ISSN: 1683-1942
E-ISSN: 2304-6155
УДК: 33

Харківський національний економічний університет імені Семена Кузнеця

ЕКОНОМІКА РОЗВИТКУ

Міжнародний економічний журнал

Заснований у 2002 році
Періодичність випуску: 4 рази на рік

Том 25, № 2

Харків – 2026

ISSN: 1683-1942
E-ISSN: 2304-6155
UDC: 33

Simon Kuznets Kharkiv National University of Economics

ECONOMICS OF DEVELOPMENT

International Economic Journal

Founded in 2002
Frequency of issue: Four times per year

Volume 25, No. 2

Kharkiv – 2026

ЗМІСТ / CONTENTS

ECONOMICS OF DEVELOPMENT

Journal homepage: https://ecdev.com.ua/

ISSN: 1683-1942
E-ISSN: 2304-6155

Vol. 25, No. 2, 2026

UDC 339.138:366.1:004:502/504
DOI: 10.63341/econ/2.2026.33

Natalia Boiko*
PhD in Economics, Associate Professor
Simon Kuznets Kharkiv National University of Economics
61166, 9A Nauky Ave., Kharkiv, Ukraine
https://orcid.org/0000-0001-7292-5289

Formation of consumer value of a product under conditions of digitalisation and sustainable development

Abstract. The relevance of this study was driven by the transformation of consumer value formation under the influence of economic digitalisation and the growing importance of sustainable development principles. The aim of the research was to identify the key determinants of consumer value and to develop an integrated model of their interaction. The study was based on a survey of 210 respondents aged 18-45 who regularly made online purchases. The results showed high average evaluations of key variables: digital experience (4.25), perceived consumer value (4.18), personalisation (4.12), brand trust (4.05), and environmental sustainability (3.89). Correlation analysis revealed the strongest relationship between brand trust and consumer value ($r = 0.72$), followed by personalisation ($r = 0.68$) and digital experience ($r = 0.65$), confirming the critical role of intangible factors. The regression model demonstrated strong explanatory power ($R^2 = 0.62$). Brand trust had the greatest impact on consumer value ($\beta = 0.36$, $p < 0.01$), followed by personalisation ($\beta = 0.31$, $p < 0.01$), digital experience ($\beta = 0.28$, $p < 0.01$), and environmental sustainability ($\beta = 0.19$, $p < 0.05$). Additionally, the combined effect of personalisation and environmental sustainability increased perceived value by 18% compared to their individual effects, indicating a significant synergistic effect. The findings provided empirical evidence that consumer value was a multidimensional construct shaped by the interaction of digital and sustainable factors, with trust acting as a key mediating variable. The proposed model could be applied to improve product policy, enhance competitiveness, and strengthen long-term consumer relationships

Keywords: consumer behaviour; product policy; customer experience; brand trust; environmental responsibility; personalisation strategies; marketing analytics

INTRODUCTION

In contemporary market conditions, firms faced increasing challenges in creating and delivering value that corresponds to rapidly evolving consumer expectations. The rapid development of digital technologies, the expansion of online platforms, and the growing importance of environmental and social responsibility have fundamentally transformed the mechanisms of consumer decision-making. As a result, traditional approaches to consumer value formation, primarily based on functional characteristics such as price and quality, are becoming insufficient. Instead, consumer value is increasingly shaped by a combination of digital experience, personalisation, emotional engagement, and sustainability-related attributes.

At the global level, digitalisation has been recognised as a key driver of transformation in marketing theory and practice. Y.K. Dwivedi *et al*. (2021; 2023) analysed the evolution of digital and social media marketing, focusing on changes in consumer-firm interactions. These studies demonstrate that technological progress leads to more interactive and data-driven marketing models. However, the authors primarily concentrated on communication processes and did not sufficiently examine how digital product attributes contributed to consumer value formation. S. Verma *et al*. (2021) emphasised the growing role of artificial intelligence and data-driven technologies in marketing, highlighting their impact on personalisation and consumer decision-making.

Article's History: Received: 13.11.2025; Revised: 22.04.2026; Accepted: 19.05.2026; Published: 29.06.2026

Suggested Citation:
Boiko, N. (2026). Formation of consumer value of a product under conditions of digitalisation and sustainable development. *Economics of Development*, 25(2), 33-41. doi: 10.63341/econ/2.2026.33.

*Corresponding author (*nataleboyko@gmail.com*)

Recent studies indicate that digital environments significantly enhance customer participation and value co-creation through interactive and personalised experiences. In particular, influencer-driven and digitally mediated interactions stimulate consumers' active engagement and contribution to value creation processes (Bu *et al*., 2022). Furthermore, the growing integration of artificial intelligence into service systems enables more adaptive and responsive interactions, thereby strengthening customer engagement and perceived value (Huang & Rust, 2021). As a result, digital technologies not only facilitate communication between firms and consumers but also transform consumers into active participants in value co-creation.

