International Journal for Multidisciplinary Research (IJFMR)
E-ISSN: 2582-2160 ● Website: www.ijfmr.com ● Email: editor@ijfmr.com

Consumer Acceptance of Ai Generated Content in E Commerce

Ms. Nikita Kumari[1], Dr. Karan Gupta[2]

[1]PhD Research Scholar, Department of Management Studies, Sardar Patel University, Mandi Himachal Pradesh
[2]Associate Professor, Department of Management Studies, Sardar Patel University, Mandi Himachal Pradesh

Abstract
Because AI-generated content is changing how companies make, personalise, and share data, it is having a profound impact on online shopping.Using AI in content creation has several benefits. Better personalisation, cost efficiency, scalability, and consumer engagement. AI may use consumer data and preference research to present, market, and provide related material to each shopper, improving associations and conversion rates. However, implementing AI-generated content presents various obstacles, including a lack of emotional intelligence and originality in AI output, data privacy issues, over-reliance on automation, and latent biases in AI algorithms. All these provide hurdles that must be overcome to guarantee AI-generated content meets consumer and brand expectations. This article examines trust, perceived utility, and quality as other elements affecting e-commerce AI-generated content adoption. The research examines theoretical frameworks for consumer behaviour and acceptance, including consumer perception and technology preparedness, which affect AI content uptake. The article will discuss the operational efficacy and SEO benefits of AI-generated content, including ethical concerns and governance requirements. The study's conclusions include how organisations could improve AI management, incorporate ethics, and execute them. The report suggests that AI innovation and human understanding should be combined to generate personal, engaging, and trustworthy content to meet today's customers' evolving needs.

Keywords: AI-generated content, e-commerce, consumer acceptance, personalization, artificial intelligence, consumer behavior, data privacy, SEO, trust, perceived usefulness, technological readiness, consumer perceptions.

INTRODUCTION

With digital transformation, the era of digital transformation has catapulted e-commerce as a vibrant and essential aspect of the world economy. Proliferation of online shopping platforms and dependency on technology in enhancing consumer experience have catapulted artificial intelligence to be the force of transformation in e-commerce. Not a few have sought to attract notice for its purposes in automating, personalizing, and making optimal the contact of businesses to consumers. Indeed, this is the chapter wherein the acceptance Utilising artificial intelligence-generated material in online retail and the subsequent behavioural effects, business, and the future would be discussed. This is a form of AI-generated content, including texts, images, videos, and other digital content created by machine learning algorithms and NLP. It is built to simulate human creativity and intelligence in producing content-from

personalizing product recommendations and customer service responses to developing promotional campaigns. This can be done via an AI system, say generating engaging and convincing product descriptions; even composing customer-specific email campaigns or coming up with visually appealing advertisements(Shevchyk, 2024). Content in e-commerce-not only is it helping it become efficient but is also giving a newfound life to old demarcations of marketing and consumer interaction.

Artificial intelligence (AI) produced content is highly relevant since it might provide solutions to several major problems encountered by e-commerce companies. In a competitive market where consumers are looking for highly personalized and seamless experiences, AI-generated content can be the key to individual preferences at scale. Artificial Intelligence algorithms scan thousands of consumer data and generate tailor-made content based on different tastes and preferences, which can foster engagement and increase conversion rates, as well as customer loyalty. For instance, Amazon and Alibaba are using artificial intelligence in proposing products for purchasing based on a history of how people browse, how they purchase and demographic details which make for a very intuitive experience while shopping.

There is a lot of complexity involved in using AI-generated content in online commerce. Consumer acceptance remains one of the primary challenges. Despite its numerous capabilities, AI does not find consumer trustworthiness or authenticity with its content. A survey conducted indicates that while some consumers are impressed with the convenience and personalization brought by AI, others detest it because it seems impersonal and full of bias. This includes a chatbot that answers a customer's question very efficiently but is probably going to come across as less empathetic than a human representative(Gu et al., 2024). AI-based reviews or ratings that are found to be fake or biased reduce credibility and trust.

Then the ethical concerns and transparency make consumers uncomfortable to accept it. Consumers increasingly get concerned over the private and security issues associated with AI impacts and even fairness. The issue of content developed by AI on personal data or information raises more concern on data misuse and ambiguity of offering some kind of clarity regarding it. Biased algorithms embedded inside AI also produce non-represented or misleading content - an alienator of some particular consumer groups. For example, an AI system trained on biased datasets may make recommendations that, due to the bias in the dataset, inadvertently end up excluding minority groups, which may take a perception of unfairness.

