

# A Literature Analysis on the Relationship between AI Influencers' Perceived Credibility and Purchase Intention: Product-Endorser Fit with the Brand as a Moderator

Xu Yan, Huam Hon Tat & Abu Barkar Sade  
Putra Business School, Universiti Putra Malaysia, 43400 Malaysia

To Link this Article: <http://dx.doi.org/10.6007/IJARBSS/v14-i3/21092>

DOI:10.6007/IJARBSS/v14-i3/21092

**Published Date:** 01 March 2024

## Abstract

The study investigates the impact of AI influencers' perceived credibility (AII's PC) on Chinese consumers' purchase intention (PI), as well as the moderating effect of product-endorse fit with the brand (PEFB) on the relationship between AII's PC and PI. AII's PC refers to the level of trust consumers have in AI influencers and their perception of the reliability and authenticity of the information, recommendations, or product endorsements provided by them. AII's PC includes attractiveness, trustworthiness, and expertise. PEFB denotes the relevance or congruence between the product endorser (AI influencer) and the brand being promoted. This alignment involves whether the image, traits, and values of the product endorser align with the positioning, image, and values of the brand. Previous literature on human influencer marketing has indicated that consumers' purchase intention is influenced by AII's PC and PEFB, but the research results remain mixed and inconclusive. Specifically, there is a lack of relevant research on the moderating effect of PEFB on the relationship between AII's PC and PI in the context of AI influencer marketing. Therefore, this study discusses the relationship between AII's PC and PI and the moderating effect of PEFB on the relationship between AII's PC and PI. Ultimately, this research can enrich the existing body of knowledge on consumer behavior in the context of AI influencer marketing.

**Keywords:** AI Influencer, Purchase Intention, Product-Endorser Fit With The Brand, Perceived Credibility, Attractiveness, Expertise, Trustworthiness.

## Introduction

In recent years, the development of technologies such as Artificial Intelligence (AI) has significantly reshaped the interaction between consumers and brands, as well as the shopping experience (Flavián et al., 2019). These new technologies have also given rise to a new form of influencer marketing, known as AI influencers. These AI influencers are computer-generated virtual personalities with a wide-reaching influence on social media, playing a role similar to that of human influencers in marketing, such as brand endorsements. AI influencers

are primarily constructed from five technological modules (natural language processing, image recognition, voice recognition, problem-solving, and machine learning). The first three modules are used to gather information. Natural language processing extracts linguistic meaning from consumer text such as social media posts, direct messages, or tweets (Kietzmann, et al., 2018). Image recognition and voice recognition collect consumer-posted images, videos, and audio information on social media. AI influencers utilize problem-solving to construct various responses to address consumer inquiries and continuously enhance their ability to resolve consumer issues through machine learning in each interaction with consumers (Kietzmann et al., 2018).

AI influencers are increasingly being used as alternatives to human influencers in corporate advertising campaigns (Franke et al., 2023). Currently, 63% of companies globally plan to use AI influencers in their influencer campaigns (Goudswaard, 2023). Los Angeles-based startup Brud manages three prominent AI influencers: Lil Miquela, Bermuda, and Blawko, ranked first, fifth, and sixth, respectively, in HypeAuditor's 2019 Annual Instagram Virtual Influencer Rankings (Baklanov, 2019). Lil Miquela is described in her Instagram bio as a "robot seeking change" and is perhaps the most well-known. In 2018, she was named one of Time magazine's most influential people on the internet and was described as a fashion idol promoting luxury brands like Prada, Balenciaga, and Kenzo (Time, 2018). Bermuda is a character self-proclaimed as the "queen of robots," while Blawko endorses more mainstream brands such as Netflix, Nike, and Del Taco (Baklanov, 2019). With the emergence of more international AI influencers, numerous companies in China have introduced over 30 local AI influencers, with many internet companies participating in various financing activities for the AI influencer industry (Ji, 2021). One of the most famous Chinese AI influencers, Ayayi, created by Ranmaitech in 2021, has become a brand ambassador for international renowned brands in the Chinese region, such as NIKE, Dyson, and M.A.C. Currently, AI influencers have become traffic owners on Chinese online platforms such as Weibo (Chinese version of Twitter) and Douyin (Chinese version of TikTok) (Ji, 2021). Overall, 62.2% of Chinese netizens believe that AI influencer marketing campaigns can enhance their purchase intentions (IQiyi, 2019).

Similar to their human counterparts, AI influencers publish various content, build connections and relationships, and generate excitement and audience engagement (Huang et al., 2022). However, AI influencers do not have the opportunity to test products or their features. Therefore, their recommendations are not based on experience, raising questions about potential sources of success based on perceived legitimacy (Huang et al., 2022). Understanding how audiences perceive AI influencers is crucial in determining the effectiveness of influencer marketing mechanisms and the impact of AI influencers on shaping consumer attitudes and purchase intentions. The process by which AI influencers guide consumer trust, brand attitudes, and purchase intentions is complex and dynamic (Wibawa et al., 2022). Therefore, in order to provide valuable insights for marketers and relevant practitioners, it is necessary to study how AI influencers influence purchase intention in marketing campaigns.