At the same time, sustainability has become an increasingly important determinant of consumer behaviour. Recent research demonstrates that sustainability attributes significantly influence purchasing decisions, although potential trade-offs with functionality may still occur (Qalati *et al*., 2024). The influence of sustainability on consumer behaviour has also been actively explored in recent studies. F. Riva *et al*. (2024) demonstrated that sustainability-related brand positioning and green brand associations play an important role in shaping green brand trust, particularly under conditions of sustainability skepticism. This study supports these conclusions but further demonstrates that sustainability has both direct and indirect effects on perceived value, particularly through trust formation. This highlights the importance of integrating sustainability into broader value creation strategies rather than treating it as an isolated attribute.

Sustainability attributes significantly influence consumer behaviour and purchasing decisions, particularly depending on how consumers perceive and accept sustainable innovations (Giacalone & Jaeger, 2023). However, existing research predominantly examines digitalisation and sustainability as separate domains. Recent studies emphasise the need to integrate these perspectives, as digital transformation plays a crucial role in enabling sustainability while also revealing significant research gaps (Feroz *et al*., 2021; Guandalini, 2022).

Despite the significant body of research, the existing literature revealed an important gap. Most studies analysed digitalisation and sustainable development as separate directions, without sufficiently exploring their interaction and combined impact on consumer value formation. In particular, the mediating role of trust and the synergistic effect of combining digital and sustainability-related product attributes remain insufficiently investigated. The relevance of this study is therefore determined by the need to develop an integrated approach to consumer value formation that reflects the interaction between digital and sustainable factors. Addressing this issue is essential for improving product competitiveness and ensuring long-term consumer relationships in the context of digital transformation.

The aim of the article was to identify the key determinants of consumer value formation in the context of digitalisation and sustainable development and to substantiate their integration into firms' product policy. To achieve this aim, the following objectives were defined: to analyse contemporary approaches to consumer value formation and to identify key digital and sustainable factors influencing consumer value; to empirically assess the relationships between these factors; to develop an integrated model of consumer value formation. The scientific novelty of the study lies in the development of a comprehensive model that integrates digital and sustainable determinants of consumer value while incorporating brand trust as a mediating variable and accounting for their synergistic effect.

MATERIALS AND METHODS

This study was based on a combination of theoretical and empirical research methods aimed at ensuring the validity, transparency, and reproducibility of the results. The research design included several stages, namely the conceptualisation of variables, data collection through an online survey, and statistical analysis of the obtained data. The methodological approach was grounded in contemporary frameworks of quantitative marketing research and data analysis (Sarstedt & Mooi, 2019; Hair *et al*., 2022; Enholm *et al*., 2022). The empirical study was conducted using a structured online survey administered via Google Forms. Data collection took place between March and April 2025. Respondents were recruited using a non-probability convenience sampling method through social media platforms and online communities. The inclusion criteria required participants to be between 18 and 45 years old and to have prior experience with online shopping, ensuring the relevance of responses to digital consumption contexts. A total of 210 valid responses were collected. Participation was voluntary and anonymous.

The study adhered to established ethical standards for social research, including informed consent, confidentiality, and the right to withdraw at any stage. Ethical considerations were guided by established principles for research involving human participants (American Psychological Association, 2020; The Declaration of Helsinki, 2024). In addition, broader ethical principles related to digital technologies and data use were considered (European Commission, 2019). All respondents were informed about the purpose of the study and provided consent prior to participation. The questionnaire consisted of several blocks designed to measure key constructs: personalisation, digital experience (UX), environmental sustainability, brand trust, and perceived consumer value. All variables were operationalised using multi-item scales adapted from recent empirical studies in digital marketing and consumer behaviour (Bleier *et al*., 2019; Huang & Rust, 2021) and measured on a five-point Likert scale (1 = strongly disagree; 5 = strongly agree).

Personalisation was assessed through items reflecting the degree to which products and services met individual preferences. For example, respondents evaluated statements such as: "The products I purchase online are tailored to my personal preferences" and "Online platforms provide recommendations that match my needs". Digital experience (UX) was measured based on usability, interactivity, and ease of navigation, including items such as: "The website or application is easy to use" and "I can quickly find the information I need". Environmental sustainability included perceptions of ecological product characteristics and responsible production practices, with statements such as: "I prefer products that are environmentally friendly" and "I consider the environmental impact of products when making a purchase". Brand trust was operationalised as the level of consumer confidence in the brand's reliability and integrity, for example: "I trust the brands I purchase from online" and "These brands keep their promises". Perceived consumer value was defined as the overall assessment of product usefulness and benefits, measured through items such as: "The products I purchase provide good value for money" and "Overall, I am satisfied with the benefits I receive from these products".

