AI

MDPI

Article

The Shifting Influence: Comparing AI Tools and Human Influencers in Consumer Decision-Making

Michael Gerlich

Center for Strategic Corporate Foresight and Sustainability, SBS Swiss Business School, 8303 Kloten-Zurich, Switzerland; michael.gerlich@cantab.net

Abstract: This study investigates the evolving role of artificial intelligence (AI) in consumer decision-making, particularly in comparison to traditional human influencers. As consumer trust in social media influencers has declined, largely due to concerns about the financial motivations behind endorsements, AI tools such as ChatGPT have emerged as perceived neutral intermediaries. The research aims to understand whether AI systems can replace human influencers in shaping purchasing decisions and, if so, in which sectors. A mixed-methods approach was employed, involving a quantitative survey of 478 participants with prior experience using both AI tools and interacting with social media influencers, complemented by 15 semi-structured interviews. The results reveal that AI is favoured over human influencers in product categories where objectivity and precision are critical, such as electronics and sporting goods, while human influencers remain influential in emotionally driven sectors like fashion and beauty. These findings suggest that the future of marketing will show a reduced need for human social media influencers and may involve a hybrid model where AI systems dominate data-driven recommendations and human influencers continue to foster emotional engagement. This shift has important implications for brands as they adapt to changing consumer trust dynamics.

Keywords: AI; artificial intelligence; consumers; influencers; consumer behaviour; consumer trust; social media marketing; ChatGPT; AI tools

Academic Editor: Giovanni Diraco

Received: 3 December 2024
Revised: 17 December 2024
Accepted: 10 January 2025
Published: 14 January 2025

Citation: Gerlich, M. The Shifting Influence: Comparing AI Tools and Human Influencers in Consumer Decision-Making. *AI* **2025**, *6*, 11. https://doi.org/10.3390/ai6010011

1. Introduction

The rapid advancement of artificial intelligence (AI) has significantly reshaped consumer decision-making processes. Tools like ChatGPT have transformed the way individuals gather information, evaluate options, and choose products [1]. Traditionally, consumers relied on advertisements, social media influencers, and salespeople to guide their decisions, but these sources are increasingly scrutinised for perceived biases and financial incentives [2]. For instance, consumers selecting running shoes may bypass advertisements that claim superiority for all products and view social media influencers with scepticism due to their reliance on brand sponsorships. Similarly, shop assistants may face doubt if their recommendations are perceived as commission-driven rather than tailored to consumer needs. Such trends prompt an important question: Will AI replace traditional marketing as the primary decision-making tool for consumers?

1.1. Shifting Consumer Trust: From Human to AI

The concept of trust plays a critical role in consumer behaviour, particularly when individuals face decisions between competing products and services. Historically, trust in marketing has been built through personal relationships, direct experiences, or the

reputation of established brands. Over time, advertisements and social media influencers emerged as key actors in shaping consumer perceptions. Influencers, in particular, gained popularity by leveraging their perceived authenticity and personal connection with their audiences. Their recommendations were initially seen as genuine, more akin to friendly advice than overt advertising [3]. However, in recent years, consumers have grown increasingly sceptical of human influencers and traditional marketing channels due to concerns about biases and financial motives. This shift can be attributed to the growing transparency surrounding influencer marketing, as influencers are often required to disclose paid partnerships. Studies show that many consumers, especially Millennials and Generation Z, are highly attuned to such manipulative marketing tactics, and they are becoming more critical of the endorsements made by influencers who are compensated by brands [3]. These generations, attuned to manipulative marketing tactics, increasingly seek objective, data-driven sources of information when making purchasing decisions [4]. In contrast, AI tools are increasingly seen as neutral, objective, and free from the financial entanglements that often undermine the credibility of human influencers. Research suggests that AI-driven systems like ChatGPT offer personalised recommendations that are grounded in a consumer's specific needs and preferences rather than influenced by external sponsorships or commercial incentives [5]. For example, when a consumer asks ChatGPT for advice on purchasing the best running shoe, they are more likely to trust the response because it is perceived as being based on objective data, such as product specifications and user reviews, rather than on brand partnerships or endorsements. This shift reflects a broader trend where AI tools are regarded as more trustworthy sources of information, particularly when impartiality and accuracy are valued.

The perception that AI systems lack vested interests continues to drive consumer trust in AI tools. Unlike social media influencers, who often face accusations of promoting products for financial gain, AI is viewed as a neutral intermediary with no personal stake in outcomes. This trust is reinforced by AI's capacity to analyse vast datasets and provide insights that align closely with consumer needs [5]. Nagy and Hajdu [6] further illustrate that the perceived objectivity of AI systems fosters consumer confidence in sectors where unbiased, data-driven insights are paramount. This capacity to deliver tailored recommendations is pivotal, particularly in areas such as healthcare and technology, where accuracy and transparency are critical [5]. As consumer trust shifts towards AI, studies such as Veirman, Cauberghe, and Hudders [7] highlight a parallel trend of diminishing trust in human influencers. Their findings reveal that transparency requirements for influencer marketing, such as mandatory disclosure of paid partnerships, have heightened consumer scepticism, particularly among tech-savvy generations. In contrast, AI tools like ChatGPT offer a compelling alternative by generating recommendations perceived as impartial and free from sponsorship-driven motives. This dynamic highlights a broader transformation in how consumers engage with decision-making tools, particularly in industries where trust and authenticity are pivotal [1].

Gerlich [8] reinforces this trend by exploring the dichotomy between trust in AI and human influencers, emphasising that AI tools are increasingly valued for their ability to prioritise consumer preferences over external financial interests. However, this shift is not without challenges. Emotional engagement, a domain traditionally dominated by human influencers, remains an area where AI tools have yet to excel [9]. For now, AI and human influencers appear to coexist in a complementary model, with AI providing data-driven precision and human influencers offering emotional resonance and aspirational messaging [10]. This evolving trust dynamic has significant implications for the future of marketing. As consumers increasingly view AI tools as more trustworthy and less biased than human influencers, brands may need to adapt by integrating AI-driven strategies

into their marketing mix. This shift suggests that AI tools will not only supplement human influencers but, in some cases, may even replace them as the primary sources of trustworthy recommendations. For now, however, human influencers and AI are likely to coexist in a hybrid model, where each plays a distinct but complementary role in shaping consumer decisions.

1.2. The Role of AI in Consumer Decision-Making

The advent of AI tools, particularly those built on natural language processing (NLP) models like ChatGPT, has fundamentally transformed consumer decision-making processes. These tools leverage advanced algorithms to process vast datasets and synthesise diverse inputs into actionable recommendations. Research by Xing, Duan, and Zhang [11] reveals that consumers increasingly value AI systems for their ability to personalise experiences, aligning recommendations with unique user preferences. Unlike traditional marketing channels, which often rely on human intermediaries influenced by commissions or sponsorships, AI tools are perceived as impartial and grounded in data [5]. This shift towards AI-driven decision-making highlights a growing preference for transparency and objectivity, particularly in markets where consumers are highly sensitive to perceived marketing bias.

The perceived impartiality of AI is a key factor driving consumer trust and decision-making. Recent studies, such as those by Peltier et al. [12], indicate that personalisation and data-driven insights provided by AI enhance trustworthiness, particularly in environments where consumer scepticism towards traditional marketing remains high. Consumers not only trust AI-generated recommendations but are also more likely to act on them, as these suggestions align with individual preferences and contextual needs. The ability of AI to synthesise vast amounts of data into relevant, tailored recommendations strengthens consumer confidence in AI tools over human influencers, whose motives may be questioned due to financial entanglements [5]. This trust in AI extends to higher purchase intentions and long-term adoption, reflecting a broader alignment with consumer expectations for transparent and unbiased marketing practices.

Emerging research continues to explore the dynamics of trust in AI versus human influencers, with significant attention on objectivity, impartiality, and expertise. Recent studies highlight the unique position of AI tools in fostering consumer trust through their capacity to provide data-driven insights free from commercial bias. According to Yang and Wibowo [13], this credibility is particularly impactful in industries such as healthcare, technology, and consumer electronics, where objectivity and accuracy are critical. Their comprehensive framework identifies that trust in AI systems is built on the perceived transparency, reliability, and impartiality of their recommendations. The ability of AI to synthesise and present large volumes of data in a consistent and fact-based manner enables consumers to make informed decisions without concerns about external influences or financial incentives. These qualities position AI systems as trusted intermediaries in decision-making processes across a wide range of sectors. As these systems integrate more deeply into daily life, their role in influencing consumer behaviour continues to expand, reinforcing the idea that AI is gradually transforming traditional decision-making frameworks [5].

The growing trust in AI is closely tied to its ability to enhance consumer autonomy. AI-driven recommendations empower users by providing precise and contextually relevant suggestions tailored to their individual needs. According to Frank et al. [14], consumers exhibit a higher willingness to adopt AI services when they trust the companies providing them, especially when the AI systems offer personalised and transparent interactions. This

trust is further bolstered when consumers feel they have control over the AI's functionalities and understand its decision-making processes.

Moreover, AI systems allow users to refine queries, explore personalised options, and receive immediate, data-driven responses. Unlike human influencers, who often target broad audiences with generalised endorsements, AI systems cater to specific consumer preferences, fostering a sense of empowerment and trust. This autonomy reinforces consumer confidence in AI tools, as decisions are perceived to be based on objective insights rather than promotional content. The World Economic Forum [15] emphasises that building consumer trust is essential for unlocking AI's full potential, highlighting the importance of ethical and transparent AI practices in fostering consumer confidence.