### **Conceptual Model**

Figure 1 illustrates the hypothesized model linking the relationship between AI influencers' perceived credibility, product-endorser fit with the brand, and purchase intention. Attractiveness, trustworthiness and expertise will be used to measure AI influencers' perceived credibility in this conceptual model. Finally, it should be noted that due to the

influence of various factors on purchase intention, it is not feasible to encompass all measurement scales in just one study.

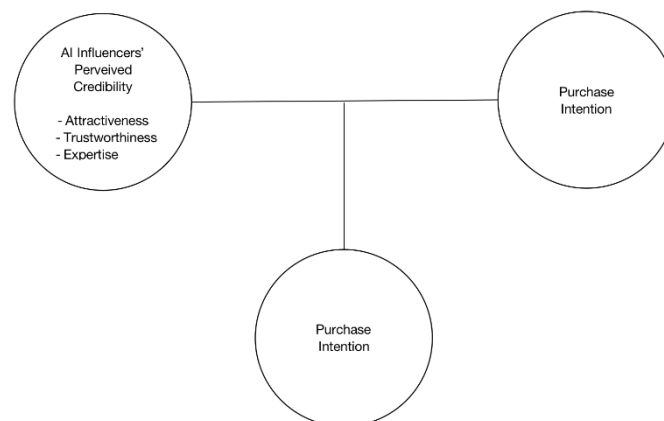


Figure 1. Proposed conceptual model

### AI Influencers' Perceived Credibility

In the digital age, with the overwhelming influence of scattered marketing media messages, consumers find it challenging to discern which content is trustworthy when making purchase decisions or seeking buying advice from opinion leaders (AI influencers) (Davidaviciene & Paliulis, 2019). The credibility of a communicator or message source is an important factor in its persuasiveness (Hovland & Weiss, 1951). Therefore, AI influencers' perceived credibility has become crucial for consumers to mitigate perceived risks in the buying process (Aytuna, 2019). According to the study of Hovland and Weiss, Kelman and Hovland (1953); Ohanian (1990), AI influencers' perceived credibility have three dimensions: attractiveness, trustworthiness and expertise.

### Attractiveness

In many studies, attractiveness has been acknowledged and utilized as a key dimension of source credibility (McGuire, 1985; Ohanian, 1990, 1991). In the literature, source attractiveness is described as a multidimensional construct, with these sub-dimensions being crucial for message effectiveness. Some early studies employed terms such as "attractive," "beautiful," "charismatic," and "sophisticated" to characterize attractiveness (Patzer, 1983). Physical attractiveness is generally considered a significant aspect of forming initial impressions of an individual (Ohanian, 1990). In certain industries, particularly in the fashion and cosmetics sectors, attractiveness is primarily interpreted in terms of physical appearance (Djafarova & Trofimenko, 2018). Therefore, in this study, attractiveness refers to the physical attractiveness of the AI influencer as perceived by consumers. Numerous studies had demonstrated that physically attractive sources were more effective in altering consumer viewpoints and attitudes (Chaiken, 1979) and in influencing purchase intentions (Till & Busler, 2000). Ladhari et al (2020) discovered in their investigation of beauty vloggers that physical attractiveness significantly impacts the purchase intention for the products they endorse.

Several previous studies examined the relationship between attractiveness and purchase intention in different research contexts (e.g., AI influencer and human influencer). In the context of human influencer marketing, Aytuna (2019) found a significant and positive relationship between attractiveness and purchase intention in a study on the impact of human influencers on the purchasing intentions of Millennials. Similarly, Torres et al (2019)

also observed a positive effect of attractiveness on purchase intention. However, the study conducted by Lou and Yuan (2019) did not reveal a positive or significant relationship between attractiveness and purchase intention.

In the context of AI influencer marketing, Kim (2022) suggested that the stronger the appeal of AI promoters to consumers, the higher their willingness to accept information. This is because the attractiveness of AI promoters as sources of information enhances the effectiveness of communication between the brand and the consumer, thereby increasing the willingness of the recipient of the information to purchase the brand's products (Robinson, 2020). Chiu and Ho (2023) confirmed this viewpoint and found a positively significant relationship between attractiveness and purchase intention. However, Kim and Park (2023) demonstrated that attractiveness had no direct effect on purchase intention, but the relationship became significant when mediated by imitation desire and brand attachment. Similarly, Yap and Ismail (2022) also found that attractiveness was not directly related to purchase intention. Given the mixed and inconclusive findings on the relationship between attractiveness and purchase intention, further investigation is necessary in the context of AI influencers in China.

### **Trustworthiness**

Trustworthiness is another dimension of source credibility. According to Hovland et al. (1953), trustworthiness refers to "the degree of confidence and acceptance the audience has in the speaker and the message." Friedman et al (1976) defined credibility as "the solemn, trustworthy, and honest attributes possessed by the speaker and observed by consumers." McCracken (1989, p. 311) proposed an updated definition as "the perceived validity of claims made by the information provider." Therefore, as AI influencers function as information providers, trustworthiness can be interpreted in this study's research context as the level of trust consumers have in AI influencers.

