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NÂNG CAO HAY LÀM SUY GIẢM Ý ĐỊNH MUA HÀNG CỦA SINH VIÊN ĐẠI HỌC TẠI THÀNH PHỐ HỒ CHÍ MINH: TÁC ĐỘNG CỦA QUẢNG CÁO CÁ NHÂN HÓA DỰA TRÊN TRÍ TUỆ NHÂN TẠO AI THÔNG QUA NHẬN THỨC VỀ SỰ THAO TÚNG VÀ TÍNH HỮU ÍCH

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Tóm tắt

Nghiên cứu này xem xét tác động của quảng cáo cá nhân hóa dựa trên trí tuệ nhân tạo (AI-powered Personalized Advertising) ảnh hưởng đến ý định mua hàng của sinh viên

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đại học tại Thành phố Hồ Chí Minh. Dựa trên 289 phản hồi khảo sát, dữ liệu này sẽ được phân tích thông qua Cronbach's Alpha, Exploratory Factor Analysis và thống kê mô tả nhân khẩu học. Kết quả này cơ bản cho thấy quảng cáo cá nhân hóa dựa trên AI có ảnh hưởng đáng kể đến nhận thức về tính hữu ích và nhận thức về sự thao túng. Hơn thế, nhận thức về tính hữu ích có tác động tích cực đến ý định mua hàng. Đáng chú ý, mặc dù giả thuyết nghiên cứu dự đoán rằng nhận thức về sự thao túng sẽ ảnh [2]hưởng tiêu cực đến ý định mua hàng, nhưng kết quả thực nghiệm lại cho thấy mối quan hệ tích cực giữa hai yếu tố này. Phát hiện này cho thấy rằng ngay cả khi người tiêu[3] dùng nhận ra ý đồ thao túng trong quảng cáo cá nhân hóa dựa trên AI, mức độ cá nhân hóa đó vẫn có thể làm tăng ý định mua hàng của họ. Những kết quả này mang lại những hiểu biết mới về cách các nhận thức tâm lý định hình phản ứng của người tiêu dùng đối với quảng cáo cá nhân hóa dựa trên trí tuệ nhân tạo AI.kho và tự động hóa. Từ các thực tiễn này, nghiên cứu đánh giá hàm ý đối với ngành logistics Việt Nam, đồng thời xác định các thách thức trong việc áp dụng Digital Twins, bao gồm chi phí đầu tư cao, hạn chế hạ tầng số, thiếu hụt kỹ năng và sự kháng cự trong tổ chức. Bài viết đề xuất triển khai theo giai đoạn, hợp tác dựa trên nền tảng đám mây và nâng cao kỹ năng nguồn nhân lực phù hợp với Chương trình Chuyển đổi số Quốc gia của Việt Nam.

Từ khóa: Quảng cáo cá nhân hóa dựa trên AI, Nhận thức về tính hữu ích, Nhận thức về sự thao túng, Ý định mua hàng.

ENHANCING OR UNDERMINING PURCHASE INTENTION OF UNIVERSITY STUDENTS IN HO CHI MINH CITY: THE EFFECTS OF AI-POWERED PERSONALIZED ADVERTISING THROUGH PERCEIVED MANIPULATION AND USEFULNESS

Abstract

This research analyses how AI-powered personalized advertising affects the intention to purchase among university students in Ho Chi Minh city. The data were analyzed by using cronbachs alpha, explotary factor analysis and demographic descriptive with

the help of 289 responses in the survey. The findings indicate that the AI-powered personalized advertising has a significant impact on the perceived usefulness and perceived manipulation. Perceived usefulness, in its turn, has a positive impact on purchase intention. Specifically, although the hypothesis predicts that perceived manipulation would have negative effects on purchase intention, the empirical results reveal a positive relationship. This shows that despite the awareness of the manipulative intent in AI-powered advertising, such personalization may still increase consumer's purchase intention. These results provide new insights into how psychological perceptions shape consumer responses to AI-driven personalized advertising..

Keywords: AI-powered Personalized Advertising, Perceived Usefulness, Perceived Manipulation, Purchase Intention

1. Introduction

Driven by the incredible evolution of artificial intelligence in deep learning systems, the AI's application has profoundly transformed digital marketing from intuition-based paradigms to intricate techniques and algorithms capable of offering hyper-personalised consumer experiences (Tarsney, 2024; Choudhary, 2025). Notwithstanding, the increasing use of AI algorithms in marketing of marketers is a cut in both ways since such systems pose unprecedented ethical concerns and potential for manipulation (Choudhary, 2025; Ienca, 2023)

To be specific, artificial intelligence is a technology that is capable of mimicking human behaviour and intelligence to analyse a wide range of online and offline consumers' data using programming computers (LEMSIEH & ABARAR, 2024). As a result, firms are provided with timely customers' insights by evaluating their inclination for further personalisation (LEMSIEH & ABARAR, 2024). Consequently, future marketing strategies are anticipated to adopt Generative AI and AI consolidation to elevate customers' experience via targeted and customised marketing content (Choudhary, 2025).

The advantageous aspect of AI application in marketing is prominent for

businesses since they can maximise AI's potential to process vast amounts of data for better customers' experience (LEMSIEH & ABARAR, 2024)). This predictive approach enables marketers to launch hyper-personalised content and employ microtargeting advertisements aligning with users' inclination, behaviours or psychological characteristics (Choudhary, 2025; Ienca, 2023). Despite such commercial merits, AI's adoption in marketing raises significant ethical issues by demonstrating manipulative behaviour in a way that bypasses consumers' rational defense (Ienca, 2023). Furthermore, advanced AI models possess deceptive and manipulative behaviour on an unprecedented scale, as a result steering consumers' belief from what they would naturally endorse under semi-ideal conditions (Tarsney, 2024). Ultimately, over-personalised marketing content is likely to result in mental consequences such as customer fatigue or skepticism (Choudhary, 2025). Therefore, deeply grasping the nuanced interplay between AI personalisation using algorithms and purchase intention via mediating effects of perceived manipulation and perceived usefulness is indispensable for marketers in this sophisticated digital landscape.

Existing studies provide valuable insights into this field by suggesting the efficacy of AI marketing and their potential to increase customers' short-term engagement (Choudhary, 2025; LEMSIEH & ABARAR, 2024), yet they suffer from tunnel vision since too much attention was paid to developed nations context but omitting the cultural, economic and technological aspects of developing market, as noted by D. C. Tuan et al., 2025. Moreover, many researchers often overlook the psychological mechanism of consumers in giving out purchase decisions, particularly when consumers consider both the effect of perceived manipulation and perceived usefulness simultaneously on their intention to consume which may alternatively attenuate or elevate their purchase intention.

One of the major strengths of the present study is that it simultaneously investigates these two contradicting processes. Although personalization increases the relevance of information and decreases the search costs for consumers, it could also activate persuasion knowledge and manipulation perceptions among consumers when they believe that there is some hidden persuasive intention behind the algorithmic

targeting. By investigating these two competing processes simultaneously, this study shows that the effectiveness of AI personalization is not constant but conditional. The influences it has on purchase intention depends on whether the perceived usefulness is greater than the perceived manipulation. Additionally, the current research does not fail to use income and gender as control variables to ensure that the results are not influenced by demographic variations.

From a practical perspective, this research contributes valuable information to businesses that implement the use of AI-based advertising models. The findings of this study suggest that the concept of personalization is not to be perceived as an exclusively technological streamlining method but a strategic one that must be taken into account. Companies can use AI personalization to improve perceived usefulness and minimize the threat of manipulation at the same time through using transparency and control techniques. Overall, this study not only contributes to the theoretical development of AI-powered personalization, but it also offers practical suggestions to the companies that are actually interested in building sustainable digital marketing strategies.

2. Theoretical framework

2.1. Key Concepts

2.1.1. Stimulus-Organism-Response (S-O-R) framework

One of the theoretical frameworks playing a pivotal role in the study of environmental psychology and consumer behaviours are the Stimulus-Organism-Response (S-O-R) model, which has been highly utilized to elucidate how external stimuli interact with the internal psychological states of humans and consequently cause behavioral responses. The framework is based on the research by Mehrabian and Russell (1974) explaining human behavior as being not only beholden by direct environmental stimuli but also through intervening emotional and cognitive processes inside an individual.

The S-O-R structure holds that the outside influences are known as Stimuli (S) influencing the Organism (O), in terms of internal psychological, emotional, or cognitive conditions of individuals, and finally resulting into Responses (R), as regards purchase intention or actual consumption behavior. S-O-R is considered a helpful theoretical concept used in marketing and consumer behavior studies to explain how the environmental factors associated with consumption impact the purchasing intentions and behaviors.

In the context of the study, the concept of personalized advertising via AI technology was considered a stimulus (S), as it represents a factor outside the consumer (an organism) to which the consumer is exposed. This stimulus evokes the inner psychological processes and evaluations, which in the context of the study were considered the organism (O). Specifically, the inner psychological processes and evaluations in the context of the study were the two main factors of perceived usefulness and perceived manipulation. Finally, the inner psychological processes and evaluations affect the response (R), which in the context of the study was the intention to purchase.

The application of the S-O-R model in the context of the study offers a framework to examine the dual and possibly contradictory impact of personalized advertising via AI technology. Additionally, to enhance the validity and the explanatory power of the proposed model, the study draws on other theories. Specifically, the Technology Acceptance Model (TAM) was used to explain the concept of perceived usefulness, while the Persuasion Knowledge Model (PKM) was used to explain the concept of perceived manipulation.

2.1.2. Persuasion Knowledge Model (PKM)

The Persuasion Knowledge Model, advocated by Friestad and Wright (1994), can be used as a basic guideline for understanding consumer responses toward and coping with various persuasion attempts used in marketing communications. Unlike other persuasion models, which see consumers as merely reactive targets for various marketing persuasion attempts, the PKM acknowledges consumers' active roles in

handling various persuasion attempts through the knowledge consumers have gathered and can apply in understanding persuasion and marketers' motives and choosing appropriate coping strategies for dealing with these attempts (Friestad & Wright, 1994). The core concept in the PKM is the notion of persuasion knowledge, which entails the consumers' perceptions and beliefs on various strategies, tactics, and motives used by the persuader. The majority of the research based on the PKM saw persuasion knowledge as a cognitive capacity for consumers that, when evoked, allows them to cope more effectively with various marketing persuasion attempts, particularly those accompanied by self-serving motives from the marketer or persuader (Campbell & Kirmani, 2000).

