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Consumer Perceptions of Artificial Intelligence Attributes and their Impact on Attitudes and Purchase Intention

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Abstract: “Artificial intelligence (AI)” has recently become known as a novel method for evaluating and anticipating consumer behavior. The purpose of this study is to assess the effect of perceived attributes of AI on consumer purchase intention based on the “Technology Acceptance Model (TAM)”. We created a conceptual model based on literature and used Smart PLS-SEM to test it experimentally by distributing a survey questionnaire to a sample of consumers. The results indicated the “perceived usefulness (PU)” has a significant impact on the perceived ease of use of (PEOU), as well as the perceived AI usefulness; the perceived ease of use of AI and perceived intelligence have a significant impact on the attitude toward AI; and finally, the attitude toward AI, awareness have a significant impact on purchase intention when using AI. This study contributed the essential empirical information required to enhance our comprehension of AI and presented novel insights into predicting consumers' intentions to utilize AI services.

Keywords: Artificial intelligence; TAM; Purchase Intention; perceived AI usefulness; perceived intelligence.

تصورات المستهلك لخصائص الذكاء الاصطناعي وتأثيرها على المواقف ونية الشراء

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المستخلص. أصبح الذكاء الاصطناعي (AI) مؤخرًا معروفًا كنهج مبتكر لتقييم وتوقع سلوك المستهلكين. يهدف هذا البحث إلى تقييم تأثير الخصائص المدركة للذكاء الاصطناعي على نية الشراء لدى المستهلكين بالاعتماد على نموذج قبول التكنولوجيا. وقد تم تطوير نموذج مفاهيمي استنادًا إلى الأدبيات السابقة، واختباره تجريبيًا باستخدام برنامج Smart PLS-SEM من خلال توزيع استبيان على عينة من المستهلكين.

وأظهرت النتائج أن المنفعة المدركة لها تأثير معنوي على سهولة الاستخدام المدركة، بالإضافة إلى تأثيرها على المنفعة المدركة للذكاء الاصطناعي. كما تبين أن سهولة الاستخدام المدركة للذكاء الاصطناعي والذكاء المدرك لهما تأثير معنوي على الموقف تجاه الذكاء الاصطناعي. وأخيرًا، فإن الموقف تجاه الذكاء الاصطناعي والوعي يؤثران بشكل معنوي على نية الشراء عند استخدام الذكاء الاصطناعي.

وقد ساهمت هذه الدراسة في تقديم معلومات تجريبية أساسية لتعزيز فهمنا للذكاء الاصطناعي، كما قدمت رؤى جديدة حول توقع نية المستهلكين لاستخدام خدمات الذكاء الاصطناعي.

الكلمات المفتاحية: AI, نموذج قبول التكنولوجيا (TAM), نية الشراء, المنفعة المدركة للذكاء الاصطناعي, الذكاء المدرك.

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Introduction

Merely a few decades prior, artificial intelligence was a notion confined to advanced science fiction; it is today integral to several aspects of everyday existence, including employment, leisure, dining, and even sleep. Individuals utilize AI regular provision of goods and services, including the Shaghlatty application, digital zone and Miswag. The fast advancement of AI and its significant effect on marketers' strategic approaches in areas where computer science shapes culture is undeniable (Asante et al., 2023). It is established that it seems that AI technology can make the lives of consumers more practical significantly. The failure to consider behavioral information and combine it with technology would have a negative impact on AI-using consumers (Rahman et al., 2023). Purchase intention has been significantly promoted and developed by artificial intelligence. These systems can gather, analyze, and appraise data at a high level compared to the manual ways. Besides, AI is involved in social commerce by analyzing customer behavior trends and business developments (Wang et al., 2023) The retail industry is not an exception and has experienced revolution and reconfiguration due to the recent technological advancements (Jameel, Abdalnabi, et al., 2024). The retail industry is undergoing rapid change, and this is largely because of retail technology that involves consumer interactions. There is no doubt that the retailing sector is evolving under the influence of new technology and it is expected that will remain so until 2020 and even later (Arachchi and Samarasinghe, 2025). The AI can help in the retailing sector by offering pricing efficiency, customer interaction, computerization of the store and demand prediction. Moreover, businesses that adopted the services of AI technologies indicated an increase in sales by 30 percent, reduction in stock by 20 percent, and efficiency in assortment by half (Scarpi and Pantano, 2024). TAM measured the adoption and use of technology through two basic constructs, which include PU and PEOU. This method facilitates the incorporation of extraneous factors to make it more comprehensive. This research examined AI awareness and Perceived Intelligence (PI), along with enhancements of the TAM as proposed by Davis in 1989 to predict the purchase intention. When consumers first adopting technology, these components are crucial. For instance, acknowledging that technology facilitates activities (Singh & Sinha, 2020), the existence of consumers who accept AI (Rahman et al., 2023), the influence of associated risks, and the degree of awareness in AI (Hasan et al., 2021). The implementation of AI is relatively novel in Iraq. Therefore, it is essential to examine client opinions about the adoption of AI in its first phases and their preparedness to persist in utilizing AI. The purpose of this study is to assess the effect of PEOU, PU and perceived intelligence of AI on attitude and consumer purchase intention based on the TAM.

