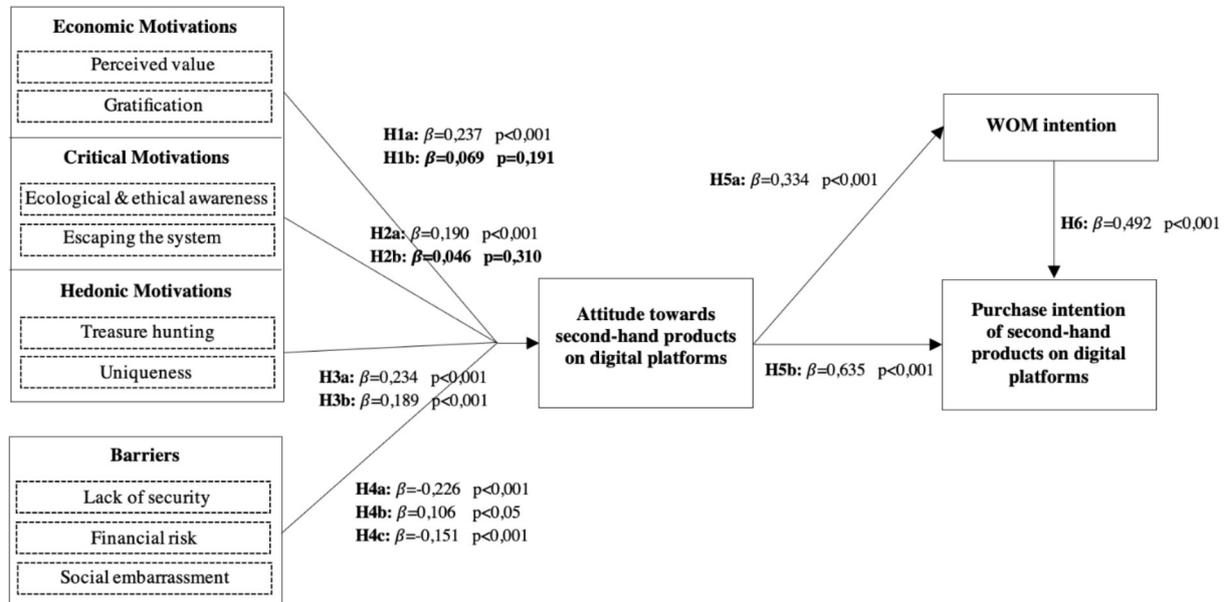
Regarding these six motivations, the impact of perceived value on attitudes towards second-hand products was significant and strong (H1a. β = 0.237; t = 5.020; p < .001), reinforcing the idea that consumers who attribute higher value to products tend to adopt a more favourable attitude. By contrast, gratification (H1b. β = 0.069; t = 1.307; p = .191) did not show a significant effect, contradicting the initial hypothesis and suggesting that this motivation may not be determinative for the attitude in question. Ecological and ethical awareness (H2a. β = 0.190; t = 3.806; p < .001) had a relevant and significant impact, highlighting that environmental and ethical concerns are important drivers of positive attitudes. The motivation of 'escaping the system' (H2b. β = 0.046; t = 1.016; p = 0.310) was not significant, indicating that this factor does not have a strong direct relationship with attitudes. The treasure-hunting motivation (H3a. β = 0.234; t = 4.679; p < .001) demonstrated a significant and relevant impact, highlighting the pleasure of discovery as a key motivation. Finally, the uniqueness (H3b. β = 0.189; t = 4.173; p < .001) also showed a significant impact, confirming that the perception of exclusivity in second-hand products contributes to favourable attitudes. These results suggest that both rational and hedonic motivations play distinct roles in shaping attitudes, with the perceived value (β = 0.237), treasure hunting (β = 0.234), ecological and ethical awareness (β = 0.190) and uniqueness (β = 0.189) being the main factors. Concerning the motivations that were not statistically significant, gratification (β = 0.069) had a greater impact compared to the variable of escaping the system (β = 0.046). This indicates that although neither motivation has a statistically relevant relationship with attitudes towards second-hand products, gratification still plays a slightly more significant role, suggesting that the pursuit of personal satisfaction may be marginally more influential than the desire to escape the system, which refers to the purchase of new products.

