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The Role of Artificial Intelligence in Enhancing Customer Repurchase Intention

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ABSTRACT

The purpose of this study is to investigate the role of consumer engagement on social media and conversion rate optimization in mediating the relationship between artificial intelligence technology and repurchase intention, where customer habit is as a moderator. This study also determines how artificial intelligence technology integrated social media sites affect consumers' intentions to repurchase as well as to improve the understanding of established variables. Moreover, this study is conducted on the international sportswear brands and to evaluate the hypothesized relationships, the data was collected using Google Forms from 496 respondents who buy from these brands. Furthermore, the study was cross sectional in nature. The data was analyzed using Smart PLS to test the hypotheses. Results of the study show that artificial intelligence technology positively and significantly affects repurchase intention through consumer engagement and conversion rate optimization. Furthermore, customer habit has been found to be a moderator between consumer engagement on social media and repurchase intention with the positive correlation. Results also showed that artificial intelligence technology significantly affects repurchase intention with positive correlation. The findings reveal that brands should focus on integrating artificial intelligence technology in their networking sites to understand the consumer needs and wants. Conclusion, limitations of the study, future research and managerial implications were also included in the study.

Introduction

In the highly competitive marketplace of today, firms that want to achieve sustainability, growth, and revenue must first understand the elements that affect repurchase intention. Where, repurchase intention refers to a consumer's likelihood to make future purchases from the same retailer (Javed & Wu, 2020). Consumers select products, place orders, pay with credit cards, and receive tangible products. A brand's identity provides customers with a sense of security and safety, allowing them to evaluate the quality and legitimacy of products and services. Consumers now trust internet purchasing as a cost-effective and efficient option. Researchers found that customer engagement led to increased repurchase behavior (Keller, 2020). Application of AI technology in fashion business has sparked widespread interest around the world. One of the most common routes for this to occur is social media, where customers discuss their experiences, share information, review products, and express enthusiasm, happiness, or disgust with others. Because consumers spend a significant amount of time (four to seven hours per day) on social media platforms (Yang et al., 2020). Artificial Intelligence technology can be employed to monitor their online actions and understand their purchasing habits. AI enables companies to create novel products and services. Artificial Intelligence's ability to analyze massive volumes of data via linked technologies and high-performance computers has made it a critical component of many sectors' digital strategies (Raisch and Krakowski, 2021).

Modern society is experiencing a boom in artificial intelligence technologies. As AI technology matures, competition among organizations is still increasing. Understanding consumer needs and purchase behavior is crucial for businesses in order to develop and implement effective marketing strategies. The digital revolution has brought an era filled with data overload. Digital marketing enables businesses to more effectively increase consumer engagement (Maitri et al., 2023). Consumers are continuously assaulted with generic advertisements, which make it more and more challenging for firms to differentiate themselves. Artificial Intelligence in marketing applications provides an interactive setting that helps fashion industry organizations quickly satisfy consumer expectations and build a large, devoted client base (Perreira et al., 2023). Artificial Intelligence offers a transformative solution by enabling brands to identify and analyze data and make predictions. Companies should focus on developing AI solutions that add economic value and enable collaborative collaboration between humans and robots. Leaders must prepare their workforce for the effect of AI, including upskilling for existing positions and retraining for new opportunities (Soori et al., 2023). However, technology is still in its early stages in large businesses and generally absent in smaller ones. There is a gap in how organizations can employ real-time data to engage with customers and provide personalized services. Given that consumers spend an average of five to six hours each day on social media sites, artificial intelligence technologies might be utilized to analyze their behavior and understand their purchase habits (Kishen et al., 2021). The study aims to address the gap of employing real-time data by developing and implementing an artificial intelligence technology integrated framework that enhances the customer engagement, turning the visitors into regular customers. Enterprises must discover their consumers' wants and expectations by connecting to them directly, as customer involvement on social media alone is insufficient to benefit enterprises; conversion rate optimization is critical. Moreover, this research fulfills the need of personalizing based on consumer’s choices and preferences by using control variables i.e. age, income, marital status as well as frequency of purchase.