1st: Literature review and development of hypotheses

1- Consumer Purchase intention

Consumer Purchase intention (CPI) denotes the buyer's propensity to expend funds and their disposition and tendency towards obtaining a specific thing or commodity. The predominant mode of purchasing is via online outlets. Trust and client awareness are essential elements in online transactions (Roy et al., 2025). Consequently, we utilize purchase intention to represent buying behavior in the present study. Online buying enables consumers to circumvent the opportunistic and socially inept behaviors of vendors (Lin & Wang, 2023). An essential precedent that cultivates a positive disposition towards CPI. Purchase intention denotes the likelihood that a buyer, in a specific purchasing context, would select a particular category of items in the future (Roy et al., 2025). CPI is in straightforward words an occurrence where consumers perceive a need that should be met (Bashir, 2019). Purchase intention has the potential to influence the purchase decision of the consumer in the future (Jameel, Alewi, et al., 2024). Application of AI by the business entities has significantly enhanced consumer confidence and preference towards specific products and services. It provides purchasers the chance to engage in virtual experiences from their own places, aiding them in making educated selections prior to finalizing a purchase (Sipos, 2025). AI helps customers by utilizing cutting-edge technology that uses combinations and permutations to choose the best option from a wide range of options, backed by a wealth of data. Apps for augmented reality have used AI to allow consumers to visualize things in a fundamentally new way, enhancing optimum purchase decision-making. Organizations have integrated AI-driven technologies to provide consumers with more tailored and optimum selections. AI utilizes advanced and inventive technology to assist consumers in comprehending their purchase preferences (Roy et al., 2025). According to a number of sources, AI's main goal is to create software that helps people make better decisions about what to buy by inventing algorithms that can solve problems like a person (Liu et al., 2019). Research indicates that consumers perceive enhanced security and regard the shopping process as less hazardous when using websites that use AI (Haenlein et al., 2019). AI focuses on customers and helps them to make informed choices about the services or goods they choose (Yoo et al., 2010). The potential and the effectiveness of the AI impress consumers, which leads to its broad usage (Roy et al., 2025; Sipos, 2025).

2- TAM

The TAM has been widely used by researchers to assess consumer attitude towards technology. The TAM was developed by Davis (1989) as an attempt to examine the attitudes of individuals towards the use of new technologies. PU and PEOU are the key constructs, and they serve as the basic evaluations of consumers when they develop an attitude towards technology. BI is a factor that influences technology usage and adoption. The behavioral intention is dependent on the perception of technology and perceived usefulness by users. The TAM also considers the impacts of external environment which may alter PU and PEOU. These external elements can be used to improve the acceptance models of some technologies that the researchers make. Information systems have found the TAM so useful in determining what users desire as far as adoption and the use of new technologies are concerned. (Al-Adwan et al., 2023; Ikhsan et al., 2025).

A. Perceived usefulness PU

PU refers to the extent to which an individual thinks that a certain method would make him or her more productive in the job (Davis, 1989). PU can be regarded as a major factor in the evaluation of technology, because it can enhance the current abilities of an users. Additionally, PU has proven to have both direct and indirect effects on online purchase behaviour intention, which could have a desirable influence on the intention to use the technology (Venkatesh and Davis, 2000). Literature Selem et al., (2023) and Roy et al., (2025) has shown that perceived utility is an important factor in influencing positive attitudes towards online networking sites. In addition, online purchasing makes people more productive that has a significant influence on their shopping behavior. Perceived utility

can influence the attitudes and buying intentions of the participants (Chin et al., 2022). The artificial intelligence systems can enhance perceived usefulness and consumer service by answering questions and drawing conclusions based on acquired data (Nica et al., 2022). Because of this, AI services could provide suggestions that are straightforward for consumers to grasp, which might make users think positively about them. According to a survey, consumers' opinions of AI technology' usefulness and ease of use have a positive impact on their willingness to buy (Roy et al., 2025). Arachchi and Samarasinghe (2025) reported PU has a significant impact on attitude toward AI among retail consumers in Sri Lanka. Similar result reported by Chin et al. (2022) who reported PU has significant impact on attitude for using AI.

H1: “PU has a significant impact on attitudes toward using AI”.

B. Perceived Ease of Use

PEOU is the amount to which people think that using new technologies and systems doesn't involve a lot more mental or physical effort (Davis, 1989). A lot of TAM research has revealed that PEOU are important signs of whether someone wants to use or keep using new services or technology (Chin et al., 2022; Jameel et al., 2022; Roy et al., 2025). People's feelings about a firm can also be affected by how easy they think a product is to use. Companies have tried to integrate new technology to their own systems in an endeavor to improve their evaluation. As an example, Jameel et al. discovered that the impressions could depend on the perception of PEOU AI robots among consumers of their functionality (Jameel et al., 2022). PEOU is one of the most significant factors that should determine the acceptance or adoption of a system by the users in the information technology sector (Davis, 1989; Switek et al., 2021). PEU is based on the premise that individuals believe that online shopping with the help of AI will be more convenient. Research indicates that it is much more convenient and pleasant to the clients with the addition of AI technology to the purchasing process, and it results in increased profits (Bhagat et al., 2023; Luo et al., 2019; Roy et al., 2025). It simplifies the process of making decisions because it provides consumers with a user-friendly interface where they can make a great number of options to select the most appropriate (Roy et al., 2025). As a result, the convenience of use is one of the major factors that influence the decision of consumers to submit to online shopping (Bhagat et al., 2023). According to Arachchi and Samarasinghe (2025), PEOU has made a huge difference in the attitude of consumers towards using AI. Ikhsan et al., (2025) also revealed a similar finding on the effect of PEOU on the attitude towards using AI on bank consumers in Indonesia, and indicated that PEOU has a strong effect on AI attitude. Kashive et al., (2020) showed that PEOU had a major effect on the attitudes of professionals and students who used the e-learning.

