The Impact of Artificial Intelligence on Customer Experience in E-Commerce Platforms: Evidence from Generation Z in an Emerging Market

KADRI Djamila, BEREKSI REGUIG Mehdi, LAREDJ MEDJAHED Safa*

[1] Business Management and Social Capital Laboratory, Abu Bekr Belkaid university Tlemcen (Algeria).
Djamila.kadri.chikh@gmail.com
[2] Business Management and Social Capital Laboratory, Abu Bekr Belkaid university Tlemcen (Algeria).
mehdibereksireguig@hotmail.com
[3] Laboratory of Evaluation of the Politics Economics of Algeria,Abu Bekr Belkaid university Tlemcen (Algeria).
safa.laredjmedjahed@univ-tlemcen.dz

Abstract. Artificial intelligence (AI) has become a key driver of digital transformation in e-commerce platforms, profoundly reshaping consumer–platform interactions. This study examines the impact of AI on customer experience within e-commerce platforms, with a specific focus on Generation Z e-consumers in an emerging market context. Generation Z represents a digitally native cohort characterized by intensive use of online platforms and heightened expectations regarding personalization, interactivity, and usability. Using a quantitative approach, data were collected from 190 Generation Z e-consumers through a structured questionnaire. Reliability and validity tests, followed by linear regression analyses, were conducted to test the research hypotheses.

Keywords: Artificial Intelligence; Customer Experience; Generation Z; E-commerce; Digital Transformation; Emerging Markets .First Section

1 Introduction

In increasingly competitive digital markets, differentiation no longer relies solely on functional attributes but on the quality of the online customer experience. Customer experience has thus become a central construct for understanding e-consumers' perceptions and engagement with e-commerce platforms.

This shift is particularly evident among Generation Z, a digitally native chort whose expectations are shaped by usability, interactivity, personalization, and immediacy.

At the same time, artificial intelligence (AI) has become a key component of digital platforms through tools such as personalized recommendation systems and conversational agents, aiming to enhance interaction quality and information relevance.

D. Agti et al. (eds.), *Proceedings of the International Conference on Artificial Intelligence Applications in Business Administration in MENA Region (ICAIABA 2026)*, Advances in Economics, Business and Management Research 393,
https://doi.org/10.2991/978-94-6239-711-8_20

However, despite its recognized potential, the role of AI in shaping customer experience especially among Generation Z in emerging contexts remains insufficiently explored.

In Algeria, where e-commerce adoption is growing alongside challenges related to trust and usability, examining the contribution of AI to customer experience is particularly relevant.

To what extent does artificial intelligence contribute to enhancing customer experience on e-commerce platforms, particularly from the perspective of Generation Z consumers?

This study aims to analyze the impact of AI on customer experience among Generation Z users. It focuses on how AI-based mechanisms, such as personalized recommendations and conversational agents, influence the overall quality of the online experience.

The research is grounded in experiential marketing approaches, viewing customer experience as the result of cognitive, emotional, and functional interactions, and assumes that AI acts as a significant lever for enhancing experiential value.

Building on theoretical approaches to customer experience and recent studies on the integration of artificial intelligence into e-commerce platforms, this study is based on the following hypotheses:

H1: Artificial intelligence has a positive and significant effect on customer experience **on e-commerce platforms.**

H1.1: AI-based personalization of recommendations has a positive and significant effect on customer experience.

H1.2: The accuracy and relevance of AI-generated recommendations have a positive and significant effect on customer experience.

H1.3: The interactivity of artificial intelligence systems, particularly conversational agents, has a positive and significant effect on customer experience.

In this research, artificial intelligence Is conceptualized as a multidimensional construct, while customer experience is considered a global variable reflecting the perceptions and interactions of Generation Z e-consumers.