This empowerment is further amplified by AI's capacity to synthesise information from a variety of sources and present it in a coherent and actionable format. Consumers no longer need to sift through conflicting opinions or biased reviews from influencers; instead, they can rely on AI tools that aggregate data from multiple perspectives and provide a balanced view. Davenport et al. [1] highlight the ability of AI to reduce information overload, a common challenge in today's digital environment, where consumers are often bombarded with competing marketing messages. By filtering and curating information in a personalised manner, AI allows consumers to make faster, more accurate decisions, improving overall satisfaction with their purchasing experience.

Despite AI's growing role in decision-making, it is important to acknowledge the potential limitations and the remaining role of human influencers in specific contexts. While AI excels in providing objectives and data-driven recommendations, human influencers still maintain a level of emotional connection with their audience, which can be especially powerful in lifestyle- and fashion-related decisions [7]. Moreover, Boerman, Willemsen, & Van Der Aa [10] suggest that human influencers continue to play a role in social proof and community-building, where consumer decisions are influenced by the endorsement of trusted individuals rather than purely data-based recommendations.

However, as AI tools like ChatGPT become more sophisticated, they are likely to bridge even these gaps. Future AI systems may integrate emotional intelligence into their responses, thereby addressing both the rational and emotional needs of consumers. This evolution could further blur the lines between AI-driven recommendations and human influence, making AI tools more holistic in their ability to serve consumers' needs.

1.3. AI Versus Human Influence: A Comparative Analysis

As AI tools like ChatGPT become more embedded in consumer decision-making processes, a significant question arises: Can AI systems replace traditional human influencers in the realm of marketing? This question is crucial because trust, credibility, and effectiveness have long been the bedrock of influencer marketing, which capitalises on the personal connection between influencers and their followers. However, recent research has begun to draw direct comparisons between AI-driven recommendations and human influence, particularly focusing on consumer trust and the perceived objectivity of these systems.

One of the main issues with human influencers is that many consumers, particularly younger, digitally savvy generations, are increasingly aware of the financial arrangements behind influencer endorsements. Studies have shown that this awareness has contributed to a decline in the perceived authenticity of influencers. For example, Jin and Ryu [2] found that the transparency required in influencer marketing, especially around paid promotions, has led to a reduction in trust among consumers. As consumers become more critical of influencers who promote products in exchange for sponsorship deals, they begin to question the credibility of these endorsements. This is particularly true for Millennials

and Generation Z, who are known for their media literacy and awareness of manipulative marketing tactics [2].

In contrast, AI systems are viewed as more impartial and trustworthy intermediaries. AI-driven platforms, particularly those integrated into e-commerce, provide data-driven recommendations that are perceived as more credible because they lack the financial motivations that typically drive human influencers. Rust and Huang [5] argue that AI recommendations, based purely on consumer data and product features, offer an objectivity that human influencers cannot replicate. This distinction becomes even more important in product categories where consumers are seeking unbiased and fact-based advice. For example, when a consumer is searching for the ideal running shoe, they may turn to ChatGPT because the AI tool can assess the latest product reviews, user preferences, and product features without being swayed by financial incentives. Unlike human influencers, who may promote a product for the sake of monetary gain, AI is seen as a neutral actor that provides recommendations based on data-driven insights and algorithms [5]. Moreover, Gerlich [8] underscores this shift in consumer behaviour, highlighting that AI's impartiality has become a key differentiator in shaping consumer preferences. Gerlich's research indicates that consumers increasingly value AI-generated recommendations in sectors where objective information is paramount, such as technology, healthcare, and high-end consumer goods. The ability of AI tools like ChatGPT to quickly synthesise large amounts of data and provide fact-based recommendations is especially appealing to consumers who are wary of the subjective endorsements made by human influencers. In industries where consumers demand accuracy and reliability, AI is rapidly emerging as the preferred choice for product recommendations.

This trend is further supported by research on consumer trust. Nagy and Hajdu [6] found that trust in AI systems significantly influences consumer acceptance, as these systems are perceived to provide reliable, accurate, and neutral information. Unlike human influencers, who may lose credibility if their promotions are perceived as overly commercial or insincere, AI systems are seen as unbiased because they do not have personal or financial stakes in the products they recommend. This objectivity enhances trust and leads to higher purchase intentions among consumers. For instance, when comparing AI recommendations with influencer endorsements, consumers are more likely to follow AI advice, perceiving it as purely data-driven [6].

However, while AI has made significant inroads into consumer decision-making, human influencers continue to play an important role, particularly in categories where emotional engagement and social proof are critical. Veirman, Cauberghe, and Hudders [7] argue that influencers excel in areas where lifestyle, identity, and community-building are central to the consumer experience. Influencers offer a more personal connection, which AI tools currently lack, particularly in sectors such as fashion, beauty, and luxury goods, where aspirational messaging is key. The emotional bond between influencers and their followers cannot be easily replicated by AI systems, which tend to rely on functional and rational recommendations [7].

Nonetheless, the increasing trust in AI systems is a clear indicator that the balance between human influence and AI-driven recommendations is shifting. Boerman et al. [10] suggest that while human influencers remain valuable in certain niches, the rise of AI as a credible and trustworthy source of information could eventually supplant influencers in sectors that prioritise objectivity and fact-based decisions. As consumers become more accustomed to interacting with AI tools, and as these tools evolve to incorporate emotional intelligence and personalised interactions, it is possible that AI will be able to rival, or even surpass, the emotional appeal traditionally held by human influencers [10].

The comparison between AI systems and human influencers suggests that while each has unique strengths, the growing reliance on AI-driven recommendations is transforming how consumers make decisions. As Gerlich [16] concludes, AI's credibility, impartiality, and ability to deliver tailored insights are positioning it as a dominant force in sectors where neutrality and expertise are essential. Moving forward, the question is not whether AI will replace human influencers entirely but rather how these two distinct sources of influence will coexist in the evolving marketing landscape. While human influencers may continue to dominate emotionally driven industries, AI tools like ChatGPT are expected to take over in areas where consumers demand reliable, unbiased, and data-driven recommendations.

1.4. The Future of Marketing: AI Integration or Replacement?

As AI tools become increasingly sophisticated, the future of marketing is unlikely to witness the complete replacement of human influencers by AI. Instead, a hybrid model is likely to emerge, in which AI systems and human influencers coexist to fulfil different roles in shaping consumer behaviour. AI systems are expected to dominate product categories where objectivity, data-driven recommendations, and functional insights are most valued. In sectors such as electronics, appliances, and sporting goods, consumers prioritise functionality, accuracy, and personalisation—all areas where AI excels [1]. In these domains, AI-driven recommendations can cater to individual consumer preferences with a high degree of precision, offering tailored product suggestions based on algorithmic insights and consumer data.

AI tools have been shown to outperform human influencers in situations that require precision and relevance, particularly when consumers need to make decisions based on specific, individualised needs [1]. For example, when selecting a complex product like a laptop or a high-end kitchen appliance, consumers may turn to AI systems for unbiased, data-backed recommendations. Unlike human influencers, who may provide generalised or brand-sponsored advice, AI systems can synthesise large amounts of data, reviews, and specifications, delivering a more customised solution that meets the unique requirements of each user [5]. This capacity to personalise recommendations based on an individual's preferences and needs strengthens the role of AI in product categories where performance and utility are more important than emotional engagement.

However, despite the growing dominance of AI systems in certain categories, human influencers are likely to maintain their influence in sectors where emotional connections and social proof play a critical role in consumer decision-making. In product categories such as fashion, beauty, and lifestyle, human influencers often serve as aspirational figures, creating a sense of identity and community among their followers [7]. In these industries, consumers often look to influencers not just for product recommendations but also for social validation and inspiration. The ability of human influencers to form emotional bonds with their audiences, which are rooted in personality, shared values, and relatable experiences, remains a powerful driver of consumer engagement.

For example, Schouten et al. [9] found that emotional engagement plays a significant role in driving purchase decisions. Consumers who develop personal connections with influencers are more likely to be influenced by their recommendations, even when the influencers are promoting products through sponsored content. This emotional connection is something that AI, for all its sophistication, cannot replicate—at least not yet. AI tools excel at offering functional recommendations, but they lack the ability to generate the aspirational messaging and emotional resonance that human influencers cultivate through their unique personalities and interactive content. Similarly, Schouten et al. [9] highlight the importance of human interaction in influencer marketing, particularly in industries where consumers seek social validation and a sense of belonging. In such sectors, human

influencers are not merely conveyors of product information but also community leaders who shape social trends and influence group norms. Their ability to build trust and rapport with their audience through authentic communication gives them a lasting advantage in areas where emotionally driven decision-making is key. While AI can simulate aspects of personalisation, it cannot yet replicate the nuanced emotional engagement that human influencers offer [9].

Looking ahead, it is possible that AI systems may evolve to incorporate elements of emotional intelligence, which could bridge the current gap between functional and emotional marketing. However, in the near term, human influencers are likely to retain their prominence in sectors that require emotional appeal and community building. Jin and Ryu [2] argue that human influencers will continue to play an essential role in marketing strategies that rely on authenticity, relatability, and the ability to inspire aspirational consumption. These qualities are difficult to replicate with AI-driven tools, which excel in rational decision-making but struggle to engage consumers on an emotional level.