Regarding the three barriers analysed, all hypotheses were statistically significant. The influence of a lack of security on attitudes towards second-hand products (H4a. β = -0.226; t = 5.045; p < .001) was the most significant, indicating that concerns related to safety and reliability play a critical role in shaping negative attitudes, making it the most relevant barrier to unfavourable attitudes. The negative value (β = -0.226) suggests that as the perception of a lack of security increases, attitudes towards second-hand products become more negative. In other words, consumers perceive a greater lack of security in transactions related to secondhand products and tend to have more unfavourable attitudes towards them. Social embarrassment (H4c. β = -0.151; t = 3.761; p < .001) also showed a statistically significant impact, although less pronounced compared to the lack of security. The negative value (β = 0.151) suggests that as the perception of social embarrassment associated with purchasing second-hand products increases, attitudes towards these products tend to worsen. In other words, consumers who feel embarrassed or are judged for buying second-hand products have a more negative attitude towards these purchases. In contrast, financial risk (H4b. β = 0.106; t = 2.165; p = 0,030) revealed a positive relationship (β = 0,106) with attitudes towards secondhand products, suggesting that perceived financial benefits

may outweigh potential risks in this consumption category. This indicates that consumers who perceive a higher financial risk may still develop favourable attitudes. This relationship may seem counterintuitive, but a possible explanation is that consumers who recognise some financial risk may be more cautious in their decisions and still consider these products a good option, perhaps because of factors such as lower prices or perceived value. Another plausible explanation relates to the growing familiarity and experience of consumers with digital buying and selling platforms, which may mitigate the negative impact of financial risk. From a more theoretical perspective, this positive effect can be interpreted in light of concepts such as consumer expertise and risk tolerance in C2C contexts. More experienced or specialized consumers tend to develop strategies to manage perceived risks and feel more comfortable assessing the reliability of products and sellers, which allows them to perceive financial risk not as a barrier, but as a manageable and even expected factor. In other words, more experienced consumers in this type of transaction may feel confident in their ability to assess the value and reliability of products and sellers, leading them to interpret the risk not as an obstacle but as a manageable and even expected factor in a more informal consumption environment.

Thus, although all barriers were statistically significant, the lack of security emerged as the most determining factor, reinforcing its relevance in the context of consumer behaviour towards second-hand products.

Finally, concerning attitude and purchase intention, a positive and significant relationship was found between attitude towards products and purchase intention (H5b. β = 0.635; t = 18.570; p < .001), with a direct effect of 0.335 and a total effect of 0.646. Furthermore, attitudes towards products also positively influenced WOM intentions (H5a. β = 0.334; t = 6.310; p < .001). WOM intention demonstrated a positive and significant impact on purchase intention (H6. β = 0.492; t = 9.410; p < .001). These results highlight the importance of attitude and WOM in shaping purchase intention, with particular emphasis on attitude.

Regarding indirect effects, the analysis reinforces and nuances previous findings. Among these motivations, perceived value stands out (H1a1. β = 0.154; t = 4.449; p < .001), indirectly impacting purchase intention through attitude towards second-hand products, thereby confirming its pivotal role in shaping consumer behaviour. Similarly, ecological and ethical awareness (H2a1. β = 0.123; t = 3.742; p < .001), treasure hunting (H3a1. β = 0.150; t = 4.484; p < .001), and uniqueness (H3b1. β = 0.125; t = 4.144; p < .001) also presented statistically significant indirect effects, reinforcing their influence on purchase intention via a more favourable attitude.

By contrast, gratification (H1b1. β = 0.034; t = 0.998; p = .318) did not show a statistically significant indirect effect, which is consistent with the results obtained for its direct impact. This further suggests that gratification may not play a decisive role in shaping consumer behaviour in this context. Similarly, escape from the system (H2b1. β = 0.027; t = 0.955; p = .340) remained non-significant both directly and indirectly, reinforcing its limited influence in this setting.

Regarding barriers, lack of security (H4a1. β = -0.143; t = 4.720; p < .001) and social embarrassment (H4c1. β = -0.107; t = 4.007; p < .001) maintained their statistically significant indirect effects, reinforcing the idea that these barriers reduce purchase intention through the formation of negative attitudes. Notably, the lack of security demonstrated not only the strongest direct negative effect but also the most substantial indirect effect, solidifying its position as the most influential barrier. In contrast, financial risk (H4b1. β = 0.067; t = 1.656; p = .098) did not reveal a significant indirect effect, suggesting that its influence on purchase intention may not be fully mediated by attitude.

In summary, the analysis of indirect effects confirms the mediating role of attitudes towards second-hand products in most of the relationships tested, emphasising the dual role of motivations (e.g. gratification) and barriers (e.g. lack of security) in shaping consumer intention. These findings highlight the complexity of consumer behaviour in this domain and the importance of considering both direct and indirect influences in strategic decision making.