2 Theoretical Framework

2.1 Customer Experience in Digital Environments

Customer experience is a central concept in digital marketing, referring to the set of cognitive, emotional, and relational responses resulting from interactions with a firm across multiple touch points. According to Meyer and Schwager [1], customer experience is the internal and subjective response generated through direct or indirect contact with an organization. In digital environments, it is mainly shaped by interface quality, interaction, and ease of use. In e-commerce, customer experience is multidimensional, combining functional aspects (usability, efficiency), affective responses (enjoyment, reassurance), and relational perceptions (trust, responsiveness), which together influence the over all evaluation of the platform [2] [3]

2.2 Characteristics of Customer Experience in E-Commerce

In e-commerce, customer experience is entirely mediated by digital technologies, making system quality and interface design key determinants of consumer percep-

tions. Evaluation depends not only on the offer itself but also on the quality of the interaction process. Research highlights perceived security, trust, ease of navigation, and responsiveness as major drivers of a positive online experience [4] [5], especially in contexts marked by higher uncertainty. Customer experience in e-commerce is therefore a cumulative process, where each interaction contributes to the overall evaluation of the platform [6]

2.3 Generation Z as Digital Consumers in E-Commerce

Generation Z, born between the mid-1990s and early 2010s, represents the first generation of true digital natives, shaped by constant connectivity and digital technologies [7] [8].In e-commerce, they are characterized by a strong preference for personalization, interactivity, and seamless digital experiences. They value intuitive interfaces, fast responses, and efficient systems, while showingowtolerance for complexity or delays [9].

This generation is also highly familiar with intelligent technologies such as recommendation systems and chat bots, making artificial intelligence a key factor in shaping their online experiences. Trust, security, and transparency remain essential, particularly in emerging markets[10] [11].Given these characteristics, Generation Z is a highly relevant segment for analyzing customer experience in AI-enabled e-commerce environments.

2.4 Artificial Intelligence in E-Commerce: Concept and Applications

Artificial intelligence refers to a set of computational techniques that enable systems to perform tasks traditionally associated with human intelligence, including learning, pattern recognition, prediction, and decision-making [12] .

In e-commerce, AI is primarily deployed through intelligent recommendation systems, predictive analytics and behavioral modeling, conversational agents and chat bots, and real-time personalization engines. These applications aim to enhance interaction efficiency, reduce information a lover load, and adapt platform content to individual consumer preferences [13].

2.5 Artificial Intelligence as an ExperientialEnabler

Artificial intelligence is increasingly viewed as an experiential enabler that transforms interactions between consumers and digital platforms by enhancing responsiveness, relevance, and personalization [14]

AI-driven recommendation systems facilitate decision-making by providing tailored suggestions and reducing cognitive effort [15] . Likewise, conversational agents ensure continuous and immediate support, improving interaction quality [16] .

From an experiential perspective, AI enhances customer experience by increasing content relevance, interaction fluidity, and user engagement throughout the customer journey [17].

2.6 Artificial Intelligence and the Co-Creation of Customer Experience

Contemporary marketing theories increasingly emphasize the active role of consumers in value creation processes. According to the service-dominant logic, value

emerges through interactions between firms and customers rather than being embedded solely in products or services ([17]

Artificial intelligence enhancesthisco-creation process by enabling real-time adaptation of digital environments to consumer behaviors and preferences. By learning from user interactions, AI systems personalize experiences dynamically, reinforcing perceptions of individual relevance and uniqueness [18]

Consequently, customer experience in AI-driven e-commerce contexts evolves from a standardized interaction into a continuously adjusted and co-constructed process, where technology facility ateseaningful engagement and anticipatory satisfaction.

3 Empirical Framework

3.1 Sample Description

The empirical study was conducted on a sample of 190 respondents, considered adequate for multivariate analyses such as factor analysis and regression. The sample consists exclusively of Generation Z e-consumers, in line with the study's focus on digitally native users of AI-enabled e-commerce platforms.