Consumer acceptance depends on the understanding of how the psychological and behavioral factors connect with their beliefs about AI-generated content. A key determinant is trust, authenticity, and relevance(Arora et al., 2023). Generally, consumers find more acceptable content produced by an AI if they see it reflect their preferences, value, or feel authentic, or even if it came from a trustworthy source. Inappropriately generic, irrelevant, or misleading content can give rise to skepticism and resistance. Emotional connections in consumers and in contents are also noteworthy in the context. For instance, a personalized greeting by an AI chatbot is a very positive entity, while an executed, overly generic response may operate with negative impact.

Scope of the study

This study covers customer acceptability of AI-generated content in all e-commerce situations, including product suggestions, chatbots, virtual assistants, and promotion-related information. The study examines how personalisation, efficiency, and emotional involvement affect customer attitudes towards AI-generated outputs. The data contains customer demographics from various countries and global e-commerce platforms. This includes theoretical models like TAM and UTAUT that describe acceptance

mechanism operations. This study will use case studies and actual data to provide suggestions to businesses, developers, and legislators. The study's conclusions would benefit online businesses that want to increase customer engagement, fight backlash, and maximise AI-based technologies' potential in digital shopping. The rest of this chapter will explore AI-generated content and its applications in e-commerce, as well as its technology. The sections next examine consumer acceptance factors using TAM and UTAUT theoretical frameworks. The chapter will use empirical facts and real-life examples to show how organisations may negotiate customer acceptance and use AI-generated content to stay ahead in e-commerce.

Understanding AI-Generated Content in E-Commerce

Media created by AI systems, including text, images, videos, and audio, are together known as AI-generated content. These advancements in the e-commerce space have changed the way businesses converse with consumers, promoting efficiency, personalization, and scalability(Shevchyk, 2024). From product descriptions to chatbot interaction and personalized recommendation, AI-generated content has become the new online retail landscape-both an opportunity and a challenge.

The primary technologies that power AI-generated content are ML, NLP, and GANs.These systems consume vast amounts of data to find patterns and to replicate human creativity and problem-solving abilities. NLP models such as ChatGPT can therefore produce coherent and human-like text for product descriptions, email campaigns, and even customer service while GANs create realistic images of products or promotional visuals.

AI-generated content plays several critical roles in e-commerce. The most prominent application is personalization. They recommend products by analyzing browsing and purchasing history of a particular consumer(Arora et al., 2023). Platforms like Amazon and Netflix have mastered that way, so it really drives consumer engagement and sales. Similarly, AI-generated product descriptions provide relevant messaging to specific audience segments. For example, descriptions highlighting sustainable features cater to environmentally conscious shoppers, enhancing the relevance and appeal of the content.

Another area where AI-generated content excels is in customer service automation(Mierkhan & Åkesson, 2024). When customers ask enquiries, chatbots and virtual assistants powered by AI can answer them instantly. This helps the company save operational costs while delivering a seamless shopping experience. Also, AI is widely used for marketing content like personalized email campaigns and social media posts, through which businesses are able to reach their audience much better.

However, the challenges remain. The biggest problem is the question of authenticity. Even though the AI-generated content is efficient, some consumers will find it less authentic or close to the heart than human-made content. Other ethical issues involve biases in the AI models and transparency in using data. More importantly, there are creative constraints, meaning AI may not replicate the subtle depth and originality of human creatives(Chodak, 2024).

Understanding AI-generated content is important for businesses that want to stay ahead in the fast-changing e-commerce landscape. Companies can create engaging, meaningful interactions that drive growth, innovation, and customer loyalty by leveraging its strengths while addressing its limitations.

Theoretical Frameworks on Consumer Acceptance

Several theoretical frameworks may be used to analyse new technology adoption, such as AI-generated e-commerce content. These show how AI attitudes and decisions affect customer behaviour. These

models can help organisations understand how customers see AI and develop tactics to make it more acceptable. Major theoretical frameworks for consumer acceptance research include:

Technology Acceptance Model (TAM):

When Davis first started using computers in 1989 Using this approach, we may try to understand how receptive customers are to new technology. If a technology is both useful and simple to use, then its rate of adoption will be high, says TAM. The likelihood of adopting AI-generated material that enhances the purchasing or customer service experience increases. Chatbots and product recommendations for e-commerce should be user-friendly. TAM suggests that a technology's user-friendliness and utility directly affect consumer acceptance, making it a powerful tool for AI-Generated Content(Jokar et al., 2017).

Unified Theory of Acceptance and Use of Technology (UTAUT):

The most complete model that identifies four fundamental technology adoption drivers is Venkatesh et al. (2003)'s Unified Theory of Acceptance and Use of Technology. Consumers' responses to material created by artificial intelligence are impacted by social influence, expectations for performance, expectations for effort, as well as enabling variables such as resources, support, and infrastructure. When evaluating the acceptability of AI technology, the model takes into account factors such as gender, age, experience, and extent to which usage is voluntary. UTAUT gives a deep understanding of technology adoption factors(Sarfaraz, 2017).