Trustworthiness represents consumers' expression of expectations for the authenticity of advertising information (Logan et al., 2012). It pertains to the level of trust consumers possess when evaluating information (Cuesta-Valiño et al., 2020). In other words, without credibility, there is no trust. On social media platforms, information from credible sources holds the power to alter recipients' attitudes, representing the effectiveness of communication (Cuesta-Valiño et al., 2020; De Veirman et al., 2017). Essentially, credibility promotes effective communication through brand endorsements (Shimp, 2000). Considering influencers as trustworthy brand endorsers is critical as it increases the likelihood of purchasing the endorsed brand (Shimp, 2000).

Numerous studies (McGinnies & Ward, 1980; Pornpitakpan, 2003a, 2004) had shown that credibility positively influences attitude change and purchase intention. According to Djafarova and Matson (2021), trustworthiness is a key factor in determining influencer credibility. When consumers trust an influencer, they are more likely to believe their recommendations or endorsements, which could influence their perceptions and purchasing habits for specific products (Singh et al., 2020; Wiedmann & Mettenheim, 2020).

In the context of human influencer studies, many studies have confirmed that trustworthiness significantly affects purchase intention (Aytuna, 2019; Ki & Kim, 2019; Lou & Yuan, 2019). On the contrary, Tiwari et al. (2023) found that there was no positive significant relationship between trustworthiness and purchase intention. Additionally, Drossaert (2023) conducted a comparative study aiming to understand whether there were differences in perceived trustworthiness and frankness between human influencers and AI influencers and

whether these two types of influencers had different effects on consumer purchase intention. The study found that the trustworthiness of AI influencers had a positive impact on consumers' purchase intention (Drossaert, 2023). However, this result contradicts the findings of Chiu and Ho (2023). In a comparative study of three types of influencers (traditional celebrities, micro-influencers, and AI influencers), Chiu and Ho (2023) found that the trustworthiness of AI influencers did not affect consumer purchase intention. Chiu and Ho (2023) suggested that Gen Z consumers may not trust AI influencers as they come from a fictional world and cannot try the products they promote (e.g., beauty products) and provide honest opinions. The findings by Chiu and Ho (2023) provide new evidence that, even though Gen Z is the primary target audience for virtual influencers, their impact on consumer attitudes and behaviors remains uncertain. Based on this discussion, the findings are still mixed and contradictory, and therefore there is a need to investigate further the relationship between trustworthiness and purchase intention in the context of AI influencer in China.

### **Expertise**

According to Kelman and Hovland (1953), expertise is described as "the extent to which the communicator is perceived as a source of valid assertions. It refers to the knowledge, experience, or skill that the endorser possesses." McCracken (1989, p.311) provides a similar definition inspired by Kelman and Hovland (1953), that is "perceived as having the capacity to make valid assertions." In the context of celebrity endorsements, a more recent definition describes expertise as "the extent to which the endorser is perceived to possess sufficient knowledge, experience, or skill to endorse a product" (Van der Waldt et al., 2011, p.104). Indeed, for each definition, the key focus is not on being an actual expert but on being perceived as one by the target audience (Kelman & Hovland, 1953; Ohanian, 1991). Therefore, in the context of this study, expertise can be understood as whether consumers perceive the AI influencer as an expert in the product (endorsed or recommended by the AI influencer).

In the realm of celebrity endorsements, expertise is considered the most crucial dimension for effective endorsements (Daneshvary & Schwer, 2000). Expertise reflects the competent image a celebrity displays when endorsing a particular brand or product. For instance, athletes, doctors, or lawyers can endorse products related to their respective professions (Ohanian, 1991). Friedman and Friedman's (1979) research suggests that consumers prefer to purchase high-tech and pricey products if endorsed by a professional celebrity. Celebrities with a higher level of expertise are expected to be more persuasive than those perceived to have a lower level of expertise (Aaker & Myers, 1987) and are more likely to stimulate purchase intentions (Erdogan, 1999; Ohanian, 1991).

In the context of human influencer endorsements, AlFarraj et al. (2021) explored the influence of influencer credibility on consumer purchase intentions in the beauty and skincare industry. The study confirmed that expertise had no significant effect on purchase intentions (AlFarraj et al., 2021). AlFarraj et al. (2021) explained that this result was due to "relatively limited experience in the field of makeup and skincare, not enough to be a factor" (p.368). Similarly, Lou and Yuan (2019) also found no significant relationship between expertise and purchase intentions. However, Aytuna (2019) found that the influencer's expertise is crucial in explaining consumer responses, including purchase intentions. He pointed out that consumers are more likely to consider purchasing a product endorsed by a source they perceive to have knowledge and experience in a certain product category (Aytuna, 2019).