H2: “PEOU has a significant impact on attitudes toward using AI”.

C. Perceived intelligence (PI)

Higher levels of human intelligence are demonstrated by current advancements in AI technology and intelligent systems that use linked algorithms and data estimations (Arachchi & Samarasinghe, 2025; Balakrishnan & Dwivedi, 2021). Nonetheless, Due to the fact that AI algorithms now rely on cognitive and reasoning abilities in data processing, intelligence has become an integral part of AI-powered systems (Arachchi & Samarasinghe, 2025). Intelligence has become an essential attribute of every AI-powered system, since the capacity for reasoning and analytical thinking in data processing is a vital element of all AI algorithms. From a commercial perspective, intelligence affects user perception of a product, especially when it endows the thing with anthropomorphic attributes (Balakrishnan & Dwivedi, 2021). Positive attitudes are demonstrated by PI of AI technology, which is also increasing consumer productivity of everyday work (Fritsch et al., 2022). Research on the potential impact of digital assistants, AI assistants, and AI-devices on consumers' attitudes and desire to purchase is limited (Balakrishnan and Dwivedi, 2021). Thus, engineers are always coming up with new algorithms to improve the cognitive capacities of AI-assistants. Marketers and developers, though, should be cognisant of how this promotes a satisfying

experience for users. Perceived intelligence has a significant impact on consumers' attitudes toward using AI during the decision of purchase (Arachchi & Samarasinghe, 2025).

H3: "PI has a significant impact on attitudes toward using AI".

3- Awareness

When deciding whether to purchase a certain product, awareness plays a significant role (Jameel & Ahmad, 2020). It involves implementing a certain conduct after learning a topic. The initial phase of the buying process, known as awareness, is when consumers who are largely unfamiliar with the good or service come to know it. Stated differently, awareness refers to the comprehension or knowledge of a specific topic or circumstance (Bashir, 2019). Although in the literature on technology adoption, awareness has not yet gotten significant attention, it may be especially crucial when examining freshly introduced technological services (Flavián et al., 2022). According to Jameel and Ahmad (2020), awareness in advertising relates to product/brand recognition and shows that consumers have taken notice of and are cognizant of information about a new good or service. According to researchers like Brougham and Haar (2018), AI awareness is the understanding that robots and algorithm management systems, among other AI technologies, may eventually replace workers in their existing positions, creating an unpredictable environment that might be harmful to workers. The study, which involved 230 foreign consumers living in South Africa, measured Halal awareness and its impact on purchase intention. The results showed awareness has a significant impact on purchase intention (Bashir, 2019). Similarly, another studies indicated awareness has a significant impact on purchasing decisions (Hamdan et al., 2013) and BI to adopt influencers among retail investors (Chandani et al., 2025).

H4: "Awareness has a significant impact on consumers purchase Intention".

4- Attitude

An attitude is a favorable or negative predisposition of an individual's behavior towards any object. Ajzen (1991) defined attitude toward an action as the degree to which a person has a positive or negative opinion of the activity in issue. Attitude is a psychological precursor, representing an emotional capacity to define an individual (Wood, 2000). It is a predisposed mental state including a value, typically triggered by a response expression related to a person, location, or item (Chatterjee et al., 2023). This characteristic influences an individual's behaviors and objectives. Attitude towards use is the subjective assessment of a user about contemporary AI technologies or equipment. The influence of modern AI systems on user mindsets and choices has been the subject of much study (Chatterjee et al., 2023). Attitudes are associated with consumers' personal conduct and the link between attitude and behavior (Lynn et al., 2012; Elizabeth et al., 2014). Ajzen (1991) noted that an attitude is defined as a certain disposition to engage in a particular activity, either positively or negatively. An attitude is significantly correlated with users' intention to utilize a novel technology, such as an AI, as well as their usage behavior (Chatterjee et al., 2023; Sadaf et al., 2012). Consumer attitude and purchase intention regarding products have been extensively discussed in previous (Arachchi & Samarasinghe, 2025; Bashir, 2019; Roy et al., 2025).

