

The mediating role of anticipated satisfaction in the relationship between functional value and purchase intention

İşlevsel değer ve satın alma niyeti arasındaki ilişkide beklenen memnuniyetin aracı rolü

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Abstract

This study examines the psychological mechanisms underlying purchase intention for cleaning robots, which are rapidly gaining importance in the smart home technology market. The main objective of the study is to empirically test the central mediating role of anticipated satisfaction in the effect of perceived functional value on purchase intention. Data for this study, focusing on cleaning robots, were collected from 276 female participants through face-to-face surveys. Jamovi and SPSS were used for the analysis. The study supports the value-satisfaction relationship in marketing theory by showing that perceived functional value influences purchase intention not only directly but also indirectly through anticipated satisfaction. Furthermore, these findings will guide smart device manufacturers in developing marketing strategies that align with potential users' expectations and in optimising their product design processes.

Keywords: Functional Value, Anticipated Satisfaction, Purchase Intention

Jel Codes: M31, D12, D91

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Öz

Bu çalışma, akıllı ev teknolojisi pazarında hızla önem kazanan temizlik robotlarına yönelik satın alma niyetinin altında yatan psikolojik mekanizmaları incelemektedir. Çalışmanın temel amacı, algılanan işlevsel değerın satın alma niyeti üzerindeki etkisinde beklenen memnuniyetin merkezi aracı rolünü ampirik olarak test etmektir. Temizlik robotlarına odaklanan bu çalışma için veriler, yüz yüze anketler yoluyla 276 kadın katılımcıdan toplanmıştır. Analiz sürecinde Jamovi ve SPSS yazılımları kullanılmıştır. Çalışma, algılanan işlevsel değerin satın alma niyetini yalnızca doğrudan değil, aynı zamanda beklenen memnuniyet yoluyla dolaylı olarak da etkilediğini göstererek, pazarlama teorisindeki değer-memnuniyet ilişkisini desteklemektedir. Dahası, bu bulgular, akıllı cihaz üreticilerine potansiyel kullanıcıların beklentileriyle uyumlu pazarlama stratejileri geliştirmede ve ürün tasarım süreçlerini optimize etmede yol gösterecektir.

Anahtar Kelimeler: İşlevsel Değer, Beklenen Memnuniyet, Satın Alma Niyeti

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Introduction

The introduction of innovative advances in artificial intelligence and robotics has led to the emergence of autonomous smart robot vacuum cleaners as a vital component of domestic life (Bilici and İnam, 2024). The utilisation of vacuum technology has been a subject of study since the 1860s, and the commercial availability of such devices to consumers dates back to the early 2000s. The adoption of these devices has been particularly prevalent in household chores, as they can reduce the time required to complete domestic tasks. In the extant literature, models focusing on cognitive determinants, such as the Technology Acceptance Model (TAM) developed by Davis (1989), are frequently used to explain the acceptance processes of new technologies (Davis, 1989; Bilici & Özdemir, 2019; Bilici, 2025). Nonetheless, in the context of high-tech products that have not yet been experienced, such as cleaning robots, it is imperative to emphasise the consumer's psychological visualisation processes, superseding rational inputs, to comprehensively grasp how the perception of functional value formed in the mind is transformed into a purchase intention (Demirgüneş, 2015).

Vroom's Expectancy Theory provides a critical theoretical framework for understanding consumers' pre-purchase decisions (Pecotich & Churchill, 1981). This theory posits that an individual's propensity towards a particular course of action is contingent on the anticipated outcome of that action and the perceived appeal of that outcome (Granzin & Schjelderup, 2001). In the context of purchasing, valence is defined as the future-oriented pleasure or expected satisfaction the consumer anticipates from the product before using it (Pecotich & Churchill, 1981).

The Mental Imagery approach developed by Shiv and Huber (2000) provides a comprehensive explanation of the mechanism underlying this expectation process: When assessing visually striking product attributes, consumers tend to formulate mental representations of their anticipated satisfaction levels upon utilisation (Shiv & Huber, 2000). This mental simulation has been shown to trigger the ultimate purchase intention by transforming rational information about the product's technical features into a prediction of sensory satisfaction (Li et al., 2024).