The dependent variable in the study was perceived consumer value. Independent variables included personalisation, digital experience, and environmental sustainability. Brand trust was treated as a mediating variable, as it explained the mechanism through which product attributes influenced perceived value. This approach was theoretically grounded in relationship marketing and supported by recent studies emphasising the role of trust in digital environments (Bleier *et al.*, 2019). Data analysis was performed using standard statistical techniques. Descriptive statistics (mean values and standard deviations) were used to summarise the characteristics of the sample and the main variables. To ensure the internal consistency of measurement scales, reliability analysis was conducted using Cronbach's alpha coefficient, with all constructs exceeding the recommended threshold of 0.7, indicating satisfactory reliability (Hair *et al.*, 2022).

Correlation analysis was applied to examine the relationships between variables and identify the strength and direction of associations. Multiple regression analysis was used to assess the impact of independent variables on perceived consumer value and to determine the relative importance of each factor. In addition, subgroup analysis was conducted to examine differences between age groups (18-25, 26-35, and 36-45), allowing for the identification of variations in consumer perceptions across segments. To evaluate the presence of interaction effects, an additional analysis of the combined influence of personalisation and environmental sustainability was performed. The results enabled the identification of a synergistic effect, reflected in a higher level of perceived value compared to the individual contribution of each factor. Despite the robustness of the applied methods, the study had certain limitations. The use of convenience sampling might have affected the generalisability of the results, while self-reported data could be subject to response bias. However, these limitations were partially mitigated by the consistency of the results and the application of validated measurement scales.

RESULTS AND DISCUSSION

The empirical analysis aimed to identify the key determinants of perceived consumer value and to assess the strength and nature of relationships between digital, sustainable, and relational factors. To ensure a structured interpretation of the findings, the analysis was conducted in several stages, including descriptive statistics, correlation analysis, and regression modelling. At the first stage, the descriptive statistics of the main variables were analysed (Table 1).

Table 1. Descriptive statistics of variables

Variable	Mean value	Standard deviation
Personalisation	4.12	0.78
Digital experience (UX)	4.25	0.71
Product environmental sustainability	3.89	0.85
Brand trust	4.05	0.74
Perceived consumer value	4.18	0.69

Source: developed by the author based on survey data

The results presented in Table 1 indicate generally high evaluations across all variables, suggesting that respondents perceive digital and relational attributes as important components of consumer value. The highest mean value was observed for digital experience (M = 4.25), reflecting the critical role of usability, convenience, and interface quality in shaping consumer perceptions in digital environments. Perceived consumer value (M = 4.18) and personalisation (M = 4.12) also received high evaluations, indicating that consumers place significant importance on tailored offerings and relevant interactions. In contrast, environmental sustainability demonstrated a relatively lower mean value (M = 3.89), suggesting that although sustainability is recognised as important, it remains a secondary factor compared to immediate functional and experiential benefits. However, mean values alone do not fully reflect the structure of responses. Therefore, at the second stage, a distribution analysis was conducted to examine the proportion of respondents selecting different response categories (Table 2).

Table 2. Distribution of respondents' evaluations, %

Variable	High (4-5)	Medium (3)	Low (1-2)
Personalisation	72	18	10
Digital experience (UX)	78	9	13
Product environmental sustainability	61	24	15
Brand trust	74	11	15
Consumer value	76	14	10

Source: developed by the author based on survey data

As can be seen from Table 2, more than 70% of respondents provided high evaluations for digital experience, personalisation, and consumer value, confirming the consistency of positive perceptions across these dimensions. In contrast, environmental sustainability shows the greatest variability, with a relatively high proportion of neutral responses (24%), indicating that its importance varies among consumer segments. This variability can be explained by differences in consumer awareness, income levels, and the perceived trade-off between price and environmental responsibility. These findings suggest that digital and experiential factors dominate immediate consumer decision-making, whereas sustainability plays a more differentiated and context-dependent role.

Based on the distribution results presented in Table 2, it can be concluded that each factor contributes to consumer value formation through distinct behavioural mechanisms. In practical terms, digital experience directly influences purchase completion rates, as users are more likely to abandon transactions in poorly designed interfaces. Personalisation increases engagement and repeat purchases, while trust reduces perceived risk and strengthens long-term relationships. Environmental sustainability, although less immediate, enhances brand image and contributes to long-term loyalty. To further examine the relationships between variables identified in the previous stage, a correlation analysis was conducted (Table 3).

Table 3. Correlation matrix

Indicators	1	2	3	4	5
1. Personalisation	1				
2. UX	0.62	1			
3. Sustainability	0.41	0.38	1		
4. Trust	0.57	0.52	0.60	1	
5. Value	0.68	0.65	0.54	0.72	1

Source: developed by the author based on survey data

The correlation analysis demonstrates strong and statistically significant positive relationships between all variables. The strongest relationship was identified between brand trust and perceived consumer value ($r = 0.72$), indicating that trust plays a central role in shaping consumer evaluations. This relationship can be explained by the characteristics of digital consumption, where uncertainty is higher due to the intangible nature of products and services. In such conditions, trust acts as a mechanism for reducing perceived risk, increasing confidence in the brand, and enhancing overall value perception. This finding has important managerial implications, suggesting that investments in trust-building mechanisms, such as transparency, data security, and consistent brand communication, can yield substantial returns in terms of consumer value.