One of the most important principles in social psychology is the connection that exists between attitude and behavioral intention. Chen et al. (2025) identified behavioral intention as a critical characteristic connecting attitudes to actual conduct. In the realm of marketing technology, consumers that harbor a positive attitude towards AI are more likely to demonstrate a robust intention. Consumers who are positive about AI and cognitively accept it are said to have a good attitude. This positive review makes them more likely to interact with AI and want to buy. Fishbein and Ajzen (1972) People have said that the way someone feels about an activity is directly related to the objective they want to achieve by doing it. The word "attitude" describes how someone thinks about and evaluates an action, whereas the word "behavioral intention" describes how ready someone is to do that behavior in a specific situation. The correlation between the attitude and the behavioral intentions was studied to show that the perception customers have of the artificial intelligence technologies has a direct impact on their intentions to purchase the technology, which

then has an impact on the fact that a customer actually utilizes the technology (Chen et al., 2025). It has been noted that attitudes are important in predicting a purchase intention (Arachchi and Samarasinghe, 2025; Bashir, 2019). Previous studies have established a significant relationship between the attitudes and the purchase intention (Arachchi and Samarasinghe, 2025; Bashir, 2019; Roy et al., 2025).

H5: “Attitude has a significant impact on consumers purchase Intention”.

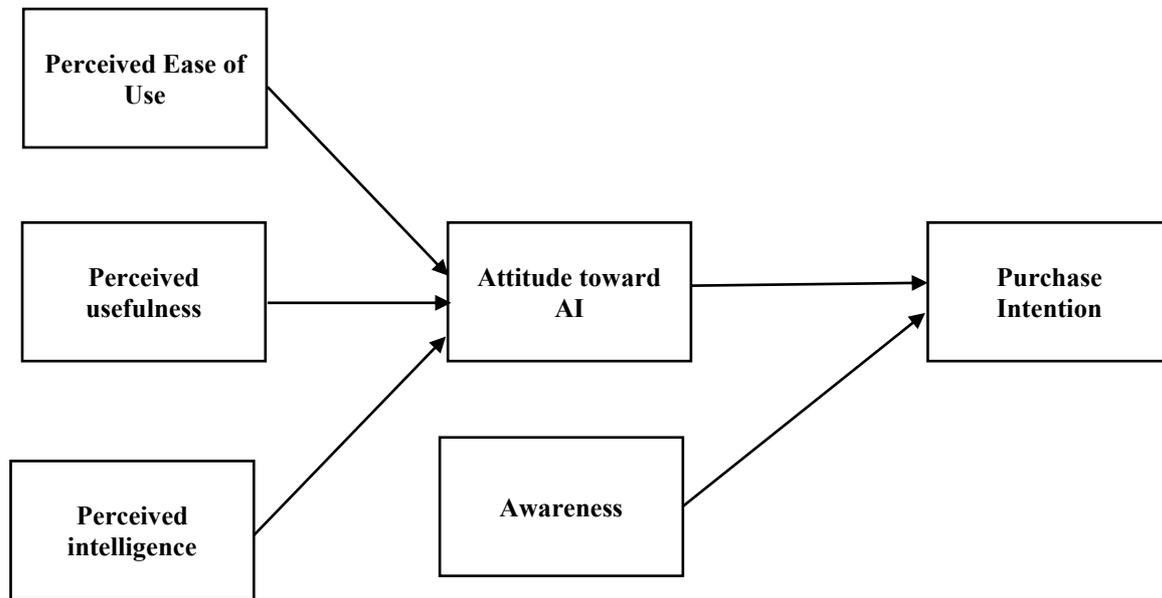


Figure (1): Research Model

2nd: Methodology

In order to have an empirical measurement of the conceptual model, the research employed a quantitative method with the help of a survey research process, which is effective to measure modern attitudes and beliefs regarding the purchase intentions of a diverse group of retail customers. An identical questionnaire was used to collect the data based on the responses constituting representative sample of the current trade retail consumer in Iraq (April-July 2025). The geographical area of the study was Iraq, which is considered to be critical in analyzing consumer buying intention and technology perceptions in the framework of a developing economy, especially with the trends in retail using AI. The study population will include consumers that are 18 years and above and are involved in transacting businesses in modern trade stores in Iraq. We incorporated a screening question at the outset of the questionnaire to ascertain the suitability of consumers with a foundational grasp of AI and automated service experience in purchase for inclusion in the survey. The non-probability convenience sampling approach was employed to gather data from the target population (Iraqi consumers). This sampling technique is widely used in similar studies which were conducted in several regions, especially if using SEM. This method was chosen because it is considered practical and suitable for evaluating a big number of participants with low cost and time. The study used the online form to distribute the questionnaire through several platforms, such as Facebook, Telegram, and WhatsApp, which permitted this study to have diverse participants in different Iraqi cities. We obtained 197 completed surveys, following the management of missing values and the treatment of outliers, the study achieved an effective sample size of 184.

The study employed two main software packages: the “Statistical Package for the Social Sciences, version 26 (SPSS)”, which was used for data coding, analyzing demographic characteristics, handling missing values, and identifying outliers. The second software is “Structural Equation

Modelling” (SEM) using the “Partial Least Squares (PLS-SEM)” for the main analysis of data and measuring the validity, reliability and hypothesis test.

All the constructs' items were adapted from reliable prior studies. Items were contextualized for purchase intention and AI role, which was worded for consumer respondents. The constructs' items were measured using a five-point Likert scale "(1 = strongly disagree ... 5 = strongly agree)". The standard procedures of item adaptation have been followed; (1) item wording and screening consistency with purchase intention and AI role context; (2) The questionnaires were reviewed and sent to three experts in the field to assess the content validity; (3) all the items in the questionnaires used (back-translation) translation to Arabic and back-translation to English (Brislin method). Table 1 displays the number of items and sources associated with each construct.