Innovation Diffusion Theory (IDT):

To explain how new ideas and technologies spread, Rogers created Innovation Diffusion Theory (IDT) in 1962. Consumer acceptance of AI-generated content may depend on relative utility, compatibility, complexity, trialability, and observability. If AI-generated material is better than human-driven content or solutions, people will adopt it. When AI-generated content aligns with customers' beliefs, wants, and life experiences, it increases the likelihood that they will accept it. However, complexity reduces adoption, and if the AI interaction is simplified and intuitive, acceptance increases. When consumers can test AI technologies with little commitment, adoption increases. And if other consumers are visibly benefitting from AI-generated content, then adoption increases as well. IDT explains why AI-generated content can easily be accepted on the basis of perceived advantages and ease of use along with compatibility with consumer behaviors and values (Yuen et al., 2021).

Consumer Perception and Behavior Toward AI-Generated Content

Companies are capitalising on how customers feel and act towards AI-generated content in online stores by using this technology. Considerations including the material's usefulness, credibility, and appropriateness impact how consumers see AI-generated content. The most important factor in consumer impression is valuable and personalised information. AI-driven suggestions based on a consumer's browsing history, buying behaviours, or preferences are frequently positively welcomed since they are more personalised and relevant (Ananthakrishnan & Arunachalam, 2022).However, in the case of AI-generated content, consumer perception can become extremely negative when that content is overly intrusive or irrelevant. For example, over-personalization or recommending the wrong product can give people a feeling that they are under surveillance or manipulation, creating a sense of unease or distrust. Consumer confidence might wane because consumers might think the AI fails to predict the trends correctly or give incorrect suggestions. Consumer acceptance and consumption will decrease over such contents when consumers' suspicion about AI and the ability to work transparently about their own

data are established.

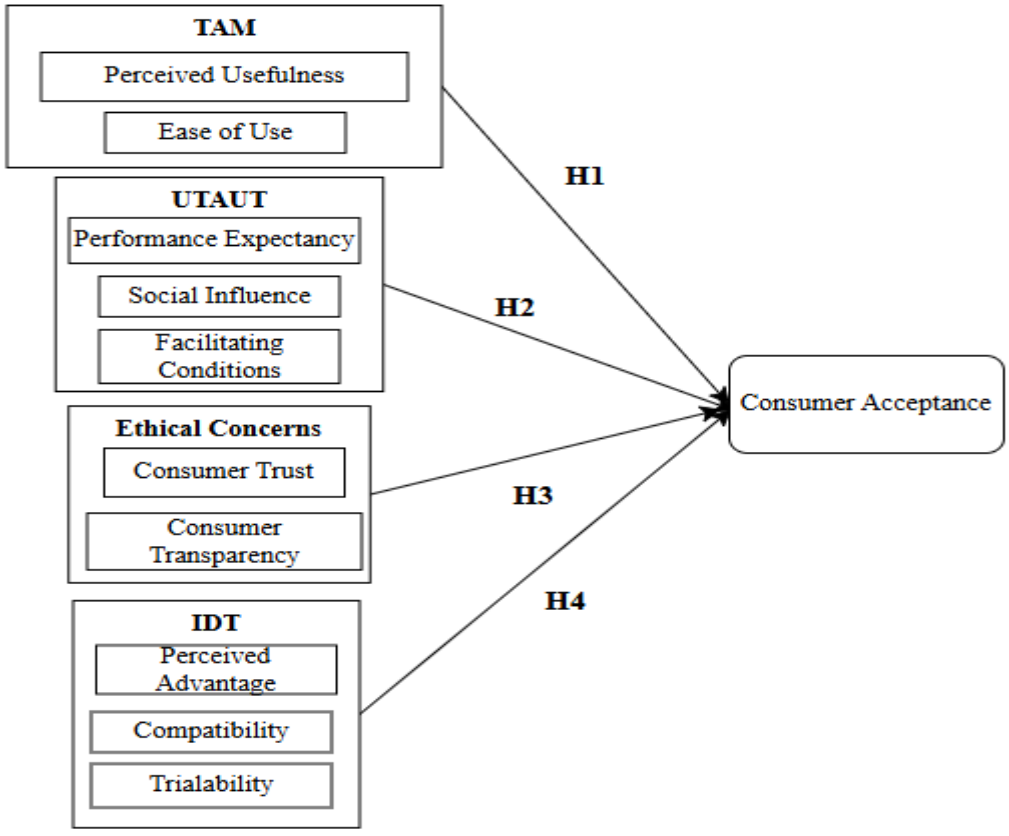
One important determinant of consumer behavior toward AI-created content is the degree of trust the consumer can offer to it. Customers' faith in the platform and AI system determines how open they are to AI-driven content and how active they are with it. Consumers are more likely to trust AI-generated content when they believe it is unbiased, accurate, and based on reliable data(Ratta et al., 2024). All such factors influence credibility, like transparencies in the procedures, wherein they must disclose data sources used by an AI algorithm for content generation or clarify how customer data is treated.