Personalisation ($r = 0.68$) and digital experience ($r = 0.65$) also demonstrated strong relationships with perceived value. These results indicate that consumers respond positively to tailored and user-friendly interactions, which enhance both functional and emotional aspects of value. From a strategic perspective, this suggests that firms should prioritise customer-centric design and data-driven personalisation to improve competitiveness. Environmental sustainability showed a moderate but meaningful relationship with perceived value ($r = 0.54$). This indicates that sustainability contributes to value perception, although its effect is less immediate and may operate through indirect mechanisms such as trust and emotional engagement. To assess the relative importance of each factor, multiple regression analysis was conducted, the results of which are presented in Table 4.

Table 4. Results of the regression analysis

Variable	β coefficient	p-value
Personalisation	0.31	<0.01
UX	0.28	<0.01
Environmental sustainability	0.19	<0.05
Brand trust	0.36	<0.01

Note: $R^2 = 0.62$
Source: developed by the author based on survey data

The regression model demonstrates strong explanatory power ($R^2 = 0.62$), indicating that the selected variables explain 62% of the variance in perceived consumer value. This confirms the adequacy of the proposed model and its practical relevance. Among the predictors, brand trust has the strongest effect ($\beta = 0.36$), highlighting its central role in value formation. From an economic standpoint, this implies that trust functions as a key intangible asset that amplifies the perceived benefits of product attributes. Firms that successfully build trust can achieve higher consumer value without necessarily increasing functional product characteristics.

Personalisation ($\beta = 0.31$) also demonstrates a substantial effect, confirming that tailored offerings significantly enhance perceived relevance and customer satisfaction. This suggests that investments in data analytics and customer profiling can directly improve value perception and strengthen competitive positioning. Digital experience ($\beta = 0.28$) contributes through usability and convenience, reducing cognitive effort and improving interaction efficiency. This indicates that user interface design and platform optimisation are critical components of value creation in digital markets. Environmental sustainability has a weaker but statistically significant effect ($\beta = 0.19$), suggesting that its influence is more indirect. Sustainability primarily enhances value through emotional and ethical dimensions and contributes to trust formation rather than immediate functional utility.

An important finding of the study is the presence of a synergistic effect between personalisation and environmental sustainability. When both factors are highly developed, perceived consumer value increases by approximately 18% compared to their individual effects. This result indicates that consumers respond more positively to integrated value propositions that combine functional, emotional, and ethical attributes. From a managerial perspective, this implies that firms should not implement sustainability initiatives in isolation but should integrate them with personalised offerings to maximise their impact. From an economic perspective, these findings indicate that investments in digital experience and trust-building mechanisms can generate higher returns compared to traditional product improvements. Improving UX reduces transaction costs and decision-making time, while trust increases conversion rates, customer retention, and lifetime value, thereby enhancing overall marketing efficiency.

The analysis of age groups revealed significant differences in consumer behaviour. Younger consumers (18-25) demonstrated higher sensitivity to digital factors, particularly usability and personalisation, which can be explained by their greater familiarity with digital technologies and higher expectations regarding user experience. In contrast, older consumers (36-45) placed greater emphasis on trust and reliability, reflecting higher risk perception and a stronger need for security in digital environments. These findings suggest that marketing strategies should be differentiated based on demographic characteristics, with a stronger focus on innovation and personalisation for younger segments and trust-building for older consumers. To complement the previous findings and explore potential heterogeneity in consumer behaviour, a comparative analysis across age groups was conducted (Table 5).

Table 5. Share of respondents with high evaluations (4-5), %

Factor	18-25	26-35	36-45
Personalisation	80	73	64
UX	85	78	69
Environmental sustainability	58	63	66
Brand trust	68	74	79

Source: developed by the author based on survey data

These differences can be explained by variations in risk perception and digital literacy. Younger consumers tend to prioritise convenience and speed due to their higher familiarity with digital technologies, while older consumers focus more on trust and reliability due to greater sensitivity to potential risks and financial losses. As indicated in Table 5, younger consumers demonstrate a higher sensitivity to digital experience and personalisation, whereas older consumers place greater emphasis on trust. This pattern confirms that the importance of specific value drivers varies across segments, which has important implications for marketing strategy. This result further confirmed that the interaction between digital and sustainability-related factors amplifies perceived consumer value beyond their individual effects. This finding suggests that the highest level of value is achieved not through isolated improvements, but through the integration of multiple factors. Therefore, the combined interpretation of results from Tables 1-5 indicates that firms should adopt an integrated approach to value creation, focusing on the simultaneous development of digital experience, personalisation, sustainability, and trust-building mechanisms.

