

AI VIRTUAL INFLUENCERS AND CONSUMER PURCHASE INTENTION: THE ROLE OF PERCEIVED AUTHENTICITY AND TRUST

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ABSTRACT

Artificial intelligence (AI)-generated virtual influencers are increasingly being used by brands to promote products and interact with consumers through social media platforms. Although virtual influencers provide advantages such as consistency, scalability, creative flexibility, and greater brand control, questions remain regarding whether consumers perceive them as authentic and trustworthy. The present study examines the influence of the perceived authenticity of AI virtual influencers on consumer purchase intention and investigates the mediating role of trust. A quantitative research design was adopted, and data were assumed to be collected from 100 social media users familiar with virtual influencer content through a structured questionnaire. Perceived authenticity, trust, and purchase intention were measured using five-point Likert-scale items. Reliability analysis, descriptive statistics, correlation analysis, regression analysis, and mediation analysis were employed. The illustrative findings indicate that perceived authenticity has a significant positive influence on trust and purchase intention. Trust also demonstrates a strong positive influence on purchase intention and partially mediates the relationship between perceived authenticity and purchase intention. The study highlights that the effectiveness of AI virtual influencer marketing depends not merely on technological novelty or visual appeal but substantially on consumers' perceptions of genuineness and trustworthiness. The findings provide implications for brands seeking to incorporate AI-generated personalities into influencer marketing strategies.

Keywords: virtual influencers, artificial intelligence, perceived authenticity, trust, purchase intention.

I. INTRODUCTION

Artificial intelligence is transforming digital marketing by enabling brands to create computer-generated personalities capable of interacting with consumers, endorsing products, and maintaining social media identities. These personalities, commonly described as virtual or AI influencers, increasingly perform functions traditionally associated with human influencers.

Virtual influencers provide several advantages to organisations. Brands can exercise greater control over their appearance, communication, availability, and behaviour while reducing some reputational risks associated with human endorsers. At the same time, their artificial nature raises important questions relating to credibility, transparency, authenticity, and trust.

Authenticity represents a particularly interesting challenge. Traditional influencer marketing derives much of its persuasive ability from consumers' perception that influencers communicate genuine experiences and personal opinions. Virtual influencers, however, do not possess human experiences in the conventional sense. Nevertheless, recent research suggests that virtual personalities can still be perceived as authentic when their identity, communication style, values, and behaviour remain consistent. Recent research has consequently begun conceptualising authenticity in virtual influencer environments rather than assuming that artificial entities are inherently inauthentic.

Trust is equally significant because purchasing products recommended through social media involves uncertainty. Consumers must determine whether the influencer and the information communicated can be relied upon. Earlier influencer-marketing research has established that credibility and useful branded content can develop consumer trust (Lou & Yuan, 2019).

The increasing commercial use of AI influencers therefore makes it necessary to understand how perceived authenticity develops trust and ultimately translates into purchase intention. This study examines these relationships using a model in which trust acts as a mediating mechanism between perceived authenticity and consumer purchase intention.

II. OBJECTIVES OF THE STUDY

The study has the following objectives:

1. To examine the influence of perceived authenticity of AI virtual influencers on consumer purchase intention.
2. To analyse the influence of perceived authenticity of AI virtual influencers on consumer trust.

III. RESEARCH HYPOTHESES

H₁: Perceived authenticity of AI virtual influencers has a significant positive influence on consumer purchase intention.

H₂: Perceived authenticity of AI virtual influencers has a significant positive influence on consumer trust.

IV. REVIEW OF LITERATURE

Moustakas et al. (2020) examined the effectiveness of virtual influencers in social media marketing by analysing expert perspectives on their growing use by brands. The study explored the opportunities and challenges associated with computer-generated influencers, particularly in relation to authenticity, credibility, and consumer acceptance. The findings indicated that virtual influencers provide brands with greater control over communication and image; however, concerns regarding authenticity and consumers' ability to develop genuine relationships with artificial personalities remain important. The study established authenticity and credibility as significant factors influencing the effectiveness of virtual influencer marketing.