A substantial proportion of extant literature focuses on post-use experiences and the effect of satisfaction on continuation intention, with the Expectation Confirmation Model (ECM) proposed by Bhattacharjee (2001) being a notable example (Avcı et al., 2024). Whilst the concept of ECM is predicated on the premise that satisfaction is derived from past experiences, the present study deviates from extant literature by positing satisfaction as a pivotal psychological construct in the pre-purchase decision-making process (Demirgüneş, 2015; Proynova, 2017). The use of visual stimuli, most notably videos, has been shown to facilitate consumers' mental imagery, thereby strengthening their perception of prospective benefit for a product yet to be experienced (Wu et al., 2016; Proynova, 2017).

The present study aims to address a lacuna in the extant literature by examining consumer perceptions of cleaning robots, a rapidly expanding market in smart home technologies, using a quantitative approach. The research indicates that perceived functional value exerts a direct influence on purchase intention, while concurrently mediating this relationship through a psychological journey conceptualised as constructed within the consumer's mind, predicated on anticipated satisfaction. The findings provide a new pre-purchase process-oriented perspective on the value-satisfaction relationship in marketing theory, while also offering smart device manufacturers a strategic roadmap for developing communication strategies that align with potential user expectations and optimising product designs in light of these predictions.

Theoretical framework and hypotheses

Functional value and purchase intention

Functional value can be defined as a set of objective, practical and rational benefits derived from a product's quality or performance (Coelho et al., 2020). In the context of smart devices specifically, this value is considered a rational evaluation based on the effectiveness with which the product performs its primary tasks, such as cleaning performance (Bilici & İnam, 2024). Purchase intention, reflecting the likelihood that a consumer will acquire a specific product in the near future, is directly shaped by this rational perception of benefit (Demirgüneş, 2015; Wells & Tan, 2024).

Substantial evidence from literature on technology acceptance studies supports the hypothesis that functional utility significantly influences the formation of purchase intention. The Technology Acceptance Model (TAM) posits that perceived usefulness is a pivotal factor in forming intentions towards technological innovations (Davis, 1989). However, the Unified Theory of Acceptance and Use of Technology (UTAUT) corroborates the idea that the functional benefit of smart home appliances, conceptualised as 'performance expectancy', has a direct and significant impact on the intention to use

them (Venkatesh et al., 2003; Dülek et al., 2025). Moreover, within the conceptual framework of Behavioural Reasoning Theory (BRT), it has been demonstrated that rational justifications for innovative products, which underpin functional value, have strong predictive value for purchasing attitudes and intentions (An et al., 2021).

Cost-benefit analyses and mental simulations often aid this rational process. According to the Value-Based Adoption Model (VAM), consumers make a value judgement by weighing up the practical benefits of the product against the costs or sacrifices incurred. This triggers the intention to adopt (Kim et al., 2007; Doszhan et al., 2026). According to Expectancy Theory and the Mental Imagery approach, consumers form mental images of their future satisfaction levels when evaluating a product's functional features (Pecotich & Churchill Jr., 1981; Shiv & Huber, 2000). Therefore, the functional advantages offered by cleaning robots, such as autonomous cleaning and time savings, are the most critical motivational factors shaping consumer intentions (Tor-Kadioǧlu, 2020). Accordingly, the following hypothesis has been developed:

H₁: Perceived functional value has a positive and significant effect on purchase intention.

Functional value and anticipated satisfaction

Anticipated satisfaction, defined as a subjective prediction of a product's future fulfilment, plays a decisive role in purchase intention, reflecting the consumer's perceived likelihood of acquisition (Krishnamurthy & Kumar, 2015; Proynova, 2017). This relationship is theoretically grounded in Vroom's (1964) Expectancy Theory, which elucidates the motivational drivers of human behaviour. Within this framework, valence is conceptualised as anticipated satisfaction, representing the emotional appeal of the outcomes an individual expects from their purchasing behaviour (Vroom, 1964; Pecotich & Churchill Jr, 1981). Consequently, higher anticipated satisfaction from technological products such as cleaning robots strengthens the behavioural intention of consumers to acquire them (Pecotich & Churchill Jr, 1981; Demirgüneş, 2015)