From an empirical perspective, persuasion knowledge activation is noted to be contextually related to persuasion resistance rather than a universal predictor. For example, in situations where consumers perceive persuasion as deceptive, manipulative, or covert, persuasion resistance is often noted to be likely. This includes consumer coping efforts in terms of skepticism, counter-arguing, and message avoidance, as proposed in a study by Kirmani and Zhu (2007). However, in a context in which persuasion is perceived to be full of integrity with consumer self-interest, persuasion knowledge may not necessarily translate to a reduction in persuasion effectiveness. As a result, persuasion knowledge is noted to be an interpretive phenomenon for evaluating the equity of persuasion attempts. However, there seem to be several limitations of the existing research in the field of PKM, especially in advertising studies, pertaining to the diverse applicability of such research. For example, most of the literature focused on studies that employed experimental designs, which do not provide a comprehensive understanding of how persuasion knowledge functions in complex, real-world persuasive contexts, as suggested by Ham et al. (2015). Moreover, most of the literature focused on traditional advertising, which resulted in a lack of exploration of novel ways of imposing persuasion, such as algorithmic targeting and AI-driven personalization, which form integral components of modern advertising. As such, it is possible that consumers could encounter difficulties in comprehending ways of expression, especially as

persuasion agents become more data-driven, leading to issues of complexities as relates to overall levels of perceived manipulation and trust.

2.1.3. The Technology Acceptance Model (TAM)

The most popular and societally impactful framework for explaining individuals' acceptance of technology is the Technology Acceptance Model (TAM). The original model was proposed by Davis in 1989, which states that behavioral intentions to utilize a specific technology can be predicted solely by two cognitive beliefs: perceived usefulness and perceivability. Perceived usefulness is indicated as a function of whether individuals consider a specific system more productive for them, while perceivability is indicated as a function of whether they find a specific system effortless to use.

Later amplifications of the model have further underscored the pre-eminence of perceived usefulness as the strongest antecedent to intention to behave, especially in environments where technology use is goal-oriented and performance-focused (Venkatesh & Davis, 2000). Empirical studies have always confirmed that users are ready to embrace technology they perceive to be useful and instrumental in attaining desired results, even in situations of uncertainty and perceived risk. For this reason, perceived usefulness has come to be used not only in traditional information systems but also to account for consumer behavior towards digital services, online technologies, and intelligent systems. Regarding the application of AI-based personalized advertisement, TAM is a theoretical lens that could be employed to understand consumer evaluation and reaction to algorithm-based advertisement technologies. Personalized advertising systems powered by artificial intelligence aim at improving decision-making efficiency in delivering relevant product information, reducing search costs, and aligning the advertising content with the preferences of the consumer. From a TAM perspective, it is more likely that consumers will give favorable responses to the personalized AI-based advertisements when these systems are perceived as useful for supporting the consumers' shopping goals, helping them make better purchase decisions, or saving

their time and cognitive efforts.

TAM thus forms the basis of AI-powered personalized advertising for describing how functional evaluations of usefulness shape consumer behavioral intention and, simultaneously, can be integrated with complementary theories such as the Persuasion Knowledge Model for ethical, psychological, and affective responses. This integrative perspective therefore enables a more comprehensive understanding of why AI personalization may simultaneously enhance advertising effectiveness and provoke consumer resistance.

2.1.4. Theory of AI personalization in advertising

Artificial intelligence (AI) technologies have witnessed unprecedented growth in the past few years, which has drastically changed the way firms disseminate marketing ads. However, the most prominent effect of the technological advancements related to AI technologies is its ability to personalize the nature of marketing ads (Kaplan & Haenlein, 2019). For instance, AI technologies are capable of generating personalized marketing ads through patterns generated by the data of consumers, which help firms personalize marketing ads to an unprecedented level of accuracy (Boerman et al., 2017; Xin Yun & Chun, 2024).

This represents a clear disconnect from the more traditional approach to mass marketing ads, which attempt to connect with general consumer groups. From a management point of view, AI-driven personalization in advertising can prove to bring much greater benefits. For example, personalized advertising can improve advertising efficiency and response rate by using advertisements that are more relevant and timely, compared to a non-personalized strategy or a rules-based approach to personalization (Arora et al., 2021). Previous studies indicated that personalized advertisements are more likely to have a better attitude among consumers if they find that they are receiving information that can satisfy their needs and requirements (Bleir & Eisenbeiss, 2015), and therefore, this has driven its adoption in the digital world as a way of maximizing its use in marketing.

Nevertheless, aside from its ability to improve efficiency, personalization

involving AI also transforms the general idea behind the persuasion process. In standard persuasion, as in advertising, the persuasion intentions are usually obvious. By comparison, in AI-powered adverts, a sense of integration or involvement in the consumer's environment might not be obvious. This impact might present a problem with a consumer being able to recognize or distinguish personalization since the intentions are no longer obvious, transforming an already complex process.

Evidently, although there has been substantial research on the application and efficacy of AI personalization, there has been little seen on the theoretical understanding of consumer responses, cognitively and affectively, towards such motivational persuasion by means of algorithmic methods (Kaplan & Haenlein, 2019; Boerman et al,. 2017). Indeed, the majority of the existing theoretical propositions have been focused on the outcomes and results instead of creating a new understanding on the underlying theoretical processes appropriate for explaining existing knowledge on consumer understandings towards AI personalization strategies such as advertising. Essentially, in order to create a more comprehensive understanding on consumer responses, there is a need to apply existing persuasion theories.

2.1.5. Theory of Perceived Manipulation (PM)

Perceived manipulation has been widely explored in advertising and persuasion studies as a key psychological process that occurs when consumers perceive a company’s persuasive effort as being strategically crafted to shape their decision-making in a self-serving way (Campbell, 1995). Based on the Persuasion Knowledge Model (PKM), consumers are not passive responders to marketing communications; instead, they are active processors and evaluators of persuasion attempts by relying on their cumulative knowledge about marketers’ strategies (Friestad & Wright, 1994). Perceiving that an advertisement is deliberately crafted to nudge their behavior in a strategic or hidden way triggers the activation of persuasion knowledge and leads to the development of perceptions of manipulative intent. Such perceptions are often followed by resistance, skepticism, or negative attitudes toward the ads and the brand

that us used in it (Kirmani & Zhu, 2007).

Theoretically, the perceived manipulation construct can be theorized into two dimensions that are correlated but differing. To begin with, it comprises the concept of hidden or tactical persuasion. This dimension involves the consumer's perception that the advertiser is interested in influencing his or her decision but without complete disclosure, maybe by using psychological techniques that seek to influence the decision making process (Campbell, 1995). Within the concept of personalized advertising, it might create the impression that the message is not objective but rather carefully created to maximize the strength of persuasions and raise doubts about the intentions of the advertiser. According to Auguirre et al. (2015), consumers can respond in a negative way when they learn that companies are gathering and using their personal information to target them with advertisements.

Although these two factors provide conceptual richness and are used to conceptualize the substantive content of perceived manipulation, it has been observed in previous empirical studies that perceived manipulation is considered as a single evaluative judgment as opposed to distinct constructs (Campbell, 1995; Kirmani & Zhu, 2007). The awareness of hidden persuasive intent and the recognition of data use are two notions that are conceptually connected and are likely to happen simultaneously in the environment of personalized advertising. The recognition of algorithmic targeting can be observed to deliver the message of hidden persuasive intent and data exploitation, and can be hard to separate in consumers into individual pyschological reactions. Accordingly, though the current study considers perceived manipulation through the two perspectives of covert persuasive intention and exploitative use of data to enhance the theoretical resolution, the research apply perceived manipulation as a unitary construct in the research model. This enables the study to conceptually complete without breaking parismony in the specification and testing of hypotheses. When perceived manipulation is implemented as a unitary construct, the study can measure the net evaluative judgment of consumers regarding AI-powered personalized advertising.

2.1.6. Theory of Perceived Usefulness (PU)

According to TAM, perceived usefulness is a central determinant of an individual's behavioral intention to adopt and use a new technology. Perceived usefulness is "the degree to which a person believes that using a system would enhance his or her job performance" (Davis, 1989). In the context of AI-powered personalized advertising, perceived usefulness can be conceptualized as the extent to which consumers believe that personalized advertising facilitates more efficient decision-making, improves the relevance of products offered, or reduces time and effort invested in the search for suitable options.

Prior studies conducted on the applicability of TAM models on online advertising and recommender systems indicate that perceived usefulness has a positive effect on the consumers' acceptance of the presented content as well as on their purchase intentions (Venkatesh & Davis, 2000). Personalized online advertisements that are informative, timely, and related to the consumers' shopping objectives will lead consumers to rate those online ads favorably. Based on the empirical investigations conducted on the applicability of the TAM model on online business scenarios, it has been indicated that perceived usefulness has the ability to reduce consumers' concerns over data privacy as well as data usage. This is because consumers are willing to share data up to a particular degree.

Nevertheless, there are certain circumstances that restrict the effectiveness of the impact of perceived usefulness on consumer responses. In this regard, recent research in the context of AI-powered advertising settings revealed that the impact of perceived usefulness might be mitigated by the parallel perception of the manipulative or invasive nature of personalization strategies, which are implemented with the objective of exploiting personal data as a means to indirectly influence consumer decisions. During such circumstances, even highly relevant or effective advertising messages might not be able to induce a powerful behavioral response due to the level of skepticism.

Accordingly, the role of perceived usefulness in AI-powered personal

advertisement is complex. Although it is an important way in which personal advertisement increases purchase intention, it is also limited under the impact of perceived manipulation or invasiveness. This implies that the role of perceived usefulness is as an important explanatory pathway to AI-powered personal advertisement on consumer purchase intention.

2.1.7. Theory of Purchase Intention (PI)

Purchase intention is a key concept in consumer behaviour and advertising, reflecting consumers' willingness to purchase a certain product or service in the foreseeable future. In marketing, purchase intention is typically used as a trustworthy indicator of the actual purchasing behaviours, especially in advertising research where those behaviours are usually hard to observe directly. Intention serves as the most direct and powerful predictor of intentional behaviours (Morwitz et al., 2007), hence it is a typical outcome variable in attitude-behaviour models.