DISCUSSION

The results indicate that perceived value, resort hunting, ecological and ethical awareness, and uniqueness are the most relevant motivations, listed in descending order of importance, with statistical significance in shaping attitudes towards these products. Perceived value is a key factor in economic motivation, supporting the findings of Guiot and Roux (2010) and Ferraro et al. (2016). In contrast, the gratification variable did not show a significant impact, contradicting the conclusions of Padmavathy et al. (2019) and Hinojo et al. (2022). The rejection of this hypothesis may be explained by the evolution of digital platforms, which offer a more streamlined shopping experience, resulting in consumers feeling less of a strong sense of gratification. The lack of negotiation experience may have diminished the relevance of this motivation. Among the critical motivations, ecological awareness (Gupta et al. 2023) stood out, unlike the desire to escape from the system (Guiot & Roux 2010). The rejection of this hypothesis may be explained by the weaker association between escape from the system and digital shopping, where platforms provide an experience similar to that of conventional retail. These results reflect the notable evolution of the online second-hand market in recent years, where more experienced consumers and more robust platforms have made the purchase of these products a more rational, structured, and secure process, in

which risk is manageable and purchasing decisions are guided by perceived value, platform experience, and trust in the system, transforming the purchase of second-hand products into an informative and strategic process rather than merely impulsive or hedonic.

Regarding hedonic motivations, the treasure-hunting and uniqueness variables proved to be significant motivational factors, corroborating the findings of Ferraro et al. (2016) and Muller (2022). The acceptance of these hypotheses can be explained by the connection between these motivations and the emotional and psychological factors that enrich the shopping experience. 'Treasure hunting' provides a sense of excitement and reward associated with discovering something unique or valuable, while 'uniqueness' satisfies the need for personal affirmation and differentiation, allowing consumers to express themselves authentically. These factors make buying second-hand products not only functional but also an engaging and meaningful experience, justifying their importance as motivations.

Regarding barriers, lack of security, social embarrassment, and financial risk showed a negative influence in descending order of importance. Financial risk and social embarrassment have a negative influence, as noted by Sandes and Leandro (2019), due to the perception of low status and fear of judgment. A lack of security also negatively affects attitudes (Faria et al. 2022). The acceptance of these three hypotheses can be explained by the ongoing perception of uncertainty and the impact of these barriers on the shopping experience. However, it is important to note the growing digital maturity among the population, which, coupled with improvements in digital platforms—such as more robust guarantees, effective return policies, and safer payment systems—could help reduce the relevance of these barriers in the medium and long term. In the future, this evolution could contribute to greater trust in and the adoption of second-hand products, especially among more sceptical consumers.

Finally, the analysis of indirect effects reinforces the importance of attitude as a mediating variable between motivation, barriers, and purchase intention. Several motivations, such as perceived value, ecological and ethical awareness, treasure hunting, and uniqueness, indirectly influence purchase intention through the formation of a positive attitude. However, gratification motivation did not show a statistically significant indirect effect, suggesting that its impact may be limited or conditioned by other contextual factors, such as the digital nature of the platforms. Barriers such as a lack of security and social embarrassment also exert negative indirect effects by fostering less positive attitudes towards second-hand products. These results confirm the central role of attitude as a bridge between perceptions and behaviours, showing that to promote the purchase of second-hand products, it is essential to address both motivational factors and inhibitors, with a particular focus on perception and the construction of more favourable attitudes.

They also concluded that a positive attitude towards second-hand products significantly influences both WOM and purchase intentions. These results align with Ajzen (1991), who suggested that attitudes can shape behavioural intentions, and with Kang et al. (2013), who demonstrated how attitudes towards sustainable products positively impact purchase intentions (Kim et al. 2021; Park & Oh 2014). Thus, a positive attitude towards second-hand items exerts a positive effect on both WOM and purchase intention (Park & Oh 2014). Finally, regarding the last hypothesis, it can be noted that the relationship between WOM intention and purchase intention was found to be statistically significant. These results corroborate the research of Kim et al. (2021), who argued that a greater WOM intention is generally implied by a greater purchase intention.

MANAGERIAL IMPLICATIONS

In addition to the practical contributions previously mentioned, this study presents concrete management implications that can be operationalised by professionals in the digital market for second-hand products. Positioned at the intersection of sustainable marketing, consumer behaviour, and digital marketing, this study contributes by highlighting how consumer motivation and barriers influence attitudes and purchase intentions in the context of second-hand goods. Moreover, this study provides a significant theoretical contribution through the development and validation of an integrative model, representing the central theoretical advancement of the research.