This cognitive transformation process operates through the mental imagery mechanism proposed by Shiv and Huber (2000). As consumers evaluate the 'functional value' of features such as a robot vacuum cleaner's suction power, battery life, mapping capability, and autonomous operation, they visualise the practical conveniences these features will bring to their daily lives (Shiv & Huber, 2000). During this mental simulation phase, functional capacity emerges as the strongest predictor of anticipated satisfaction as a rational input (Demirgüneş, 2015). Within the theoretical framework of the Expectancy-Value Model, it is proposed that consumers' beliefs about a product's attributes are positively correlated with expected benefits and, consequently, with anticipated satisfaction (Fishbein & Ajzen, 1975; Granzin & Schjelderup, 2001).

Marketing literature demonstrates that heightened perceived rational utility fosters greater anticipated satisfaction, particularly for high-technology products such as cleaning robots that have not yet been extensively used (Granzin & Schjelderup, 2001; Bilici & İnam, 2024). As Li et al. (2024) emphasised, consumers actively consider their satisfaction levels before making a purchase, and this perception of 'prospective utility' is formed by specific functional features (Loewenstein, 1987; Li et al., 2024). Consequently, the functional advantages offered by cleaning robots, such as the potential for time savings and autonomous cleaning, have been shown to contribute to consumers' 'future-oriented satisfaction' goals and to influence the pre-purchase evaluation process (Tor-Kadioǧlu, 2020). In this context, the following hypothesis has been developed:

H₂: Perceived functional value has a positive and significant effect on anticipated satisfaction.

Anticipated satisfaction and purchase intention

Anticipated satisfaction, which is defined as a subjective prediction of the future level of fulfilment that a product will provide, plays a decisive role in purchase intention. This reflects the consumer's perceived likelihood of acquiring the product in question (Krishnamurthy & Kumar, 2015; Proynova, 2017). This relationship is theoretically grounded in the concept of 'valence' within Vroom's (1964) expectancy theory, which explains an individual's motivation towards a specific action (Pecotich & Churchill Jr, 1981). According to the theory, valence is defined as 'anticipated satisfaction' and represents the emotional appeal of the outcomes an individual expects from a purchase (Vroom, 1964; Pecotich & Churchill Jr, 1981). Consequently, the greater the anticipated satisfaction derived from a technological product such as a cleaning robot, the stronger the consumer's behavioural intention to purchase it (Pecotich & Churchill Jr., 1981; Demirgüneş, 2015).

The mental imagery approach, proposed by Shiv and Huber (2000), explains the psychological processes involved in decision-making through the concept of a 'decision goal' (Shiv & Huber, 2000). Before making a purchase, consumers set a target level of anticipated satisfaction and construct mental scenarios of using the product to achieve it (Shiv & Huber, 2000). This cognitive visualisation process enables product feature information to be transformed into a sensory forecast of satisfaction, thereby directly triggering purchase intention (Shiv & Huber, 2000; Li et al., 2024).

Modern empirical marketing studies confirm that consumers primarily consider how satisfied they will be when making a purchase, and that anticipated satisfaction is one of the strongest predictors of behavioural intentions (Demirgüneş, 2015; Li et al., 2024). The strong correlation between anticipated satisfaction and consumers' plans and loyalty further emphasises the important role this concept plays in influencing purchase intention (Söderlund, 2003; Li et al., 2024). In summary, the vision of fulfilment that consumers construct in their minds for a product they have not yet experienced personally acts as the most significant psychological bridge linking complex rational evaluations to the ultimate intention to purchase (Demirgüneş, 2015; Proynova, 2017). Accordingly, the following hypothesis has been developed:

H₃: *Anticipated satisfaction has a positive and significant effect on purchase intention.*