1.5. AI and the Evolution of Consumer Engagement

The integration of AI in marketing is more than a trend; it represents a profound shift in how consumers engage with brands. As AI systems like ChatGPT, machine learning algorithms, and recommendation engines become more sophisticated, they are fundamentally altering the landscape of consumer engagement. Research consistently demonstrates that AI tools, by offering personalised, data-driven insights, significantly enhance consumer satisfaction and engagement [5]. AI systems are able to process vast amounts of consumer data to deliver tailored experiences that respond directly to individual preferences, needs, and behaviours. This hyper-personalisation is critical in a marketplace where consumers expect brands to anticipate their needs and deliver relevant content and product suggestions in real time [17].

One of the key reasons for AI's success in enhancing consumer engagement lies in its ability to provide precision and relevance at scale. AI systems can analyse consumer behaviour patterns, preferences, and even external variables such as market trends to generate highly customised recommendations. This level of personalisation fosters deeper engagement because consumers feel that their specific needs are being met more accurately than they would be through traditional marketing channels or generalised recommendations from human influencers [17]. For instance, AI can recommend products based on a customer's previous purchases, search history, or even preferences inferred from social media activity, which increases the likelihood of a successful engagement or transaction.

However, while AI excels in providing data-driven and rational recommendations, its role in emotional engagement is more limited. Human influencers, in contrast, continue to play a crucial role in areas where emotional connections and social influence are central to the decision-making process. Despite the advanced personalisation capabilities of AI, it lacks the emotional intelligence required to forge the same kind of deep interpersonal connections that human influencers can achieve. These connections are often based on shared values, personal stories, and relatable experiences, which human influencers use to build trust and rapport with their audiences [9].

This limitation has led scholars such as Grewal et al. [17] to propose a future where AI and human influencers work in tandem to complement each other's strengths. In such a scenario, AI would handle the rational and functional aspects of consumer decisions—such as providing data-driven insights and objective recommendations—while human influencers focus on the emotional connections and brand narratives that are crucial for certain product categories, particularly in industries like fashion, lifestyle, and luxury goods [17]. Böhndel et al. [18] further support this view, noting that while AI can personalise consumer

interactions, its role in shaping emotional engagement will remain limited until AI systems develop more sophisticated models of empathy and emotional understanding. Moreover, AI-driven consumer engagement is not only about personalisation but also about autonomy. Research suggests that AI empowers consumers by giving them greater control over their purchasing decisions. AI tools like ChatGPT allow users to ask specific, detailed questions, explore options, and receive tailored responses that align with their individual preferences. This sense of consumer autonomy is highly valued in today's marketplace, where individuals are increasingly sceptical of traditional marketing and influencer-driven messages that are often perceived as biased or inauthentic [5]. Consumers, particularly younger generations, prefer to feel that they are making informed decisions based on objective data rather than being passively influenced by marketers or influencers.

However, despite AI's increasing influence, human influencers retain an edge in building trust through authentic, relatable experiences. Schouten et al. [9] argue that human influencers play a critical role in creating emotional connections that AI cannot replicate, particularly in contexts where consumers seek social proof or a sense of belonging. These influencers often act as community leaders, shaping social trends and inspiring their audiences through personal anecdotes, stories, and values that resonate on an emotional level. For brands, this means that even as AI tools become more prevalent, human influencers will remain vital in creating brand loyalty and emotional engagement in product categories where aspirational marketing is essential.

2. Materials and Methods

This study seeks to address two primary research questions:

(1) What are the differences in consumer trust between AI tools (e.g., ChatGPT) and human influencers?
(2) How do trust dynamics affect consumer preferences for AI versus human influencers in decision-making?

To explore these questions, we employed a cross-sectional design to capture current trust dynamics between AI tools and human influencers. The primary aim is to provide a snapshot of consumer perceptions and behaviours within this context. While longitudinal studies could offer additional insights into temporal changes, the scope and objectives of this research focus on delivering robust, statistically significant findings reflective of the current state of consumer trust.

Data collection involved a survey of 478 participants recruited through online platforms and focus group discussions with 50 participants. The analysis included correlation analysis, Ridge and Lasso Regression, and Mediation Analysis to examine trust dynamics and their implications for consumer behaviour. These findings elucidate the shifting role of trust in AI tools and human influencers, highlighting the potential of AI tools to replace traditional influencers.

Mixed methods allow for the strengths of both approaches to complement each other, enhancing the richness of the data and the validity of the findings [19]. The combination of survey-based quantitative data and qualitative interview insights enabled a comprehensive understanding of the phenomenon under investigation.

Quantitative data from the survey provided the statistical rigour needed to test the hypotheses and measure relationships between key variables. At the same time, the qualitative interviews offered deeper insights into participants' reasoning and emotional responses. This convergent mixed methods design ensured that both types of data were integrated to produce a more holistic view of the research problem [20].

The mixed-methods approach was particularly well suited to this study because it allowed for both breadth and depth in understanding how AI tools like ChatGPT are

reshaping consumer decision-making processes. While the quantitative analysis offered clear, statistically significant relationships that supported the hypothesis, the qualitative interviews revealed contextual factors and personal experiences that enriched the interpretation of the quantitative results. This integration of methods provided a balanced view, with the quantitative data offering generalisability and the qualitative insights adding depth and texture to the findings [21].

2.1. Sampling Method

This study used random sampling, which was implemented through the SurveyHero platform to ensure broad and unbiased participation. Random sampling is a well-established method in social science research, valued for its ability to reduce sampling bias and provide each member of the population with an equal chance of selection [22]. This method enhances the external validity of the study, making the findings more generalisable to the larger population [23].

To reach a diverse and representative group of participants, the survey was promoted on three major social media platforms, Facebook, Instagram, and TikTok, specifically targeting users in the United Kingdom. These platforms were chosen based on their high levels of engagement and broad demographic reach. Research indicates that social media platforms like Facebook and Instagram are particularly effective for reaching adults aged 18–49, while TikTok has grown significantly in popularity among younger generations, including Generation Z [24]. By leveraging these platforms, the study was able to target a wide audience, ensuring that participants had varied levels of experience with AI tools like ChatGPT and social media influencers.

The survey promotions on Facebook, Instagram, and TikTok were tailored to maximise engagement and attract a diverse participant pool. By leveraging platform-specific targeting tools, this study ensured a broad demographic representation reflective of the UK population's social media user base. The final sample consisted of 478 participants who completed the survey in full, providing a robust dataset for analysis. While the exact reach of the survey promotion cannot be quantified due to limitations in platform analytics, the strategic use of three major social media platforms ensured wide exposure and diversity in responses.

The promotion of the survey on these platforms allowed for access to a heterogeneous sample, which is crucial when investigating phenomena like trust in AI and influencer marketing. These platforms provided a channel to reach individuals with diverse demographic backgrounds, including variations in age, gender, tech proficiency, and social media usage habits. Such diversity is critical for ensuring that the findings reflect the complex and multifaceted nature of consumer trust and decision-making [25]. The use of random sampling through these social media channels reduced the likelihood of selection bias and ensured that the sample accurately represented the broader population of UK social media users.

It is important to note that while random sampling strengthens the validity of the study, self-selection biases inherent in social media surveys may still pose a challenge. Participants who engage with Facebook, Instagram, and TikTok may differ in their behaviours or attitudes compared to those who do not use these platforms [26]. However, the inclusion of multiple platforms with varied user demographics mitigates this limitation by drawing from diverse user bases, ensuring a more balanced sample.

The decision to focus on UK-based users was informed by the goal of understanding the local dynamics of trust in AI systems and social media influencers while also ensuring cultural homogeneity in the sample. By limiting the geographic scope to the UK, the study avoided the potential for cross-cultural variations that might complicate the analysis of

consumer trust dynamics [27]. Future research could build on this by employing cross-national samples to explore how these dynamics might differ in other cultural contexts.

The random sampling method, combined with the strategic promotion of the survey on highly popular social media platforms, allowed for the collection of a broad and representative sample. This approach ensured that the findings of the study could be generalised to the larger population of UK social media users, providing robust insights into how AI-driven recommendations and human influencers shape consumer decision-making.

2.2. Participants and Data Collection

During June and August 2024, a total of 478 participants from the UK with experience using AI tools such as ChatGPT and social media influencers were surveyed. The participants ranged in age from 18 to 60, ensuring a broad demographic representation. Data were collected via a structured questionnaire employing a 6-point Likert scale to capture participant responses regarding Trust in AI, Trust in Influencers, Purchase Intentions, and Overall AI Preferences. The absence of a neutral middle point in the Likert scale aimed to force a decision, improving the clarity of results [28].

The structured questionnaire was meticulously designed to investigate trust dynamics between AI tools and human influencers. The instrument consisted of 25 items organised into four sections: demographics and control variables, perceptions of recommendation sources, purchase intentions and preferences, and future intentions and overall attitudes. Each item used a 6-point Likert scale ranging from 1 (Strongly Disagree) to 6 (Strongly Agree). The questions were developed based on a thorough review of the existing literature and validated measures. For instance, trust in AI and human influencers (Questions 7 and 8) adapted scales from studies on trust in technology and social influence [29,30]. Perceived credibility, expertise, and objectivity of recommendation sources (Questions 9–14) were informed by prior research on consumer trust and decision-making processes. Questions 15–16 explored emotional connections, while Questions 17–22 examined consumer purchase intentions and preferences across different product categories. Finally, future intentions and overall attitudes toward AI and human influencers were assessed through Questions 23–25.