The sample is predominantly female (61.6%), compared to 38.4% male respondents. This distribution is consistent with prior e-commerce studies indicating a strong involvement of femaleusers in online interactions and digital customer experiences.

The majority of respondentsbelong to the 1995–2000 age group (74.2%), followed by thosebornbetween 2000–2010 (25.8%). This confirms a strongrepresentation of Generation Z.

The sampleisthereforehomogeneous and alignedwith the study objectives, giventhisgeneration's high familiaritywith digital and AI-drivenenvironments.

3.2 Reliability, Validity, and Adequacy of Measurement Scales

The results reported on SPSS Statistics 27 output indicate a globally satisfactory psychometric quality of the measurement instruments used in this study (see table 1).

Table 1: Reliability, Validity, and Model Adequacy Tests

Variable	Items	Crobach's α	KMO	Bartlett (Sig.)	Explaned Variance (%)	F	Sig.
Perceived Security and Trust (PST)	3	0.769	0.668	0.000	61.4	5.005	0.007
Social Interaction (SI)	3	0.759	0.657	0.000	63.2	7.243	0.001
Ergonomics and User Experience (EUX)	3	0.671	0.640	0.000	59.8	3.593	0.028
Customer Experience (CX)	9	0.792	0.827	0.000	69.5	38.356	0.000
Interactivity and Engagement (IE)	3	0.824	0.680	0.000	68.9	22.543	0.000
All items	12	0.806	0.786	0.000	72.4	62.144	0.000

Source: prepared by author based on SPSS Statistics 27 output

First, Cronbach's alpha coefficients range from 0.671 to 0.824, exceeding the minimum threshold of 0.60 commonly recommended in social sciences. The overall alpha value of 0.806 confirms a good internal consistency, attesting to the reliability of the retained items. Second, Kaiser–Meyer–Olkin (KMO) indices, varying between 0.640 and 0.827, indicate an adequate sampling adequacy for conducting factor analyses. This adequacy is further supported by the Bartlett's test of sphericity, which is statistically significant in all cases ($p < 0.05$), confirming the existence of meaning ful correlations among variables. Moreover, the explained variance percentages, ranging from 59.8% to 72.4%, reflect a strong explanatory capacity of the extracted factors, in line with the theoretical structuring of the studied constructs. Finally, the significant F-values confirm the internal homogeneity of the dimensions and the relevance of the item groupings.

Taken together, these results demonstrate the reliability, validity, and statistical robustness of the measurement scales, fully justifying the use of regression analyses to test the research hypotheses.

3.3 Hypothesis Testing Using Linear Regression Dependent Variable :Interactivity and Engagement (IE)

Following the validation of the reliability and adequacy of the measurement scales, linear regression analyses were conducted to empirically test the research hypotheses. These analyses aim to examine the extent to which the different dimensions associated with artificial intelligence contribute to enhancing inter activity and engagement, which constitute a central component of customer experience in AI-enabled e-commerce platforms, particularly among Generation Z e-consumers.

- **Effect of Perceived Security and Trust on Interactivity and Engagement (H1.1)**

Linear regression analyses tested hypotheses after validating scales, examining AI dimensions' impact on interactivity/engagementa key customer experience component for Generation Z in AI e-commerce platforms.

Effect of Perceived Security/Trust (H1.1)

Security/trust drive online behavior in risky digital settings, shaping interaction willingness in AI platforms. H1.1 tests their effect on IE.