Table (1): items and references

constructs	No. items	Reference
PU	4	(Chin et al., 2022; Ikhsan et al., 2025; Roy et al., 2025)
PEOU	4	(Chin et al., 2022; Ikhsan et al., 2025; Roy et al., 2025)
ATT	4	(Chin et al., 2022; Ikhsan et al., 2025)
Purchase Intention	6	(Chin et al., 2022; Ikhsan et al., 2025; Roy et al., 2025)
Awareness	6	(Chandani et al., 2025; Gui et al., 2025)
Perceived Intelligence	5	(Balakrishnan & Dwivedi, 2021)

3rd: Data analysis and results

A total of 184 valid responses were received from those who participated in this study; the demographic results are summarized in Table 2. The participants were both male and female, and the number of participants showed balanced distribution. Most of the respondents' ages in this study are between 18 and 35 years, which shows the young consumers are more familiar and engaged with AI-enabled products. Regarding the education level, Table 2 shows varied levels of participation; the largest proportion have bachelor's degrees, which ensures informed opinions regarding AI technologies. The participants came from different backgrounds, such as employees, self-employed people, students and others, which could provide a clear image of consumer perceptions.

Table (2): demographic information

Demographic Variable	Category	Frequency	Percentage (%)
Gender	Male	96	52
	Female	88	48
Age	18–25 years	62	34
	26–35 years	71	39
	36–45 years	32	17
	46 years and above	19	10
Education Level	High school or less	21	11
	Bachelor's degree	109	59
	Master's degree	38	21
	Doctorate/Other	16	9
Occupation	Student	54	29
	Employed (public/private)	88	48
	Self-employed	24	13
	Others	18	10

1- Measurement model

The aim of the criteria at this stage is to evaluate the proposed model's reliability and convergent validity. Reliability is assessed by the outer loading for each item of the construct. Loading values above 0.70 is acceptable and indicates the construct is able to explain more than 50% of the

variance in the indicator(Hair et al., 2019). Based on Table 3 and Figure 2, the majority of items exceeded 0.70, except for AW5, which was below 0.7 and subsequently removed from the model. Threshold, confirming adequate indicator reliability. The next step is to measure “Cronbach’s Alpha (α) and Composite Reliability (CR)” to assess internal consistency. The CA and CR values between 0.70 and 0.95 are acceptable (Hair et al., 2019). The results reported in Table 3 showed all the constructs met these criteria, which means there is a strong internal consistency. Convergent validity was measured by the “Average Variance Extracted (AVE)”. The AVE value higher than 0.5 shows that a construct is able to explain at least 50% of the variance of its indicators (Hair et al., 2019). Based on Table 3, all the AVE values are above 0.5, thus satisfying the criterion.

Table (3): validity and reliability

constructs	code	loadings	Cronbach's alpha	CR	AVE
Attitude	ATT1	0.848	0.886	0.888	0.745
	ATT2	0.864			
	ATT3	0.892			
	ATT4	0.848			
Awareness	AW1	0.767	0.910	0.910	0.737
	AW2	0.890			
	AW3	0.867			
	AW4	0.892			
	AW6	0.872			
Perceived intelligence	PEI1	0.878	0.922	0.923	0.761
	PEI2	0.863			
	PEI3	0.861			
	PEI4	0.875			
	PEI5	0.887			
PEOU	PEOU1	0.869	0.872	0.880	0.722
	PEOU2	0.869			
	PEOU3	0.869			
	PEOU4	0.790			
Purchase Intention	PI1	0.799	0.913	0.921	0.698
	PI2	0.871			
	PI3	0.787			
	PI4	0.763			
	PI5	0.904			
	PI6	0.879			
PU	PU1	0.805	0.912	0.913	0.794
	PU2	0.908			
	PU3	0.934			
	PU4	0.911			

The discriminant validity was measured by two approaches: the “Fornell–Larcker criterion and the Heterotrait–Monotrait Ratio of Correlations (HTMT)”.The Fornell–Larcker requires the square root of each construct’s AVE to be higher than its correlations with other constructs. Table 4 showed each construct’s AVE correlations with its higher than the other values highlighted in bold.The HTMT values should be less than 0.85 as a strict criterion or 0.90 as a liberal criterion. Table 5 shows all the HTMT values less than 0.85. Thus, the Fornell–Larcker and HTMT criteria were met.