Social factor also contributes towards consumer behavior over AI-generated contents. The social influence theory postulates that consumers' perceptions of AI depend on what they believe their counterparts or the mainstream society think about it. Positive reviews or word-of-mouth recommendations or benefits derived from someone else who uses some AI-powered service create social proof, and eventually, others join in. By contrast, societal perceptions that focus on negative fears, such as privacy or more ethical concerns about using AI, produce resistance to adapting to AI-related technologies.

Methodology

This study analyses perceived utility, simplicity of use, trust, transparency, and compatibility with buying patterns to determine customer acceptability about online shopping material produced by artificial intelligence. To characterise how customers feel about and plan to act upon AI-generated information, we use the acronyms TAM, UTAUT, and IDT.

Conceptual Framework



Research Objectives

The key objectives of this study include:

- To investigate how perceived usefulness and ease of use would influence consumer acceptance of AI-generated content in e-commerce.
- To establish the role that performance expectancy, social influence, and facilitating conditions play in influencing consumer adoption.
- To identify how trust and transparency influence the acceptance of AI-generated content by consumers.
- To find out the effect of perceived advantage, compatibility, and ease of trial on AI-generated content adoption.
- To give actionable insights to businesses on how to optimize AI-generated content for better consumer engagement and trust.

Sample Size Calculation

To find the right sample size for large populations, researchers often use Cochran's method:

$$n = Z^2 \cdot p \cdot (1-p) / e^2$$

n = Sample size

Z = Z-score (1.96 for 95% confidence level)

p = Estimated proportion of the population (0.5, assuming maximum variability)

e = Margin of error (0.05)

$n = 384.16 \approx 384$

Therefore, the study chooses 384 respondents to ensure statistical reliability.

Sampling Techniques

To make sure that online shoppers are represented fairly, a random sample approach is employed. The target demographic includes users who have interacted with AI-generated material on online marketplaces. To provide a complete picture of customer sentiment, In order to provide a diverse sample, Age, gender, education level, and buying habits are some of the demographic variables included in the research.

Data Analysis Techniques

The data is examined using SPSS to ascertain whether or not e-commerce customers are satisfied with AI-generated content. Testing hypotheses with statistical methods ensures reliability and validity. In the first stage, age, gender, educational status, and buying behaviour are summarised to understand sample distribution and customer responses to AI-generated content. The dataset is summarised using the following statistical measures: frequency, percentage distribution, standard deviation, and mean. In order to evaluate the survey apparatus The reliability of each component is assessed by calculating Cronbach's Alpha. The Cronbach's Alpha test assesses questionnaire item internal consistency to measure desired variables. Good reliability and data analysis are possible when Cronbach's Alpha is over 0.7. Consumer impressions of AI-generated content are analysed using factor analysis. Factor analysis divides survey questions into components that show customers' adoption of AI in e-commerce. Principal component analysis with varimax rotation finds important elements that simplify data interpretation.

Multiple linear regression analyses independent and dependent variables. The variables perceived utility,

trust, transparency, social impact, and compatibility affect consumer adoption of AI-generated material, according to this statistical method. Regression analysis allows one to evaluate the direction and intensity of these connections. Thus, the most important customer behaviour predictors may be determined.

Results and Conclusion

This study will provide light on e-commerce consumers' adoption of AI-generated content. These include perceived usefulness, convenience of use, trust, transparency, and shopping compatibility. SPSS-based statistical study would show how these factors affect customer attitudes and behaviour towards AI-driven content. To thoroughly examine data, the chapter analyses descriptive statistics, reliability analysis, factor analysis, and regression modelling. Demographic study shows sample age, gender, education, and internet buying frequency. Reliability study verifies the survey instrument's internal consistency and findings' trustworthiness. Factor analysis determines customers' opinions, categorising the most relevant factors into AI-generated content adoption. Regression analysis also determines if perceived utility, social influence, and transparency affect customer acceptance of AI- generated material. This chapter presents these data methodically in order to prove the theories and verify the assumptions. The findings suggest that e-commerce enterprises, AI developers, and governments should emphasise trust, openness, and personalisation in AI-generated content to increase customer involvement.