Table 2 : Simple Linear Regression Results: Effect of Perceived Security and Trust on Interactivity and Engagement

Model Summary[b]						
Model	**R**	**R^2**	**Adjuted R^2**	**Std. Error of the Estimatete**		
1	**,204[a]**	**,042**	**,037**	**3,92334**		
Coefficients[a]						
Model			**Unstandardized**	**Standardized**	**t**	**Si**

	Coefficients		Coefficients		g.
	B	Std.Error	B		
(Constant)	9,734	1,343		7,246	,000
Perceived Security and Trust(PST)	,215	,075	,204	2,857	,005

a. Dependent Variable: Interactivity and Engagement (IE)

Source: prepared by author based on SPSS Statistics 27 output

The results reported on SPSS 27 simple regression showed positive, significant relationship ($\beta = 0.204$; $R^2 = 0.042$; $F = 8.162$, $p = 0.005$; $B = 0.215$, $p = 0.005$). A one-unit security/trust increase raises IE by 0.215 units, acting as enabling conditions for Gen Z's confident engagement despite digital familiarity and privacy sensitivity.Thus,**H1.1 is supported**.(see table 2)

- **Effect of Social Interaction on Interactivity and Engagement (H1.2)**

Social interaction is key to customer experience in AI-driven e-commerce, where intelligent systems mediate communication, feedback, and social presence. Interactive tools enhance user involvement and sustained interaction. H1.2 tests its effect on IE.

Table 3: Simple Linear Regression Results: Effect of Social Interaction on Interactivity and Engagement Interactivity and Engagement

Model Summaryb				
Model	R	R^2	AdjustedR^2	Std. Error of the Estimatete
1	,210a	,044	,039	3,91841

Coefficientsa					
Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std.Error	B		
(Constant)	10,594	1,023		10,360	,000
Social Interaction (SI)	,208	,071	,210	2,942	,004

a. Dependent Variable: Interactivity and Engagement (IE)

Source: prepared by author based on SPSS Statistics 27 output

The results reported on SPSS 27 simple regression showed positive, significant relationship ($\beta = 0.210$; $R^2 = 0.044$; $F = 8.657$, $p = 0.004$; $B = 0.208$, $p = 0.004$). A one-unit social interaction increase raises IE by 0.208 units, highlighting socially enriched interactions' importance. For Gen Z valuing connectivity and digital social experiences, it boosts engagement quality and interaction willingness. Therefore, **sub-hypothesis H1.2 is supported**.(see table 3)

- **Effect of Ergonomics and User Experience (EUX)on Interactivity and Engagement (H1.3) Interactivity and Engagement**

Ergonomics and user experience are core determinants of customer interaction in AI-enabled e-commerce platforms, where system transparency is essential. Interface

clarity, navigation ease, information accessibility, and over all usability significantly influence sustained engagement. H1.3 tests their effect on IE.

Table 4: Simple Linear Regression Results: Effect of Ergonomics and User Experience on Interactivity and Engagement

Model Summary[b]

Model	R	R^2	AdjustedR^2	Std. Error of the Estimatete
1	,313[a]	,098	,093	3,80559

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std.Error	β		
(Constant)	6,611	1,543		4,283	0
Ergonomics and User Experience (EUX) (EUX)	,408	,090	,313	4,527	, 005

a. DependentVariable:Interactivity and Engagement (IE)

Source: prepared by author based on SPSS Statistics 27 output

The results reported on SPSS 27 simple regression demonstrated strong, positive, significant relationship (β = 0.313 the strongest effect; R^2 = 0.098; B = 0.408, p = 0.005; t = 4.527). A one-unit EUX increase raises IE by 0.408 units. Well-designed interfaces and intuitive navigation drive engagement, especially for Gen Z'slowtolerance of digital friction.There fore, **sub-hypothesis H1.3 is strongly supported**.(see table 4)

- **Multiple Regression Model: Joint Effects of AI Dimensions on Inter activity and Engagement**

Multiple linear regression assessed combined effects of perceived security/trust (PST), social interaction (SI), and ergonomics/user experience (EUX) on interactivity/engagement.

SPSS 27 results show statistical significance (R^2 = 0.113; adjusted R^2 = 0.098), with the three dimensions jointly explaining 11.3% of IE variance.

Only EUX remains significant (β = 0.251, p = 0.002), confirming its dominant role. PST (β = 0.058, p = 0.464) and SI (β = 0.106, p = 0.157) lose significance when cobined, overshadowed by ergonomic quality.