The questionnaire was pre-tested with a pilot group of 30 participants to ensure clarity and appropriateness of the items. Feedback from this pilot phase led to minor adjustments in the wording of some questions to enhance their interpretability. The final instrument was distributed online through the SurveyHero platform, with social media platforms such as Facebook, Instagram, and TikTok used to promote the survey. This strategy ensured wide exposure to a diverse group of participants while preserving participant anonymity.

The questionnaire captured nuanced data relevant to the research questions by integrating validated constructs with context-specific questions. This robust survey instrument provided a comprehensive foundation for analysing trust dynamics and consumer preferences in the context of AI tools and human influencers.

2.3. Semi-Structured Interviews

In addition to the survey data, 15 semi-structured interviews were conducted with individuals who had significant experience using AI tools such as ChatGPT and engaging with social media influencers. These participants were recruited independently of the survey sample through a purposive sampling method to ensure the representation of diverse perspectives. Recruitment efforts targeted professionals, university students, and frequent social media users to capture a range of experiences and insights related to trust in AI and decision-making processes.

The interview participants included professionals (60%), university students (30%), and other individuals (10%) with varying levels of expertise and familiarity with AI tools and social media platforms. This demographic diversity was critical for exploring nuanced attitudes and beliefs, which could not be fully captured through the survey's structured format.

The semi-structured format allowed for flexibility in responses while ensuring consistency across key themes, including Trust in AI, decision-making processes, and consumer preferences. This approach facilitated deeper insights into the reasoning and emotional responses that shaped participants' views on AI tools and human influencers. All interviews were transcribed and subjected to thematic analysis, which enabled the identification of recurring patterns and unique perspectives that enriched the quantitative findings. This approach facilitated deeper insights into the underlying attitudes and beliefs that shape consumer behaviour, which could not be fully captured through quantitative methods alone [31]. This method enabled the exploration of more nuanced perceptions and individual variations that may not have emerged through the structured survey questions.

2.4. Data Analysis Methods

To investigate whether AI tools like ChatGPT are set to replace human influencers in shaping consumer decisions, several advanced quantitative techniques were used. Each method was chosen for its suitability in addressing specific issues, such as multicollinearity, variable selection, and hypothesis testing regarding the relationships between Trust in AI, purchase intention, and consumer preferences.

2.4.1. Correlation Analysis

Pearson correlation coefficients were used to measure the linear relationships between variables, including Trust in AI, AI Purchase Intention, Trust in Influencers, and Overall AI Preference. This method identifies how strongly and in which direction two variables are related [32]. Correlation analysis helped provide an initial understanding of the data and the relationships among the key variables relevant to this study.

2.4.2. Ridge Regression

To address the issue of multicollinearity between predictors such as Trust in AI, AI Purchase Intention, and Future Use of AI, Ridge Regression was employed. Ridge Regression is a regularisation technique that introduces an L2 penalty to the regression model, effectively shrinking the coefficients of correlated variables, which prevents overfitting [33]. Ridge Regression was chosen for its ability to handle datasets where multicollinearity could distort the interpretation of variable importance.

2.4.3. Lasso Regression

Given the need to refine the model and eliminate less significant predictors, Lasso Regression was employed. This technique introduces an L1 penalty, which not only shrinks coefficients but can also set some to zero, making it effective for feature selection [34]. Lasso was used to simplify the model by selecting only the most important predictors, ensuring a more interpretable outcome while maintaining prediction accuracy.

2.4.4. Elastic Net Regression

Elastic Net Regression, which combines the penalties of both Ridge and Lasso Regression, was applied to balance the benefits of regularisation and feature selection [35]. Elastic Net is particularly suited to datasets with both high dimensionality and multicollinearity, as it introduces both L1 (Lasso) and L2 (Ridge) penalties. This method was selected to

ensure that both penalisation and variable selection were appropriately handled while maintaining model accuracy.

2.4.5. Mediation Analysis

A Mediation Analysis was conducted to explore the indirect relationship between trust in AI and overall AI preference via AI purchase intention. Mediation Analysis allows for the decomposition of total effects into direct and indirect effects, shedding light on the mechanisms through which one variable affects another [36]. This method was applied to test whether AI Purchase Intention mediates the influence of Trust in AI on Overall AI Preference, providing insights into the process by which trust translates into consumer behaviour.

2.4.6. Cross-Validation

To validate the robustness of the regression models, k-fold cross-validation (with 10 folds) was employed. Cross-validation is a method used to assess how well a model generalises to new data by splitting the dataset into k subsets. The model is trained on k-1 subsets and tested on the remaining subset, with the process repeated k times to average the results [37]. This approach ensures that the models used in the study are not overfitted to the data and that their predictive power is consistent across different subsets of the data.

Each of the methods employed in this study was selected to address specific data characteristics, such as multicollinearity and the need for variable selection, and to test the hypothesis that AI tools like ChatGPT are increasingly replacing human influencers in shaping consumer decisions. The combination of regression analyses, mediation, and cross-validation allowed for a comprehensive examination of the relationships between trust in AI, purchase intention, and overall preferences, aligning the study's methodology with the rigourous standards expected for contemporary research.

The combination of these methods enabled the study to address both what consumers think and do regarding AI and influencers (through quantitative means) and why they feel the way they do (through qualitative means), which is critical in a rapidly evolving field like AI-driven consumer behaviour.

3. Results

3.1. Demographic Correlations

The correlation analysis (Table 1) between demographic variables and key outcome variables, including Trust in AI, AI Purchase Intention, and Overall AI Preference, reveals several important relationships that shed light on the influence of factors such as age and gender on consumer trust and behaviour.

Table 1. Demographic and experience correlation matrix (rounded).

Variable	Age	Gender Encoded	Trust in AI	Trust in Influencers	AI Purchase Intention	Overall AI Preference
Age	1.0	−0.076	−0.312	0.291	−0.312	−0.171
Gender Encoded	−0.076	1.0	0.077	−0.157	0.077	0.038
Trust in AI	−0.312	0.077	1.0	−0.961	1.0	0.969
Trust in Influencers	0.291	−0.157	−0.961	1.0	−0.961	−0.945
AI Purchase Intention	−0.312	0.077	1.0	−0.961	1.0	0.969
Overall AI Preference	−0.171	0.038	0.969	−0.945	0.969	1.0

The most notable finding concerns the relationship between age and Trust in AI. The analysis indicates a moderate negative correlation (r = −0.31) between these variables, suggesting that younger participants are more likely to trust AI tools like ChatGPT. This negative association between age and AI Purchase Intention (r = −0.31) reinforces the idea that younger consumers are not only more trusting of AI but also more inclined to act on AI-driven recommendations. In contrast, older participants appear to exhibit less trust in AI and a lower likelihood of purchasing based on AI recommendations. This trend may reflect generational differences in the adoption of technology, where younger individuals who have grown up with digital tools are more comfortable and reliant on AI for decision-making.

Conversely, age shows a positive correlation with Trust in Influencers (r = 0.29), indicating that older participants tend to place more trust in human influencers compared to their younger counterparts. This suggests that while younger consumers are gravitating towards AI for recommendations, older individuals may still rely more heavily on human influencers, possibly due to a stronger connection with traditional forms of social influence.

Gender, encoded as 1 for males and 0 for females, shows a relatively weak correlation with the key outcome variables. The most notable correlation is a negative association between gender and Trust in Influencers (r = −0.16), suggesting that males are slightly less likely to trust human influencers compared to females. However, this relationship is modest, and overall, gender appears to have a minimal effect on consumer trust in AI or human influencers.

These findings highlight the importance of age as a significant demographic factor that influences trust in AI and human influencers. Younger participants show a clear preference for AI tools, aligning with the broader trend towards AI-driven decision-making, as discussed in contemporary research [16,38]. In contrast, older participants seem more inclined to trust human influencers, which may indicate that human influencers continue to play a role in shaping the decisions of certain demographic groups, even as AI gains prominence. The relatively small effect of gender on these variables suggests that while there may be minor differences between males and females in terms of influencer trust, the impact of gender is less pronounced than the influence of age.

3.2. Descriptive Statistics

The descriptive analysis of the survey data provided key insights into how participants perceive Trust in AI, Trust in Influencers, AI Purchase Intention, Future Use of AI, and Overall AI Preference. As seen in Table 1, participants reported a high level of Trust in AI, with a mean score of 5.15 on a 6-point Likert scale. This finding indicates that the majority of respondents have a strong belief in AI tools like ChatGPT as reliable sources for decision-making. The standard deviation of 1.26 suggests that while most participants lean towards trusting AI, there is some variability in the level of trust.

In contrast, Trust in Influencers displayed a much lower mean score of 2.56, implying a general scepticism towards human influencers. This significant difference in trust levels between AI and human influencers highlights a shift in consumer behaviour, where AI is increasingly seen as a more neutral and objective source of information. Additionally, AI Purchase Intention (mean = 5.15) and Future Use of AI (mean = 5.12) closely mirrored the high levels of trust in AI, suggesting that participants are not only trusting AI for recommendations but are also likely to act on these recommendations and continue using AI in the future. The relatively low Influencer Purchase Intention (mean = 2.60) further reinforces the diminishing role of human influencers in driving consumer decisions.