Demographic Information

Gender Distribution

Gender		
	Frequency	Percent
Male	184	47.9
Female	200	52.1
Total	384	100.0

The gender distribution of the sample shows that 52.1% or 200 participants are females, and 47.9% or 184 participants are males. This is a balanced distribution toward females.

Age Distribution

Age		
	Frequency	Percent
18 - 27 Years	92	24.0
28 - 37 Years	105	27.3
38 - 47 Years	104	27.1
Above 47 Years	83	21.6
Total	384	100.0

The age group distribution is mainly 27.3% (105 participants) in the 28 - 37 years and 27.1% in the 38 - 47 years category with 104 participants. The 18 - 27 years category makes up 24.0% (92 participants), and Above 47 years represents 21.6% of participants, with 83 respondents. This is a relatively young and

middle-aged sample, typical for an e-commerce study.

Education Level

Education		
	Frequency	Percent
High School or below	126	32.8
Graduate	117	30.5
Post Graduate	141	36.7
Total	384	100.0

With regards to education, the most prominent is post graduate participants who 36.7% amount to 141 participants; High School or below has 32.8% who amount to 126 participants while graduates account for 30.5% being 117 participants. This, therefore means that many respondents have gone to college while a big number of participants only managed to graduate with a high school certificate.

Occupation

Occupation		
	Frequency	Percent
Student	100	26.0
Job Less	110	28.6
Job Holder	80	20.8
Business	94	24.5
Total	384	100.0

The Job Less category dominates with 28.6% (110 participants), followed by Student (26.0%, 100 participants). Business represents 24.5% (94 participants), and Job Holder makes up 20.8% (80 participants).

Frequency of Online Shopping

How frequently do you shop online		
	Frequency	Percent
Rarely (less than once a month)	104	27.1
Occasionally (1-3 times a month)	92	24.0
Regularly (once a week)	96	25.0
Frequently (multiple times a week)	92	24.0
Total	384	100.0

With 27.1% (104 participants) saying they seldom purchase online (less than once a month), the second most common response was "occasionally" (1-3 times a month), with 24.0% (92 participants) saying the same. At 24.0%, 92 people fall into the "Regularly" category, while 25.0%, 96 participants, fall into the "Frequently" category.

These demographic details would help in the understanding of the sample and further give insight into consumer preferences, based on several factors like age, education, and online shopping habits.

Hypothesis Testing

H1: Perceived usefulness and ease of use positively influence consumer acceptance of AI-generated content in e-commerce.

Model Summary				
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
1	.903[a]	.816	.815	.34157
a. Predictors: (Constant), Ease of Use, Perceived Usefulness				

With an R-Squared value of 0.816, the model successfully captures the inclination of 81.6% of internet users to accept AI-generated material. The model becomes more robust as a result, given that the number of predictors has a small influence (Adjusted R Squared Score: 0.815). This model has promising prediction abilities, with an average discrepancy of 0.34157 between observed and anticipated values.

ANOVA[a]						
Model		**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
1	**Regression**	**196.563**	2	98.281	842.363	.000[b]
	Residual	**44.453**	381	.117		
	Total	**241.015**	383			
a. Dependent Variable: Consumer Acceptance						
b. Predictors: (Constant), Ease of Use, Perceived Usefulness						

The ANOVA findings showed that customer acceptability of AI-generated content in the e-commerce framework was influenced by perceived utility and convenience of use, which were shown to be significant independent factors ($p < 0.001$; $F = 842.363$). With a residual sum of squares of 44.453 and a regression sum of squares of 196.563, which is a significant difference. A large portion of the variance in customer satisfaction may be explained by the model.

Coefficients[a]						
Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**
		B	**Std. Error**	**Beta**		
1	**(Constant)**	.148	.086		1.713	.087
	PerceivedUsefulness	.373	.030	.381	12.294	.000
	EaseofUse	.583	.031	.593	19.125	.000
a. Dependent Variable: Consumer Acceptance						

The results of the coefficient analysis reveal that perceived utility ($\beta = 0.381$, $p < 0.001$) as well as ease of use ($\beta = 0.593$, $p < 0.001$) have a positive impact on consumer acceptance of AI-generated content, with ease of use being the more significant factor.It appears that the explanatory factors are the primary drivers of customer approval, as the constant term does not show statistical significance ($B = 0.148$, $p = 0.087$). Perceived usefulness and ease of use both have high t-values (12.294) and (19.125), respectively, which show how much these aspects impact customer acceptability.