Based on the obtained results, several practical recommendations can be formulated. Firms should prioritise the development of integrated value propositions that combine digital experience, personalisation, and sustainability. For example, companies can implement AI-based recommendation systems to enhance personalisation, optimise website navigation and interface design to improve digital experience (UX), and integrate sustainability labels into personalised offers to increase their effectiveness. Such measures not only improve customer satisfaction but also contribute to higher conversion rates and long-term customer retention. Particular attention should be paid to building brand trust, as it has the strongest impact on perceived value. In addition, segmentation strategies should be applied to tailor marketing approaches to different consumer groups. The conceptual model of consumer value formation (Fig. 1) summarises the key findings of the study and illustrates the interaction between digital, sustainable, and relational factors. Consumer value is formed through the interaction of digital factors (personalisation and UX), sustainable factors (environmental and social responsibility), and relational mechanisms, with brand trust acting as a mediating variable linking product attributes to perceived value and purchase intention. The proposed model can serve as a practical framework for designing product strategies, enhancing customer experience, and supporting managerial decision-making in digital environments. It highlights the importance of integrating digital capabilities, trust-building mechanisms, and sustainability initiatives to maximise perceived consumer value and long-term competitiveness. The findings of this study were compared with existing literature to provide a deeper understanding of consumer value formation in digital environments. In contrast to a fragmented view in prior research, this study enabled a more systematic interpretation of how digital, sustainable, and relational factors interact in shaping perceived value.

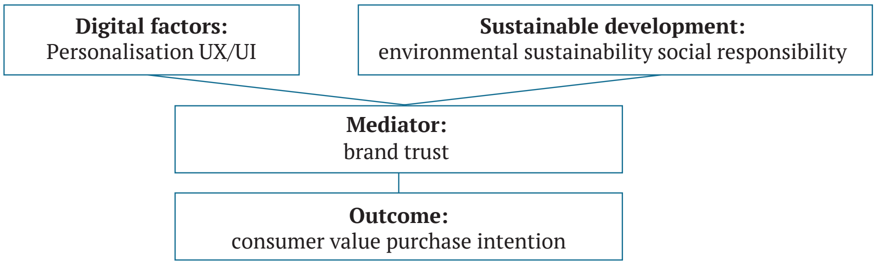

Figure 1. Consumer value formation model

Source: developed by the author

Recent studies in digital marketing emphasise the growing importance of customer experience and value co-creation in digital environments. F. Ahmad *et al*. (2022) demonstrated that online customer experience enhances customer engagement and loyalty, while value co-creation strengthens the relationship between digital experience and consumer responses. These findings are consistent with the results of this study, where digital experience showed a strong positive effect on consumer value. However, while prior research primarily focused on engagement and loyalty outcomes, the present study extends this perspective by empirically confirming the direct impact of digital experience as an independent determinant of perceived consumer value.

Recent research further supports the central role of digital experience in shaping consumer behaviour. For instance, S. Molinillo *et al*. (2022) demonstrated that retail app experience significantly influences customer loyalty through cognitive, affective, relational, and sensorial dimensions of digital customer experience. A.L. Roggeveen & R. Sethuraman (2020) emphasised that seamless omnichannel experiences enhance perceived value by reducing friction in the customer journey. These findings reinforce the results of this study and highlight the importance of continuous investment in digital capabilities.

The role of trust in digital environments has been widely discussed. M. Harrigan *et al*. (2021) demonstrated that trust plays a central role in shaping online purchase intention, particularly through perceived usefulness and peer communication in digital environments. The present study not only supports these conclusions but also demonstrates that trust has the strongest direct effect on perceived value ($\beta = 0.36$), thereby positioning trust not merely as a supporting factor but as a central mechanism in consumer value formation. Their findings suggested that trust reduces perceived risk and enhances customer engagement. The present study not only supported these conclusions but also demonstrated that trust had the strongest direct effect on perceived value ($\beta = 0.36$), thereby positioning trust not merely as a supporting factor but as a central mechanism in consumer value formation.

This interpretation is further supported by recent studies on digital trust. For example, S.A. Qalati *et al*. (2021) demonstrated that trust in online environments significantly influences purchase intention and plays a mediating role between perceived quality factors and consumer behaviour, particularly under conditions of uncertainty and information asymmetry. This aligns with the findings of this study and confirms the mediating role of trust in transforming product attributes into perceived value. M.-H. Huang & R.T. Rust (2021) developed a framework explaining how artificial intelligence can support customer engagement in service contexts, including standardisation, personalisation, and relationalisation. The authors demonstrated that data-driven personalisation significantly improves customer engagement and perceived value. These findings are consistent with the results of this study, which confirm the strong positive effect of personalisation on consumer value. At the same time, this research extends prior work by identifying a synergistic effect between personalisation and environmental sustainability.