In the context of AI influencer endorsements, Formentini (2020) suggests that the expertise of AI influencers enhances the perceived credibility of their image among



consumers, thereby improving their attitudes towards the brand and stimulating purchase motivation. However, this assertion contradicts other research findings. Huang et al. (2022) analyzed the impact of AI influencer characteristics on consumer purchase intentions for branded apparel and found no significant relationship between expertise and consumer purchase intentions. Huang et al. (2022) speculated that this result might be due to the fact that clothing is a necessity; the expertise disparity among clothing endorsers may not be a significant consideration for consumers of clothing. Young online consumers seem to boost brand awareness through other means. Apparently, this explanation seems plausible as consumers tend to rely on the endorser's knowledge, skills, and expertise when the brand is not a necessity but rather a technological or high-end category (El Hedhli et al., 2021). Similarly, Chiu and Ho (2023) analyzed the impact of AI influencer's expertise on the purchase intentions of Generation Z consumers in China endorsing beauty products (soap). The study found that the expertise of AI influencers does not directly affect consumer purchase intentions. This result also supports Healy's (2021) viewpoint that consumers question whether AI influencers provide genuine opinions, testimonials, or content for the products they endorse, as they do not actually use the products they endorse, unlike human influencers. This poses a significant challenge for AI influencers endorsing beauty products (Chiu & Ho, 2023). Since the findings on relationship between expertise and purchase intention were mixed and inconclusive, there is a need to further investigate the relationship between expertise and purchase intention in the context of AI influencer in China.

### **Product-Endorser Fit with the Brand**

Product-endorser fit with the brand (PEFB) refers to the similarity or consistency between the endorser and the product or brand, within a particular context of endorsement (Bergkvist et al., 2016; Schouten et al., 2020). According to Rifon et al. (2004), if consumers perceive a strong match between the endorsed brand and the endorser, they may attribute their main motivation to the endorsement, enhancing its effectiveness (Bergkvist et al., 2016). When a meaningful match is established between the endorser and the product, a strong relevance between the endorser and the product exists (Misra & Beatty, 1990). Most studies have also shown that increased alignment between the celebrity and the brand correlates with a higher probability of positive consumer responses to the endorsement (Fleck et al., 2012; Kahle & Homer, 1985; Lynch & Schuler, 1994; Till & Busler, 2000). Similarly, Choi and Rifon (2012) argue that the higher the consistency between the celebrity/product, the following outcomes are expected: (a) more positive attitudes towards the advertisement; (b) more positive attitudes towards the brand; and (c) a greater inclination to purchase the brand.

Diverging from leveraging traditional celebrities through traditional media such as TV shows, movies, and magazines to enhance brand product value, companies are turning to social media influencers, who have gained fame by showcasing themselves as product experts (Khamis et al., 2017; Marwick, 2015). Influencers use their credibility and product evaluations to positively influence fans' purchase intentions (Wei & Lu, 2013). However, Bower and Landreth (2001) suggest that having a highly credible endorser is not always effective for all brand categories, emphasizing the importance of fit in endorsement strategies. Indeed, for influencers, the fit of the product endorser may have a more significant impact on consumers' willingness than celebrity endorsers (Kim & Park, 2023). Because influencers successfully brand themselves as representatives of specific domains, such as "beauty bloggers," and distribute details about products to their fans Balog et al (2008), the association between the product and the endorser may be more accessible. Consequently, compared to celebrities,

influencers endorsing products that do not match their specialization are more likely to receive negative reviews, and only endorsements closely aligned with their areas of interest will be regarded as credible sources of information by the audience, positively impacting consumer purchase intentions (Schouten et al., 2020).

Furthermore, previous literature has also examined the moderating effect of PEFB on the relationship between AI influencers' perceived credibility and purchase intention. Aytuna (2019) found that PEFB moderated the relationship between attractiveness and purchase intention. However, in a study on the relationship between AI influencer attractiveness and consumer purchase intention, Kim and Park (2023) found that under low PEFB (below one standard deviation of the mean), there was no significant association between attractiveness and purchase intention. However, under high PEFB (above one standard deviation of the mean), a significant and positive correlation was found between attractiveness and purchase intention. Therefore, PEFB partially moderated the relationship between attractiveness and purchase intention.

In terms of the moderating effect of PEFB on the relationship between trustworthiness and purchase intention, only a few studies have directly investigated this effect (Aytuna, 2019), with most research focusing on verifying the direct influence of PEFB on purchase intention (Santos & Azevedo, 2019). Aytuna (2019) discovered the moderating effect of PEFB on the relationship between trustworthiness and purchase intention in a study on how Instagram influencers affect purchase intention, using multiple linear regression analysis. Similarly, in the context of the limited literature on the moderating effect of PEFB on the relationship between expertise and purchase intention, Aytuna (2019) found the moderating effect of PEFB on the relationship between expertise and purchase intention. Given the scarcity of topic-relevant literature and the inconsistency of previous research findings, it is necessary to further investigate the moderating effect of PEFB on the relationship between AI influencers' perceived credibility and purchase intention.

### **Purchase Intention**

"Purchase intention" refers to the likelihood of consumers acquiring a certain product (Fishbein & Ajzen, 1977). Similarly, according to the definition provided by Spears and Singh (2004), purchase intention represents an individual's conscious plan or effort to purchase a specific brand. In short, purchase intention can be understood as the likelihood that a consumer may intend to purchase a specific product or service in the future (Wu et al., 2011).

Morwitz (2012) have noted that purchase intention is considered a primary predictor of consumer potential purchase behavior. Marketers widely utilize purchase intention in research not only to forecast sales but also to estimate production quantities based on demand, test brand and product concepts, and launch (Silk & Urban, 1978), advertising research (MacKenzie et al., 1986), market segmentation (Sewall, 1981), brand evaluation, and brand extensions (Spears & Singh, 2004).