Conclusion:

The research confirms that simplicity of use is the stronger predictor of customer acceptance of AI-generated content in e-commerce, but perceived utility still has a substantial effect. The ANOVA findings verify the model's significance at $p < 0.001$, and it explains 81.6% of the variation. In order to increase customer acceptance, businesses should focus on creating interfaces that are easy to use and should emphasise the real advantages.

H2: Performance expectancy, social influence, and facilitating conditions significantly impact the adoption of AI-generated content.

Model Summary				
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
1	.816[a]	.666	.664	.46006
a. Predictors: (Constant), FacilitatingConditions, PerformanceExpectancy, SocialInfluence				

An R value of 0.816 shows that the independent variables—performance expectancy, social influence, and facilitating conditions—and dependent variable—consumer acceptance—have a "excellent relationship" in the regression model that predicts the consumer acceptance of AI-generated content in e-commerce. The R Squared score of 0.666 indicates that these factors explain about 66.6% of the variance in consumer acceptance. With an adjusted R-squared value of 0.664, the model's strength is even more evident, which indicates that there is minimal shrinkage when applying the model to the population as a whole. With a standard error of 0.46006 (the average difference between the observed and projected values), the model fits the data quite well.

ANOVA[a]						
Model		**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
1	**Regression**	160.587	3	53.529	252.911	.000[b]
	Residual	80.428	380	.212		
	Total	241.015	383			
a. Dependent Variable: ConsumerAcceptance						
b. Predictors: (Constant), FacilitatingConditions, PerformanceExpectancy, SocialInfluence						

Additionally, analysis of variance (ANOVA) produced a very significant F-statistic of 252.911 and an exceptionally low p-value, Sig. = 0.000, indicating that the regression model is statistically significant. With a sum of squares of 80.428 as a residual, indicating that it does not explain for a substantial amount of the overall variance (241.015), but the regression sums of squares is 160.587, a substantial difference. Results from the F-test show that consumers' expectations of performance, the impact of social influences, and the presence of enabling circumstances are important factors in determining whether or not they would embrace AI-generated content.

Coefficients[a]					
	Unstandardized Coefficients		**Standardized Coefficients**		
Model	**B**	**Std. Error**	**Beta**	**t**	**Sig.**

1	**(Constant)**	.234	.151		1.547	.123
	PerformanceExpectancy	.103	.042	.090	2.426	.016
	SocialInfluence	.127	.044	.111	2.872	.004
	FacilitatingConditions	.714	.032	.730	22.590	.000
a. Dependent Variable: ConsumerAcceptance						

The relative importance of each predictor variable may be better understood with the use of regression coefficients. With the largest unstandardised coefficient (B = 0.714, p < 0.001), the enabling conditions have the most significant impact on customer acceptability. At lower levels, we also find statistically significant positive effects of social influence (B = 0.127, p = 0.004) and performance expectation (B = 0.103, p = 0.016). No example indicates that the predictors are driving customer acceptability more than external, unmeasured factors, and the constant term is not significant (B = 0.234, p = 0.123).

Conclusion:

Facilitating conditions have played the most important role in the influence of AI-generated content in e-commerce adoption, followed by social influence and performance expectancy. The high F-statistic value and R Square value confirm the explanatory capabilities of the model. Organizations that seek consumer trust and, therefore, uptake of AI-created content should prioritize improving facilitating conditions with ease of use and accessibility, at the same time as using the influence of social entities and performance expectancies to gain adoption.

H3: Consumer trust and transparency of AI-generated content positively influence its acceptance.

Model Summary				
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
1	.487[a]	.237	.233	.69486
a. Predictors: (Constant), ConsumerTransparency, ConsumerTrust				

The regression analysis examined the association between consumer trust and transparency as predictors and customer adoption of AI-generated content in e-commerce. An R-value of 0.487 shows a moderate correlation. These two variables explain 23.7% of the variance in customer acceptability (R Squared = 0.237). The results may be extrapolated to a wider population with little to no loss of predictability, as indicated by the modified R Square value of 0.233. Variation in the model's predictions is shown by the standard error of the estimate (0.69486), which may point to other elements that have not been investigated yet that might be influencing customer acceptance.

ANOVA[a]						
Model		**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
1	**Regression**	57.057	2	28.528	59.086	.000[b]
	Residual	183.958	381	.483		
	Total	241.015	383			
a. Dependent Variable: ConsumerAcceptance						
b. Predictors: (Constant), ConsumerTransparency, ConsumerTrust						

Consumer trust and transparency, when combined, have a substantial influence on consumer adoption of AI-generated content, according to the regression model, which is statistically significant in the ANOVA

results (F-statistic = 59.086, p = 0.000). The regression sum of squares is much lower at 57.057 than the residual sum of squares, which is 183.958, suggesting that a substantial portion of the variance is still unexplained. In turn, this lends credence to the model's modest predictive abilities.