The concept of purchase intention is explained by theories which mainly originated from the Theory of Reasoned Action (TRA) and its extension to the Theory of Planned Behaviour (TPB). Regarding TPB, purchase intention is influenced by three fundamental factors, namely attitudes towards purchasing behaviour of an individual, subjective norms used to reflect the perceived social pressure, and the perceived behavioural control which refers to the degree to which people feel that they have enough resources and capability to carry out the behaviour (Ajzen, 1991). In the advertising context, TPB implies that marketing communications affect purchase intention indirectly by impacting attitudes and beliefs of consumers about how they have control over making their purchase.

Purchase intention is widely conceptualized in the advertising study as the conative response of conusmers to advertisements and brands, in both cognitive and affective reactions. According to Spears and Singh (2004), purchase intention is a unique behaviour construct illustrating the willingness of consumers to purchase a product. They suggest standardized scales of measurement, such as likelihood or intention to buy, which have been extensively used in empirical studies of advertising

because they have high reliability and validity.

Purchase intention has been elucidated in digital advertising contexts, in particular, within the Stimulus-Organism-Response (S-O-R) framework when it comes to personalized advertising. This model holds that personalized advertising is a stimulus that influences consumer inner cognitive and emotional status, which results in behavioural response in the form of purchase intention (Zhenwei & Rehman, 2025). According to previous studies, the more the advertising messages are personalized, the more likely consumers will view them as more relevant and helpful, leading to positive attitudes and a subsequent purchase intention.

Nonetheless, the existing literature also points to the fact that the dependence between the personalization of advertising and the intention to purchase is not always positive. Aguirre et al. (2015) discover that, in spite of the fact that personalization can improve the relevance of advertising and enhance its effectiveness, increased knowledge of the transfer of personal information and its utilization can result in a sense of privacy invasion in consumers. These perceptions of intrusiveness may provoke defensive responses, undermine positive attitudes and hence lower purchase intention.

2.1. Hypothesis development

2.1.1. Impact of AI-powered Personalized Advertising on Purchase Intention of university students in Ho Chi Minh city

Personalized advertising through AI has become a widely used technique in online marketing owing to its ability to customize advertising content based on consumers' behavioral information. Unlike traditional advertising, where information can be disseminated through mass communication channels, personalized advertising through AI has enabled organizations to customize advertising content based on consumers' information to increase the relevance of advertising content. From an information processing perspective, information relevance has become a vital factor in influencing consumers' responses to advertisements. Consumers are likely to process and evaluate information positively when it is relevant to their needs and preferences

(Tam & Ho, 2006). The relevance of advertising content has reduced cognitive information evaluation for consumers, thereby creating positive behavioral intentions.

The effectiveness of personalization is also supported by congruency theory and fit theory, which assert that the more congruent there is between the consumer's needs and the content of the advertisement, the better the results in terms of persuasion. The effectiveness of AI-powered personalization is also reinforced because it uses predictive analytics to analyze the needs of the consumer in real-time. Research proves that the effectiveness of advertisements is improved through personalization because it adds value to the advertisement, making the consumer realize that the advertisement is beneficial to him or her because of the congruence between the advertisement's content and the consumer's needs.

Moreover, personalization may create a sense of understanding and acknowledgment from the company regarding the consumer’s personal preferences. This could have a positive impact on the consumer’s overall evaluation of the brand. In addition, it could minimize the uncertainty in the consumer’s decision-making processes. Aguirre et al. (2015) suggested that if the personalization in advertising is perceived as beneficial to the consumer, it could have a positive impact on the consumer’s response. AI advertising provides consumers with recommendations regarding products, which could help in avoiding information overload. This is especially important in a digital environment in which there are numerous options available to consumers. However, there are chances of privacy and manipulation issues in personalization. Nevertheless, the prior literature has confirmed that the positive influence of personalization on behavioral intentions remains significant when the consumer feels they are benefiting from the advertising experience. This is in accordance with the findings of Bleier & Eisenbeiss (2015) and Tam & Ho (2006), which suggested that in a personalization environment provided by AI advertising, consumers are more inclined to form a positive intention to purchase a product. Thus, based on the information processing theory and empirical findings, we assume that the influence of AI-powered personalization advertising on consumers' purchase intention is expected to be positive.

Hypothesis 1 (H1): AI-powered personalized advertising has a positive impact on purchase intention of university students in Ho Chi Minh city

2.1.2. The Mediating role of Perceived Manipulation

Perceived manipulation is the consumers' subjective inference that the message in the ad is deliberately constructed to shape their decision-making through unfair and exploitative means rather than through transparent persuasion (Campbell, 1995; Friestad & Wright, 1994). Perceived manipulation is the consumers' inference of persuasion intent and their assessment of the marketer's tactics as inappropriate and strategically deceptive, as postulated in the Persuasion Knowledge Model (PKM). Perceived manipulation in the AI-driven personalized ad context goes beyond the consumers' skepticism of the ad and includes their concerns over algorithmic ad targeting and exploitative content in the personalized ad. When consumers realize that the message communicated through the advertisements is based on their personal information, surfing history, or preferences, they may view this personalization of the message as an effort to control their behavior without their full knowledge or approval. Thus, the awareness of the personalization of the message communicated through the advertisements may trigger the consumers' persuasion knowledge, leading to a re-evaluation of the intentions of the advertiser. AI-powered personalization may be cognitively reassigned from an information-assistance role to a manipulative persuasion role, especially when the decision-making process is not transparent.

In the case of students in Ho Chi Minh City and their experience with APA, this mechanism is particularly relevant. As students in Vietnam are part of the digital landscape and technologically savvy, they often find themselves surrounded by APA through social media platforms and short-form video-sharing apps. Even though this would make them accustomed to the concept of personalized content, it would also make them sensitive to the use of data-driven targeting and the underlying persuasive intent. Therefore, students would be more likely to use their persuasion knowledge and make inferences regarding the underlying motives for the AI-based highly personalized advertisement. Empirical studies have consistently shown the role of

perceived manipulation in the negative psychological consequences of AI-based personalized advertising. Binder et al. (2022) showed that “consumers' perceptions of manipulative intent in advertising are highly linked to skepticism, avoidance, and negative ad beliefs, even if the content of the advertisement is deemed relevant to the consumer.” This shows the difference between the two and the fact that the perception of manipulation is not simply an extension of the perception of the advertisement but rather an evaluative judgment in itself.

In the AI-driven ad environment, PM may be further amplified through the lack of transparency and privacy issues. This study implies that the perception of the use of AI in the message content may heighten the perception of manipulation in consumers. Further, targeted advertisements have been confirmed to increase psychological resistance to the ad message through the perception of unfair persuasion strategies. Studies have confirmed that the perception of manipulation may have varying effects on consumers depending on the context in which the message is communicated to the consumers. A study by Li et al. (2024) has confirmed that the perception of manipulation and the perception of privacy invasion have varying effects on consumers’ resistance to targeted advertisements, especially in the case of low-involvement products. This study implies that although APA may be more accurate in reaching the target consumers, the perception of manipulation may reduce the effectiveness of the advertisements.

Apart from being an outcome of AI-powered personalization, the role of PM is critical as an antecedent for behavior. The persuasion knowledge model suggests that once the manipulative intent is established, consumers resort to coping mechanisms that attempt to reinstate the sense of autonomy, such as skepticism, discounting, and avoidance (Campbell, 1995). The seminal study by Campbell (1995) shows that the impact of perceived manipulative intent is strong, as it reduces persuasion in advertising as well as purchase intention. It has been demonstrated in recent studies that consumer response is mediated by perceptions created while exposed to advertisements. One example of this is how low perception of authenticity in advertisements affects purchase intention in a negative manner, even if the consumer

has engaged with the advertisement (Kučinskas & Survilaite, 2025). Briefly, the PM moves beyond the negative reaction and instead plays a crucial role as a cognitive judgement that allows the consumer to evaluate the legitimacy of AI-powered personalized ads. Thus, when the personalization is perceived as a strategic manipulation that is exploitative instead of supportive, it limits the persuasive power of AI-powered ads on the consumer's purchase intention.

Hypothesis 2 (H2): Perceived manipulation mediates the relationship between AI-powered personalized advertising and purchase intention of university students in Ho Chi Minh city.

Hypothesis 2a (H2a): AI-powered personalized advertising has a positive impact on perceived manipulation

Hypothesis 2b (H2b): Perceived manipulation has a negative impact on purchase intention of university students in Ho Chi Minh city.

2.1.3. The Mediating role of Perceived Usefulness

Perceived usefulness (PU) was first proposed in the Technology Acceptance Model (TAM) and represents the cognitive appraisal that a system can significantly contribute to the effectiveness of individual performance and decision outcomes (Davis, 1989). Beyond its seminal contribution to the understanding of technology acceptance, PU has begun to emerge as a key psychological construct in digital consumption contexts in which the consumer seeks to reduce uncertainty and evaluate the worth of the technology in purchasing decisions. In such contexts, PU does not merely represent a cognitive appraisal of efficiency; it represents a cognitive framework in which the consumer seeks to make sense of the technology.

In the case of APA, the role of PU is deemed significant because, as already explained, the personalization of advertising is deemed to alter the way consumers experience the information they come across. Instead of being presented with advertising that is not filtered or prioritized, consumers are presented with advertising that is deemed more relevant to them as consumers. This is deemed to alter the way consumers go about allocating cognitive efforts, as advertising is seen as an

instrumental support for consumers, especially when they find the advertising useful, as opposed to intrusive (An & Ngo, 2025). Significantly, the perceived usefulness in AI-driven personalization is not absolute and is subject to the perceived competence and relevance of the algorithm-driven recommendations. This is evident from the study conducted by Hardcastle et al. (2025), which demonstrated that consumers are likely to acquiesce to the collection of their data, such as through the use of cookies, in return for the perceived usefulness of the search results and the browsing experience. This illustrates the instrumental value of the PU construct as a rationalization tool, which allows consumers to rationalize their engagement with personalized advertisements despite the perceived threats to their sense of control and privacy. However, in the event of the failure of the personalization to offer relevant and accurate recommendations, the perceived usefulness is likely to decline, and the advertisements may be perceived as disruptive rather than supportive (Hardcastle et al., 2025). APA is therefore instrumental in the development of the PU construct through its demonstration of instrumental value in actual consumption situations.