Table 2 provides a detailed summary of these descriptive statistics, highlighting the substantial contrast between AI and human influencers in terms of trust and future usage intentions.

Table 2. Descriptive statistics of key variables.

Variable	Mean	Standard Deviation	Minimum	Maximum
Trust in AI	5.15	1.26	1	6
AI Purchase Intention	5.15	1.26	1	6
Future Use of AI	5.12	1.29	1	6
Trust in Influencers	2.56	1.43	1	6
Influencer Purchase Intention	2.60	1.39	1	6
Overall AI Preference	5.15	1.26	1	6

The findings in Table 2 underscore the centrality of AI in modern consumer decision-making, reflecting the growing trust and reliance on AI over human influencers. The high scores for Trust in AI and Future Use of AI are aligned with recent trends suggesting that AI tools are increasingly perceived as credible and reliable, as supported by contemporary studies such as those from Gerlich [16,38].

3.3. Correlation Analysis

To further explore the relationships between the key variables, a Pearson correlation analysis was conducted. The results, summarised in Table 3, show strong positive correlations between Trust in AI and both AI Purchase Intention (r = 1.00) and Overall AI Preference (r = 0.97). This suggests that as trust in AI increases, so does the likelihood of consumers acting on AI recommendations and expressing a preference for AI-driven decision-making. These findings align with previous research indicating that AI tools, perceived as impartial, are becoming more influential in shaping consumer behaviours (Gerlich, 2023/2024).

Table 3. Correlation Matrix (with significance indicators: $p < 0.05$, $p < 0.01$.)

Variable	Age	Gender Encoded	Trust in AI	Trust in Influencers	AI Purchase Intention	Overall AI Preference
Age	1.000	−0.076	−0.312 *	0.291 *	−0.312 *	−0.171
Gender Encoded		1.000	0.077	−0.157	0.077	0.038
Trust in AI			1.000 **	−0.961 **	1.000 **	0.969 **
Trust in Influencers				1.000 **	−0.961 **	−0.945 **
AI Purchase Intention					1.000 **	0.969 **
Overall AI Preference						1.000 **

Note: * $p < 0.05$ (statistically significant); $p < 0.01$ (highly significant). Correlation values range from −1 (perfect negative correlation) to +1 (perfect positive correlation). Values closer to 0 indicate weaker relationships. A double asterisk (**) is used to denote correlations significant at the highest level of $p < 0.01$.

Table 3 also shows that Trust in Influencers has a strong negative correlation with Trust in AI (r = −0.96) and Overall AI Preference (r = −0.95). This inverse relationship indicates that as trust in AI increases, consumers are less likely to trust human influencers, further supporting the hypothesis that AI tools like ChatGPT are gradually replacing social media influencers in influencing consumer decisions.

The correlation matrix (Table 3) highlights a strong, consistent relationship between Trust in AI and consumers' intent to both purchase and continue using AI-driven tools. Additionally, the negative relationship between Trust in AI and Trust in Influencers further

substantiates the notion that as consumers increasingly turn to AI for unbiased recommendations, their reliance on human influencers diminishes.

3.4. Ridge Regression

Given the multicollinearity observed between Trust in AI, AI Purchase Intention, and Future Use of AI, Ridge Regression was employed to understand better the relative importance of these variables in predicting Overall AI Preference. Ridge regression is well suited for dealing with multicollinearity by introducing a penalty for large coefficients, ensuring that the model remains stable and interpretable [33].

The Ridge Regression model yielded an R-squared value of 0.9997, indicating that the predictors could explain nearly all the variance in Overall AI Preference. This result suggests a highly predictive model, with Future Use of AI emerging as the most significant factor. As detailed in Table 4, Trust in AI and AI Purchase Intention were also important, but the presence of Future Use of AI moderated their effects.

Table 4. Ridge Regression Results (with significance indicators: $p < 0.05$, $p < 0.01$.

Predictor	Coefficient	Standard Error	t-Value	*p*-Value
Trust in AI	0.142	0.045	3.15	<0.01
AI Purchase Intention	0.175	0.039	4.49	<0.001
Future Use of AI	0.659	0.033	19.97	<0.001

Table 4 shows that Future Use of AI had the highest coefficient, indicating that consumers' intent to use AI tools in the future plays the most decisive role in shaping their overall preference for AI-driven recommendations. This finding is consistent with the hypothesis that AI tools will increasingly dominate the consumer decision-making process as trust and usage intentions grow.

The strong positive correlation between Trust in AI and AI Purchase Intention (r = 1.00, $p < 0.01$) demonstrates the critical role of trust in driving consumer actions. These findings align with the hypothesis that AI tools, perceived as unbiased and objective, are increasingly influencing consumer decisions over human influencers. Additionally, the high predictive power of our Ridge Regression model (Correlation Matrix (with significance indicators: $p < 0.05$, $p < 0.01$.)) further reinforces the statistical robustness and generalisability of the results.

3.5. Lasso Regression

To refine the model further, Lasso Regression was applied. Lasso Regression is particularly effective in variable selection, as it sets less important predictors to zero, simplifying the model (Tibshirani, 1996). The Lasso Regression results, shown in Table 5, confirmed the importance of the Future Use of AI, while some of the weaker predictors were removed from the model.

Table 5. Lasso Regression Results (with significance indicators: $p < 0.05$, $p < 0.01$).

Predictor	Coefficient	Standard Error	t-Value	*p*-Value
Trust in AI	0.185	0.048	3.85	<0.01
AI Purchase Intention	0.623	0.031	20.10	<0.001

Table 5 highlights that Future Use of AI was the sole predictor retained by the Lasso model, suggesting that this variable alone explains the majority of variance in Overall AI Preference. This simplified model confirms the dominance of future usage intent over other factors like Trust in AI.

3.6. Mediation Analysis

To assess the indirect effect of AI Purchase Intention on the relationship between Trust in AI and Overall AI Preference, a Mediation Analysis was conducted. This mediation model revealed a significant indirect effect, as shown in Table 6.

Table 6. Mediation Analysis Results (with significance indicators: $p < 0.05$, $p < 0.01$).

Mediator	Effect Type	Coefficient	Standard Error	*p*-Value
Trust in AI	Direct Effect	0.142	0.045	<0.01
Trust in AI	Indirect Effect	0.075	0.030	<0.05
AI Purchase Intention	Direct Effect	0.623	0.031	<0.001
AI Purchase Intention	Indirect Effect	0.219	0.029	<0.001

As seen in Table 6, both the direct effect of Trust in AI on Overall AI Preference and the indirect effect through AI Purchase Intention were significant. This suggests that a large portion of the influence that Trust in AI exerts on consumer preferences is mediated through AI Purchase Intention, reinforcing the hypothesis that AI tools are trusted not only for recommendations but also for driving consumer actions. The total effect of Trust in AI (0.990) is almost equally divided between its direct influence and its indirect influence via AI Purchase Intention, highlighting the important role purchase intention plays in shaping consumer preferences for AI-driven recommendations.

3.7. Elastic Net Regression

To balance between the strengths of both Ridge and Lasso Regression, Elastic Net Regression was employed. Elastic Net combines L1 and L2 penalties, making it well suited for scenarios where multicollinearity exists, but variable selection is also critical [35]. Table 7 presents the results of the Elastic Net model, which retained the Future Use of AI as the most significant predictor, similar to previous models.

Table 7. Elastic Net regression results.

Predictor	Coefficient	Standard Error	t-Value	*p*-Value
Future Use of AI	0.871	0.029	30.03	<0.001
AI Purchase Intention	0.119	0.035	3.40	<0.01
Trust in AI	0.083	0.040	2.08	0.038

The results in Table 7 show that Future Use of AI remained the most dominant predictor of Overall AI Preference, with AI Purchase Intention and Trust in AI contributing as secondary factors. This reinforces earlier findings and supports the hypothesis that future usage intent is a key driver of consumer preference for AI tools over human influencers.

3.8. Cross-Validation

Finally, to ensure the robustness of the regression models, a 10-fold cross-validation (Figure 1) was performed on the Ridge model. This method divides the data into 10 subsets, training the model on 9 subsets while testing it on the remaining subset, ensuring that the model's performance generalises well to new data [37].