Some studies on consumer behavior indicate that consumer purchase intentions are influenced by various factors such as past experiences Barber et al (2012), product type Morwitz (2012), popularity Park et al (2007), quality and credibility O'Reilly & Marx (2011), word of mouth and brand awareness Lafferty et al (2002), brand knowledge and loyalty Khan et al (2012), opinions of family and friends Price & Feick (1984), and other generated content from consumer evaluations Burnkrant & Cousineau (1975), timing choices (Morwitz, Steckel, & Gupta, 2007). Nevertheless, this study will not consider these factors. The research aim of this study is to explore the influence of AI influencers on consumer purchase intention.

Therefore, consumers' perception of AI influencers' credibility will be the primary consideration factor. Drawing from the previous literature, this study will treat purchase intention as the dependent variable.

### **Conclusion**

This article reviews relevant literature in the field of influencer marketing, emphasizing the positive impact of AI influencers' perceived credibility on consumer purchase intention. The authors propose that under conditions of product consistency, AI influencers' perceived credibility can significantly strengthen consumer purchase intention. Given the limited research investigating the moderating effect of PEFB on the relationship between AI influencers' perceived credibility and purchase intention, this paper aims to fill this research gap. The study proposed in this paper is of significant importance for practitioners and scholars alike. Firstly, for marketing professionals, understanding the influence of AI influencers on consumer purchase intent can guide them in effectively leveraging AI influencers for product promotion and marketing activities. This research can provide them with valuable insights to develop more targeted influencer marketing strategies and activities, thereby enhancing product sales and market share. Secondly, for scholars, this research can broaden the understanding of consumer behavior in the current context of AI applications. Ultimately, such thought relies on more detailed empirical research in China.

### **Acknowledgement**

The author would like to express gratitude to Huam Ton Tat and Abu Barkar Sade for their support and guidance in this research.

### **Corresponding Author**

Huam Hon Tat

Putra Business School, Universiti Putra Malaysia Serdang, Malaysia.

Email: huam@putrabs.edu.my

### **References**

- Aaker, D. A., Biel, A. L., & Biel, A. (2013). *Brand equity & advertising: advertising's role in building strong brands*. Psychology Press.
- AlFarraj, O., Alalwan, A. A., Obeidat, Z. M., Baabdullah, A., Aldmour, R., & Al-Haddad, S. (2021). Examining the impact of influencers' credibility dimensions: attractiveness, trustworthiness and expertise on the purchase intention in the aesthetic dermatology industry. *Review of International Business and Strategy*, 31(3), 355-374. <https://doi.org/10.1108/RIBS-07-2020-0089>
- Aytuna, E. S. (2019). *Marketing Through Instagram Influencers: The Effect of Source Credibility on Millennials' Purchase Intention* (Doctoral dissertation, Marmara Universitesi (Turkey)).
- Baker, M. J., & Churchill, G. A. (1977). The impact of physically attractive models on advertising evaluations. *Journal of Marketing Research*, 14(4), 538-555. <https://doi.org/10.2307/3151194>
- Baklanov, N. (2021, December 7), The top virtual instagram influencers in 2021, HypeAuditor Blog. Retrieved from <https://hypeauditor.com/blog/the-top-instagram-virtual-influencers-in-2021>.
- Balog, K., De Rijke, M., & Weerkamp, W. (2008). Bloggers as experts: feed distillation using expert retrieval models. In *Proceedings of the 31st annual international ACM SIGIR*