Apart from the fact that PU is subject to the influences of AI-powered personalization, the role of PU in facilitating the translation of technological characteristics into behavioral outcomes cannot be overstated. According to Davis (1989), PU ranks among the strongest predictors of behavioral intention, a fact that has been supported through various studies conducted in the realm of digital commerce. An extension of the TAM model to the realm of online purchasing, Pavlov (2003) reveals that perceived usefulness plays a significant role in the formation of transaction intention through the minimization of uncertainty and maximization of decision quality confidence. Further evidence of the role of PU in facilitating the translation of technological characteristics into behavioral outcomes comes from the realm of personalized recommendation systems. According to Tam and Ho (2006), the formation of purchase intention is subject to the perceived usefulness of the personalized recommendation system to the decision-making process of the consumer. Moreover, the role of recommendation agents in the formation of purchase intention was revealed by Xiao and Benbasat (2007) to be subject to the maximization of the

consumer's confidence in product evaluation. At this stage, the perceived usefulness transcends its common definition as a simple criterion of information efficiency. In the case of APA, it develops into a holistic system of value assessment in which the consumer is able to grasp the relevance, convenience, and decision-enabling properties of the content in a single cognitive process. Thus, in the event that the personalized advertisement is effective in providing the consumer with timely, precise, and relevant content, such truth shall be the critical cognitive catalyst to convert the algorithmic process of personalization to an intention of purchase with the result of a considerable positive effect on the purchasing intention of the consumer. From the above section analysis, the following hypotheses have been formulated:

Hypothesis 3 (H3): Perceived usefulness mediates the relationship between AI-powered personalized advertising and purchase intention of university students in Ho Chi Minh city.

Hypothesis 3a (H3a): AI-powered personalized advertising has a positive impact on perceived usefulness.

Hypothesis 3b (H3b): Perceived usefulness has a positive impact on purchase intention of university students in Ho Chi Minh city

3. Methodology

3.1. Conceptual framework

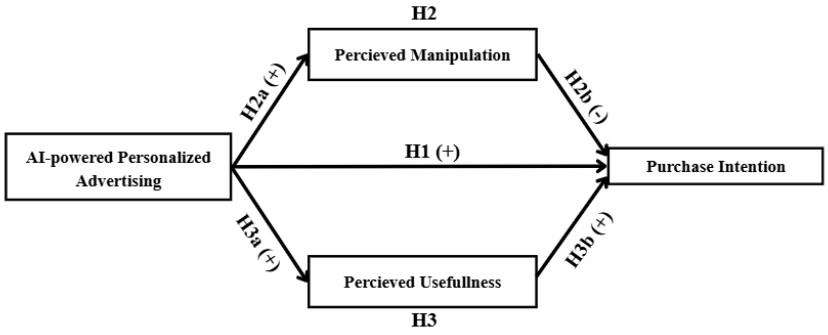

Figure 3.1 Research Model of The Author

Source: Author's Compilation

3.2. Research design

3.2.1. Quantitative Methods

Before engaging in any more complicated statistical tests, the current research has applied a quantitative methodology to measure both the preliminary and official scales. Quantitative methodology has been considered appropriate in this study because it aims is to emphasize through statistical analysis the empirical testing of the relationships between AI-powered personalized advertising, perceived usefulness, perceived manipulation, and purchase intention. By quantifying how university students in Ho Chi Minh city feel and what they intend to do, the research can be ensured to be objective, reliable and relevant to the researched contenxt.

To effectively gather primary data in an efficient manner while reaching a larger population of respondents, particularly university students across Ho Chi Minh city, an online survey was used as the primary tool for collecting the research data. The online survey was used to gather the research data in an anonymous manner through voluntary participation of the research respondents. The online survey was considered an effective tool for this research study because the research topic deals with AI technology in terms of personalized advertisements in an online environment in which the research respondents are internet users.

Online surveys have several advantages over traditional methods of conducting research studies. They enable the researcher to access geographically diverse populations of research respondents, increase convenience for the research respondents, reduce errors in recording research data due to the automation of storing research data, and reduce social desirability bias in terms of honest evaluations due to anonymous participation in the research study.

Nevertheless, there were some limitations in online data collection methods, such as the possibility of inattentive responses and the absence of direct control over respondents' interpretation of the questionnaire items. In order to overcome such limitations, the questionnaire was well-designed with proper instructions, simple

wordings to avoid confusion, reverse-coded questions and attention-check items in the questionnaire to test the consistency of the respondents' answers. During the data cleaning phase, invalid cases were dropped in order to improve the quality of the data and increase the reliability of further analysis.

3.2.2. Questionnaire Design

In the subsequent phase, the author created the questionnaire based on the measurement scales developed from earlier empirical studies. The final survey was conducted through an online platform in a standardized questionnaire form. All closed-ended questions in the survey utilized a five-point Likert scale from 'strongly disagree' to 'strongly agree'. The questionnaire consisted of four main sections. The first part introduced the research objectives and gives a thanks to the respondents. The second part consisted of screening questions that showed whether or not the respondents had experience with AI-powered personalized advertising in the online environment. The third part measured the key variables in the conceptual model including AI-powered personalized advertising, perceived usefulness, and perceived manipulation. The fourth part measured the dependent variable in terms of purchase intention and included questions concerning the respondents' demographics, including gender and income level. Briefly, the questionnaire was divided into several sub-parts representing the independent variables, mediating variables, and the dependent variable in the research model.

3.2.3. Control Variables

3.2.3.1. Gender

Gender has been recognized as one of the significant demographic elements in the research of consumer behaviour, possibly affecting the decision-making process and the development of behavioral intentions. Previous empirical findings indicate that gender is not just a descriptive attribute but has a direct influence on purchase intention in the sphere of e-commerce and digital marketing.

In the online consumer behaviour scenario, gender has been found to drive attitudes, perceptions and consumers' willingness to initiate buying behaviours. Male

consumers are more inclined to express a positive attitude to online shopping, whereas female ones record higher perceived risk as well as show more caution at the information research and evaluation stages. Such dissimilarities result in differences in purchase intention between males and females, implying that gender is directly correlated with purchase intention (Ling et al., n.d.).

Additionally, Franco, Condori-Vargas and Goicochea-Reyes (2026) directly examined how gender impacts purchase intention of the Generation Z consumers to buy personal care products. The results illustrate that there is a statistically significant effect of gender on purchase intention. Evidently, female consumers' purchase intention is strongly affected by emotional value, compared to male consumers where functional, social and emotional values do not have an impact on purchase intention. These findings demonstrate that gender modulates the structural development of purchase intention and exerts a direct effect on purchase intention (Franco et al., 2026).

Another study is also conducted by Zhu, Xu and Wang (2023), utilizing PLS-SEM and multi-group analysis when comparing live-streaming commerce determinants between male and female consumers. The results indicate that there is a considerable distinction between these two genders in the determinant of purchase intention. The mechanism of initiating purchase intentions is different in respect of the genders, emphasizing the crucial role of gender in elucidating variations in purchase intention outcomes.

3.2.3.2. Income

Income has been regarded as one of significant factors influencing consumers' purchase intention by previous research. Such findings indicate that income has direct and statistically significant influence on purchase intention, even when other demographic and behavioral elements are held constant. For example, the research evaluating online purchase intention has reported that income remains a noteworthy predictor in multiple regression models, meaning that consumers with higher income are more likely to show stronger purchase intentions than their lower-income counterparts (Khaleeli, 2020).

Additionally, theoretical models in consumer behaviour offer a solid backing to this relationship. Economically, income is the purchasing power and defines the degree of financial constraint that consumers encounter. Higher income earners will suffer less budget constraints and perceive less financial risk, hence being more inclined to develop favorable purchase intentions. Such argument is congruent with the resource-based perspective on consumer decision-making where financial competency is considered a facilitating condition to consumer behaviours.

Purchase intention is also affected by the perceived behavioral control in the Theory of Planned Behaviour (TPB), reflecting the extent to which individuals perceive his or her capability to perform a behaviour (Ajzen, 1991). Financial feasibility is often regarded as a fundamental component of perceived behavioral control. The empirical evidence in terms of high-involvement products, including electric vehicles, illustrates that perceived economic feasibility is one of dominant predictors of purchase intention and that such association is especially pronounced among consumers with higher income (He et al., 2022).

3.3. Data collection and Sampling

3.3.1. Sample Size Determination

Students in Ho Chi Minh City who are currently enrolling in universities serve as the target demographic for our survey for approximately 3-weeks time. The study emphasises on these students provided that the core prerequisite for them must be the active engagement in online shopping and are exposed to AI-recommended marketing contents beforehand. Based on the statistical grounds provided by Hair et al., (2010), in order for a result's precision guaranteed, the minimum observation counted for a research needs to be at least 5 times of the total number of measurement items. For our research framework containing 6 variables, the minimum acceptable size is calculated as 6*5=30. Yet, for further reliability and statistical confidence, a total of 289 responses were collected.

Table 3.1 Scale items design of the survey questionaire

Variables	Codes	Items	References
AI-powered Personalized Advertising	A1	I often receive personalised product recommendations when shopping online	Lin, X. & Wang, X. (2023)
	A2	Online advertisements seem tailored to my interests and preferences.	
	A3	E-commerce platforms suggest products based on my past purchases or browsing history.	
	A4	I frequently encounter personalised content or recommendations while using e-commerce websites	
Perceived Usefulness	B1	AI-powered personalized advertising on digital platforms saves me time when shopping.	An, G. K., & Ngo, T. T. A. (2025)
	B2	AI-powered personalized advertising on digital platforms supports important aspects of my shopping	
	B3	AI-powered personalized advertising on digital platforms helps me improve my shopping efficiency	
	B4	AI-powered personalized advertising on digital platforms enhances the quality of my shopping experience	
Perceived	C1	AI-generated advertisements often make me	Campbell, 1995; Qadri

Manipulation		feel that my autonomy is being unfairly influenced.	et al., (2025)
	C2	Advertisements that use AI often influence my emotions in ways that encourage me to buy products	
	C3	The personalization of advertisements through AI makes the advertisement contents feel unnatural and lacking in authenticity	
	C4	I feel that AI-generated advertisements create psychological pressure that makes me more susceptible to being influenced while shopping	
	C5	I find the persuasive approach used in personalized advertisements through AI acceptable	
Purchase Intention	D1	I am more likely to make a purchase when I receive personalized product recommendations	Abdul Razzaq, Maryam Khalid Khan, & Kiran Afzal. (2025)
	D2	AI-powered personalization increases my intention to shop more frequently online	
	D3	I will buy products that are advertised through AI-powered personalized advertising	Wen, J., & Li, X. (2025).
	D4	I plan to purchase products that are promoted through AI-powered personalized advertising	An, G. K., & Ngo, T. T. A. (2025).