The influence of sustainability on consumer behaviour has also been actively explored in recent studies. Recent studies (e.g., S.A. Qalati *et al*. (2024)) demonstrate that sustainability-related attributes significantly influence consumer trust and purchasing decisions in both online and offline environments. This study supported their conclusions but further demonstrates that sustainability has both direct and indirect effects on perceived value, particularly through trust formation. This highlights the importance of integrating sustainability into broader value creation strategies rather than treating it as an isolated attribute. Recent contributions also highlighted the strategic importance of sustainability integration. Recent studies emphasise that sustainability initiatives are most effective when they are integrated into broader marketing strategies and value creation processes rather than communicated as isolated attributes (Qalati *et al*., 2024; Riva *et al*., 2024). This supports the findings of this study regarding the synergistic effect between sustainability and personalisation.

The integration of digital and sustainable strategies has been increasingly addressed in recent research. I. Guandalini (2022) emphasised that digital transformation can support sustainability-oriented business development, while A.K. Feroz *et al*. (2021) identified digital technologies as important enablers of environmental sustainability. The present study strongly supported this view and provided empirical evidence of a synergistic effect between digital and sustainable factors, demonstrating that their combined implementation led to a significantly higher level of perceived consumer value.

In contrast to studies that focus primarily on global markets, Ukrainian research has also contributed to understanding digital transformation in marketing. S. Illiashenko *et al*. (2022) analysed the impact of digital transformation on enterprise development in the digital economy and emphasised the importance of integrating digital technologies into business and marketing processes. These findings are consistent with the results of Ukrainian researchers, who emphasise the importance of digital marketing transformation in shaping customer-oriented strategies and enhancing value creation (Oklander *et al.*, 2024). While these studies supported the general direction of this research, they primarily considered digitalisation separately from sustainability, whereas the present study demonstrated the necessity of their integration.

An important contribution of this study was the identification of the mediating role of trust. While many previous studies acknowledged trust as an important factor, it was often conceptualised as an outcome of customer experience. In contrast, this research demonstrated that trust functioned as a mechanism through which digital and sustainability-related attributes influenced perceived value. This interpretation provided a more nuanced understanding of value formation, particularly in digital environments characterised by uncertainty and information asymmetry. Furthermore, the findings revealed that consumer responses to value drivers were not uniform across segments. Younger consumers were more sensitive to digital attributes such as usability and personalisation, whereas older consumers placed greater emphasis on trust and reliability. This result expanded existing literature by demonstrating the importance of demographic segmentation in value formation and suggested that marketing strategies should be adapted accordingly.

From a managerial perspective, the results indicated that firms should adopt an integrated approach to value creation. Investments in digital experience and personalisation should be combined with sustainability initiatives and supported by trust-building mechanisms. The findings suggested that isolated improvements in individual attributes were less effective than their coordinated implementation, as the highest level of perceived value was achieved through their interaction. Overall, the study not only confirmed key assumptions of recent research but also extended them by providing empirical evidence of the interdependence between digital, sustainable, and relational factors. By integrating these dimensions into a unified model, this research contributed to a deeper understanding of consumer value formation and provided a foundation for future theoretical and empirical developments. This integrated perspective provides a comprehensive framework for understanding how digital transformation and sustainability jointly shape consumer value in modern markets.

CONCLUSIONS

The results of this study confirmed that consumer value formation in contemporary market conditions was a complex and multidimensional process determined by the interaction of digital, sustainable, and relational factors. The empirical findings demonstrated that digital experience, personalisation, and brand trust played a dominant role in shaping perceived consumer value. The proposed model showed strong explanatory power ($R^2 = 0.62$), confirming its ability to capture the key determinants of consumer value. Among the examined factors, brand trust had the strongest influence ($\beta = 0.36$), highlighting its role as a central mechanism that transforms product attributes into perceived value, particularly in digital environments characterised by higher uncertainty. The study also confirmed the significant contribution of personalisation and digital experience, reflecting the growing importance of user-centred and data-driven approaches in marketing. At the same time, environmental sustainability, although less influential in direct terms, contributed to value formation through emotional and ethical dimensions and reinforced trust.

An important contribution of the study was the identification of a synergistic effect between personalisation and environmental sustainability, which increased perceived consumer value by approximately 18% compared to their individual effects. This finding emphasised the importance of integrated value propositions. The results also revealed differences across consumer segments, indicating that younger consumers were more sensitive to digital attributes, while older consumers placed greater emphasis on trust and reliability. This highlighted the need for differentiated marketing strategies. From a managerial perspective, the findings suggest that firms should adopt an integrated approach to value creation. In particular, companies should prioritise investments in digital experience (UX) to reduce transaction costs and improve usability, implement data-driven personalisation to enhance relevance and customer engagement, and develop trust-building mechanisms such as transparency, data protection, and consistent communication. In addition, sustainability initiatives should be integrated into personalised offerings rather than implemented as isolated attributes, as this significantly increases their effectiveness. The results indicate that the highest level of consumer value is achieved through the coordinated interaction of these factors rather than their separate implementation.