Mediating roles

In the literature, the effect of perceived value on purchase intention is explained indirectly through processes such as brand preference, attitude and satisfaction (Wang, 2010; Bilici and İnam, 2024). Although studies on the mediating role of anticipated satisfaction are quite limited, it has been established that the perception of rational utility serves as a psychological bridge in the formation of intentions (Demirgüneş, 2015). In his study on snack foods, Wang (2010) found that brand preference plays a central mediating role between multidimensional perceived product values and purchase intention. The findings indicate that rather than directly influencing purchase intention, product values (functional, emotional, social) primarily strengthen brand preference and, through this preference, foster purchase intention. In their study, Delgado-Ballester and Sabiote (2015) demonstrated statistically that perceived functional and experiential values mediate the transformation of brand familiarity into brand outcomes. In their study on smart robot vacuum cleaners, Bilici and İnam (2024) found that the attitude towards use variable played a central mediating role between perceived benefits, entertainment, and cleaning dimensions and future usage intention. Demirgüneş (2015) found that satisfaction acts as a significant mediating variable in the relationship between perceived value dimensions (particularly functional value) and consumers' willingness to pay more. Based on this information, the following hypothesis has been formed:

H₄: *Anticipated satisfaction mediates the relationship between perceived functional value and purchase intention.*

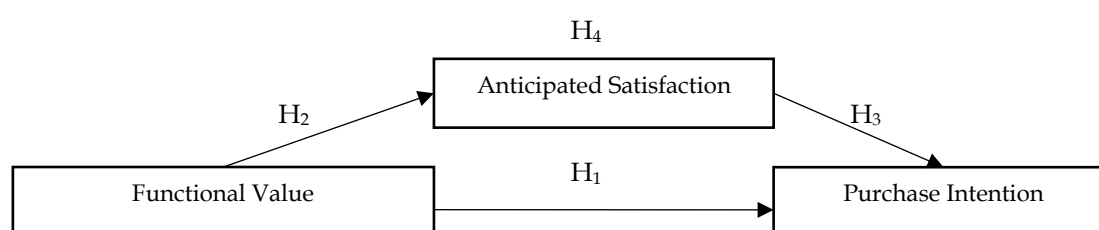


Figure 1: Research Model

Methodology

Scales and questionnaire design

For this study, the survey method was used to collect data. The items in all scales in the survey were adapted from scales whose validity and reliability have been proven in the literature and which have been used in various studies. In this study, the perceived functional value (Demirgüneş, 2015), anticipated satisfaction (Shiv and Huber, 2000), and purchase intention were adapted from An et al. (2021). In this study, the translation-back-translation technique was used to adapt the scales under the guidance of marketing academics. Each scale item was translated from English (the original language) into Turkish, then back into English. Subsequently, the meanings of the items in the original language (English) and the translated language (Turkish) were compared. The finalised questionnaire was then

administered. The second section of the questionnaire included participants' demographic information and the scale items.

Target audience and sample

Data for the present study were collected from 276 individuals via face-to-face surveys. The sample size satisfies commonly recommended minimum requirements for multivariate statistical analysis and structural modelling techniques, as prior methodological literature suggests that a sample exceeding 200 respondents is generally adequate for achieving statistical reliability and analytical robustness (Kass & Tinsley, 1979; Sivo et al., 2006; Wilson & Morgan, 2007; Hair et al., 2014).

The study focused specifically on female participants who had not yet purchased a cleaning robot. This preference is theoretically grounded in the traditional association of domestic spaces and cleaning responsibilities with women's social roles (Berg, 1994; Strengers et al., 2022). Research indicates that autonomous cleaning devices attract greater interest from women because they have the potential to reduce the time and coordination required for household chores (Strengers et al., 2022). Furthermore, the existing literature on robot vacuums in Turkey consistently demonstrates high levels of female engagement with and responsiveness to cleaning-related technological innovations (Tor-Kadioǧlu, 2020; Bilici & İnam, 2024).