Source: Author's Compilation

Table 3.2 Descriptive statistics of the sample (N = 289)

Variables	Category	Frequency	Percentage
Gender	Male	142	51,40%
	Female	134	48,60%
Monthly Income (Estimated) of Respondents	Below 3 million VND	154	55,80%
	3-5 million VND	78	28,30%
	5-7 million VND	27	9,80%
	Above 7 million VND	17	6,20%

Source: Author's Compilation

3.3.2. Sampling Method

This research used a non-probability sampling method called convenience sampling. Convenience sampling is a non-probability method in which data collectors select samples based on their availability for participation. This research used an online survey method for data collection. The survey was sent out for a period of approximately three weeks via various channels, including university student groups on social media sites such as Facebook, Messenger, Zalo and through email as well.

The survey participation was entirely voluntary and anonymous. Before participating in the survey, participants were informed about the purpose of the research to maintain transparency and adhere to ethics. To ensure the quality of data collected for this research, the survey questions were carefully crafted to include clear instructions and simple words to avoid confusion for participants.

In addition, questions were added at the beginning of the survey to filter out participants based on predetermined criteria for the sample.

3.3.3. Measurement Model Evaluation

The measurement model was evaluated using IBM SPSS Statistics to make sure that every construct and observed variable in the questionnaire was valid and reliable. The validity of the model was assessed through exploratory factor analysis (EFA). During this process, Kaiser-Meyer-Olkin (KMO) measure and Bartlett's test of sphericity were employed to evaluate the sample adequacy and the ability to factor each of the vraiables. Values above 0.6 for KMO scale indicate acceptable suitability while a significance level (sig) below 0.05 for Bartlett's Test of Sphericity indicates that the variables are sufficiently correlated. The items that had factor loadings of above 0.5 were retained so that the observed variables were good enough to represent the latent constructs.

The internal consistency of the scales was assessed using Cronbach's Alpha and value results of 0.7 or above would be acceptable. Values of 0.7 are not viewed as ideal, but they will still be regarded as tolerable. To improve the quality of the measurement, the items that lower the overall reliability of the scale or have a low item-total correlation were eliminated.

3.3.4. Structural Model Evaluation

Once the validity and reliability of the measurement model was accepted, the structural model was performed with a view to exploring the relationship between the independent variables and the dependent variable as postulated in the research framework. The Multiple Linear Regression analysis was done to establish the degree to which the independent variables explain and affect the intention of investors in making investment decisions.

The suitability of the model and the strength of structural relationships were evaluated using a number of statistical measures, such as R-square, Adjusted R-square, standardized regression coefficients (Beta), the level of significance (p-value), and the multicollinearity diagnostic (Variance Inflation Factor) values.

3.3.5. Hypothesis Testing

Hypothesis testing was done based on the regression results that were obtained after the analysis of the structural model. To test each hypothesis the direction and strength of the regression coefficient were assessed and the statistical significance of the regression coefficient was also calculated and p-values below 0.05 were viewed as acceptable.

Hypothesis is accepted when the associated independent variable has shown statistically significant effect on the dependent variable in a desired theoretical direction. Conversely, when the regression coefficients are statistically unimportant or not in line with the hypothetical relationship, then the hypothesis is rejected. The process offers empirical data to show whether the conceptual framework relationships are supported or not.

4: Research result and discussion

4.1. Descriptive Statistics Analysis

4.1.1. Descriptive Statistics Analysis of the Research Sample

This section presents the demographic result of the sample collected through the compilation of the authors for this study. Regarding a total of 289 respondents, 276 of which were considered suitable for the aim of this study, which indicates that 95,5% of the respondents claimed to be accommodating in Ho Chi Minh city. The large enough sample size, as suggested in earlier chapters provides sufficient and neutral claims for the study of social science like in this study

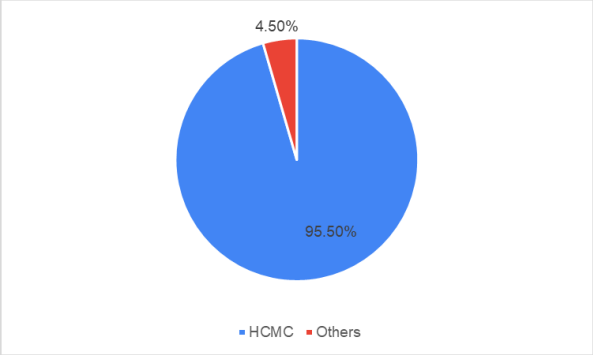

Figure 4.1 Respondents' Place of Residence (Unit: %)

Source: Author's Compilation

The gap between genders in this study is generally insignificant, as 51,4% of the respondents were male while the other 48,6% were female participants, such a narrow gap suggests that gender-based bias would not be an issue for this sample and might have little effect on the overall outcome.

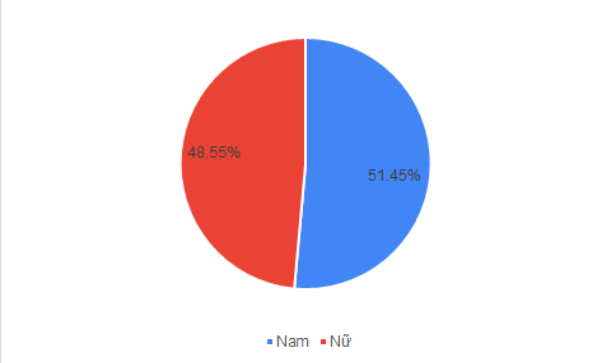

Figure 4.2 Respondents' Gender (Unit: %)

Source: Author's Compilation

The study focuses on students who are currently living in Ho Chi Minh city, hence such a young age might be related to a limited income or disposable income, which would be a significant factor when considering the effect of economic implications on the research variables and claims. As it is compiled, over half of the participants admitted to have the income of under 3 million VND, which is considered very limited in general yet reasonable for being students. About a quarter of them have an income ranging from 3 to 7 million VND, a specifically decent disposable income for students and only a small

portion reported to earn more than 7 million monthly.

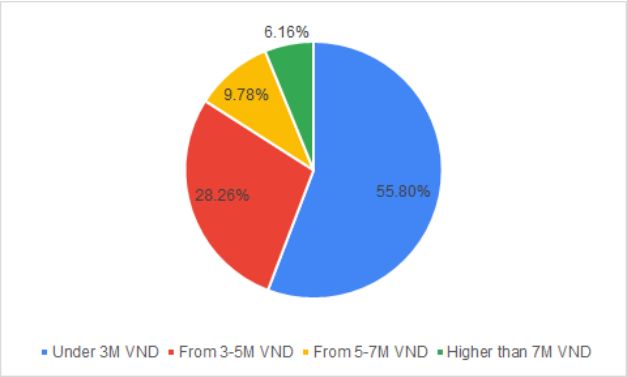

Figure 4.3 Respondents' estimated monthly income (Unit: %)

Source: Author's Compilation

The demographic data indicates that the sample represents a specific urban group in Ho Chi Minh city, which is students with decent educational level yet still possess a limited disposable income level. The majority of the respondents are reported to earn less than 5 million VND monthly, suggesting that the later outcome of this study, specifically in terms of purchase intention, could be interpreted within the aspects of price-sensitive consumers.

Besides, as a consequence to the high educational background among the respondents, the ratio of encountering and recognizing the appearance of AI-powered advertisements is significant, which shall support the outcome of this study.

4.1.2. Descriptive Statistics Analysis of the Model Variables

The descriptive statistical results for each variable chosen in this study are illustrated in this section. The study considers not only the mean values, which are collected and compiled through the five-point Likert scale, but also the standard deviations that show the extent of dispersion among respondents' perceptions.

Regarding the AI-powered advertisements items, their mean values are relatively above average, fluctuating from 3,73 - 3,81, and their standard deviations are between 0,746 and 0,800. Such findings indicate that the presence of AI personalized advertisements are widespread and the participants of this study, mostly students with

high educational levels, possess the ability to identify them and differentiate them from the traditional counterparts. Hence, the application of AI also brings out an expected outcome, which implies that the contents that are suggested are technically suits with customers' tastes, this result ultimately aligned with the aforementioned findings and theories in this study. Moreover, considering the standard deviations of the items, it can be understood that the recognition of such advertisements and the extent in which they align with customers might vary among students in Ho Chi Minh.

Almost similar to the AI-powered advertisements items, the items related to perceived usefulness are reported to have the mean values ranging from 3,77 - 3,87, showing that customers perceive the appearance of AI-generated advertisements relatively useful for them. Aside from being recognized and differentiated, this study also deep dive into whether the more advanced type of advertisements can satisfy the primary needs of customers, such as time-saving or increase in efficiency and experience, as mentioned earlier in this study. And in line with this outcome, it can be implied that among students living in Ho Chi Minh city, AI-powered advertisements have proven to be helpful for them in terms of suggesting desirable contents. Nevertheless, the standard deviations, ranging from 0,740 - 0,797, suggest diversity still appear in this sample.

Compared to other constructs, the mean values for perceived manipulation-related items range from 3,84 - 4,02, which are certainly higher. This outcome could be comprehended as respondents realize and admit the adverse impact of AI-generated advertisements on their autonomies and experiences. Theoretically speaking, such results are not that surprising as according to the literature review chapter, the study aims to discover and disclose the negative impacts, perceived by students, of such advertisements. However, similar to the higher mean values trend, these items are also reported with more diversity among respondents, with standard deviations from 0,742 - 0,892. These moderate-to-high standard deviations indicate that, although the majority of the researched students agree upon the adverse effects of AI-powered advertisements, there are still various responses towards the perceived manipulation's impacts.

According to the survey outcome, items linked to purchase intention show a decent fluctuation from 3,84 - 3,91. Regarding the context of this study, the chosen respondents were mostly students with relatively limited income level; hence, this above-average index might be significant in implying that the purchasing power relating to the AI suggestions of students in Ho Chi Minh city is certainly mindful. Besides, the cluster of standard deviations between 0,731 - 0,802 still vary the intention in purchasing products recommended by AI-generated advertisements.