The theoretical contribution of the study lies in the development of an integrated model of consumer value formation that incorporates trust as a mediating variable and demonstrates the interdependence and synergistic effects of digital and sustainability-related determinants. This contributes to a more comprehensive understanding of value formation in digital environments and extends existing research by combining previously fragmented perspectives. Despite its contributions, the study has several limitations that open avenues for future research. First, the use of a convenience sample may limit the generalisability of the findings. Future studies could apply probabilistic sampling methods and include a larger and more diverse sample. Second, further research could explore cross-country differences in consumer value formation to identify cultural and institutional influences. Third, longitudinal studies would allow for the analysis of how consumer value evolves over time in response to digital transformation. Finally, future research could examine the role of emerging technologies, such as artificial intelligence and big data analytics, in enhancing personalisation and trust, as well as their interaction with sustainability initiatives.

ACKNOWLEDGEMENTS

None.

FUNDING

None.

CONFLICT OF INTEREST

None.

REFERENCES

[1] Ahmad, F., Mustafa, K., Hamid, S.A.R., Khawaja, K.F., Zada, S., Jamil, S., Qaisar, M.N., Vega-Muñoz, A., Contreras-Barraza, N., & Anwer, N. (2022). Online customer experience leads to loyalty via customer engagement: Moderating role of value co-creation. *Frontiers in Psychology*, 13, article number 897851. doi: 10.3389/fpsyg.2022.897851.

[2] American Psychological Association. (2020). *Publication manual of the American Psychological Association* (7th ed.). Washington: American Psychological Association. doi: 10.1037/0000165-000.

[3] Bleier, A., Harmeling, C.M., & Palmatier, R.W. (2019). Creating effective online customer experiences. *Journal of Marketing*, 83(2), 98-119. doi: 10.1177/0022242918809930.

[4] Bu, Y., Parkinson, J., & Thaichon, P. (2022). Influencer marketing: Homophily, customer value co-creation behaviour and purchase intention. *Journal of Retailing and Consumer Services*, 66, article number 102904. doi: 10.1016/j.jretconser.2021.102904.

[5] Dwivedi, Y.K., *et al*. (2021). Setting the future of digital and social media marketing research. *International Journal of Information Management*, 59, article number 102168. doi: 10.1016/j.ijinfomgt.2020.102168.

[6] Dwivedi, Y.K., *et al*. (2023). Opinion paper: "So what if ChatGPT wrote it?" Multidisciplinary perspectives on opportunities, challenges and implications of generative conversational AI. *International Journal of Information Management*, 71, article number 102642. doi: 10.1016/j.ijinfomgt.2023.102642.

[7] Enholm, I.M., Papagiannidis, E., Patrick Mikalef, P., & Krogstie, J. (2022). Artificial intelligence and business value: A literature review. *Information Systems Frontiers*, 24, 1709-1734. doi: 10.1007/s10796-021-10186-w.

[8] European Commission. (2019). *Ethics guidelines for trustworthy AI*. Brussels: European Commission. doi: 10.2759/346720.

[9] Feroz, A.K., Zo, H., & Chiravuri, A. (2021). Digital transformation and environmental sustainability: A review and research agenda. *Sustainability*, 13(3), article number 1530. doi: 10.3390/su13031530.

[10] Giacalone, D., & Jaeger, S.R. (2023). Consumer acceptance of novel sustainable food technologies: A multi-country survey. *Journal of Cleaner Production*, 408, article number 137119. doi: 10.1016/j.jclepro.2023.137119.

[11] Guandalini, I. (2022). Sustainability through digital transformation: A systematic literature review for research guidance. *Journal of Business Research*, 148, 456-471. doi: 10.1016/j.jbusres.2022.05.003.

[12] Hair, J.F., Hult, G.T.M., Ringle, C.M., Sarstedt, M., Danks, N.P., & Ray, S. (2022). *Partial least squares structural equation modeling (PLS-SEM) using R*. Cham: Springer. doi: 10.1007/978-3-030-80519-7.

[13] Harrigan, M., Feddema, K., Wang, S., Harrigan, P., & Diot, E. (2021). How trust leads to online purchase intention founded in perceived usefulness and peer communication. *Journal of Consumer Behaviour*, 20(5), 1297-1312. doi: 10.1002/cb.1936.

[14] Huang, M.-H., & Rust, R.T. (2021). Engaged to a robot? The role of AI in service. *Journal of Service Research*, 24(1), 30-41. doi: 10.1177/1094670520902266.

[15] Illiashenko, S., Shypulina, Yu., Illiashenko, N., & Raiko, D. (2022). Management of the innovative development potential of industrial enterprises in the digital economy. *Economic Herald of State Higher Educational Institution "Ukrainian State University of Chemical Technology"*, 2, 97-106. doi: 10.32434/2415-3974-2022-16-2-97-106.

[16] Molinillo, S., Aguilar-Illescas, R., Anaya-Sánchez, R., & Carvajal-Trujillo, E. (2022). The customer retail app experience: Implications for customer loyalty. *Journal of Retailing and Consumer Services*, 65, article number 102842. doi: 10.1016/j.jretconser.2021.102842.