Table (4): Fornell-Larcker criterion

	Attitude	Awareness	PEI	PEOU	PU	Purchase Intention
Attitude	0.863					
Awareness	0.435	0.859				
PEI	0.503	0.398	0.873			
PEOU	0.486	0.434	0.458	0.850		
PU	0.507	0.487	0.608	0.475	0.891	

Table (5): HTMT

	Attitude	Awareness	PEI	PEOU	PU	Purchase Intention
Attitude						
Awareness	0.483					
PEI	0.554	0.434				
PEOU	0.548	0.480	0.510			
PU	0.564	0.535	0.663	0.528		
Purchase Intention	0.580	0.746	0.525	0.569	0.580	

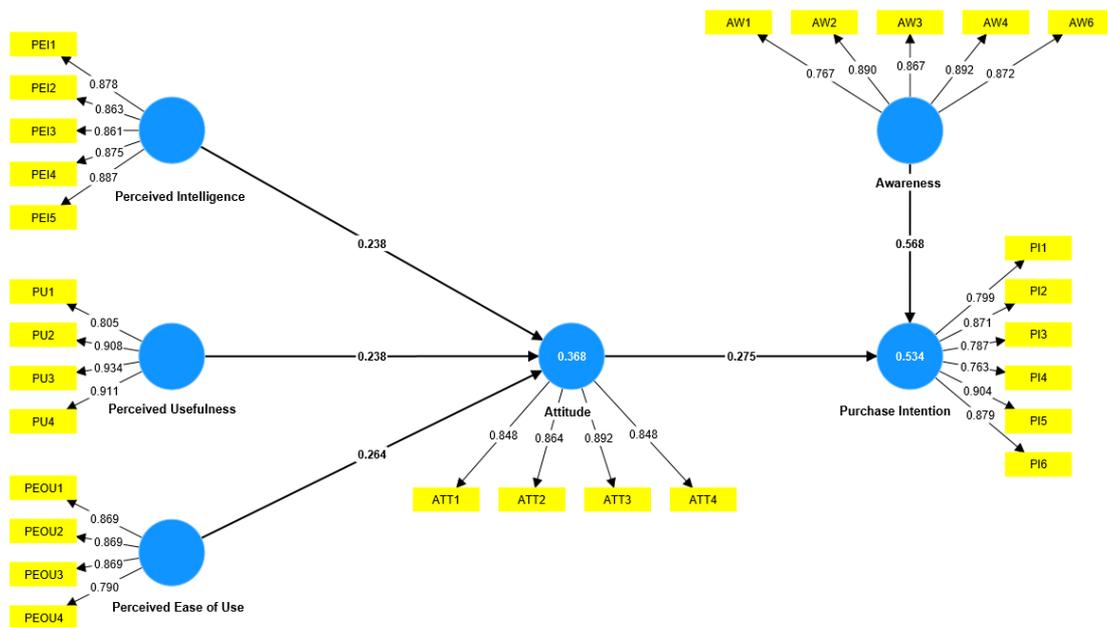


Figure (2): Measurement Model

2- Structural Model

After ensuring there is no issue in reliability and validity, the next step is to assess the structural model. Several criteria are required, first examining collinearity. The collinearity was examined using the “Variance Inflation Factor (VIF)” ; the value of VIF should be less than 5 to ensure that collinearity is not a concern(Hair et al., 2019). Based on Table 6, the VIF values are less than 5 and below the threshold. Thus. the absence of multicollinearity Second, assess the coefficient of determination (R^2) to measure the explanatory power of the model. Based on Figures 2 and 3, the R^2 for attitude is 0.368, which is substantial, which means that PU, PEOU, and perceived intelligence are able to explain 36% of the variance in attitude. The R^2 of Purchase Intention showed Moderate as illustrated in Table 2 (0.534), indicating the Attitude and Awareness explained around 53% of variance. The effect sizes (f^2) were assessed to measure the relative impact of independent variables on dependent variables. Based on Hair et al. (2019), the f^2 shown varies. Table 6 shows the values that indicate small, medium, and large.

Table (6): VIF and F^2

	VIF	f-square	effect
Attitude -> Purchase Intention	1.233	0.132	medium
Awareness -> Purchase Intention	1.233	0.561	large
PEI -> Attitude	1.686	0.053	small
PEOU -> Attitude	1.373	0.080	small
PU -> Attitude	1.720	0.052	small

The last step is the bootstrapping run with 5,000 resamples, as recommended by Hair et al. (2019), to assess the proposed hypotheses. The results reported in Table 7 and depicted in Figure 3 showed that PEOU, PU, and perceived intelligence had significant positive effects on attitude toward using AI with p-values < 0.00 and T-values > 1.96; thus, H1, H2, and H3 are supported. Furthermore, both attitude and awareness have a significant positive impact on purchase intention, with p-values < 0.00 and T-values > 1.96; thus, H4 and H5 are supported.

Table (7): Hypotheses results

Path	Standard deviation	T statistics	P values	Decision
Attitude -> Purchase Intention	0.052	5.303	0.000	Supported
Awareness -> Purchase Intention	0.051	11.116	0.000	Supported
PEI -> Attitude	0.078	3.047	0.002	Supported
PEOU -> Attitude	0.070	3.782	0.000	Supported
PU -> Attitude	0.067	3.546	0.000	Supported