4.2. Measurement Model Evaluation Result

4.2.1. Reliability Analysis - Cronbach's Alpha

The Cronbach's Alpha of 0.813 observed in AI-powered personalized advertising scale indicates good internal consistency across the four measurement items. The corrected item-total correlations, which are all positive and in the range of 0.612 to 0.664, demonstrate that the items are all positively related to the construct in general and have a significant contribution to the measurement of AI-powered personalized advertising. Moreover, the Cronbach's Alpha values of the items that are deleted are between 0.750 and 0.775 with the overall value of the Cronbach's Alpha being lesser than any of the values. This implies that the elimination of any item would not enhance the reliability of the scale and thus all the items should be retained to be further analyzed. In general, these findings validate that the measurement items are always able to cover the concept of AI-powered customized advertising and that the scale is sound and can be further used in statistical analysis. The Cronbach's Alpha is relatively large, which can be interpreted to mean that the respondents rated the items in a consistent way, which means that the scale is able to accurately measure their perceptions of AI-powered personalized advertising. This observation is consistent with the theoretical argument presented in chapter 2, that is, the AI-based advertising systems will use algorithmic processing of the behavioral data of the consumers to create personalized marketing content. This can lead to the respondents understanding these features of advertising as belonging to the same process of personalization as opposed to different phenomena.

The reliability test on the perceived usefulness also indicates high internal consistency with the Cronbach's Alpha of 0.848. All the corrected items-total correlations have values beyond the permissible level of 0.633 to 0.751, and Cronbach's Alpha if Item Deleted values do not show any degree of bettering in the reliability in the event of removal of an item. Thus, all the items of the perceived usefulness scale are retained. This good internal consistency confirms the theoretical approach of the Technology Acceptance Model (TAM) that perceived usefulness is a consistent mental assessment on how a technological system amplifies the execution of tasks or decision-making effectiveness in individuals. Within the framework of AI-enhanced personalized advertisement, the high level of reliability is an indicator that the respondents will rate personalized advertisement as persistent, based on the instrumental advantages of the adapted option, i.e. how much the information provided about a specific product is relevant or how much less search is required during the purchase process.

The perceived manipulation scale has an acceptable level of reliability having a Cronbach's Alpha of 0.822. The overall item-total correlations lie between 0.566 and 0.648 and this means that each item adds meaning to the total construct. Moreover, the values of the Cronbach Alpha of deleting the items are smaller than the coefficient, which proves that the deletion of any item would not enhance the reliability of the scale. This homogeneity is indicative of the theoretical suppositions of the Persuasion Knowledge Model (PKM), which opines that consumers tend to judge persuasive messages by deducing the intentions of the marketers. Within the environment of AI-based personalized advertising, various signs of manipulation (like the issue of strategic persuasion or personal data utilization) can be viewed by consumers as closely related manifestations of the same appraisal of the rightness and transparent nature of the advertising approach.

Lastly, purchase intention construct shows a good internal consistency of Cronbach Alpha of 0.838, which is above the suggested amount. The fixed item-total correlations are 0.597-0.782, which implies that every item has a significant contribution to construct measurements. Moreover, values of Cronbach's Alpha if

Item Deleted do not indicate any increase in reliability in the case of an item deletion which confirms that all the measurement items must be retained. The fact that this scale is reliable contributes to the idea of purchase intention as a consistent behavioral disposition, which the theories of planned behavior (TPB) and Stimulus-Organism-Response (S-O-R) model presume. These theoretical schools of thought propose that the cognitive and affective judgment of consumers on marketing stimulus is eventually integrated into a purchase decision intention.

Table 4.1 Cronbach's Alpha Results

No	Variables	Scale Mean if Item detected	Scale variance if Item Detected	Corrected Item - Total Correlation	Cronchback's Alpha if Item Detected
1	**AI-powered personalized advertising (Cronbach's Alpha = ,813)**				
	APA1	11,30	3,875	0,614	0,774
	APA2	11,30	3,606	0,664	0,750
	APA3	11,32	3,782	0,612	0,775
	APA4	11,24	3,644	0,639	0,763
2	**Perceived usefulness (Conchbach's Alpha = ,848)**				
	PU1	11,50	3,633	0,751	0,777
	PU2	11,43	3,875	0,670	0,814
	PU3	11,49	4,105	0,633	0,828
	PU4	11,40	3,870	0,690	0,805
3	**Perceived manipulation (Cronbach's Alpha = ,822)**				
	PM1	15,66	6,108	0,648	0,777

	PM2	15,56	6,589	0,632	0,782
	PM3	15,63	6,967	0,566	0,800
	PM4	15,74	6,090	0,647	0,777
	PM5	15,73	6,786	0,588	0,794
4	**Purchase intention (Cronbach's Alpha = ,838)**				
	PI1	11,63	3,767	0,674	0,794
	PI2	11,60	3,812	0,635	0,811
	PI3	11,64	4,137	0,597	0,826
	PI4	11,57	3,570	0,782	0,745

Source: Author's Compilation

4.2.2. Factor Loading - Explanatory Factor Analysis (EFA)

To clearly specify the dimensionality and sampling adequacy of the measurement instrument, the research team conducted a Principal Component Analysis (PCA), consisting of 4 items (PI1 - PI4). The Kaiser-Meyer-Olkin (KMO) measure was 0.79, which can be implied "middling" to "meritorious" and greatly exceed the required threshold of 0.50. Considering the Barlett's test of Sphericity ($\chi 2$ = 356.050, p < 0.001), indicating the sufficiently strong correlations among the relating items, justifying the extraction of the latent dimensions.

Additionally, the extraction follows the Kaiser Criterion, specifying the retention of components with Eigenvalue greater than 1.0. The analysis discloses a transparent unidimensional structure, including only the first relating item to exceed the Eigenvalue of 2,701. This component also accounts for 67,52% of the total variance, meeting the required demand, which indicates the minimum of 60% cumulative variance explained to be considered a well-defined primary factor.

By analyzing the items individually through the component matrix and extraction communalities, further construct validity was assured. Regarding the 4 items, the factor loadings indexes are certainly high, ranging from 0,767 to 0,893. To be specific, the highest relationship demonstrated was PI4 with the factor loadings of 0,893; followed by PI1, PI2 and PI3 with the calculated factor loadings of 0,824; 0,797 and 0,767 consecutively. In terms of minimum requirement, these outcomes undoubtedly exceed the needed 0,50 threshold for practical significance and could be implied as well-defined structure. Various validity assurances were presented, furtherly indicates the conclusiveness of this empirical evidence. As such a dependent variable can guarantee the validity, the overall outcome of the study can henceforth be assured of being validated.

When it comes to the remaining variables, the metrics for ensuring the effectiveness and validity of them remain unchanged, yet from the overall perspective, they could be implied to possess well-defined constructs with strong validity as well as empirical evidence. This not only helps to maintain the final outcome that the research team is pursuing, but also the alignment with the dependent variable.

Table 4.2 Factor Loadings

Variables	KMO	Barlett's test ($\chi 2$)	Eigenvalue	% of variance
APA	0,790	356,050	2,565	64,131
PU	0,806	456,053	2,747	68,671
PM	0,848	431,305	2,924	58,485
PI	0,784	449,118	2,701	67,524

Source: Authors' Compilation

4.3. Structural Model Analysis

4.3.1. Pearson Correlation Matrix

Initially, the strongest positive correlation was observed between AI-powered

personalized advertisements (APA) and purchase intention (PI) ($r = .667$; $p < .001$). This results suggests that higher exposure to AI-powered personalized advertisement is associated with greater inclination to show purchase intention among students. This is consistent with previous studies, which demonstrates that AI-powered personalized advertisements particularly improve the consumer's response rate and enhance their positive perceptions toward the brand.

Meanwhile, AI-based personalized advertisements (APA) also show a high positive correlation with the perceived manipulation (PM) ($r = .637$, $p = .001$). This finding implies that the higher the exposure of consumers to AI-driven personalized advertisements, the higher the chances they will consider them to be manipulative. The high dependence of these ads on the personal information and behavioral tendency of consumers could provoke some questions about the invasion of privacy and personal persuasion. The finding is also in line with the Persuasion Knowledge Model which argues that consumers, when they realize that advertisement contains a persuasive intent, can become skeptical and resistant to the advertising message.

Similar in strength to PM, perceived usefulness (PU) likewise shows a positive correlation with AI-based personalized advertisements (APA) ($r = .648$, $p < .001$). This highlights the benefits that consumers determine to be associated with personalized advertisements generated by AI in their purchasing process. By utilizing information collected from browsing history and user's behavioral patterns analysis, AI algorithms efficiently optimize the shopping experience and decision-making process. This would create a consumer satisfaction mood and this would consequently make consumers more receptive to AI-based custom advertisements and more helpful.

Perceived manipulation (PM) and purchase intention (PI) are shown to be positively correlated ($r = .606$, $p < .001$). This finding implies that the greater the perceived manipulation, the greater purchase intention there is among students. That is, students who feel that AI personalized advertisements are somewhat manipulative might develop a greater desire to purchase the advertisement products. This conclusion is contrary to what previous literature can imply, in general, that perceived

manipulation may lower the intention to buy. This surprising finding can also suggest that consumers perceive persuasive efforts in personalized advertisements but this does not automatically reduce purchase intention.

The perception of usefulness (PU) is correlated positively with purchase intention (PI) ($r = .648$, $p = .001$). This outcome shows that in the case that the consumers believe AI-driven personalized advertising is useful, they tend to build a more significant desire to buy advertised products. The result can be linked to the Technology Acceptance Model by Fred D. Davis, according to which the perceived usefulness is an important factor that determines the acceptance of users to a technological system and further affects the behavior intention. Therefore, this highlights the significance of the perceived usefulness in enhancing the purchase intention of the consumers in the case of the AI-based personalized advertising.

Table 4.3 Pearson Correlation Matrix

		APA	PI	PM	PU
APA	Pearson Correlation	1	.667**	.637**	.648**
	Sig. (2 - tailed)		.000	.000	.000
	N	276	276	276	276
PI	Pearson Correlation	.667**	1	-.109**	.648**
	Sig. (2 - tailed)	.000		.387**	.000
	N	276	276	276	276
PM	Pearson Correlation	.637**	.606**	1	.614**
	Sig. (2 - tailed)	.000	.000		.000
	N	276	276	276	276
PU	Pearson Correlation	.648**	.648**	.614**	1

Sig. (2 - tailed)	.000	.000	.000	
N	276	276	276	276

** Correlation is significant at the 0.01 level (2 - tailed)

Source: Author's Compilation

4.3.2. Multicollinearity

To ensure the robustness and interpretability of the regression model, multicollinearity diagnostics were conducted using the Variance Inflation Factor (VIF). VIF diagnostics are important for determining whether there is considerable excess overlapping between associated multiple predictors (independent variables) contributing distinct portions of explanatory power to dependent variables, or if the independent predictor variables significantly overlap with each other and therefore do not provide a unique source of explanatory power to the dependent variables. The results indicate that all VIF values are well below the commonly recommended threshold of 5. Specifically, the VIF values range from 1.321 to 2.393, with the highest value observed for PM (VIF = 2.393). This suggests that the independent variables including AI-powered personalized advertising, perceived manipulation and perceived usefulness offer distinct and unique contributions to purchase intention. Therefore, the structural model maintains adequate statistical independence among predictors which enables the regression coefficients to be interpreted reliably. This result is consistent with the findings from the pearson correlation matrix, which indicated that the correlations among the independent variables were moderate and remained below the commonly accepted threshold of 0.80. This suggests that although the constructs are related, they do not exhibit excessive overlap.