Artificial Intelligence's ability to analyze massive volumes of data via linked technologies and high-performance computers has made it a critical component of many sectors' digital strategies

(Raisch & Krakowski, 2021). These tools can evaluate historical information, social media chats, customer evaluations, and other sources to find new patterns and preferences. Over the last decade, there has been a considerable increase of research on incorporating Artificial Intelligence technology into shipping across multiple disciplines (Li et al.,2023). To avoid this, businesses must develop new strategies to connect the physical and digital worlds. Both virtual reality (VR) and augmented reality (AR) technologies offer a potential answer by allowing shoppers to virtually try items before making a purchase, boosting confidence and improving the buying experience (Lubis & Sembiring, 2023).

In today's competitive world, personalization has emerged as the key to establishing deeper consumer ties. Businesses may increase loyalty and engagement by personalizing experiences to individual tastes. Existing methods of personalization frequently rely on fundamental segmentation i.e. age, gender, location along with data analysis, which limits their usefulness. Consider earning a birthday discount coupon for your favorite shoe brand or a product you have researched online. This article examines the potential for transformation of artificial intelligence (AI) for marketing customization and personalization experiences (Abrahams et al., 2023). Furthermore, Artificial Intelligence technology may provide consumers with personalized suggestions and recommendations based on their usage habits and preferences, resulting in a more personalized and comfortable experience for users (Lina & Ahluwalia, 2021).

With the rapid rise of online shopping over recent years, totally new fields of research have emerged. One of the most important is conversion rate optimization, which is the study of how to build online interfaces to ensure they are as efficient as possible in turning casual viewers into genuine consumers (Wambui, 2015). This research introduces an Artificial Intelligence-assisted method of optimizing conversions based on computational evolution. Organizations that embrace the potential of Artificial Intelligence can now create more interesting, relevant, and current content tailored to their target audience's preferences and interests. A good attitude toward the brand and the tendency to make repeated purchases indicate customer trust in the items or services provided. Customer repurchase attitude and intents are important factors in the performance of an online clothing brand. This study focuses directly on the rate of customer engagement and conversion and aims to find characteristics that have a favorable impact on a customer's choice to repurchase after seeing the website (Kumar et al., 2019).

The study also analyzed how customer habits moderate the relationship between consumer engagement and repurchase intention. The concept of habit was first introduced in psychology and has been investigated in several fields, including social psychology, customer behavior, organizational behavior, and information systems. Research on customer habits is crucial for understanding consumer behavior as repetition is a common occurrence in daily life (Chiu et al., 2012). Customers had a habit of purchasing things. Repeated positive online purchasing experiences can build trust and habits. Consumers often make unconscious decisions while purchasing a product they frequently use (Limayem & Cheung, 2007).

Literature Review

Defining the concepts

Stimulus organism response theory (SOR)

This study applies the stimulus-organism-response (SOR) theory to explore the proposed relationship between AI technology, customer engagement, and repurchase intentions. According

to the SOR theory, environmental cues can enhance an individual's cognitive and emotional responses, leading to a specific physical response (Kim et al.,2020). According to SOR theory, AI technology stimulates consumer involvement on social media channels, leading to higher conversion rates and repurchase intentions among hotel clients (Majeed et al., 2022).

Artificial Intelligence Technology

Artificial intelligence (AI) technology refers to the computer systems that have been designed to act or think like people (human approach) or systems that act or think rationally (Lyu & Liu, 2021). An organization's current drive toward digitalization includes artificial intelligence (AI), which provides it a competitive advantage in the business world.

Consumer engagement

Consumer engagement refers to the procedures, strategies, and technological resources that provide continuous communication with customers through a variety of touchpoints. Customers feel heard, respected, and linked to the company as a result of this continuous communication, which boosts brand loyalty (Chiu et al., 2021).