Ease of use, interface clarity, and navigation drive engagement most for Gen Z'spreference for fluid digital experiences.

- **Global Effect of Customer Experience on Interactivity and Engagement (H1)**

Multiple linear regression assessed combined effects of perceived security/trust (PST), social interaction (SI), and ergonomics/user experience (EUX) on interactivity/engagement.

Table 5: Multiple Linear Regression Results for Interactivity and Engagement

Coefficients[a]					
Modèle	**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**
	B	**Std.Error**	**β**		
(Constante)	**5,456**	**1,709**		**3,193**	**,002**
PTS	**,061**	**,083**	**,058**	**,733**	**,464**
SI	**,106**	**,074**	**,106**	**1,421**	**,157**
EUX	**,327**	**,104**	**,251**	**3,146**	**,002**

a. Dependent Variable :Interactivity and Engagement (IE)

Source: prepared by author based on SPSS Statistics 27 output

SPSS 27 results show statistical significance ($R^2 = 0.113$; adjusted $R^2 = 0.098$), with three dimensions jointly explaining 11.3% of IE variance. Only EUX remains significant ($\beta = 0.251$, $p = 0.002$), confirming its dominant role over PST and SI in Gen Z engagement.

Customer experience holistically predicts IE ($\beta = 0.312$, $p < 0.001$). Thus, main hypothesis H1 is supported.

These empirical findings provide comprehensive evidence supporting the research hypotheses and highlight the differential contributions of AI dimensions to customer engagement among Generation Z e-consumers.(see table 5)

4 Discussion of Results

This study examined AI's impact on customer experience in e-commerce platforms, focusing on Generation Z e-consumers in emerging markets. Empirical findings offer key theoretical and managerial insights into AI-driven customer experience.

Simple regression analyses confirm all AI dimensions perceived security/trust, social interaction, and ergonomics/user experience positively and significantly affect interactivity/engagement individually, consistent with prior research on AI'sexperiential role [18] [19].

Perceived security/trust significantly enhances engagement, validating trust-building mechanisms' critical role in online environments, especially emerging markets with risk/data protection concerns [4] [9]. For Generation Z, trust enables confident AI system interaction.

Social interaction positively influences interactivity/engagement, underscoring communication, responsiveness, and social presence importance in AI platforms aligning with digitally native consumers' preference for interactive experiences [8]

Ergonomics/user experience shows the strongest individual effect, highlighting interface quality, ease of use, and navigational fluidity'scentrality for Generation Z engagement, supporting usability research [3] [15]

Multiple regressioneveals only ergonomics/user experience remains significant when combined, indicating Generation Z prioritizes frictionless experiences over isolated features despite individual dimension importance.

Although individual AI dimensions vary in combined influence, customer experience's global effect remains significant, showing Generation Z responds to holistic experiential integration of usability, trust, and interaction rather than isolated technologies.

The global model confirms customer experience as higher-order construct—positively affects interactivity/engagement, reinforcing AI's contribution through digital journey coherence rather than specific functionalities

5 Conclusion

This study examined AI's impact on customer experience in e-commerce platforms among Generation Z consumers in an emerging market. Using quantitative data from 190 Generation Z e-consumers, it provides empirical evidence supporting AI's experiential role in digital commerce.

Findings show AI positively influences customer experience through perceived security/trust, social interaction, and ergonomics/user experience, with ergonomics playing the dominant role in shaping inter activity/engagement for Generation Z' s usability, immediacy, and simplicity expectations.

Theoretically, this positions AI as an experiential enabler, extending research by emphasizing holistic customer experience in AI-driven environments and providing emerging market evidence underrepresented in existing studies.

Managerially, e-commerce platforms targeting Generation Z should prioritize ergonomic design, intuitive interfaces, and seamless interaction flows when integrating AI technologies, as trust and social interaction effectiveness depends on overall user experience quality.