4.3.3. Regression Model Evaluation

4.3.3.1. Model summary

The total explanatory power of the structural model was initially tested to identify the extent to which the predictor variables explain the variation in the endogenous

constructs. The Model summary findings show that the explanatory ability of the model is satisfactory in the dependent variables.

In the case of Purchase Intention (PI), coefficient of determination (R Square) is 0.562, which implies that a combination of the influence of the predictor variables such as AI-based personalized advertising, perceived usefulness, perceived manipulation is 56.2 percent of the purchase intention. This finding provides evidence that the determinants proposed as a collective category can explain the behavioral intentions of consumers significantly in the model. The value of R Square is significantly similar to that of Adjusted R Square which indicates that the model is still parsimonious and that the predictors included in the model have a significant contribution to the explanation of purchase intention without having to add to the explanatory power.

The same can be said about the model explaining a middle level of variance in Perceived Manipulation (PM), the R Square value of which is 0.406. This means that perceived manipulation may be predicted by its predictor variables to the tune of 40.6. The Adjusted R Square of 0.404 is quite close to the original R Square, which once again proves the stability and the sufficiency of the model specification.

In the case of Perceived Usefulness (PU) the model has R Square of 0.417 implying that 41.7% of the variance in the perceived usefulness can be attributed to the predictors contained in the model. The Adjusted R Square of 0.415 once again reveals that there is very limited variation in the R Square value as opposed to the adjusted R Square value, which implies that the explanatory power is not inflated and is valid.

On the whole, the similarity of R Square and Adjusted R Square among endogenous constructs proves the fact that the structural model has a balanced and well-specified explanatory structure in support of the theoretical relationships suggested in the research framework

Table 4.4 Model Summary

	R	R Square	Adjusted R Square
PI	0.7497	0.562	0.554
PM	0.637	0.406	0.404
PU	0.646	0.417	0.415

Source: Author's Compilation

4.4. Hypothesis Testing

4.4.1. AI-powered Personalized Advertising versus Purchase Intention

The very first hypothesis stated that AI-powered advertisements (APA) positively influence students' purchase intention (PI), and the calculation resulting from the findings strongly support this expectation. The path coefficient for APA is $\beta = 0.369$ ($t = 4.875$ and $p < 0.05$), indicating that the appearance of AI-generated advertisements is greatly favored by the students. Moreover, the bivariate correlation between APA and PI ($r = 0.667$), which also proves the significance of the use of AI in advertisements for enhancing purchase intention among customers, specifically students in Ho Chi Minh city in this sample.

As evident in the descriptive statistics sections earlier, the application of AI for advertisements, mainly for personalization is generally recognized by students joining this study, but such personalization incentives would greatly reduce time for searching suitable products as well as enhance the shopping experience by only being suggested with favorable products. Through these benefits, students might be favored to purchase more for not only products that they would possibly desire are presented, but also the enjoyable experience of not seeing unsuitable items. The literature review sessions also suggested such expectation and this conclusion greatly backs it. Consequently, hypothesis 1 (H1) is considered supported.

This result is in line with previous studies like Choudhary (2025), which

emphasized the efficiency of AI-based personalization in improving consumers' engagement and purchase intention. In terms of the Stimulus-Organism-Response model, AI-based personalized advertising is a stimulus that has a favorable effect on consumers' internal evaluations, thus increasing purchase intention.

4.4.2. AI-powered Personalized Advertisements versus Perceived Manipulation

For this hypothesis, which expected the positive impact of AI-powered personalized advertisements (APA) on perceived manipulation (PM). As a buffer to this statement, as the use of AI personalized recommendations increases, the extent to which students believe they are manipulated, including both autonomy and other psychological barriers, significantly increases. As compiled through the survey, the path coefficient for this hypothesis is $\beta = 0.637$ and the hypothesis is also proven to be statistically significant ($t = 16.813$; $p < 0.05$). Also, the correlation value between these two variables is also positive and significant ($r = 0.637$), indicating the major effect between the two variables. The trend is certainly aligned with suggested evidence and arguments in earlier statements, which is supported by Ienca (2023), as the author explains the potential for AI systems to manipulate users' autonomy and decision-making processes.

Considering this aspect, despite the doubtless benefits that AI offers through personalized advertisements, a significant number of respondents still show dissatisfaction towards how these advertisements abuse their personal experience and surpass their psychological barriers. Based on the Persuasion Knowledge Model (PKM), the results proposes that consumers become aware of persuasion attempts when exposed to specific marketing strategies. The positive relationship is significant, suggesting that consumers become more aware of manipulation attempts, such as when personal information is used for personalization. Combining with the reliability index, the evidence ultimately supports hypothesis 2a (H2a).

4.4.3. Perceived Manipulation versus Purchase Intention

Contrary to the initial expectation and prior assumptions based on the Persuasion Knowledge Model (PKM), the effect of perceived manipulation on

purchase intention was found to be positive and statistically significant. Despite being statistically significant ($t = 4.198$; $p < 0.05$), the coefficient after calculation turned out to be positive ($\beta = 0.286$). As the study suggested in earlier chapters, the fact of being impacted on autonomy and psychology would reduce students' purchase intention due to the reduction of satisfaction and experience during shopping. However, unlike expectation, even with the increase in perceived manipulation, students would still possess, or even increase, the intention to purchase products that are recommended through such ads. The prime reason for this could be due to the difference in behavioral response and psychological response perceived by respondents. Besides, the positive correlation value of these variables ($r = 0.606$) also suggests a relatively positive bond between perceived manipulation (PM) and purchase intention (PI).

Regardless of the proposed expectation, a social survey of this study has shown the fact that students in Ho Chi Minh city do not emphasize the fact of being manipulated, as they can perceive the effect yet refuse to change or reduce their final purchase intention. This could be due to the fact that, being students show little interest in being psychologically affected but more likely to respond to the behavioral effects, which is a reflection of the concerns that Ienca (2023) points out regarding the ability of AI-based systems to shape the behavior of users, despite their knowledge of the persuasive intent. This finding implies that the activation of persuasion knowledge does not necessarily result in resistance. From the Stimulus–Organism–Response (S-O-R) framework, perceived manipulation is just one component of the internal evaluation by the consumer. This component might be outweighed by other stronger positive perceptions, such as perceived usefulness. This is a trade-off mechanism whereby the consumer is willing to accept manipulation in order to achieve other benefits.

4.4.4. The mediating role of Perceived Manipulation on the effect of AI-powered Personalized Advertisements on Purchase Intention

The calculation of this study proposed a positive indirect effect from AI-powered

personalized advertisements (APA), mediated by perceived manipulation (PM), on purchase intention (PI). The given coefficient of this effect is β = 0,182; implying that with the appearance of perceived manipulation, the effect of AI personalized ads on purchase intention is still positive. This phenomenon could be a consequence of hypothesis 1 and hypothesis 2a, as purchase intention could be affected due to the convenience and enhanced shopping experience, but such enhancements usually accompanied with the strategies of spamming information and suggestions to navigate students' autonomies and breaking through their psychological barriers. This finding adds further weight to the complexity of consumer response to AI-driven environments, where negative perceptions do not necessarily equate to lower behavioral intention. Rather, it suggests that perceived manipulation can occur alongside positive outcomes where perceived benefits are high. Consequently, the manipulation of autonomy among students using AI personalized ads in a more general approach, would cause a rise in their final purchase intention as a result of both convenience and lack of autonomy to control shopping

4.4.5. AI-powered Personalized Advertisements versus Perceived Usefulness

The proposed relationship between AI-powered personalized advertisements (APA) and perceived usefulness (PU) is expected to be positive, and this is aligned with the statistics of the survey, with a very strong positive coefficient of β = 0.646 (t = 15.710; $p < 0.05$). Such significant and strong enhancement of APA on PU could be interpreted generally through the suitability and time-saving aspects provided by AI suggestions of products. Lemsieh and Abarar (2024) also emphasizes the potential of AI systems in terms of improving the usefulness of the content by reducing the search effort and increasing the content's relevance. Regarding the significant correlation between the two variables (r = 0.646), the effect of AI-generated personalized ads on perceived usefulness among surveyed students is even consolidated.

In fact, the increase in usefulness perceived by students through the use of AI tools and suggestions is certain due to claims and statements written in earlier chapters, as the more items recommended, the less time-consuming is the shopping

experience, not to mention the fitness and availability of various products that would even be more enjoyable for students in Ho Chi Minh city. This result aligns with the Technology Acceptance Model (TAM) theory, which emphasizes the importance of perceived usefulness in the acceptance and intention to use technology. The strong relationship in the study confirms the value enhancement effect of AI-powered personalization on advertising. Overall, the hypothesis 3a, which suggested there is a positive effect of APA on PU is statistically supported.

4.4.6. Perceived Usefulness versus Purchase Intention

When it comes to the direct effect of perceived usefulness (PU) on purchase intention (PI), the results is theoretically expected and is consistent with prior research on technology adoption and digital marketing. Hence, through statistical calculation given the study's sample, the relationship is proven to be positive despite having a smaller impact compared to other hypotheses ($\beta = 0.240$). Also, the significance of this hypothesis is assured with $t = 3.391$ and $p < 0.05$. Combining all these elements, it could be understood that if students believe AI recommendations to be increasingly beneficial and useful, their final intention for buying the products would also be accompanied. Furthermore, the relatively high correlation ($r = 0.648$) illustrates that perceived usefulness shows a direct and significant association with purchase intention. In terms of the S-O-R model, perceived usefulness is described as a positive cognitive process that responds to external stimuli with positive behavioral responses, hence promoting purchase intention.