- conference on Research and development in information retrieval (pp. 753-754).  
<https://doi.org/10.1145/1390334.1390486>
- Barber, N., Kuo, P., Bishop, M., & Goodman, R. (2012). Measuring psychographics to assess purchase intention and willingness to pay. *Journal of Consumer Marketing*, 29(4), 280–292. <https://doi.org/10.1108/07363761211237353>
- Bergkvist, L., Hjalmarson, H., & Magi, A. W. (2016). A new model of how celebrity endorsements work: Attitude toward the endorsement as a mediator of celebrity source and endorsement effects. *International Journal of Advertising*, 35, 171–184.
- Bower, A. B., & Landreth, S. (2001). Is beauty best? Highly versus normally attractive models in advertising. *Journal of Advertising*, 30(1), 1–12.  
<https://doi.org/10.1080/00913367.2001.10673627>
- Caballero, M. J., & Solomon, P. J. (1984). Effects of model attractiveness on sales response. *Journal of advertising*, 13(1), 17-33.  
<https://doi.org/10.1080/00913367.1984.10672870>
- Chaiken, Shelly. (1979). Communicator physical attractiveness and persuasion. *Journal of Personality and Social Psychology*, 37(8), 1387–1397. <https://doi.org/10.1037/0022-3514.37.8.1387>
- Chiu, C. L., & Ho, H. C. (2023). Impact of celebrity, Micro-Celebrity, and virtual influencers on Chinese gen Z's purchase intention through social media. *SAGE Open*, 13(1), 21582440231164034. <https://doi.org/10.1177/21582440231164034>
- Choi, S. M., & Rifon, N. J. (2012). It is a match: The impact of congruence between celebrity image and consumer ideal self on effectiveness. *Psychology & marketing*, 29(9), 639-650. <https://doi.org/10.1002/mar.20550>
- Cuesta-Valiño, P., Rodríguez, P. G., & Núñez-Barriopedro, E. (2020). Perception of advertisements for healthy food on social media: effect of attitude on consumers' response. *International journal of environmental research and public health*, 17(18), 6463. <https://doi.org/10.3390/ijerph17186463>
- Daneshvary, R., & Schwer, R. K. (2000). The association endorsement and consumers' intention to purchase. *Journal of Consumer Marketing*, 17(3), 203–213. <https://doi.org/10.1108/07363760010328987>
- Davidaviciene, V., Meidute-Kavaliauskiene, S., & Paliulis, R. (2019). Research on the influence of social media on generation Y consumer purchase decisions. <http://doi.org/10.21272/mmi.2019.4-04>
- De Veirman, M., Cauberghe, V., & Hudders, L. (2017). Marketing through Instagram influencers: the impact of number of followers and product divergence on brand attitude. *International journal of advertising*, 36(5), 798-828. <https://doi.org/10.1080/02650487.2017.1348035>
- Djafarova, E., & Trofimenko, O. (2018). 'Instafamous' – Credibility and Self-Presentation of Micro-Celebrities on Social Media. *Information, Communication and Society*, 22(10), 1432-1446. <https://doi.org/10.1080/1369118X.2018.1438491>
- Djafarova, E., & Matson, N. (2021). Credibility of digital influencers on YouTube and instagram. *International Journal of Internet Marketing and Advertising*, 15(2), 131-148. <https://doi.org/10.1504/IJIMA.2021.114338>
- Drossaert, D. (2023). The Replacement of Human Influencers With Virtual Influencers: Perceptions of Candidness, Trustworthiness and Purchase intention In Social Media Advertisements.

- El Hedhli, K., Zourrig, H., & Becheur, I. (2021). Celebrity endorsements: Investigating the interactive effects of internalization, identification and product type on consumers' attitudes and intentions. *Journal of Retailing and Consumer Services*, 58, 102260. <https://doi.org/10.1016/j.jretconser.2020.102260>
- Erdogan, B. Z., Baker, M. J., & Tagg, S. (2001). Selecting Celebrity Endorsers: The Practitioner's Perspective. *Journal of Advertising Research*, 41(3), 39–48. <https://doi.org/10.2501/JAR-41-3-39-48>
- Fishbein, M., & Ajzen, I. (1977). Belief, attitude, intention, and behavior: An introduction to theory and research.
- Flavián, C., Ibáñez-Sánchez, S., & Orús, C. (2019). The impact of virtual, augmented and mixed reality technologies on the customer experience. *Journal of business research*, 100, 547-560. <https://doi.org/10.1016/j.jbusres.2018.10.050>
- Fleck, N., Korchia, M., & Le Roy, I. (2012). Celebrities in advertising: Looking for congruence or likability? *Psychology and Marketing*, 29(9), 651–662. <https://doi.org/10.1002/mar.20551>
- Formentini, A. (2020). Influencer marketing: an investigation on how the type of influencer and the brand attitude affect the purchase intention of branded content on social media. <https://tesi.luiss.it/id/eprint/29119>
- Franke, C., Groeppel-Klein, A., & Müller, K. (2023). Consumers' responses to virtual influencers as advertising endorsers: novel and effective or uncanny and deceiving?. *Journal of Advertising*, 52(4), 523-539. <https://doi.org/10.1080/00913367.2022.2154721>
- Friedman, H. H., & Friedman, L. (1979). Endorser effectiveness by product type. *Journal of Advertising Research*, 19(5), 63–71.
- Hovland, Carl I., & Weiss, W. (1951). The Influence of Source Credibility on Communication Effectiveness. *Public Opinion Quarterly*, 15(4), 635–650. <https://doi.org/10.1086/266350>
- Hovland, C.I., Janis, I. L., & Kelley, H. H. (1953). *Communication and Persuasion. Psychological Studies of Opinion Change*. New Haven, CT, US: Yale University Press.
- Hoyer, W. D., MacInnis, D. J., & Pieters, R. (2013). *Consumer behavior* (6th ed). Australia ; Mason, OH: South Western Cengage Learning.
- Huang, Q. Q., Qu, H. J., & Li, P. (2022). The Influence of Virtual Idol Characteristics on Consumers' Clothing Purchase Intention. *Sustainability*, 14(14), 8964. <https://doi.org/10.3390/su14148964>
- Goudswaard, C. (2023, March 28). Influencer Marketing Statistics, Trends & Projections in 2023. Kynship. Retrieved from: <https://www.kynship.co/blog/influencer-marketing-statistics>
- IQiyi National Creative Planning Center (2019, December 9) 2019 Virtual Idol Observation Report. Retrieved from: <http://www.199it.com/archives/1004591.html>
- Ji, Y. (2021, May 6) China's Virtual Idol Industry Booming, Attracts More Than 300 Million Fans—Global Times. Retrieved from: <https://www.globaltimes.cn/page/202101/1214468>
- Kahle, L. R., & Homer, P. M. (1985). Physical attractiveness of the celebrity endorser: A social adaptation perspective. *Journal of consumer research*, 11(4), 954-961. <https://doi.org/10.1086/209029>