Conversion rate optimization

Conversion rate optimization (CRO) refers to the relationship between a brand website and consumer purchasing decisions. Conversion Rate Optimization is the ratio of users who actually purchase a product in comparison to total website views (Bag et al., 2021). Conversion metrics include click count, income, time spent on the site, and rate of return.

Repurchase intention

Online repurchase intention is defined as using an internet site to buy an item. Positive product encounter lead to repeat purchases, while unsatisfied customers are less likely to return to a firm or brand (Waruwu & Sianipar, 2021).

Customer Habit

A habit is defined as "an involuntary behavioral reaction induced by a situation or environment, without any mental processing or conscious thought due to past experiences" (Yang et al., 2019).

Hypotheses Development

Mediation of Customer engagement on social media between Artificial intelligence technology and Repurchase Intention with moderation of customer habit

AI is built on a huge data-driven machine learning approach (Dubey et al., 2020). Social media users will be identified and categorized according to their activity, interests, and demographics using machine learning techniques like classification and clustering algorithms (Kaplan & Haenlein, 2019). By identifying different user segments, marketers can modify their content and engagement strategies to better connect with a variety of target audiences. For instance, use of gender to divide the market for shoes into male and female shoe segments. Recommender systems powered by content-based algorithms and collaborative filtering will be used to suggest relevant content to social media users depending on their past interactions and preferences (Liao et al.,2022).

Search engine optimization is a crucial component of online marketing strategies as it aids in raising website ranks and increases both the volume and regularity of website visitors. An important marketing tool which requires search engine optimization is targeting (Kim & Moon, 2020). Examples are becoming more frequent; for example, when a user enters a search query in a search engine, the system determines which results to display. Artificial Intelligence technology fosters disruptive innovation, which speeds up digital transformation (Pillai et al., 2020). Previous study on Artificial Intelligence in marketing and service research has neglected customer engagement.

Natural Language Processing technologies are utilized in the fashion sector to evaluate text-based data sources, including social media chats, consumer questions, and feedback (Khurana et al., 2023). Fashion brands can tailor their offers and communications by using NLP algorithms to extract insights using unstructured data. These insights can reveal customer preferences, sentiment, and developing trends. Artificial intelligence (AI)-driven devices known as chatbots and virtual assistants mimic human speech to offer automated customer service and support (Roslan & Ahmad, 2023). Chatbots in the fashion industry can interact with clients in real time, responding to their questions, giving them information, and helping them with the shopping procedure. Chatbots and virtual assistants use natural language comprehension to provide tailored recommendations and expedite communication. Companies can learn more about the needs and behavior of their customers by using data analytics approaches (Banu, 2022).

By enhancing immersion and enjoyment, high-quality artificial intelligence technology should encourage positive user experiences in the mixed reality environment. Previous research has demonstrated that adaptive artificial intelligence, such as an Artificial Intelligence-embedded user interface, increases gamers' and virtual realty users' perceived immersion. Consumer engagement could be greatly enhanced by an immersive environment that integrates multi-modal interactions involving voice synthesis and recognition (Divekar et al., 2020).

Using the S-O-R theory, the study suggests that customers' pleasure with their online brand buying experiences have an organism (cognitive and emotional states) that impact a person's inclination toward loyalty (reactions) (Ahmed et al., 2023). Additionally, no prior research has employed the S-O-R theory to determine if low or high engagement levels influence the strength of the relationship between consumers' pleasure with their brand experiences on social media (both emotional and cognitive states of the organism). Previous research study has shown that clients are more inclined to make repeated purchases from a site if they perceive it offers value-added services. Discounts and special offers can enhance the overall consumer shopping. Customers generally seek additional value or lower prices. Depending on the circumstances, buyers will either regularly buy the exact same brand or simply test other product types within the same brand. The majority of habitual behaviors emerge and occur quickly, simply, and without awareness (Pasaribu & Salim, 2022). Customer habits have been examined in marketing to significantly raise long-term business performance. The study used the S-O-R model to study how surrounding cues affect consumers' emotional states and future online shopping intentions. Based on previous arguments, we can hypothesize that:

H_1: Consumer engagement on social media mediates the relationship between Artificial Intelligence Technology and Repurchase intention with the moderating effect of customer habit between Consumer engagement on social media and Repurchase intention.