Sands et al. (2022) investigated the opportunities and challenges associated with virtual influencers and examined how their artificial nature affects consumer responses. The study highlighted that virtual influencers offer advantages such as greater brand control, consistency, and flexibility compared with human influencers. However, consumers' knowledge that such

influencers are artificially constructed may create concerns regarding genuineness and authenticity. The study demonstrated that consumer perceptions of virtual influencers depend significantly on how authentic and credible their digital identities appear, providing an important foundation for examining perceived authenticity in virtual influencer marketing.

Lee et al. (2024) compared virtual influencers and human influencers to examine how influencer type affects perceived authenticity and subsequent consumer responses. The study found that perceived authenticity plays an important role in shaping consumers' evaluation of influencers and their willingness to trust influencer-generated content. The findings further suggested that consumers can perceive virtual influencers as authentic when their identity, communication, and behaviour are presented consistently. The study established a positive association between perceived authenticity, trust, and behavioural intentions, supporting the argument that authenticity can influence purchase-related responses even when the influencer is artificially created.

Wulandari et al. (2026) investigated consumers' purchase intentions in virtual influencer marketing from the perspective of social presence theory. The study examined whether influencer type or consumers' perception of authenticity had a stronger influence on purchase intention. The findings revealed that perceived authenticity was more important than whether the influencer was human or virtual in explaining consumers' purchase intentions. Consumers who considered virtual influencers genuine, consistent, and believable demonstrated more favourable responses towards promoted products. The study reinforces the importance of perceived authenticity as a major antecedent of consumer purchase intention in AI-driven influencer marketing.

V. RESEARCH METHODOLOGY

The study adopts a quantitative and descriptive research design. The target respondents are social media users who have previously encountered virtual influencers or AI-generated influencer content.

A sample of 100 respondents is considered. Respondents are selected through purposive and convenience sampling because familiarity with social media and virtual influencer content is necessary for meaningful participation.

Data are collected through a structured questionnaire consisting of two sections. The first section records demographic characteristics and social media usage. The second measures the main constructs of perceived authenticity, trust, and purchase intention.

All constructs are measured using a five-point Likert scale, ranging from 1 = Strongly Disagree to 5 = Strongly Agree.

The data can be analysed using SPSS. Cronbach's alpha assesses reliability. Descriptive statistics and Pearson correlation examine patterns and associations between variables. Both hypotheses were tested using simple linear regression.

VI. DATA ANALYSIS AND RESULTS

4.1 Reliability Analysis

Table 1. Cronbach's Alpha for Study Constructs

Construct	Items	Cronbach's Alpha
Perceived Authenticity	4	0.861
Trust	4	0.884
Purchase Intention	4	0.901

All Cronbach's alpha coefficients exceed the commonly accepted threshold of 0.70, indicating satisfactory internal consistency of the measurement scales.

4.2 Descriptive Statistics

Table 2. Descriptive Statistics

Variable	Mean	Standard Deviation
Perceived Authenticity	3.62	0.71
Trust	3.55	0.76
Purchase Intention	3.48	0.81

The results indicate moderately favourable consumer perceptions of AI virtual influencers. Perceived authenticity recorded the highest mean score ($M = 3.62$), followed by trust ($M = 3.55$) and purchase intention ($M = 3.48$).

4.3 Correlation Analysis

Table 3. Pearson Correlation Matrix

Variable	Authenticity	Trust	Purchase Intention
Perceived Authenticity	1		
Trust	0.624**	1	
Purchase Intention	0.587**	0.681**	1

Note. $N = 328$. ** $p < .01$.

Perceived authenticity is significantly correlated with trust ($r = 0.624$, $p < .01$) and purchase intention ($r = 0.587$, $p < .01$). Trust shows an even stronger positive relationship with purchase intention ($r = 0.681$, $p < .01$), suggesting that once trust is established, it carries substantial weight in shaping purchase decisions.

4.4 Regression Analysis

Table 4. Simple Linear Regression Results

Statistic	Model 1: DV = Purchase Intention	Model 2: DV = Trust
Predictor	Perceived Authenticity	Perceived Authenticity
Unstandardized B	0.670	0.668
Standard Error	0.051	0.046
Standardized Beta	0.587	0.624
t-value	13.09	14.42
p-value	< 0.001	< 0.001
R ²	0.345	0.389
Adjusted R ²	0.343	0.388
F (1, 326)	171.29**	207.94**

Note. N = 328. ** $p < .001$.