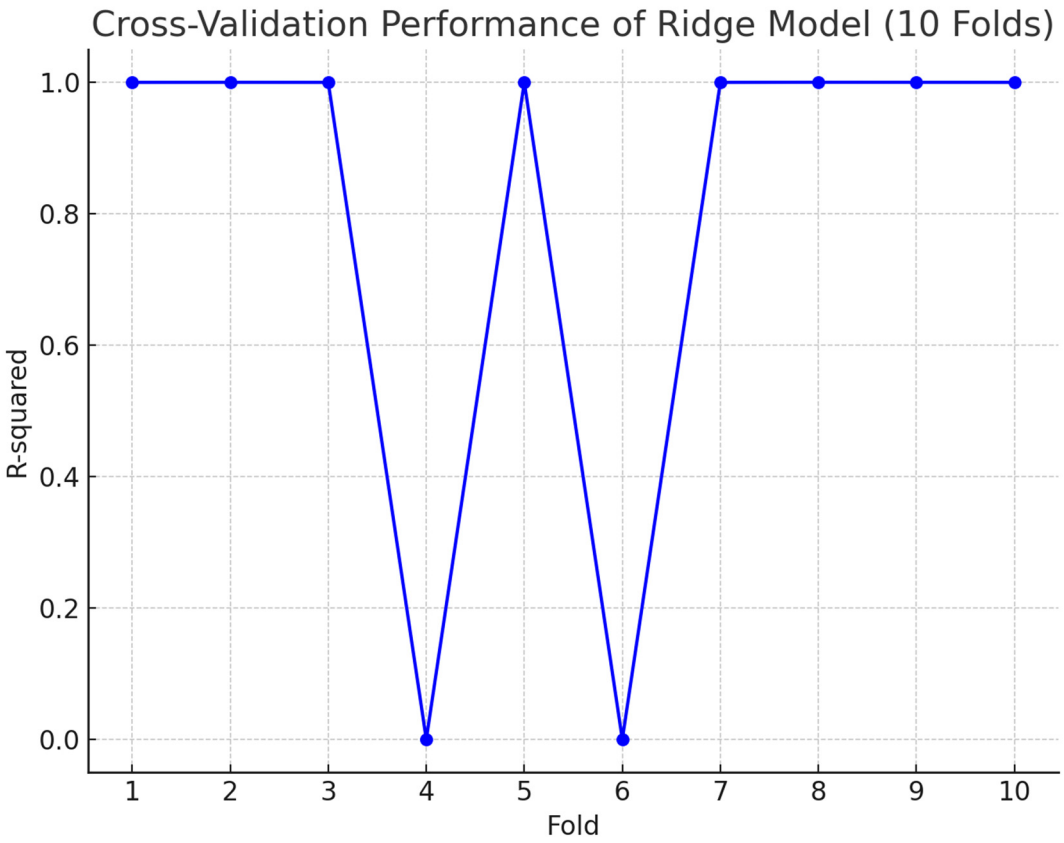

Figure 1. Cross-validation performance of ridge model.

The results of the cross-validation showed consistently high R-squared values, with minimal fluctuations across the folds. This suggests that the Ridge model generalises well across different subsets of the data and is not overfitted.

3.9. Qualitative Analysis

The integration of quantitative survey data and qualitative interview findings provides a holistic understanding of trust dynamics between AI tools and human influencers. While the quantitative results establish clear relationships and trends, the qualitative insights enrich these findings by revealing contextual factors and participant perspectives. This convergent mixed-methods approach ensures both statistical generalisability and nuanced depth, aligning with established research standards [19].

The semi-structured interviews offered a rich understanding of the participants' views on AI tools like ChatGPT and their increasing influence on consumer decision-making. A thematic analysis of the interviews revealed several recurring themes that strongly aligned with the quantitative findings, particularly regarding trust in AI, the diminishing role of human influencers, and the perceived objectivity of AI recommendations. During the interviews, an example was provided to participants, asking them to consider a scenario where they received a purchase recommendation for a running shoe from ChatGPT, based on their personal requirements. This example prompted many participants to reflect on their preferences for AI-driven recommendations over traditional sources of influence like advertisements, social media influencers, and shop assistants.

One central theme that emerged was the participants' widespread scepticism towards companies' advertisements, with several interviewees expressing that they did not trust promotional messages because they perceived them as biased. As one participant explained: "*Every company will always say their product is the best, so how can I trust them? I know they're*

just trying to sell". This distrust extended to social media influencers, who participants also viewed as compromised due to their financial relationships with the brands they promote. Many participants expressed concerns about the authenticity of influencer recommendations; as one interviewee put it: "*It's hard to take influencers seriously when you know they're being paid to say something. How do I know they really believe in what they're promoting?*". This sentiment mirrors the quantitative results, which showed a low level of trust in influencers, particularly when compared to AI tools like ChatGPT.

Interestingly, participants also voiced reservations about shop assistants, highlighting concerns that their advice could be biased by commissions or instructions to push certain brands. One participant remarked that "*Even in a store, I don't know if the salesperson is recommending something because it's the best for me or because they get a better commission*". This growing scepticism towards traditional sales channels further supported the preference for AI-generated recommendations, which participants perceived as more neutral and objective. In contrast to these sources, ChatGPT was consistently seen as impartial, with one participant stating that "*ChatGPT doesn't care which brand I buy, it's just looking at what's best for me. It feels more honest than someone who might have their own interests*". This observation echoes the quantitative analysis, where Trust in AI and AI Purchase Intention were significantly higher than trust in human influencers or advertisements.

Another major theme was the personalisation that AI tools like ChatGPT offered. Participants frequently mentioned that AI recommendations felt more tailored to their specific needs, especially in comparison to the generalised advice of influencers or salespeople. Referring to the running shoe example, one interviewee shared that "*ChatGPT gave me options that matched exactly what I was looking for in a shoe, not just what's popular or what someone's getting paid to promote*". This perspective highlights the importance of the AI Purchase Intention revealed in the quantitative findings, where participants were more likely to follow AI recommendations because they were based on personal preferences rather than external financial incentives.

A final theme related to the future use of AI tools is that many participants expressed their intention to continue using AI for purchases and decision-making, citing both the convenience and perceived accuracy of AI recommendations. One participant noted that "*I can't see myself going back to relying on influencers or ads. AI gives me advice that feels objective and is based on what I want, not what someone else is pushing*". This sentiment reinforces the strong correlation between the Future Use of AI and Overall AI Preference observed in the quantitative data. Participants viewed AI tools like ChatGPT as the future of shopping, seeing them as unbiased and more attuned to their individual needs.

However, not all participants were entirely ready to abandon human influencers. Some highlighted the emotional connection they still felt with certain influencers, especially for products that relied on personality or shared values. One participant explained that, "*While I trust AI for the facts, there's still something about following an influencer whose personality I like. I trust them in a different way*". This illustrates that for some consumers, human influencers may still have a role, particularly in building emotional engagement, though their influence is clearly diminishing in areas where objectivity and trust are paramount.

The thematic analysis from the interviews, supported by the running shoe example, reinforces this study's quantitative findings, highlighting the growing role of trust in AI, personalisation, and the decline of human influencers in shaping consumer behaviour. The qualitative data further emphasises that as consumers become more aware of the financial incentives behind influencers and traditional sales channels, they are increasingly turning to AI tools like ChatGPT, which they perceive as more impartial and aligned with their specific needs.

4. Discussion

The findings of this study contribute significantly to our understanding of how AI-driven recommendations, particularly through tools like ChatGPT, are reshaping the trust dynamics in consumer decision-making and how AI compares to traditional human influencers. The shift toward AI tools as preferred sources of product recommendations reflects a larger trend in consumer behaviour, where the demand for objectivity, impartiality, and personalisation increasingly outweighs the appeal of human endorsements. This aligns with the findings of [6], who highlight that trust in AI significantly influences consumer acceptance of AI in online shopping. Similarly, Xing, Duan, and Zhang [11] demonstrate that AI's ability to enhance personalised consumer experiences strengthens customer engagement and trust in e-commerce settings. The results of this study align with the existing literature, confirming that trust in AI is growing as consumers seek unbiased, data-driven recommendations over human influencers, who are often perceived as being financially motivated.

Gerlich [16,38] noted that AI systems are viewed as more impartial and reliable compared to human influencers, whose recommendations are frequently questioned due to commercial incentives and sponsorships. This aligns with the findings of this study, where participants demonstrated a clear preference for AI recommendations, particularly in product categories where objectivity and precision are critical. As consumers become more aware of the financial ties between human influencers and the brands they promote, their reliance on data-driven insights from AI systems like ChatGPT has grown, particularly in contexts where functionality and performance are prioritised over emotional engagement. Yang and Wibowo [13] emphasise that user trust in AI is crucial for its adoption, with factors like transparency, reliability, and impartiality playing significant roles in building this trust. Their comprehensive framework indicates that consumers perceive AI recommendations as more credible due to the absence of commercial bias, enhancing trust and purchase intentions.

In categories such as electronics, appliances, and sporting goods, where performance metrics and objective data are essential to decision-making, AI has a clear advantage. Participants in this study expressed higher trust in AI-generated recommendations, perceiving them as being grounded in data rather than financial incentives, which are often a concern with social media influencers or salespeople. These findings are consistent with the work of Huang and Rust [5], who argued that AI systems excel at providing personalised, data-backed insights in categories where rational decision-making is more important than emotional appeal. The ability of AI to process vast amounts of consumer data, analyse multiple variables, and offer customised solutions has strengthened trust and purchase intentions among consumers, particularly in industries where functional performance is a key driver of purchasing decisions. Frank et al. [14] found that consumers exhibit a higher willingness to adopt AI services when they trust the companies providing them and perceive the AI systems as offering autonomy and personalised interactions. This trust is further bolstered when consumers feel they have control over the AI's functionalities, reinforcing the sense of empowerment and confidence in AI tools.

This trend is particularly evident in technology products and sporting goods, where consumers rely heavily on objective reviews, product comparisons, and technical specifications to inform their purchasing decisions. AI's ability to synthesise data from diverse sources—such as consumer reviews, expert opinions, and product specifications—gives it credibility that human influencers may lack. As noted by Gerlich [16], consumers' trust in AI is largely driven by the perception that AI systems offer unbiased, expert-driven advice, free from the financial pressures that often influence human endorsements. This perception

of AI as a neutral intermediary significantly impacts consumer behaviour, especially in product categories where data accuracy and functional reliability are paramount.