Artificial intelligence technology and repurchase intention

Artificial Intelligence technology can analyze many data sources to identify relevant client acquisition opportunities. Artificial Intelligence and machine learning can help optimize prices for maximum profit. It may also help to improve consumer suggestions and analysis of market baskets, resulting in increased repurchase intention. A welcoming and personalized user interface that facilitates navigation and products search, providing a pleasant shopping environment, is an important component of the consumer engagement. Where, customer engagement has a major impact on repurchase intention. Repurchase intention refers to acquiring goods or services after experiencing their quality and benefits previously (Ilyas et al., 2020). The research identified numerous markers of online repurchase intention which includes, customers will continue to shop on the same website, consumers will return to this site, and customers will suggest this website to those around them. To encourage repeat purchases, companies must meet their customers' expectations. Businesses must, however, provide the best quality of their goods and services, as well as engaging marketing strategies, if they want to retain their current consumer base (Majeed et al., 2022). Customer gratification in online purchasing is also determined by quality, timely product or service delivery, and post-purchase support which develop customer habits. Consumer engagement is crucial for corporate success, since it can develop habit and lead to repeat purchases and improved revenues. Customer acquisition comes first in their purchase process. Customers prefer online purchasing since it saves time and provides convenience from any location. Customer attitudes are influenced by their perceived experiences with products, including functionality, packaging, display, and point of purchase (Lin et al., 2017). Buyers are more skeptical about online shopping due to the distance between the real and virtual environment. They perceive higher dangers and less reliability. Trust in an online business refers to personal promises that the shop will meet responsibilities, conduct appropriately, and prioritize consumer gratification (Singh et al., 2021).

Despite its evident importance, some marketing authors questioned the significance of chronological age as a segmentation factor. However, they concluded Gen Y prioritizes status-seeking consumption to demonstrate affluence and power of purchase (Liu & Li, 2019). Gen Y is well-educated, prioritizes technological knowledge, and bases their purchasing decisions on prior research. Gen Z's have greater access to information than previous generations due to their constant use of smartphones and tablets. However, they continue to rely on parents for the financial support. Consequently, Gen Z's more cautious about how much money they spend and what things they acquire (Özkan & Solmaz, 2017). The study used the S-O-R model to study how surrounding cues affect consumers' emotional states and future online shopping intentions. Chatbots or Artificial Intelligence technology are used to deliver services to customers before, during, and after their purchase. Customer services refer to a website's ability to support effective purchases. Firms which offer a simple, flexible, and managed return and exchanging process that surpasses consumers' expectations would experience increased repurchase intention (Clemes et al.,2014). Therefore, we can conclude that:

H_2: Artificial intelligence technology positively influences repurchase intention

Mediation of conversion rate optimization between Artificial intelligence technology and repurchase intention

Businesses integrate artificial intelligence technology in their social media channels in order to accomplish a number of objectives, including optimizing search engines to raise the website's

ranking, measuring the impact of content and evaluating a website's efficiency in creating the best possible plan, and improving the percentage of visitors who become customers (Jang et al., 2022). There are various motives for accessing an online platform, including window browsing, price comparison, and purchasing. People no longer have to put up with boring and repetitive work because artificial intelligence technology systems can do them effectively and consistently. The planning and implementation of marketing efforts have changed as a result of Artificial Intelligence technology's capacity to analyze vast amounts of data, provide predictions, and automate repetitive operations. The majority of sportswear brands websites use chatbots to boost client engagement and provide superior services. These chatbots are created utilizing artificial intelligence (AI) technology and machine learning techniques. Chatbots can learn and provide personalized recommendations based on past data (Hicham & Karim, 2022).