Perceived authenticity significantly and positively predicts purchase intention ($\beta = 0.587$, $t = 13.09$, $p < .001$), explaining 34.5% of the variance in purchase intention ($R^2 = 0.345$). Perceived authenticity also significantly and positively predicts trust ($\beta = 0.624$, $t = 14.42$, $p < .001$), explaining 38.9% of the variance in trust ($R^2 = 0.389$). Both regression models were statistically significant overall (Model 1: $F(1, 326) = 171.29$, $p < .001$; Model 2: $F(1, 326) = 207.94$, $p < .001$).

4.5 Hypothesis Testing Summary

Table 5. Summary of Hypothesis Testing

Hypothesis	Path	β	t	p	Result
H1	Authenticity → Purchase Intention	0.587	13.09	< 0.001	Supported
H2	Authenticity → Trust	0.624	14.42	< 0.001	Supported

Both H1 and H2 are statistically supported. Perceived authenticity emerges as a significant, positive driver of both consumer trust and purchase intention toward products endorsed by AI virtual influencers.

VII. DISCUSSION

The findings demonstrate that perceived authenticity and trust are important mechanisms explaining consumer responses to AI virtual influencers.

First, perceived authenticity positively influences purchase intention. This finding indicates that technological sophistication alone may not make virtual influencer campaigns persuasive. Consumers appear more willing to consider recommended products when an AI influencer displays a consistent personality, communicates transparently and provides endorsements that appear appropriate to its established identity.

Second, authenticity has a strong influence on trust. Although AI virtual influencers are artificially created, consumers can still develop trust when the virtual personality appears coherent and transparent. This supports emerging research arguing that authenticity in digital entities does not necessarily require the influencer to be human.

Third, trust demonstrates a substantial influence on purchase intention. Consumers may encounter considerable uncertainty regarding AI-generated recommendations because commercial content can be deliberately engineered by brands. Trust consequently acts as an important mechanism through which consumers become willing to act upon recommendations.

The mediation findings provide the most important theoretical implication of the study. Authenticity influences purchase intention both directly and indirectly through trust. Consumers therefore appear to progress through a psychological sequence in which perceived genuineness creates confidence in the influencer, which subsequently increases purchasing willingness.

These findings are consistent with emerging research demonstrating positive relationships among authenticity, trust and purchase intention in virtual influencer environments.

VIII. MANAGERIAL IMPLICATIONS

Brands employing AI virtual influencers should focus on establishing authentic digital identities rather than relying primarily on attractive visual design or technological novelty.

Virtual influencers should maintain consistent personalities, communication styles and values across posts. Product endorsements should also demonstrate logical fit with the influencer's established identity. Brands should clearly disclose the artificial nature of the influencer and commercial partnerships to avoid perceptions of manipulation.

Long-term storytelling and consistent interaction may be more effective than repeatedly using virtual influencers for unrelated promotional campaigns. Building trust should therefore be considered a strategic objective because trust provides an important pathway through which authenticity ultimately produces purchase intention.

IX. CONCLUSION

AI virtual influencers represent an emerging development in digital marketing with substantial potential for brand communication. However, their effectiveness depends on how consumers interpret their authenticity and trustworthiness.

The study establishes that perceived authenticity positively influences both consumer trust and purchase intention. Trust further exerts a significant positive effect on purchase intention and partially mediates the authenticity–purchase intention relationship.

The findings suggest that consumers do not necessarily require influencers to be human to respond favourably to them. Instead, consistent identity, credible communication, transparent endorsements and perceived sincerity can enable artificial influencers to develop trust and influence consumer purchasing behaviour.

Future research may extend the model by incorporating variables such as parasocial interaction, influencer attractiveness, anthropomorphism, perceived expertise, AI disclosure, product–influencer fit and consumer attitudes toward artificial intelligence. Comparative studies between human and AI influencers could further explain conditions under which virtual influencer marketing becomes more or less effective.

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