In terms of methodology, a convenience sampling approach was employed to reach individuals who were accessible and met the criterion of not currently owning the product. To ensure a standardised stimulus for assessing anticipated satisfaction, participants were shown a short YouTube video introducing the cleaning robot's basic functions, advantages, and autonomous features before completing the questionnaire. This 'theatre methodology', or video-based stimulus, simulates a retail experience, reduces data noise and enhances experimental control (Balasubramanian et al., 2006; Li et al., 2024). In theory, visual stimuli such as videos facilitate the process of mental imagery required for consumers to form satisfaction forecasts about a product they have not yet experienced in person (Shiv & Huber, 2000; Proynova, 2017). By visualising the product's functional features, the video acts as a 'showroom experience', converting technical specifications into a concrete 'decision target' in the consumer's mind (Wu et al., 2016; Proynova, 2017). Although video demonstrations are an effective way of stimulating the imagination and ensuring consistency across a sample, they are acknowledged to be less effective than actual physical experience (Proynova, 2017; Li et al., 2024). However, in the pre-purchase stage, when consumers must rely on 'vicarious experience' via marketing communications, this method accurately reflects how expectations and intentions are initially formed in the smart home appliance market.

Common method variance bias

Harman's one-factor test was used to assess the risk of common method variance bias (Podsakoff et al., 2003; Rodríguez-Ardura & Meseguer-Artola, 2020). For this purpose, all items were loaded onto a single factor, and the first factor accounted for 47.06% of the variance. As this proportion is below 50%, it can be concluded that there is no common method variance bias in the data. (Fuller et al., 2016). Furthermore, another method for detecting common method variance bias is the use of correlation coefficients. The fact that the correlation coefficients between the variables are below 0.90 (see Table 4) indicates that there is no common method variance bias in the dataset (Bagozzi et al., 1991).

Results

Demographic characteristics of the respondents

When examining the age distribution of the participants, the largest group is in the 40–50 age range (22.7%); participants' educational levels are concentrated among high school (35.8%) and lower secondary school (27.7%) graduates.

Table 1: Demographic Status of Participants

Variable	Group	Count	%	Variable	Group	Count	%
Age	18–28	44	15.9%	Marital status			
	29–39	60	21.7%				
	40–50	63	22.7%		Married	180	65.2%
	51–61	61	22.8%		Single	96	34.8%
	≥62	48	17.4%				
Graduation Certificate	Primary School	53	19.02%	Employment Status			
	Secondary School	77	27.9%		Employed	120	43.5%
	High school	97	35.1%		Unemployed	156	56.5%
	Undergraduate	32	11.6%				

When participants are evaluated by marital status, it can be seen that married individuals (68.0%) are in the majority; When participants are evaluated by marital status, it can be seen that married individuals (65.2%) are in the majority; when examining findings regarding employment status, it can be seen that those not in employment (56.5%) outnumber those in employment (43.5%).

Factor analysis and reliability analysis

Table 2 presents the results of confirmatory factor analysis and reliability analysis. The confirmatory factor analysis findings indicate that the factor loadings for the items within the three-dimensional structure range from 0.701 to 0.841, demonstrating that the items adequately represent the constructs. (Hair et al., 2014). When the validity and reliability findings of the scales used in the study are evaluated together, it is observed that the criteria for convergent and discriminant validity are met for all constructs. The fact that the factor loadings (λ) are above 0.70, the AVE (average variance explained) coefficients fall within the range of 0.628–0.630, and the CR (composite reliability) coefficient is 0.835 indicates that the scales are adequate in terms of convergent validity. (Fornell & Larcker, 1981).

Table 2: Confirmatory Factor Analysis and Reliability Findings

Functional Value (AVE=0.628; $\sqrt{\text{AVE}}$= 0.792; MSV= 0.366; ASV= 0.319; CR=0.835; α=0.703; Ω=0.706)	λ
The product has consistent quality	0.769
The product is exactly what I need	0.818
The product performs consistently	0.790
Anticipated Satisfaction (AVE = 0.630; $\sqrt{\text{AVE}}$ = 0.794; MSV = 0.500; ASV = 0.433; CR = 0.835; α = 0.700; Ω = 0.716)	λ
I think I will be satisfied when I purchase this product/service.	0.698
I expect this product/service to meet my needs.	0.833
I think I will feel happy after using this product/service.	0.841
Purchase Intention AVE=0.628; $\sqrt{\text{AVE}}$ = 0.792; MSV=0.500; ASV=0.386; CR=0.835; α=0.704; Ω=0.706)	λ
I will be purchasing this product in the near future.	0.763
I will use this product in the future.	0.806
I will buy this product in the future	0.808
Model Fit Summary: $\chi^2=72.2$, $P=0.000$, $\chi^2/\text{df}=3.008$, TLI=0.912, CFI=0.941, RMSEA=0.085, SRMR=0.085	
Note: λ = Factor loading; α = Cronbach's alpha; Ω = McDonald's omega	