Additionally, the introduction of chatbots and virtual assistants has made it possible to provide customer support that is quicker and more effective due to technology. These Artificial Intelligence-powered solutions can solve problems without the need for human intervention, respond to often asked queries, offer recommendations, and offer round-the-clock help. Because of this automation, response times have gotten faster, responses have been more accurate, and overall customer gratification has increased (Caruelle et al., 2023). Conversion refers to completing a desired activity on a computer interface, such as making a purchase, joining a marketing list, or clicking on a link in an email, website, or social networking application. Artificial Intelligence-driven personalization delivers a customized experience for every consumer, from dynamic email marketing to individualized product recommendations. This improves the emotional bond between the customer and the brand in addition to raising the possibility of conversions. The findings demonstrated a significant increase in click-through rates as well as conversion metrics whenever content suggestions were adjusted using artificial intelligence algorithms (Srivastava & Manohar, 2020).

Social media marketing driven by Artificial Intelligence technology that boosts customer engagement and conversion could improve relationship between customer and business. Digital advertising campaigns can also be optimized with Artificial Intelligence technology (Hicham & Karim, 2023). By evaluating previous ads and seeing trends, Artificial Intelligence technology can identify the most successful ad targeting and message techniques. Campaigns with higher conversion rates and returns on investment may arise from this (Söderlund et al., 2014). The SOR model provides more evidence for this assertion, demonstrating how Artificial Intelligence-powered social media solutions persuade customers to purchase a certain product or service by allowing them to do research on the platform. Using Artificial Intelligence, businesses can present their products or services as superior to those of their rivals, luring customers to make the purchase.

As far as the authors are aware, there isn't a conversion rate optimization strategy for online shops as yet. No single work has attempted to create a conversion rate framework that takes into account the duality of both, online and offline touchpoints along the retail customer journey, despite previous studies trying to map customer journey, ascertain the impact of website touchpoints, and identify multiple conversion rate optimization frameworks (Purnomo, 2023). Businesses may better fulfill the individualized engagement expectations of today's consumers by being able to create personalized experiences at scale. Effective client engagement is crucial for increasing the rate of conversion on social media websites. The effectiveness of a brand's online marketing is demonstrated by conversion rate optimization, which employs a variety of key performance indicators. This helps determine success rate of digital advertising as well as the total return on

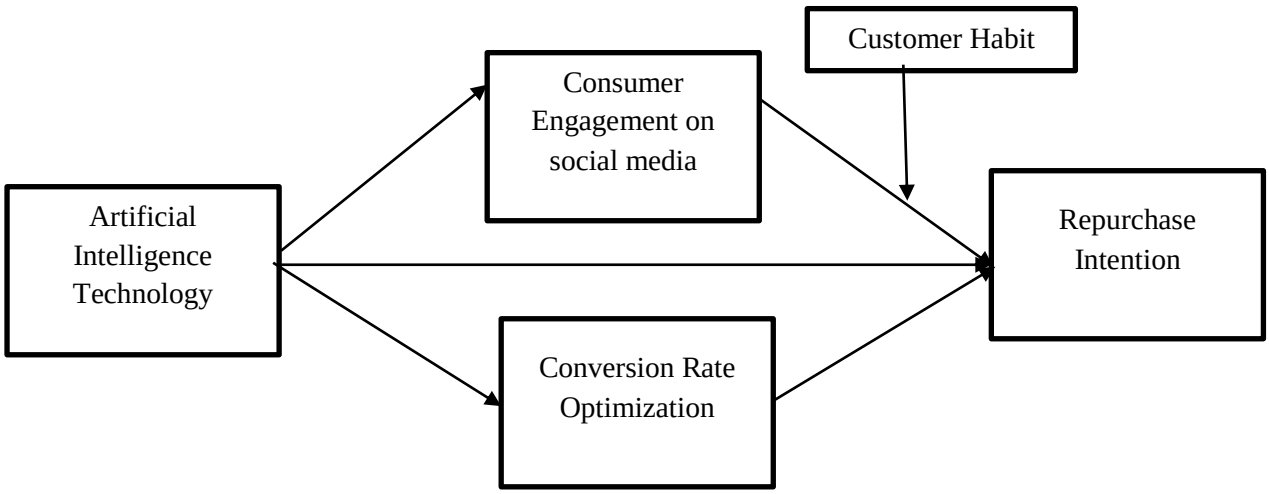
advertising campaigns. Appropriate tactics are needed to encourage consumers and convert them: immediate conversion cannot be possible. Customer interests can be inferred from content viewed, browsing habits, and the amount of time spent on particular pages (Craig et al., 2024).