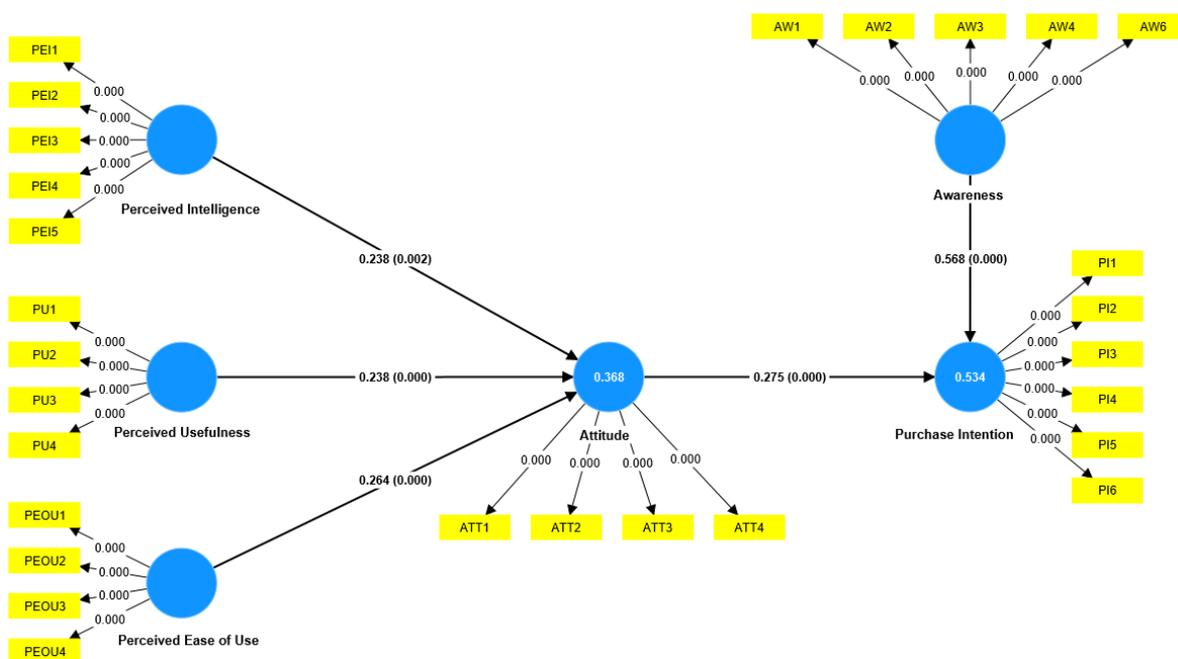


Figure (3): Structural Model

4th: Discussion

PU significantly affects attitudes toward the use of AI. The study's findings showed that PU had a favorable effect on Iraqi consumers attitudes on the usage of AI. This result is aligned with TAM and other previous findings (Arachchi & Samarasinghe, 2025; Chin et al., 2022; Roy et al., 2025), They affirm that one of the key elements influencing the adoption of new technology is PU. When the consumers believe AI is a useful tool and are able to improve their daily activities, experiences, and decision-making, consumers often view its utilization more favorably. This result in the Iraqi setting refers to the significance values in shaping consumer views of AI. As opposed to simple curiosity, easy speaks to consumers' expectations and needs. the Iraqi consumers who are facing several challenges in different sectors such as technology, economic, and social; the technology could help them to save time, enhance the effectiveness, or ensure the availability of services. For this reason, increasing the consumers' belief that AI is able to help them with several benefits, such as quicker service, smarter recommendations, and enhanced convenience, will make the consumer attitude high toward using the AI. The results are supported by prior studies, which were conducted

in different settings and cultures and indicated that PU is considered a central driver of significant attitudes toward new technology use (Arachchi & Samarasinghe, 2025; Chin et al., 2022; Roy et al., 2025). Nevertheless, this study enriches the body of knowledge in the Iraqi context, where the study about the consumer use of AI remains limited. The Iraqi consumers understand the possible value of AI when it contributes to their personal or professional outcomes, even when they have constraints in IT infrastructure and digital literacy. This proposes the PU is a universal element, surpassing culture and borders in context, which continues to be shaped by local expectations and needs. The business, retail, and organization should clarify for the consumers the importance of AI-based solutions in Iraq and the benefits of the AI in their shopping. Through marketing, they should send a message to consumers about how AI can make their daily routines easy, improve productivity, and provide reliable services. Thus, by concentrating on the positive side of AI and how it is useful rather than on the negative side, the companies are able to foster more positive consumer attitudes and use the AI in the marketing sector.

This study found that the PEOU of AI positively influences Iraqi consumers' attitudes toward using AI. This result aligns with TAM, which recognizes PEOU as one of the central estimations of user acceptance of new technologies. When Iraqi consumers recognize AI systems as friendly and requiring less effort to learn and use, they tend to develop a positive attitude toward using them. This observation implies that the use and adoption of technology is mostly obstructed by a sense of complexity and difficulty. The digital literacy of a good number of Iraqi consumers is uneven, and the application of the technology remains skewed; therefore, the convenience and accessibility of AI applications are deemed important in this context. When the AI tools (recommendation systems or chatbots) are user-friendly and comprehensible to the consumer, he/she will be less intimidated to use it. This ease of use will positively impact the lessening of psychological barriers that will translate into positive views regarding the use of AI. This finding is consistent with a number of prior findings in other environments (Arachchi and Samarasinghe, 2025; Ikhsan et al., 2025; Kashive et al., 2020), which claimed PEOU had a strong influence on attitudes. In the meantime, the present research, being carried out in the Iraqi setting, offers a very clear picture that the exposure to the high-level digital system can be limited by the IT infrastructure-related issues and socioeconomic considerations. The results indicated that even in such a setting, consumers' attitudes can be impacted by how simple and easily accessible the AI system is. This clearly demonstrates that the factor PEOU is universal and regarded as a key component in the TAM.