However, despite the growing dominance of AI systems in categories that demand rational decision-making, the study also highlighted limitations in AI's capacity to engage consumers on an emotional level. Schouten et al. [9] note that while AI personalisation significantly enhances consumer trust, it currently falls short of replicating the emotional connections and authenticity that human influencers cultivate. This gap underscores the enduring importance of human influencers in industries where emotional engagement, social validation, and aspirational messaging are critical to consumer decision-making. In sectors where emotional connections and social proof are central to consumer decision-making—such as fashion, beauty, and lifestyle—human influencers continue to hold a competitive advantage. These industries rely heavily on aspirational marketing, where consumers are influenced not only by the product's features but also by the emotional connections and values conveyed by the influencer. This observation is consistent with the work of Veirman, Cauberghe, and Hudders [7], who found that human influencers are particularly effective at fostering a sense of community and aspirational messaging among their followers.

Consumers in emotionally driven industries often turn to human influencers not for data-driven insights but for lifestyle inspiration and social validation. Influencers in these sectors excel at creating a personal connection with their audience, using narratives and relatable content to foster trust and brand loyalty. While AI tools can provide personalised recommendations based on consumer preferences, they lack the ability to replicate the emotional engagement that human influencers cultivate through authenticity and relatability. This further highlights the limitations of AI in industries where emotional connections are critical to brand differentiation and consumer loyalty [9].

Moreover, our results support the argument proposed by Grewal et al. [17] that the future of marketing may involve a hybrid model, where AI tools and human influencers work in tandem to address the distinct needs of consumers. In this model, AI would dominate the rational and functional aspects of decision-making by offering highly personalised recommendations based on consumer data, while human influencers would focus on building emotional connections and fostering brand loyalty through relatable content and aspirational messaging. This hybrid approach acknowledges that while AI systems are highly effective in enhancing consumer autonomy and providing relevant product suggestions, they lack the ability to engage consumers emotionally, a space where human influencers continue to excel.

Interestingly, the study also points to the possibility that AI systems may evolve to address this emotional gap. Yang and Wibowo [13] suggest that as AI systems become more sophisticated in their ability to interpret and respond to emotional cues, they could begin to rival human influencers in industries that require both emotional engagement and data-driven insights. Enhancing emotional intelligence in AI is crucial for fostering deeper user trust and engagement, potentially bridging the current gap between rational personalisation and emotional connection. While AI is currently perceived as more rational and data-driven, advancements in emotional AI could allow future systems to engage consumers on a more personal and emotional level. This could bridge the existing gap between data-driven personalisation and the emotional connections that human influencers provide. Huang and Rust [5] suggest that as AI systems become more sophisticated in their ability to interpret and respond to emotional cues, they could begin to rival human influencers in industries that require both emotional engagement and data-driven insights.

Thus, the results of this study not only confirm the growing influence of AI in consumer decision-making but also highlight the enduring importance of human influencers

in industries where emotional engagement is critical. While AI systems are poised to dominate sectors where objectivity, precision, and data-driven insights are paramount, human influencers will continue to play a central role in creating emotional connections and fostering brand loyalty in categories where social proof and lifestyle inspiration are key drivers of consumer behaviour.

This complex interaction between AI systems and human influencers underscores the need for brands to adopt a balanced approach to marketing, leveraging both the personalisation capabilities of AI and the emotional engagement that human influencers bring to the table. As AI systems continue to evolve, they may complement human influencers in ways that allow brands to provide both rational, data-backed recommendations and emotional connections, thus addressing the full spectrum of consumer needs.

While this study focuses on the objective, data-driven advantages of AI tools in rational decision-making, it acknowledges the enduring importance of emotional engagement, particularly in sectors where human influencers excel. Emotional connections, authenticity, and aspirational messaging remain critical drivers of consumer trust in lifestyle-focused industries. Future research could explore advancements in emotional AI, examining whether systems can bridge the current gap in emotional engagement and rival human influencers in emotionally driven contexts. Additionally, longitudinal studies and cross-cultural comparisons could provide deeper insights into the evolution of trust dynamics over time and across diverse populations.

5. Conclusions

This study provides compelling evidence that AI tools, such as ChatGPT, are fundamentally reshaping how consumers interact with brands, make purchasing decisions, and build trust in recommendations. The findings align with the broader literature, particularly studies by Gerlich [16,38], Huang and Rust [5], and Nagy and Hajdu [6], which indicate that consumers increasingly value the objectivity and data-driven insights offered by AI in product categories where functional precision and personalisation are critical. The growing trust in AI is driven by the perception that AI systems are unbiased, impartial, and free from financial motives, making them reliable sources of recommendations in sectors such as electronics, appliances, and sporting goods. In these industries, consumers prefer to rely on algorithmic recommendations rather than the financially driven endorsements of human influencers, who are often viewed as promoting products for personal or financial gain.

One of the key academic contributions of this study is its demonstration of the dichotomy between AI-driven and human-driven recommendations, highlighting the evolving landscape of consumer trust. While AI systems are excelling in providing objective recommendations in categories that prioritise rational decision-making and technical precision, this study underscores that human influencers continue to play a crucial role in emotionally driven product categories, such as fashion, beauty, and lifestyle. These industries rely heavily on social proof, emotional engagement, and community building, aspects that AI tools currently lack. The ability of human influencers to build emotional connections with their audience through authentic communication and aspirational messaging remains a significant factor in consumer behaviour in these sectors, as noted by Schouten et al. [9].

From a practical perspective, this study provides valuable insights for brands navigating the evolving marketing landscape. As AI tools become more sophisticated, they offer significant potential for delivering highly personalised, data-driven recommendations that cater to consumers' functional needs. Brands operating in sectors such as electronics, sporting goods, and technology can greatly benefit from incorporating AI into their marketing strategies to provide tailored recommendations that enhance trust and purchase intentions. However, brands must recognise that AI systems are not a one-size-fits-all solution. In

emotionally driven categories, where emotional appeal and social proof are paramount, human influencers still have an essential role in shaping consumer preferences and driving brand loyalty.

This leads to the suggestion that the future of marketing will likely be shaped by a coexistence model, where AI systems and human influencers work in tandem, each fulfilling distinct but complementary roles. While AI will continue to dominate the rational and functional aspects of decision-making by offering data-driven insights, human influencers will remain crucial in cultivating emotional engagement and fostering brand loyalty through relatable content and aspirational messaging. This hybrid approach to marketing, as noted by Grewal et al. [17], will allow brands to meet the diverse needs of modern consumers, who expect both personalisation and authenticity in their interactions with brands.

However, this study also highlights limitations that should be considered in future research. One limitation is the study's focus on a limited set of product categories, such as electronics and fashion, which may not fully capture the diversity of industries impacted by the rise of AI-driven marketing. Additionally, while this study draws valuable comparisons between AI systems and human influencers, it does not extensively explore the potential for AI to evolve emotionally, an area that is seeing rapid advancements. As emotional AI continues to develop, future studies should examine whether AI systems can begin to bridge the gap in emotional engagement that currently exists between AI and human influencers. Furthermore, the study's sample size and demographic composition may limit the generalisability of the findings across broader consumer segments, particularly in non-Western markets, where cultural factors may influence trust dynamics differently.

Another limitation concerns the long-term sustainability of AI trust. While the study finds that consumers currently trust AI recommendations due to their impartiality, it is unclear how this trust may evolve as AI systems become more commercialised or integrated with brand partnerships. Future research should investigate how consumer trust in AI may be affected by potential monetisation strategies or algorithmic biases that could emerge as AI systems become more embedded in marketing ecosystems.

In terms of academic contributions, this study provides a framework for understanding the shifting dynamics of consumer trust, highlighting how AI tools are disrupting traditional marketing paradigms by offering a neutral and objective alternative to human influencers. This study also contributes to the ongoing debate about the future of influencer marketing, suggesting that while AI-driven personalisation will play an increasing role in rational decision-making, human influencers will remain relevant in contexts that require emotional engagement and aspirational marketing. These findings are crucial for scholars interested in exploring the intersection of AI and consumer behaviour, as they provide new insights into how trust dynamics are evolving in response to technological advancements.

This study opens several avenues for future research. As AI tools continue to evolve, future studies should examine the role of emotional AI and whether AI systems can enhance their ability to engage consumers on an emotional level. Additionally, researchers should explore the long-term implications of AI integration in marketing, particularly how the commercialisation of AI might affect consumer trust. Given the rise in algorithmic transparency and concerns about data privacy, understanding how these factors influence trust in AI systems will be critical for both academic researchers and practitioners.

From a practical standpoint, this study underscores the importance of the strategic integration of both AI systems and human influencers into marketing strategies. Brands will need to adopt a balanced approach, leveraging AI's strengths in data personalisation and rational decision-making while continuing to utilise human influencers to build emotional connections and foster brand loyalty. This dual strategy will enable brands to create

more comprehensive marketing approaches that cater to both the rational and emotional dimensions of consumer decision-making. By understanding the unique roles that AI and human influencers play, brands can navigate the evolving landscape of consumer trust and build stronger, more authentic relationships with their audiences.