Customer evaluations and feedback are powerful evidence of authenticity that can greatly impact purchasing decisions. Displaying authentic customer reviews on product websites boosts brand trust and reduces concerns about the quality of the product and its reliability (Koch et al., 2020). The way in which robots interact and engage with humans has a significant impact on how users' post-adoption experiences are shaped. The website's intended product and consumer types must be the focus of the web visuals' structure (Van Doorn et al., 2017). Broadly speaking, prior research primarily concentrated on the application of marketing tools to raise customer standards of service, there is currently a dearth of studies on use of the customer service tools to influence customer behavior, specifically to control the conversion rate and subsequently sales.

Businesses should actively solicit feedback and swiftly respond to negative evaluations (Lăzăroiu et al., 2020). By leveraging its dynamic data and information processing capabilities, a company can increase its operational agility. Agility" describes a company's capacity to quickly detect and dynamically adjust to changes, for example, through information processing or analytics. Consider Artificial Intelligence technology identifying a set of consumers who recently downloaded a fitness app and often purchase running shoes (Hassija et al., 2024). With the use of this data, marketers may tailor their messaging by providing specific discounts on running gear or training advice that is in line with their fitness objectives. Retargeting advertising to past website visitors can increase conversion rates by motivating people to make purchases. Hence, we can state that:

H_3: Conversion rate optimization mediates the relationship between Artificial intelligence technology and repurchase intention

Theoretical Framework



Methods

Procedure and Respondents

This study follows quantitative, non-experimental and correlational research design. Keeping in view the study variables and the nature of research, units of analysis were the individuals as the

participants of the study were male and female involved in the use of social media and online websites for shopping and have interacted with artificial intelligence technology for online purchasing. The cross-sectional structure was utilized by following (Podsakoff et al., 2003) recommendations to collect data on the criterion and predictor variables. The respondents of this study were individuals of age 18-45 who buys products from international sportswear brands. The data was collected using Google forms which were provided to respondents through WhatsApp groups and Facebook groups. Data was collected from the individuals of Pakistan. The motive behind targeting Pakistan is that the extant literature does not show much research conducted in the country. To generalize the study results, the size of sample was selected by following (Kline, 2015) who recommended that ten (10) respondents against each item in the questionnaire (i.e., No. of items in the questionnaire × 10 respondents from targeted population) from target population is an essential condition to conclude best possible results about target population. By keeping in mind, the possibilities of missing data and non-respondents, we targeted 496 individuals. The analysis was done using Smart PLS software and the results of research were analyzed. Based on the results of the study, conclusions, limitations and future direction were further discussed.

Measurement and Scale

For measuring the variables used in the study, the most well-established and the extensively used scales were employed. The detail of the variables along with sample items is presented below in Table 1. The five-point Likert scale was used for research variables i.e., artificial intelligence technology, consumer engagement on social media, conversion rate optimization, customer habit, and repurchase intention, where 1= strongly disagree and 5= strongly agree. The questionnaire was written in the simple "English" language.