[17] Oklander, M., Yashkina, O., Zlatova, I., Cicekli, I., & Letunovska, N. (2024). Digital marketing in the survival and growth strategies of small and medium-sized businesses during the war in Ukraine. *Marketing and Management of Innovations*, 15(1), 15-28. doi: 10.21272/mmi.2024.1-02.

[18] Qalati, S.A., Barbosa, B., & Deshwal, P. (2024). Consumer behavior and sustainable marketing development in online and offline settings. *Sustainability*, 16(7), article number 2829. doi: 10.3390/su16072829.

[19] Qalati, S.A., Vela, E.G., Li, W., Dakhan, S.A., Hong Thuy, T.T., & Merani, S.H. (2021). Effects of perceived service quality, website quality, and reputation on purchase intention: The mediating and moderating roles of trust and perceived risk in online shopping. *Cogent Business & Management*, 8(1), article number 1869363. doi: 10.1080/23311975.2020.1869363.

[20] Riva, F., Magrizos, S., Rizomyliotis, I., & Uddin, M.R. (2024). Beyond the hype: Deciphering brand trust amid sustainability skepticism. *Business Strategy and the Environment*, 33(7), 6491-6506. doi: 10.1002/bse.3829.

[21] Roggeveen, A.L., & Sethuraman, R. (2020). Customer-interfacing retail technologies in 2020 & beyond: An integrative framework and research directions. *Journal of Retailing*, 96(3), 299-309. doi: 10.1016/j.jretai.2020.08.001.

[22] Sarstedt, M., & Mooi, E. (2019). *A concise guide to market research: The process, data, and methods using IBM SPSS statistics* (3rd ed.). Berlin: Springer. doi: 10.1007/978-3-662-56707-4.

[23] The Declaration of Helsinki. (2024). Retrieved from https://www.wma.net/policies-post/wma-declaration-of-helsinki/.

[24] Verma, S., Sharma, R., Deb, S., & Maitra, D. (2021). Artificial intelligence in marketing: Systematic review and future research direction. *International Journal of Information Management Data Insights*, 1(1), article number 100002. doi: 10.1016/j.jjimei.2020.100002.

Наталя Бойко
Кандидат економічних наук, доцент
Харківського національного економічного університету
61166, просп. Науки, 9А, м. Харків, Україна
https://orcid.org/0000-0001-7292-5289

Формування споживчої цінності продукту в умовах цифровізації та сталого розвитку

Анотація. Актуальність цього дослідження зумовлена трансформацією формування споживчої цінності під впливом цифровізації економіки та зростанням значущості принципів сталого розвитку. Метою дослідження було визначення ключових детермінантів споживчої цінності та розроблення інтегрованої моделі їхньої взаємодії. Дослідження ґрунтувалося на опитуванні 210 респондентів віком 18-45 років, які регулярно здійснювали онлайн-покупки. Результати показали високі середні оцінки ключових змінних: цифровий досвід (4,25), сприймана споживча цінність (4,18), персоналізація (4,12), довіра до бренду (4,05) та екологічна сталість (3,89). Кореляційний аналіз виявив найсильніший зв'язок між довірою до бренду та споживчою цінністю ($r = 0{,}72$), далі – персоналізація ($r = 0{,}68$) і цифровий досвід ($r = 0{,}65$), що підтверджує критичну роль нематеріальних чинників. Регресійна модель продемонструвала високу пояснювальну здатність ($R^2 = 0{,}62$). Найбільший вплив на споживчу цінність мала довіра до бренду ($\beta = 0{,}36$, $p < 0{,}01$), за нею – персоналізація ($\beta = 0{,}31$, $p < 0{,}01$), цифровий досвід ($\beta = 0{,}28$, $p < 0{,}01$) та екологічна сталість ($\beta = 0{,}19$, $p < 0{,}05$). Крім того, комбінований ефект персоналізації та екологічної сталості підвищував сприйману цінність на 18 % порівняно з їхнім окремим впливом, що свідчить про значний синергійний ефект. Отримані результати надали емпіричні докази того, що споживча цінність є багатовимірною конструкцією, сформованою взаємодією цифрових і сталих чинників, де довіра виступає ключовою медіюючою змінною. Запропонована модель може бути використана для вдосконалення товарної політики, підвищення конкурентоспроможності та зміцнення довгострокових відносин із споживачами

Ключові слова: поведінка споживачів; товарна політика; клієнтський досвід; довіра до бренду; екологічна відповідальність; стратегії персоналізації; маркетингова аналітика

ECONOMICS OF DEVELOPMENT
International Economic Journal

Volume 25, No. 2
2026

Managing Editor:
N. Proskurnina

Signed to the print 19.05.2026
Format 60*84/8
Conventional Printed Sheet 9.5
Circulation 50 copies

Publisher: Simon Kuznets Kharkiv National University of Economics
61166, 1-A Inzhenerny Ln., Kharkiv, Ukraine
E-mail: info@ecdev.com.ua
https://ecdev.com.ua/en