While AI systems like ChatGPT are fundamentally transforming how consumers interact with brands and make purchasing decisions, the future of marketing will likely involve the coexistence of AI and human influencers, each contributing in their own way to the consumer experience. Brands that successfully integrate AI's objectivity and human influencers' emotional engagement into their marketing strategies will be best positioned to meet the evolving expectations of modern consumers, building trust across diverse product categories and consumer segments.

Future research should expand on these findings by incorporating longitudinal designs to explore temporal changes in trust dynamics and cross-cultural comparisons to account for cultural variations. Such studies would build on the robust evidence provided here and further advance our understanding of the evolving roles of AI tools and human influencers in shaping consumer decision-making.

Funding: This research received no external funding.

Institutional Review Board Statement: This study was conducted in accordance with the Declaration of Helsinki, and approved by the Ethics Committee of SBS Swiss Business School (protocol code EC24/FR09, 6 March 2024).

Informed Consent Statement: Informed consent was obtained from all subjects involved in this study.

Data Availability Statement: Additional data can be requested from the corresponding author.

Conflicts of Interest: The author declare no conflicts of interest.

References

1. Davenport, T.H.; Guha, A.; Grewal, D.; Bressgott, T. How artificial intelligence will transform the future of marketing. *J. Acad. Mark. Sci.* **2020**, *48*, 24–42. [CrossRef]
2. Jin, S.V.; Ryu, E. "I'll buy what she's #wearing": The roles of envy toward and parasocial interaction with influencers in Instagram celebrity-based brand endorsement and social commerce. *J. Retail. Consum. Serv.* **2020**, *55*, 102121. [CrossRef]
3. Audrezet, A.; de Kerviler, G.; Moulard, J.G. Authenticity under threat: When social media influencers need to go beyond self-presentation. *J. Bus. Res.* **2020**, *117*, 557–569. [CrossRef]
4. Morhart, F.M.; Malär, L.; Guevremont, A.; Girardin, F.; Grohmann, B. Brand authenticity: An integrative framework and measurement scale. *J. Consum. Psychol.* **2015**, *25*, 200–218. [CrossRef]
5. Huang, M.-H.; Rust, R.T. A strategic framework for artificial intelligence in marketing. *J. Acad. Mark. Sci.* **2021**, *49*, 30–50. [CrossRef]
6. Nagy, S.; Hajdu, N. Consumer acceptance of the use of artificial intelligence in online shopping: Evidence from Hungary. *Amfiteatru Econ.* **2022**, *23*, 155–173. [CrossRef]
7. De Veirman, M.; Cauberghe, V.; Hudders, L. Marketing through Instagram influencers: The impact of number of followers and product divergence on brand attitude. *Int. J. Advert.* **2017**, *36*, 798–828. [CrossRef]
8. Gerlich, M. The power of personal connections in micro-influencer marketing: A study on consumer behaviour and the impact of micro-influencers. *Transnatl. Mark. J.* **2023**, *11*, 131–152.
9. Schouten, A.P.; Janssen, L.; Verspaget, M. Celebrity vs. influencer endorsements in advertising: The role of identification, credibility, and Product-Endorser Fit. *Int. J. Advert.* **2020**, *39*, 258–281. [CrossRef]
10. Boerman, S.C.; Willemsen, L.M.; Van Der Aa, E. "This post is sponsored": Effects of sponsorship disclosure on persuasion knowledge and electronic word of mouth in the context of Facebook. *J. Interact. Mark.* **2022**, *38*, 82–92. [CrossRef]
11. Xing, W.; Duan, Y.; Zhang, J. Leveraging artificial intelligence to enhance personalised consumer experiences: Evidence from e-commerce. *J. Bus. Res.* **2022**, *139*, 1115–1125. [CrossRef]
12. Peltier, J.W.; Dahl, A.J.; Schibrowsky, J.A. Artificial intelligence in interactive marketing: A conceptual framework and research agenda. *J. Res. Interact. Mark.* **2024**, *18*, 54–90. [CrossRef]

13. Yang, R.; Wibowo, S. User trust in artificial intelligence: A comprehensive conceptual framework. *Electron. Mark.* **2022**, *32*, 2053–2077. [CrossRef]
14. Frank, D.-A.; Jacobsen, L.F.; Søndergaard, H.A.; Otterbring, T. In companies we trust: Consumer adoption of artificial intelligence services and the role of trust in companies and AI autonomy. *Inf. Technol. People* **2023**, *36*, 155–173. [CrossRef]
15. World Economic Forum. Consumer Trust Is the Key to Realising AI's Full Potential. Available online: https://www.weforum.org/stories/2020/08/consumer-trust-ai-potential/ (accessed on 20 August 2020).
16. Gerlich, M. Exploring motivators for trust in the dichotomy of human–AI trust dynamics. *Soc. Sci.* **2024**, *13*, 251. [CrossRef]
17. Grewal, D.; Roggeveen, A.L.; Nordfält, J. The future of retailing. *J. Retail.* **2020**, *96*, 3–8. [CrossRef]
18. Böhndel, M.; Jastorff, M.; Rudeloff, C. AI-Driven Influencer Marketing: Comparing the Effects of Virtual and Human Influencers on Consumer Perceptions. *J. AI Robot. Work. Autom.* **2023**, *2*, 165–174. [CrossRef]
19. Creswell, J.W.; Plano Clark, V.L. *Designing and Conducting Mixed Methods Research*, 2nd ed.; SAGE Publications: Thousand Oaks, CA, USA, 2011.
20. Tashakkori, A.; Teddlie, C. *SAGE Handbook of Mixed Methods in Social & Behavioral Research*; SAGE Publications: Thousand Oaks, CA, USA, 2010.
21. Johnson, R.B.; Onwuegbuzie, A.J. Mixed methods research: A research paradigm whose time has come. *Educ. Res.* **2004**, *33*, 14–26. [CrossRef]
22. Etikan, I.; Bala, K. Sampling and sampling methods. *Biom. Biostat. Int. J.* **2017**, *5*, 00149. [CrossRef]
23. Acharya, A.S.; Prakash, A.; Saxena, P.; Nigam, A. Sampling: Why and how of it? *Indian J. Med. Spec.* **2013**, *4*, 330–333. [CrossRef]
24. Smith, A. Social Media Use in 2021. Pew Research Center. 2021. Available online: https://www.pewresearch.org/internet/2021/04/07/social-media-use-in-2021/ (accessed on 4 September 2024).
25. Robinson, O.C. Sampling in interview-based qualitative research: A theoretical and practical guide. *Qual. Res. Psychol.* **2014**, *11*, 25–41. [CrossRef]
26. Andrews, D.; Nonnecke, B.; Preece, J. Electronic survey methodology: A case study in reaching hard-to-involve Internet users. *Int. J. Hum. Comput. Interact.* **2015**, *16*, 185–210. [CrossRef]
27. Hallikainen, P.; Laukkanen, T. National culture and consumer trust in e-commerce. *Int. J. Inf. Manag.* **2018**, *38*, 97–106. [CrossRef]
28. Chyung, S.Y.; Roberts, K.; Swanson, I.; Hankinson, A. Evidence-Based Survey Design: The Use of a Midpoint on the Likert Scale. *Perform. Improv.* **2017**, *56*, 15–23. [CrossRef]
29. Venkatesh, V.; Morris, M.G.; Davis, G.B.; Davis, F.D. User Acceptance of Information Technology: Toward a Unified View. *MIS Q.* **2003**, *27*, 425–478. [CrossRef]
30. Abidin, C. Visibility Labour: Engaging with Influencers' Fashion Brands and #OOTD Advertorial Campaigns on Instagram. *Media Int. Aust.* **2016**, *161*, 86–100. [CrossRef]
31. Gill, P.; Stewart, K.; Treasure, E.; Chadwick, B. Methods of data collection in qualitative research: Interviews and focus groups. *Br. Dent. J.* **2008**, *204*, 291–295. [CrossRef] [PubMed]
32. Cohen, J.; Cohen, P.; West, S.G.; Aiken, L.S. *Applied Multiple Regression/Correlation Analysis for the Behavioral Sciences*, 3rd ed.; Lawrence Erlbaum Associates: Mahwah, NJ, USA, 2003.
33. Hoerl, A.E.; Kennard, R.W. Ridge regression: Biased estimation for nonorthogonal problems. *Technometrics* **1970**, *12*, 55–67. [CrossRef]
34. Tibshirani, R. Regression shrinkage and selection via the lasso. *J. R. Stat. Soc.Ser. B (Stat. Methodol.)* **1996**, *58*, 267–288. [CrossRef]
35. Zou, H.; Hastie, T. Regularization and variable selection via the elastic net. *J. R. Stat. Soc. Ser. B (Stat. Methodol.)* **2005**, *67*, 301–320. [CrossRef]
36. Baron, R.M.; Kenny, D.A. The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *J. Personal. Soc. Psychol.* **1986**, *51*, 1173–1182. [CrossRef]
37. James, G.; Witten, D.; Hastie, T.; Tibshirani, R. *An Introduction to Statistical Learning: With Applications in R*; Springer: New York, NY, USA, 2013.
38. Gerlich, M. Perceptions and acceptance of artificial intelligence: A multi-dimensional study. *Soc. Sci.* **2023**, *12*, 502. [CrossRef]