Table 1: Variables, References, No. of Items and Sample Items

Sr.	Variables	References	No. of items	Sample Items
1	Artificial intelligence technology	(Capatina et al., 2020)	8	5-point Likert Scale
2	Consumer engagement on social media	(Hollebeek et al., 2014)	7	5-point Likert Scale
3	Conversion rate optimization	(Di et al., 2018)	4	5-point Likert Scale
4	Repurchase intention	(Kim et al., 2012)	3	5-point Likert Scale
5	Customer habit	(Chiu et al.,2012)	3	5-point Likert Scale

Table 2: Demographic statistics

Measures	Values	Frequency	Percentage %
Gender	Female	168	37.6%
	Male	279	62.4%
Age	15-25	76	17%
	26-35	276	61.7%
	36-45	92	20.5%
	46 or above	3	0.6%

Marital Status	Single	200	44.7%
	Married	247	55.3%
Qualification	Matric/O levels	0	0%
	Intermediate/A levels	0	0%
	Bachelors	279	62.4%
	Masters/MPhil	168	37.6%
Income	Less than 50,000	33	7%
	50,000-100,000	48	10.7%
	100,000-200,000	102	23.3%
	More than 200,000	264	59%
Frequency of purchase	Daily	7	1.6%
	Weekly	118	26.4%
	Monthly	259	58%
	Yearly	63	14%

Data Analysis and Results

Analytical Strategy

The data for this study was first collected from 496 respondents. Out of which 447 respondents were used for statistical analysis for this study. The analysis of this study employed the Smart PLS software. Smart PLS software applies the partial least squares (PLS) route modelling method for conducting the variance-based SEM. The models the external and the internal were assessed using analysis, boot strapping and blindfolding assessments. The inner model or the structural model shows the pattern of the items under study to be examined. Outer models are used in testing relationships between the indicators and their respective constructs. Sometimes they are referred to as metric systems models.

Hypothesis Testing

Reliability testing was performed by doing an analysis of outer and cross loadings. In order to achieve a satisfactory degree of precision, composite reality (CR) must hold a value that surpasses 0.7. The Cronbach's Alpha values derived for all variables were determined to above the threshold of 0.70.

Table 3: Measurement model (Reliability testing and Convergent Validity)

	Cronbach's alpha	**Composite reliability (rho_a)**	**Composite reliability (rho_c)**	**Average variance extracted (AVE)**
AIT	0.770	0.785	0.866	0.683
CRO	0.761	0.763	0.848	0.584
CESM	0.783	0.804	0.858	0.603
CH	0.764	0.776	0.757	0.610
RI	0.736	0.740	0.846	0.733

Note: *AIT: Artificial Intelligence Technology; CESM: Customer Engagement on Social Media; CRO: Conversion Rate Optimization; CH: Customer Habit; RI: Repurchase Intention*

Where, Convergent validity is a technique of measurement and convergence of different definition indicators of a single construct. According to (Hair et al., 2014), the convergent validity is

determined to be high when the AVE varies more than 0.50 on average across a series (Ismail et.al, 2020).