Furthermore, given that the condition requiring the square root of AVE ($\sqrt{\text{AVE}}$) for each construct to be higher than the correlations between that construct and the others has been met, and that the MSV and ASV values are smaller than AVE, it can be stated that the criteria for discriminant validity have been satisfied (Fornell & Larcker, 1981). Furthermore, the Cronbach's α and McDonald's Ω coefficients calculated within the model are above 0.70, indicating the scale's internal consistency; in other words, that the scale exhibits a reliable structure (Nunnally & Bernstein, 1994; Durmuş vd., 2016). When these results are evaluated together, they demonstrate that the measurement instruments used are statistically valid, reliable, and suitable for structural modelling.

In terms of convergent validity, the fact that the AVE is greater than 0.50 and the CR values are greater than 0.70, alongside the condition that $\text{CR} > \text{AVE}$ is met, supports convergent validity (Hair et al., 2014). Divergent validity was tested according to the Fornell-Larcker criterion: since $\text{MSV} < \text{AVE}$ and $\text{ASV} < \text{MSV}$, and the square root of AVE is greater than the inter-factor correlation (Yaşlıoğlu, 2017), we can

state that divergent validity is established (Fornell & Larcker, 1981). Finally, the model fit indices ($\chi^2 = 72.2$, $P = 0.000$, $\chi^2/df = 3.008$, $TLI = 0.912$, $CFI = 0.941$, $RMSEA = 0.085$, $SRMR = 0.085$) indicate an acceptable to good level of fit between the data and the model (Hu & Bentler, 1999).

Normality test

Upon examining the results of the normality test in Table 4, it is observed that skewness and kurtosis fall within the range of ± 1 (George & Mallery, 2010). These results support the notion that the data set exhibits a normal distribution.

Table 3: Normality Test Results

Variable	Mean	Std. Deviation	Skewness	Kurtosis
Functional Value	4.21	0.56	-0.841	0.912
Anticipated Satisfaction	4.20	0.64	-0.762	0.683
Purchase Intention	4.18	0.63	-0.797	0.731

Correlation analysis results

According to the correlation analysis in Table 4, all variables in the model show positive, significant relationships ($p < .001$). Whilst there is a moderate relationship ($r = .605$) between perceived functional value and anticipated satisfaction, it is possible to state that there is a high-level positive relationship ($r = .707$) between anticipated satisfaction and purchase intention. Furthermore, a moderate positive relationship ($r = .521$) has been identified between perceived functional value and purchase intention.

Table 4: Correlation Analysis Results

Correlation Matrix		Functional Value	Anticipated Satisfaction	Purchase Intention
Functional Value	Pearson's r	1	.605	.521
	p-value		.000	.000
Anticipated Satisfaction	Pearson's r	.605	1	.707
	p-value	.000		.000
Purchase intention	Pearson's r	.521	.707	1
	p-value	.000	.000	

Testing hypotheses

According to the results in Table 5, an analysis conducted to determine the mediating role of anticipated satisfaction in the relationship between perceived functional value and purchase intention revealed a highly significant partial mediating effect. According to the path coefficients in Table 5, functional value has a positive and highly significant effect on anticipated satisfaction. Furthermore, the effect of anticipated satisfaction on purchase intention is also positive.