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.554	.205		7.565	.000
	ConsumerTrust	.233	.061	.198	3.794	.000
	ConsumerTransparency	.328	.048	.354	6.782	.000
a. Dependent Variable: ConsumerAcceptance						

Customers' trust in and openness to AI-generated content are positively correlated with their adoption of such material, according to the regression coefficients. Clear and transparent AI-generated content is more likely to be accepted by customers. This is because consumer transparency has a larger influence than consumer trust (B = 0.328, p = 0.000) and consumer trust (B = 0.233, p = 0.000). Constant term B = 1.554 is statistically significant (p = 0.000), suggesting that there is still a minimum level of customer acceptability even when these predictors are eliminated.

Results indicate that, although consumer trust and transparency both have significant impacts on the acceptance of AI-generated content in e-commerce, the combined explanatory power is moderate. This indicates the presence of additional factors influencing consumer behaviours. Of the two factors, transparency appears to play a more important role than trust. Therefore, there is a greater need for businesses to engage in transparent AI practices and establish trust with consumers for increased adoption and engagement in AI-driven e-commerce solutions.

H4: Perceived advantages, compatibility with shopping habits, and ease of trial drive AI-generated content adoption.

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.437[a]	.191	.185	.71625
a. Predictors: (Constant), Trialability, Compatibility, PerceivedAdvantage				

The perceived advantages, compatibility with buying patterns, and simplicity of trial all have a role in whether or not customers embrace AI-generated content in e-commerce. The association between these factors is modest, with an R-value of 0.437. These variables explain about 19.1% of the variance in customer approval, as shown by an R-squared value of 0.191. Although fairly low at 0.185, the modified R Square is negligible when applied to the greater population level. With a standard error of 0.71625, this model is not perfect in predicting consumer approval.

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	46.071	3	15.357	29.935	.000[b]

	Residual	194.944	380	.513		
	Total	241.015	383			
a. Dependent Variable: ConsumerAcceptance						
b. Predictors: (Constant), Trialability, Compatibility, PerceivedAdvantage						

The ANOVA results show that the regression model is statistically significant, with a strong overall fit (F-statistic of 29.935 and p-value of 0.000). The model is statistically significant, but it doesn't account for all the factors that impact consumer acceptance. This is because the residual sum of squares (194.944) is much larger than the regression sum of squares (46.071).

Coefficients[a]						
Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**
		B	**Std. Error**	**Beta**		
1	**(Constant)**	.999	.297		3.370	.001
	PerceivedAdvantage	.280	.056	.243	4.998	.000
	Compatibility	.187	.061	.143	3.066	.002
	Trialability	.251	.049	.250	5.169	.000
a. Dependent Variable: ConsumerAcceptance						

Each predictor's influence is shown by its own regression coefficient. In terms of consumer acceptability, trialability is the most influential factor ($B = 0.251$, $p < 0.001$), indicating that the simplicity of testing out AI-generated content significantly accelerates adoption. Perceived advantage plays a vital role since consumers are more likely to accept AI-generated content if they see significant advantages from it ($B = 0.280$, $p < 0.001$). A small but significant effect of compatibility ($B = 0.187$, $p = 0.002$) indicates that, to increase the uptake of AI material, it needs to be consistent with current buying behaviours. There is strong customer approval even in the absence of the predictors, as shown by the constant term ($B = 0.999$, $p = 0.001$).

Findings indicate that, although perceived benefits, compatibility, and trialability affect consumer acceptance of AI-generated content in e-commerce, the overall effect of these factors is relatively weak in comparison to other potential factors. Of these, trialability was the most important driver, underlining the importance of providing consumers with opportunities to experience AI-generated content with low risk. E-commerce businesses should focus on enhancing trialability and clearly communicating the benefits of AI-generated content while ensuring it aligns with consumer shopping habits to improve adoption.

Conclusion:

This study discusses the most salient factors affecting consumer acceptance of AI-generated content in e-commerce. Among a set of hypotheses, variables that included ease of use, perceived usefulness, performance expectancy, social influence, facilitating conditions, consumer trust, transparency, perceived advantages, compatibility, and trialability were evaluated in terms of their effects on adopting AI. Regression models performed quite well with certain variables accounting for a substantial percentage of variance in consumer acceptance. The findings showed that perceived utility and simplicity of use are the most important factors (81.6% of the variation), suggesting that customers are more inclined to embrace AI-generated content if it is both simple to use and seen as valuable.