- Khamis, S., Ang, L., & Welling, R. (2017). Self-branding, 'micro-celebrity' and the rise of social media influencers. *Celebrity Studies*, 8(2), 191–208. <https://doi.org/10.1080/19392397.2016.1218292>
- Khan, I., Ghauri, T. A., & Majeed, S. (2012). Impact of Brand Related Attributes on Purchase Intention of Customers: A Study About the Customers of Punjab, Pakistan. *Interdisciplinary Journal of Contemporary Research in Business*, 4(3), 194–200.
- Ki, C. W. C., & Kim, Y. K. (2019). The mechanism by which social media influencers persuade consumers: The role of consumers' desire to mimic. *Psychology and marketing*, 36(10), 905–922. <https://doi.org/10.1002/mar.21244>
- Kietzmann, J., Paschen, J., & Treen, E. (2018). Artificial intelligence in advertising: How marketers can leverage artificial intelligence along the consumer journey. *Journal of Advertising Research*, 58(3), 263–267. doi:10.2501/JAR-2018-035
- Kim, H., & Park, M. (2023). Virtual influencers' attractiveness effect on purchase intention: A moderated mediation model of the Product–Endorser fit with the brand. *Computers in Human Behavior*, 143, 107703. <https://doi.org/10.1016/j.chb.2023.107703>
- Kim, M. (2022). A Study on the Effect of Perceived Attractiveness and Social Distance of Virtual Influencer on Information Acceptance Intention. *Journal of Convergence Culture and Technology*, 8(2), 309–314. <https://www.earticle.net/Article/A410609>
- Lafferty, B. A., Goldsmith, R. E., & Newell, S. J. (2002). The dual credibility model: The influence of corporate and endorser credibility on attitudes and purchase intentions. *Journal of marketing theory and practice*, 10(3), 1–11. <https://doi.org/10.1080/10696679.2002.11501916>
- Lou, C., & Yuan, S. (2019). Influencer marketing: How message value and credibility affect consumer trust of branded content on social media. *Journal of interactive advertising*, 19(1), 58–73. <https://doi.org/10.1080/15252019.2018.1533501>
- Lynch, J., & Schuler, D. (1994). The matchup effect of spokesperson and product congruency: A schema theory interpretation. *Psychology & Marketing*, 11(5), 417–445. <https://doi.org/10.1002/mar.4220110502>
- MacKenzie, S. B., Lutz, R. J., & Belch, G. E. (1986). The role of attitude toward the ad as a mediator of advertising effectiveness: A test of competing explanations. *Journal of marketing research*, 23(2), 130–143. <https://doi.org/10.1177/002224378602300205>
- Marwick, A. E. (2015). Instafame: Luxury selfies in the attention economy. *Public Culture*, 27(1), 137–160.
- McGinnies, E., & Ward, C. D. (1980). Better liked than right: Trustworthiness and expertise as factors in credibility. *Personality and Social Psychology Bulletin*, 6(3), 467–472. <https://doi.org/10.1177/014616728063023>
- McGuire, W. J. (1985). *Attitudes and Attitude Change*. In L. Gardner & E. Aronson (Eds.), *Handbook of Social Psychology*. New York, NY: Random House.
- Misra, S., & Beatty, S. E. (1990). Celebrity spokesperson and brand congruence: An assessment of recall and affect. *Journal of business research*, 21(2), 159–173. [https://doi.org/10.1016/0148-2963\(90\)90050-N](https://doi.org/10.1016/0148-2963(90)90050-N)
- Morwitz, V. G., Steckel, J. H., & Gupta, A. (2007). When do purchase intentions predict sales? *International Journal of Forecasting*, 23(3), 347–364. <https://doi.org/10.1016/j.ijforecast.2007.05.015>
- Ohanian, R. (1990). Construction and validation of a scale to measure celebrity endorsers' perceived expertise, trustworthiness, and attractiveness. *Journal of advertising*, 19(3), 39–52. <https://doi.org/10.1080/00913367.1990.10673191>