Study limitations include Generation Z-only sample and single emerging marketcontext, limiting generaliz ability. Future research could compare generational cohorts, explore longitudinal AI effects, or integrate emotional engagement and personalization dimensions.

AI represents a strategic lever enhancing customer experience in e-commerce, particularly aligning with GenerationZ's digital behaviors and AI-enabled experiential expectations.

References

[1] C. Meyer and A. Schwager, "Understanding customer experience," Harvard Business Review, vol. 85, no. 2, pp. 116–126, 2007.

[2] B. Schmitt, "Experiential marketing," Journal of Marketing Management, vol. 15, no. 1–3, pp. 53–67, 1999.

[3] K. N. Lemon and P. C. Verhoef, "Understanding customer experience throughout the customer journey," Journal of Marketing, vol. 80, no. 6, pp. 69–96, 2016.

[4] D. Gefen, E. Karahanna, and D. W. Straub, "Trust and TAM in online shopping: An integrated model," MIS Quarterly, vol. 27, no. 1, pp. 51–90, 2003.

[5] P. Klaus and S. Maklan, "Towards a better measure of customer experience," International Journal of Market Research, vol. 55, no. 2, pp. 227–246, 2013.

[6] A. Turner, "Generation Z: Technology and social interest," The Journal of Individual Psychology, vol. 71, no. 2, pp. 103–113, 2015.

[7] D. Stillman and J. Stillman, Gen Z @ Work: How the Next Generation Is Transforming the Workplace. Harper Business, 2018.

[8] C.-V. Priporas, N. Stylos, and A. K. Fotiadis, "Generation Z consumers' expectations of interactions in smart retailing: A future agenda," Computers in Human Behavior, vol. 77, pp. 374–381, 2017.

[9] P. A. Pavlou, "Consumer acceptance of electronic commerce: Integrating trust and risk with the technology acceptance model," International Journal of Electronic Commerce, vol. 7, no. 3, pp. 101–134, 2003.
[10] S. Russell and P. Norvig, Artificial Intelligence: A Modern Approach, 3rd ed. Pearson Education, 2016
[11] T. H. Davenport, A. Guha, D. Grewal, and T. Bressgott, "How artificial intelligence will change the future of marketing," Journal of the Academy of Marketing Science, vol. 48, no. 1, pp. 24–42, 2020.
[12] M.-H. Huang and R. T. Rust, "Artificial intelligence in service," Journal of Service Research, vol. 21, no. 2, pp. 155–172, 2018.
[13] B. Xiao and I. Benbasat, "E-commerce product recommendation agents: Use, characteristics, and impact," MIS Quarterly, vol. 31, no. 1, pp. 137–209, 2007.
[14] U. Gnewuch, S. Morana, and A. Maedche, "Towards designing cooperative and social conversational agents for customer service," in Proc. Int. Conf. Information Systems (ICIS), 2017.
[15] P. C. Verhoef et al., "Digital transformation: A multidisciplinary reflection and research agenda," Journal of Business Research, vol. 122, pp. 889–901, 2021.
[16] S. L. Vargo and R. F. Lusch, "Service-dominant logic: Continuing the evolution," Journal of the Academy of Marketing Science, vol. 36, no. 1, pp. 1–10, 2008.
[17] R. Kumaran, R. Venkatesh, and S. Raghavan, "AI-driven personalization and customer experience in e-commerce platforms," Electronic Retailing Applications, vol. 12, no. 1, pp. 45–60, 2024.
[18] Y. Chen and C. Prentice, "Artificial intelligence and customer experience: An integrative framework of AI-enabled customer journey," Journal of Business Research, vol. 174, p. 114512, 2024.
[19] C. C. Ifekanandu, C. C. Ibekwe, and J. U. J. Onwumere, "Artificial intelligence and customer experience in digital retailing," Journal of Retailing and Consumer Services, vol. 71, p. 103209, 2023.
Gggg