Facilitating circumstances are the most important of three factors that greatly impact adoption: performance expectation, social influence, and other related factors. Trust and transparency, though high, were explained at a lower extent, thus indicating that though these factors are related to the adoption of AI, there are other underlying factors influencing consumer behaviours. Also, perceived benefits, compatibility with consumer shopping behaviours, and censurability, being moderate, with censurability having a high level of influence, call for businesses' allowance to allow its customers to try out this AI-generated content before buying it into usage. The results have underscored that it is significant to improve the experience of a user by improving usability, access, and transparent communication of AI-created content to people. Transparency of AI usage among businesses in its practice, in turn, builds trust between business and the consumers, enhancing further acceptance of the same. Moreover, AI-created content, integrated into online consumer shopping, must be available to consumers easily with trial access. In conclusion, the research provides valuable insights for e-commerce businesses looking to optimize AI-generated content adoption strategies by prioritizing user-friendly interfaces, effective communication of benefits, social influence, and consumer trust-building mechanisms.

References

1. Ananthakrishnan, R., & Arunachalam, T. (2022). Comparison Of Consumers Perception Between Human Generated And Ai Aided Brand Content. Webology (ISSN: 1735-188X), 19(2).
2. Arora, J., Shekhawat, R. S., & Gautam, A. (2023). Investigating the Influence of AI-Generated Marketing Content on Consumer Perceptions and Decision-Making in E-commerce. Gateway International Journal of Innovative Research, 2, 103–129.
3. Chodak, G. (2024). Artificial Intelligence in E-Commerce. In The Future of E-commerce: Innovations and Developments (pp. 187–233). Springer.
4. Gu, C., Jia, S., Lai, J., Chen, R., & Chang, X. (2024). Exploring Consumer Acceptance of AI-Generated Advertisements: From the Perspectives of Perceived Eeriness and Perceived Intelligence. Journal of Theoretical and Applied Electronic Commerce Research, 19(3), 2218–2238.
5. Han, S. (2024). Consumer Perceptions of AI-Generated Content and Disclaimer in Terms of Authenticity, Deception, and Content Attribute.
6. Jokar, N. K., Noorhosseini, S. A., Allahyari, M. S., & Damalas, C. A. (2017). Consumers' acceptance of medicinal herbs: an application of the technology acceptance model (TAM). Journal of Ethnopharmacology, 207, 203–210.
7. Kuronen, J. (2023). FINNISH CONSUMER'S ATTITUDES TOWARDS AI-GENERATED PERSONALIZED RECOMMENDATIONS.
8. Labajová, L. (2023). The state of AI: Exploring the perceptions, credibility, and trustworthiness of the users towards AI-Generated Content.
9. Li, W. (2024). A study on factors influencing designers' behavioral intention in using AI-generated content for assisted design: Perceived anxiety, perceived risk, and UTAUT. International Journal of Human–Computer Interaction, 1–14.
10. Mierkhan, S., & Åkesson, C. (2024). Evaluating the quality of AI-Assisted Content Generation in E-Commerce Web Applications: Develop and Integrate an OpenAI-Based Content Generator to Auto-Generate Product Descriptions from Keywords.
11. Ratta, A. A., Muneer, S., & ul Hassan, H. (2024). The Impact of AI Generated Advertising Content

on Consumer Buying Behavior and Consumer Engagement. Bulletin of Business and Economics (BBE), 13(2), 1152–1157.
12. Sarfaraz, J. (2017). Unified theory of acceptance and use of technology (UTAUT) model-mobile banking. Journal of Internet Banking and Commerce, 22(3), 1–20.
13. Sepolen, J. (2024). The Effects of AI Generated Marketing Content on Consumer Sentiments and Purchase Decisions.
14. Shevchyk, Y. (2024). Generative AI in e-commerce: a comparative analysis of consumer-brand engagement with AI-gen[1] Y. Shevchyk, "Generative AI in e-commerce: a comparative analysis of consumer-brand engagement with AI-generated and human-generated content," PhD diss, 2024.e. PhD Diss.
15. Szumniak-Samolej, J. (n.d.). The Role of Generative AI in E-commerce.
16. Topsakal, Y. (2024). How Familiarity, Ease of Use, Usefulness, and Trust Influence the Acceptance of Generative Artificial Intelligence (AI)-Assisted Travel Planning. International Journal of Human–Computer Interaction, 1–14.
17. Yuen, K. F., Cai, L., Qi, G., & Wang, X. (2021). Factors influencing autonomous vehicle adoption: An application of the technology acceptance model and innovation diffusion theory. Technology Analysis & Strategic Management, 33(5), 505–519.
18. Zhou, T., & Lu, H. (2024). The effect of trust on user adoption of AI-generated content. The Electronic Library.