- Ohanian, R. (1991). The impact of celebrity spokespersons' perceived image on consumers' intention to purchase. *Journal of Advertising Research*, 31(1), 46–54.
- O'Reilly, K., & Marx, S. (2011). How young, technical consumers assess online WOM credibility. *Qualitative Market Research: An International Journal*, 14(4), 330–359. <https://doi.org/10.1108/13522751111163191>
- Park, D.-H., Lee, J., & Han, I. (2007). The Effect of On-Line Consumer Reviews on Consumer Purchasing Intention: The Moderating Role of Involvement. *International Journal of Electronic Commerce*, 11(4), 125–148. <https://doi.org/10.2753/JEC1086-4415110405>
- Patzer, G. L. (1983). Source credibility as a function of communicator physical attractiveness. *Journal of Business Research*, 11(2), 229–241. [https://doi.org/10.1016/0148-2963\(83\)90030-9](https://doi.org/10.1016/0148-2963(83)90030-9)
- Pornpitakpan, C. (2003a). The Effect of Celebrity Endorsers' Perceived Credibility on Product Purchase Intention: The Case of Singaporeans. *Journal of International Consumer Marketing*, 16(2), 55–74. [https://doi.org/10.1300/J046v16n02\\_04](https://doi.org/10.1300/J046v16n02_04)
- Pornpitakpan, C. (2003b). Validation of the celebrity endorsers' credibility scale: Evidence from Asians. *Journal of marketing Management*, 19(1-2), 179-195. <https://doi.org/10.1080/0267257X.2003.9728206>
- Pornpitakpan, C. (2004). The effect of celebrity endorsers' perceived credibility on product purchase intention: The case of Singaporeans. *Journal of international consumer marketing*, 16(2), 55-74. [https://doi.org/10.1300/J046v16n02\\_04](https://doi.org/10.1300/J046v16n02_04)
- Price, L. L., & Feick, L. F. (1984). The role of interpersonal sources in external search: An informational perspective. In T. C. Kinnear (Ed.), *Advances in consumer research*, 11, 250-255. Provo, Utah: Association for Consumer Research.
- Robinson, B. (2020). Towards an ontology and ethics of virtual influencers. *Australasian Journal of Information Systems*, 24. <https://doi.org/10.3127/ajis.v24i0.2807>
- Santos, A. L., Barros, F., & Azevedo, A. (2019). Matching-up celebrities' brands with products and social causes. *Journal of Product & Brand Management*, 28(2), 242-255. <https://doi.org/10.1108/JPBM-03-2017-1439>
- Sewall, M. A. (1981). Relative information contributions of consumer purchase intentions and management judgment as explanators of sales. <https://doi.org/10.1177/002224378101800213>
- Schiffman, L. G., & Wisenblit, J. (2015). *Consumer Behavior* (11th edition). Boston: Pearson.
- Schouten, A. P., Janssen, L., & Verspaget, M. (2020). Celebrity vs. Influencer endorsements in advertising: the role of identification, credibility, and Product-Endorser fit. *International journal of advertising*, 39(2), 258-281. <https://doi.org/10.1080/02650487.2019.1634898>
- Shimp, T. A. (2000). Advertising promotion. *Supplemental Aspects of Integrated*, 4, 245-273.
- Singh, J., Crisafulli, B., & Xue, M. T. (2020). 'To trust or not to trust': The impact of social media influencers on the reputation of corporate brands in crisis. *Journal of Business Research*, 119, 464-480. <https://doi.org/10.1016/j.jbusres.2020.03.039>
- Silk, A. J., & Urban, G. L. (1978). Pre-test-market evaluation of new packaged goods: A model and measurement methodology. *Journal of marketing Research*, 15(2), 171-191. <https://doi.org/10.1177/002224377801500201>
- Spears, N., & Singh, S. N. (2004). Measuring attitude toward the brand and purchase intentions. *Journal of current issues & research in advertising*, 26(2), 53-66. <https://doi.org/10.1080/10641734.2004.10505164>

- Till, B. D., & Busler, M. (2000). The Match-Up Hypothesis: Physical Attractiveness, Expertise, and the Role of Fit on Brand Attitude, Purchase Intent and Brand Beliefs. *Journal of Advertising*, 29(3), 1–13. <https://doi.org/10.1080/00913367.2000.10673613>
- Tiwari, A., Kumar, A., Kant, R., & Jaiswal, D. (2023). Impact of fashion influencers on consumers' purchase intentions: theory of planned behaviour and mediation of attitude. *Journal of Fashion Marketing and Management: An International Journal*. doi: 10.1108/JFMM-11-2022-0253
- Torres, P., Augusto, M., & Matos, M. (2019). Antecedents and outcomes of digital influencer endorsement: An exploratory study. *Psychology and Marketing*, 36(12), 1267-1276. <https://doi.org/10.1002/mar.21274>
- Van der Waldt, D., M van Loggerenberg, M., & Wehmeyer, L. (2011). Celebrity endorsements versus created spokespersons in advertising: A survey among students. *South African Journal of Economic and Management Sciences*, 12(1), 100–114. <https://doi.org/10.4102/sajems.v12i1.263>
- Wibawa, R. C., Pratiwi, C. P., Wahyono, E., Hidayat, D., & Adiasari, W. (2022). Virtual influencers: is the persona trustworthy? *Jurnal Manajemen Informatika*, 12(1), 51-62. <https://ojs.unikom.ac.id/index.php/jamika>
- Wiedmann, K. P., & Von Mettenheim, W. (2020). Attractiveness, trustworthiness and expertise—social influencers' winning formula?. *Journal of Product and Brand Management*, 30(5), 707-725. DOI 10.1108/JPBM-06-2019-2442
- Yap, Y. R., & Ismail, N. (2022). Factors of virtual influencer marketing influencing Generation Y consumers' purchase intention in Malaysia. *International Journal of Internet Marketing and Advertising*, 17(3-4), 437-458. <https://doi.org/10.1504/IJIMA.2022.126735>