According to the stated arguments in the literature review chapter, as suggestions and time-saving tools using AI prove their effectiveness, respondents might therefore shape their mind and increase the purchasing frequency as the experience has become more satisfying and enjoyable. Combining with the high reliability and high validity, this relationship could be concluded to not be a result of mistaken measurement. Consequently, the statistics certainly support hypothesis 3b (H3b).

4.4.7. The mediating role of Perceived Usefulness on the relationship between AI-powered Personalized Advertisements and Purchase Intention

As a mediating variable, perceived usefulness could also be implied as a consequence of the use of AI-powered personalized advertisements. As the more personalization activities and recommendations appear, the more information and options are provided to the respondents. And according to the coefficient of this indirect effect of AI generated ads on purchase intention (β = 0,155), it could be said that such recommendations and suggestions by AI are relatively useful and not so much of unsuitability. As it rises in the usefulness offered, AI-powered ads therefore increase customers', specifically students in Ho Chi Minh city in this study, intention to purchase recommended items. Though diversity still exists due to certain standard deviation, as long as AI suggested contents and products are proven to be useful in ways of convenience and suitability, the statement holding that the indirect but positive effect of AI-powered personalized advertisements on purchase intention, still prevails.

Table 4.5 Coefficients

Model	**Coefficient**	**T-value**	**Sig**	**VIF**
APA	0.369	4.875	0.000	2.096
PM	0.286	4.198	0.000	2.393
PU	0.240	3.391	0.001	2.244

Source: Author's Compilation

a. Dependent Variable: PI

Table 4.6 Coefficients

Model	**Coefficients**	**T-value**	**Sig**	**VIF**
APA	0.646	15.710	0.000	1.000

Source: Author's Compilation

b. Dependent Variable: PU

Table 4.7 Coefficientc

Model	Coefficient	T-value	Sig	VIF
APA	0.637	16.813	0.000	1.000

Source: Author's Compilation

Table 4.8 Specific indirect effects

	Specific Indirect Effects
APA -> PM -> PI	0.182
APA -> PU -> PI	0.155

Source: Author's Compilation

Table 4.9 Summary of Hypothesis Testing

Hypothesis	Content	Result
1	AI-powered Personalized Advertising positively influence Purchase Intention of university students in Ho Chi Minh city	Supported
2a	AI-powered Personalized Advertising positively influence Perceived Manipulation	Supported
2b	Perceived Manipulation negatively influence Purchase Intention of university students in Ho Chi Minh city	Not Supported
3a	AI-powered Personalized Advertising positively influence Perceived Usefulness	Supported

3b	Perceived Usefulness positively influence Purchase Intention of university students in Ho Chi Minh city	Supported

Source: Author's Compilation

4.5. Analysis Summary

The empirical analysis in chapter 4 provides a coherent and theoretically consistent understanding of how AI-powered personalized advertising influences the purchase intention of university students in Ho Chi Minh city. The descriptive statistics reveal that the respondents have a positive attitude to personalised advertising, especially its usefulness and relevance to their needs. Meanwhile, concerns regarding potential manipulation or underlying persuasive intention exist among respondents. These preliminary findings indicate that, although a consumer appreciates the convenience and personalization they can enjoy with AI-driven advertising systems, they also tend to become more conscious of the persuasive mechanisms that those technologies operate on. Specifically, this dual response is an indication of the tension identified by prior research, where AI-based systems have the capacity to create value and, at the same time, elicit ethical concerns. This is supported by Ienca (2023) who noted that AI-based technologies have the capacity to affect users' autonomy subtly but still be perceived as value-creating.

The measurement scales are also verified by a number of statistical tests to determine the reliability and validity of the measurement scale. The internal consistency of all constructs is satisfactory, with Cronbach's Alpha values for AI-powered personalized advertising (0.813), perceived usefulness (0.848), perceived manipulation (0.822), purchase intention (0.838) of greater than the generally accepted value of 0.7, which means that the measurement items are highly reliable. Besides that, the findings of Exploratory Factor Analysis (EFA) indicate evident one-dimensional factor structures of all the constructs, including a high level of factor loadings exceeding the accepted level and a high percentage of variance explained. These results validate that the variables under observation converge to reflect on the theoretical constructs. Moreover, the Variance Inflation Factor (VIF) reveals that there

should be no serious multicollinearity concerns between the independent variables since each of the constructs could provide unique explanatory variables into the regression model.

The regression findings also present an empirical support of the relationships in the proposed framework of the research. The model has a significant explanatory power in the prediction of consumers' purchase intention, explaining 56.2% of the variance. According to the regression findings, AI-based personalized advertising (APA) has a positive impact on the two mediating variables, such as perceived manipulation (PM) (= 0.637) and perceived usefulness (PU) (= 0.646). This implies that AI-based personalization positively impacts both the functional and psychological aspects of consumer evaluation, especially with regards to perceived usefulness. This process is similar to the value creation process discussed by Lemsieh and Abarar (2024), where AI is useful in improving the efficiency of decision-making through the provision of relevant information. These mediators, in their turn, influence purchase intention (PI). In particular, the perceived manipulation has a positive effect on purchase intention (0.286) whereas perceived usefulness also has a positive effect on purchase intention (0.240). nterestingly, the positive effect of perceived manipulation on purchase intention also shows that consumers might not necessarily react against the manipulation when they perceive it. Instead, it reflects a more complex behavioral pattern in which the benefits of personalization might outweigh the associated psychological cost of manipulation. Moreover, APA continues to show a positive effect on purchase intention that is direct (0.369). On the whole, the results indicate that APA has both a positive and a negative effect on the purchase intention of consumers, as it positively affects the intention at the expense of perceived manipulation and perceived usefulness.

Combined, the findings indicate a significant trend in how people react to advertising technologies that rely on AI. The users are likely to value the practical advantages of customization and also exercise some level of skepticism on the persuasion capabilities of AI-driven systems of targeting. Following from the arguments presented by Choudhary (2025), it appears from the findings that the

effectiveness of AI personalization is not only based on its ability to deliver greater personalization, but also on how consumers cognitively weigh up the advantages against any potential concerns. This points to the presence of a trade-off. These empirical results support the theoretical reasoning of the previous chapters and reaffirm the increasing significance of learning more about both the positive and negative perceptions related to AI-controlled personalized advertising in the modern digital marketing setup.

5. Conclusion

5.1. Key research findings

This paper aims to contribute empirical data on the impact of AI-powered personalized advertising on university students' purchase intentions in Ho Chi Minh City. Several important theoretical and practical implications can be drawn from the results of this research.

Our results support the general proposition that AI-powered personalized advertising can have a significant positive impact on purchase intentions, both directly and indirectly through psychological effects. Most notably, our results suggest that perceived usefulness is a strong and positive predictor of purchase intentions. This supports previous studies based on TAM theory and underscores the importance of functional value as a factor influencing consumer behavior in response to AI-powered marketing.

More importantly, this study reveals a counter-intuitive and theoretically important phenomenon in terms of perceived manipulation. Unlike the conventional assumption based on the PKM framework, it was found that perceived manipulation does not have a significant effect on purchase intention. Rather, it appears from the study's findings that although consumers recognize the manipulative intention behind AI-powered advertisements, they still show a tendency to proceed with purchase intention. This implies that the psychological effect of manipulation might have been offset by the usefulness of the advertisements.

The study also contributes to the literature by showing that the effect of AI-powered personalization is two-sided but unbalanced, in which the cognitive effect of usefulness is stronger than the psychological effect of manipulation. This study contributes to the literature by showing that the effect of AI-powered advertising is not just the absence of manipulation but the difference in the psychological effect of usefulness and manipulation. This study contributes to the literature by going beyond the one-sided view of the PKM framework and offering a more holistic understanding of the psychological effect of AI-powered advertising.

Although the results did not reveal a significant effect for gender, it seems that income level affects purchasing behavior. This is evident since the majority of participants are students with limited budgets. Therefore, the results demonstrate that AI-powered personalization is an effective tool to reduce decision-making difficulty and perceived value, thus increasing purchasing intention even among those with limited budgets.

Overall, this research not only proves the effectiveness of AI-powered personalized advertising but also contributes to the existing body of knowledge by revealing the presence of both acceptance and manipulation of consumer behavior. This research demonstrates that even if consumers are aware that they are manipulated by an advertisement, their purchasing intention will be positive if the perceived benefits are high enough. This research provides a more holistic and realistic understanding of how AI-powered personalization affects purchasing decisions, especially in emerging markets like Vietnam.

5.2. Practical recommendations

5.2.1. For E-commerce platforms and marketers

Our data regression results indicate that Perceived Manipulation significantly does not deter university students from purchasing, in fact, sales are likely to escalate due to students' sense of usefulness and a shortage of autonomy when facing manipulative contents. While this result could be deemed potential and presents a short-term revenue boost for e-commerce platforms, severe long-term risks to brand

equity and customer lifetime value arise.

To be specific, platforms should transform from a “hyper-personalisation” or “micro-targeting” approach to “sustainable personalisation”. Since university students are tech-savvy, they are aware of the manipulative contents yet put up with it owing to convenience, impulse buying behaviour or low autonomy. As a result, firms face a higher risk of post-purchase cognitive dissonance, returns or dissatisfaction. To prevent this, brands should combine data-driven and individualised experiences with ethical practices, such as diminishing fake time-constraint deals or psychological exploitative contents in order to build trust and brand loyalty. In this way, the artificial intelligence is optimised to give out recommendations with the aim to satisfy and assist buyers rather than pure manipulation, thereby it is utilised in accordance with its original intent.

5.2.2: For university students

Our study reveals that, despite their AI literacy, university students remain susceptible to the persuasive suggestions made by AI’s algorithms, which overrides their perception and steer purchase intention. Therefore, students must be active in cultivating algorithmic skepticism and enhance their perceived autonomy.

Initially, instead of passively accepting the suggested products matching with their searches or blindly following the architectured experience whilst aware of it being manipulative, students should be conscious and carefully evaluate the authenticity of the recommendations. By constantly questioning whether their own purchase desires stemming from their needs or being algorithmically engineered, and further reduce their reliance on the ready-made suggestions of AI, students could significantly diminish the manipulative aspect of hyper-personalised content.

Furthermore, establishing direct search goals and queries for pre-determined goods could assist them to reclaim control over their purchase experiences. They should also practice the habit of personal information non-disclosure since AI algorithms operate based on their historical preferences or browsing histories and above all, actively navigate for the platform’s settings or cookie choices to opt out of

receiving personalised experiences.

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