The results demonstrate that communication strategies should reinforce the perceived value of these products, particularly emphasising the economic benefits associated with their purchase, such as the opportunity to obtain similar products at a lower price or access premium items at a more affordable cost. This economic emphasis should be present not only in advertising campaigns but also in platform communications and collaborations with digital influencers, aligning with sustainable marketing principles that encourage responsible consumption.

Furthermore, the identified hedonic motivations—namely, the pleasure of discovery and the pursuit of exclusivity—suggest that digital platforms should create more engaging and emotionally meaningful shopping experiences. To enhance the perception of product uniqueness, platforms can implement features such as limited-edition tags, digital badges, and environmental certifications that highlight exclusive or eco-friendly items. Personalised recommendations, themed

collections, and limited releases can stimulate consumer interest and differentiate the second-hand shopping experience from conventional retail. These actions are consistent with consumer behaviour research, which emphasises emotional and experiential factors in purchasing decisions.

Regarding the identified barriers, the perceived lack of security stands out as the factor that has the greatest negative impact on consumer attitudes. This finding reinforces the importance of digital marketing practices that focus on building trust, such as secure payment systems, user verification processes, and transparent return policies. To further mitigate perceived risk and cater to different user segments, platforms could offer enhanced security features such as verified seller badges and onboarding tutorials specifically designed for new users, while style-driven consumers might benefit from exclusive access to unique items and curated collections.

Additionally, the negative influence of social embarrassment on consumer attitudes suggests that brands should adopt strategies to normalise and valorise second-hand product consumption. Platform features that allow for anonymous browsing or discreet packaging options alongside campaigns promoting sustainability, conscious lifestyles, and testimonials from consumers can effectively reduce stigma and encourage behavioural change through sustainable marketing approaches.

Finally, the empirical evidence that positive attitudes significantly influence both wordof-mouth recommendations and purchase intentions highlights the strategic importance of fostering these attitudes. Actions such as promoting user-generated content, implementing referral programs, and increasing the visibility of positive reviews can strengthen potential consumers' trust and encourage the adoption of this type of consumption, integrating insights from consumer behaviour and digital marketing.

In summary, this study offers a set of practical and actionable guidelines grounded in sustainable marketing, consumer behaviour, and digital marketing that can inform more effective targeted marketing and communication strategies, contributing to the growth and consolidation of the digital market for second-hand products. From a theoretical standpoint, the integrative model developed in this study provides a clear and validated framework for understanding the interactions between motivations, barriers, and attitudes, not only explaining consumer behaviour in this market but also serving as a foundation for future research and the development of more effective strategies in the digital second-hand context.

LIMITATIONS AND FURTHER RESEARCH

The main limitation of this study is the use of a non-probabilistic convenience sample, which compromises representativeness and consequently limits the generalisability of the results to a broader population. Although this sampling method is practical and accessible, it inherently carries the risk of sampling bias. This may have affected the external validity of the findings and restricted their applicability to different demographic segments and geographic regions. Furthermore, the relatively small sample size and specific characteristics, particularly in relation to the niche population of second-hand consumers on digital platforms, may have constrained the depth and diversity of the insights obtained. Future research should use probabilistic sampling methods to enhance representativeness and consider larger, more diverse samples, including those from different age groups, cultural backgrounds, and digital literacy levels, to validate and extend the findings. Additionally, longitudinal studies could help us understand the changes in consumer behaviour over time in this evolving market.

Another limitation concerns common method variance (CMV), since this study relied on self-reported data. Although procedural strategies were applied during the questionnaire design — such as using different scale formats, randomising the order of items, and ensuring participant anonymity — no post hoc statistical test, such as Harman's single-factor test, was conducted. The absence of such analysis limits the ability to assess the extent of CMV. Future research should consider applying statistical methods to explicitly test for this bias.

One suggestion for future research is to conduct qualitative studies to complement the quantitative findings. For example, focus groups of second-hand product consumers could be used to explore more thoroughly the motivations and barriers that influence their purchasing decisions. This approach allows for a deeper understanding of consumer attitudes and behaviours, helping to identify nuances that might not be captured through quantitative methods. Furthermore, a longitudinal study would be valuable for observing the evolution of consumer attitudes over time as digitalisation advances and ecological awareness becomes more prevalent.

Another aspect to consider in future research is the analysis of additional variables such as sociodemographic and behavioural differences, which could provide more detailed insights into the factors influencing second-hand product purchases. The inclusion of these variables allows for more precise consumer segmentation, which could be useful for developing more effective marketing strategies.

In summary, despite these limitations, this study provides a valuable foundation for exploring consumer behaviour in the online second-hand market and the suggestions mentioned above could contribute to a more comprehensive and in-depth understanding of this phenomenon.

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