This study identified a substantial and favorable association. Perceptions of AI have lately expanded several commercial options for consumers. Nonetheless, several technologies have faltered due to the user's inability to perceive any value in them. Multiple prior studies have established a positive association between favorable attitudes or a willingness to acquire a product and good perceptions of technology overall. One may contend that AI is progressively emerging as a universal instrument in consumers' lives, irrespective of geographic location, owing to the fast proliferation of Industry 4.0 technologies. An individual is more inclined to have favorable views on new technological items or to be prepared to acquire them if they possess a positive overall attitude towards AI. Consequently, favorable impressions of AI technology can enhance opinions of a new technological product, hence increasing purchase intention. Technologically proficient consumers possess higher subjective perceptions and emotions concerning technology. The system interface is their primary concern during the purchasing process. Consequently, an increasing number of clients at textile retail establishments intend to utilize AI technology, with some explicitly articulating their preferences for brands and their purchasing intentions.

PI plays a major role in attitude towards AI use. This finding is consistent with a number of earlier studies (Arachchi and Samarasinghe, 2025; Fritsch et al., 2022) This means the way consumers view AI tools as extremely competent to perform their duties successfully and look human-like. Consequently, the attitude towards their use tends to become positive among the consumers. This finding is consistent with other study findings in the past which pointed to the role of perceptions in influencing the acceptance of new and emerging technologies whereby sophistication and expertise

usually determine the level of trust and the willingness to get involved. To improve the perceived intelligence of AI in marketing, it is necessary to enhance its performance, bring up awareness, and promote interactions that will affect user attitudes, and the latter will in turn facilitate adoption. Digital assistants and AI appliances exhibit heightened levels of animacy and intelligence, particularly when augmented with AI features that allow their human-like characteristics to respond to stimuli and intricate situations. Prior research has shown that novel technological forms improve consumer attitudes and purchase intentions through digital channels. The likelihood that individuals will start using AI devices for commercial purposes is increasing along with the popularity of these appliances. Since PI is built around animated cues and stimuli given by artificial actors, theories of psychology make sense in this context. Investigating the influence of animacy and intelligence attributes on attitudes regarding AI in stores will be useful and interesting. It was interesting to learn that PI has a bigger effect on how people feel about AI than PU and simplicity of use in a retail setting that uses AI. Awareness has a significant impact on purchase intention among consumers; this result is supported by several previous studies, such as (Arachchi & Samarasinghe, 2025; Bashir, 2019; Roy et al., 2025). The results established that awareness has a significant effect on CPI. The implication of this outcome is to underscore the critical role of the knowledge of consumers in the process of decision making. The consumers will have more confidence in comparing the value of the product in case they know more about the features and benefits of the product. In the same way, the knowledge of the way AI is integrated into the product or service will bring the highest possible trust and reduce uncertainty. Consumers are facing fast changing technology in the market today, and the distance between invention and acceptance has to be reduced and awareness is one of the major concerns. The essential role of awareness suggests the retail shop should not only adopt and implement AI-driven products and services but also make sure consumers clearly understand the AI and benefit from its use. However, when the consumer has limited awareness about AI, it often will lead to unwillingness, resistance and hesitation to use new technology. Increasing consumer AI awareness is essential because consumers usually link AI with several risks, such as privacy risk and fear of misuse. to improve and increase the AI awareness among the consumers The retail shops should explain the purpose of using AI and the benefit from this technology, which can reflect positive perceptions and maximize the probability of purchase. Moreover, the current study findings align with TAM and related theories, which ensure perceptions strongly impact behavioral intention. Awareness is considered as a frame upon which attitudes, PEOU, and PU are built. When the consumers consider the AI in a shopping app or website and platform able to personalize recommendations or enhance consumer service, they will tend to see it as worthwhile and important; thus, it will increase the intention to purchase among the consumers.

5th: Conclusions

This study measured several constructs impacting Iraqi consumers' acceptance of AI technology, the constructs being PEOU, PU, and perceived intelligence. The results showed all three constructs have a positive impact on attitude toward using AI among the consumers. Additionally, awareness and attitude significantly shape purchase intention. This study shows consumers willing to use AI impacted by perceptions and knowledge of AI. This result confirms how crucial it is to design the AI apps to be more friendly in use and practically beneficial. The Iraqi consumers showed, like other context consumers, that they positively respond to the technology when they feel and recognize it is simple and able to provide real value. There is signalling of the perceived role of intelligence which shows that the trust of the consumers can be increased to their attitude towards using AI. These results support the TAM with perceived intelligence and awareness added to them in affecting purchase-related results in an emerging market context. The findings of the research indicate that companies, retailers, legislators, and developers of applications in Iraq should focus more on the advantages and convenience of AI as well as demonstrate the smartness of the latter. However, advertising, education, and exposure to technology can help people be more aware of AI, and it can result in more positive feelings and a great.

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