Table 5: Structural Equation Modelling Results: Direct, Indirect and Total Effects

Mediation Estimates										
Effect					β	SE	Z	p	% Mediation	
Indirect	Functional Value	→	Expected Satisfaction	→	Purchase Intention	0.422	0.0492	8.58	<0.001	71.8%
Direct	Functional Value	→	Purchase Intention			0.166	0.0596	2.79	0.005	28.2%
Total	Functional Value	→	Purchase Intention			0.588	0.0581	10.13	<0.001	100%
Path Estimates										
Effect					β	SE	Z	p	-	
Direct	Functional Value		→	Expected Satisfaction		0.692	0.548	12.62	<0.001	-
Direct	Expected Satisfaction		→	Purchase Intention		0.610	0.521	11.71	<0.001	-

When the mediation findings are evaluated, the indirect effect of perceived functional value on purchase intention ($t(\beta) = 0.422$; $p < 0.001$) is significant and quite strong, accounting for approximately 71.8% of the total effect. Furthermore, the direct effect of perceived functional value on purchase intention ($\beta = 0.166$, $p = 0.005$) remains significant, and it accounts for 28.2% of the total effect ($\beta = 0.588$, $p < 0.001$).

Discussion and conclusion

This study examines the effect of perceived functional value on purchase intention and tests this relationship by including anticipated satisfaction as a mediating factor in the model. All hypotheses developed in the research model were empirically validated. SEM findings demonstrate that all paths in the model are statistically significant.

The research shows that perceived functional value directly influences purchase intention and also mediates this relationship through a psychological journey built in the consumer's mind based on

anticipated satisfaction.

The primary original contribution of this study to the literature lies in its conceptualisation of satisfaction not merely as a post-use output, as found in the majority of technology adoption models, but as a dynamic decision goal that triggers intention during the pre-purchase phase (Bhattacharjee, 2001; Demirgüneş, 2015). While the extant literature largely focuses on satisfaction derived from past experiences within the Expectation Confirmation Model (ECM), the present research shifts the focus to potential users who have yet to experience the product (Proynova, 2017; Avcı et al., 2024). This approach redefines the technology adoption process not just as a technical utility analysis, but as a future-oriented hedonism journey constructed in the consumer's mind (Pecotich & Churchill, 1981; Li et al., 2024)

These findings are expected to contribute to the literature by offering a new, process-oriented perspective on the value-satisfaction relationship in marketing theory and by providing smart device manufacturers with a strategic roadmap for developing communication strategies aligned with potential users' expectations.

Expected satisfaction, also associated with the concept of value in the literature, is considered a future hedonistic prediction of the level of satisfaction a consumer will obtain from a product they have not yet experienced (Pecotich and Churchill, 1981). The study's findings show that rational evaluations of the functional capacity (quality, performance, and usability) of cleaning robots create a strong expectation of satisfaction among consumers (Demirgüneş, 2015). This is consistent with conceptual approaches that argue that consumers not only focus on current product features but also actively visualise the future satisfaction these features will provide (Granzin & Schjelderup, 2001). As Proynova (2017) points out, the strong relationship between pre-use price perception and expected satisfaction indicates that consumers develop expectations of future satisfaction through rational evaluations in their decision-making.

The study further confirms that the mental imagery mechanism proposed by Shiv and Huber (2000) and visual stimuli, such as the video shown to participants, transform technical features into a concrete decision target. The strong mediating effect identified in our study reveals that the primary power of functional value on intention is largely conveyed through anticipated satisfaction (Demirgüneş, 2015; Li et al., 2024). These results are consistent with studies highlighting the central role of perceived value in converting brand familiarity into behavioural intentions (Delgado-Ballester and Sabote, 2015). While studies such as Wells and Tan (2024) and Wang (2010) indicate that functional value creates indirect effects through brand preference or attitude rather than directly forming intention in some markets, the present study deepens the literature by proving that the expected satisfaction variable is the most comprehensive psychological explanatory factor in this process.

Theoretical implications

Perceived functional value shapes consumers' purchasing decisions based on the level of satisfaction they expect to receive in the future (Li et al., 2024). The strong mediating effect, particularly in high-tech products such as robotic vacuum cleaners, demonstrates how tightly the value-satisfaction-intention chain is integrated with the expected satisfaction variable in the pre-purchase stage (Demirgüneş, 2015). In addition, the Expectation Confirmation Model, which treats satisfaction as the confirmation of expectations, theoretically underscores the critical role of this psychological process in the adoption of technological products (Bhattacharjee, 2001; Avcı et al., 2024). These findings are in full agreement with Vroom's prospect theory, which argues that rational evaluations primarily shape consumer emotional predictions rather than directly forming intentions (Pecotich and Churchill, 1981; Granzin & Schjelderup, 2001); furthermore, these results empirically support the Mental Imagery approach, which suggests that consumers set satisfaction as a mental decision goal before purchasing and perform a cognitive simulation to achieve this goal (Shiv & Huber, 2000).

The study also enriches the literature on expectation theory and decision-making by demonstrating that satisfaction is not merely a post-use experience but also serves as a decision criterion during the pre-purchase process. The promotional video shown to participants before the survey visualised the robot vacuum cleaner's functional features, creating a vivid image in participants' minds and providing a vicarious experience that triggered mental imagery (Wu et al., 2016). As emphasised by Shiv and Huber (2000), consumers need to visualise product features in their minds to make decisions based on expected satisfaction.

Empirical findings indicate that visual stimuli, such as videos, facilitate this cognitive effort and make the expectation of satisfaction more concrete (Proynova, 2017). This perception of satisfaction that consumers develop towards a product they have not yet experienced confirms that the intention to

purchase is not only a conscious plan, but also an emotional prediction reached at the end of a mental imagery process. In conclusion, through visual presentation, rational product features were transformed into a decision target in the consumer's mind, and the high mediation coefficient achieved confirmed the success of this mental visualisation process.

Practical implications

In advertising and promotional activities, rather than emphasising the technical specifications of such technological products, businesses should focus on the vision of the happiness and comfort the device will bring to the user's life. Even before purchasing the product, consumers imagine how much time the robot will save them while working at home and how much convenience it will provide. Therefore, promotions should focus on tangible benefits such as psychological comfort and time-saving at home, rather than the product's technical details. Visual tools, particularly videos, will bring this sense of satisfaction to life in consumers' minds and directly increase purchase intent. Marketing messages must be tailored to each target group based on their priorities.

The study also enriches expectation theory and the decision-making literature by demonstrating that satisfaction is not merely a post-use experience but also serves as a decision goal during the pre-purchase process. The promotional video shown to participants before the survey visualised the cleaning robot's functional features, creating a vivid image in participants' minds and serving as a display experience that triggered mental visualisation (Wu et al., 2016).

As emphasised by Shiv and Huber (2000), consumers must visualise product features in their minds to make decisions focused on anticipated satisfaction. Visual stimuli such as videos facilitate this cognitive effort, making satisfaction predictions more concrete (Proynova, 2017).

The perception of anticipated satisfaction that consumers develop towards a product they have not yet experienced confirms that purchase intention is not merely a conscious plan, but also an emotional prediction reached at the end of the mental visualisation process. Consequently, thanks to the video presentation, rational product features became a 'decision target' in the consumer's mind, and the high mediation coefficient obtained confirmed the success of this mental visualisation process.

Limitations and future research directions

This study has certain limitations. Firstly, the data was collected over a relatively short period. We were unable to fully observe how participants' expectations regarding satisfaction with the robot vacuum changed over the long term. In future studies, extending the observation period will be crucial to understanding how these psychological connections develop.

Secondly, we had to introduce the product to our participants by showing them a video clip; however, this approach is quite different from the actual physical experience one might gain whilst trying out the product. As highlighted by Proynova (2017) and Li et al. (2024), whilst videos tend to stimulate the imagination and evoke specific associations, future studies conducted in conditions where people use the device personally could yield more reliable results.

Furthermore, our study's focus on cleaning robots makes it difficult to generalise the findings to other smart home devices. In light of these considerations, it is strongly recommended that future research employ longer observation periods through longitudinal designs and conduct applied studies that allow participants to directly experience the product physically. Additionally, testing similar models across a broader range of smart home technologies and integrating variables such as technophobia, price sensitivity, and environmental impact is expected to significantly contribute to the literature and provide more robust evidence for technology adoption processes (Demirgüneş, 2015; Bilici & İnam, 2024; Li et al., 2024).

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