Table 4: Cross loading

	AIT	CRO	CESM	CH	RI	CH* CESM
AIT6	0.836	0.341	0.475	0.427	0.260	0.001
AIT7	0.789	0.217	0.459	0.330	0.301	-0.018
AIT8	0.853	0.402	0.619	0.429	0.233	0.006
CE1	0.568	0.433	0.830	0.280	0.290	-0.047
CE2	0.576	0.432	0.813	0.261	0.307	-0.044
CE3	0.405	0.336	0.751	0.246	0.245	0.040
CE4	0.373	0.286	0.705	0.232	0.220	0.000
CH1	0.464	0.407	0.320	0.835	0.466	0.070
CH2	0.270	0.169	0.180	0.723	0.371	0.019
CRO1	0.283	0.756	0.332	0.347	0.346	-0.051
CRO2	0.331	0.790	0.426	0.278	0.233	-0.031
CRO3	0.311	0.804	0.347	0.219	0.221	-0.022
CRO4	0.285	0.703	0.389	0.319	0.250	0.036
RI2	0.216	0.343	0.300	0.412	0.840	0.047
RI3	0.319	0.256	0.295	0.508	0.871	0.044
CH x CESM	-0.003	-0.024	-0.023	0.060	0.053	1.000

Fornell and Lacker for discriminant validity

(Hair et al., 2014) have explained that this method involves the comparison of the coefficients between the latent variables and the square root of average extracted variance (AVE). However, differing from the case of other latent variables, the very notion of the latent concept actually highlights better variance of this specific indicator (Purwanto, & Sudargini, 2021).

Table 5: Fornell-Lacker Criterion

	AIT	CRO	CESM	CH	RI
AIT	0.827				
CRO	0.396	0.764			
CESM	0.634	0.489	0.776		
CH	0.482	0.384	0.329	0.781	
RI	0.315	0.348	0.347	0.540	0.856

Heterotrait-Monotrait (HTMT) ratio

HTMT may be capable of reaching better originality and understanding percentages often lying between 97 and 99 percent (Martinez-Caro et.al., 2020).

Table 6: Heterotrait-Monotrait (HTMT)

	AIT	CRO	CESM	CH	RI	CH * CESM
AIT						
CRO	0.505					

CESM	0.784	0.620			
CH	0.877	0.693	0.597		
RI	0.452	0.498	0.484	0.607	
CH * CESM	0.012	0.052	0.048	0.094	0.067

Outer Loading

Outer loadings illustrate the strength of association between a latent variable and its measures, offering information about the magnitude of contribution of an item to the construct it measures (Arijeloye, 2023). Outer loadings were above the acceptable level of 0.7, meaning that the indicator variables were reliable in measuring their respective construct.

Table 7: Outer Loading

	AIT	CRO	CESM	CH	RI	CH x CESM
AIT6	0.836					
AIT7	0.789					
AIT8	0.853					
CESM1			0.83			
CESM2			0.813			
CESM3			0.751			
CESM4			0.705			
CH1				0.835		
CH2				0.723		
CRO1		0.756				
CRO2		0.79				
CRO3		0.804				
CRO4		0.703				
RI2					0.84	
RI3					0.871	
CH x CESM						1

Multicollinearity

Multicollinearity arises when two or more independent variables in a regression model are correlated highly, making it difficult to determine their individual contributions to the dependent variable (Baymen & Dexter, 2021). It is often detected through Variance Inflation Factor (VIF), a VIF close to 1 indicates low multicollinearity, while higher values above 10 is considered a threshold for severe multicollinearity (Kalnins & Praitis 2023).

Table 8: Collinearity statistics

	VIF
AIT6	1.678
AIT7	1.525
AIT8	1.552
CE1	1.71
CE2	1.625
CE3	1.612

CE4	1.52
CH1	1.052
CH2	1.052
CRO1	1.421
CRO2	1.583
CRO3	1.711
CRO4	1.387
RI2	1.278
RI3	1.278
CH x CESM	1

Path analysis involves the use of dependent variable and at least two independent variables. Path analysis was developed by Sewall Wright in 1918 (Wooldredge, 2021). It is an excellent example of SEM; nevertheless, it is more often associated with multiple regression inclined on causation.

Table 9: Path Analysis

	Original sample (O)	**Sample mean (M)**	**Standard deviation (STDEV)**	**T statistics (|O/STDEV|)**	**P values**	**Decision**
AIT → CRO	0.396	0.399	0.043	9.236	0.000	Accepted
AIT → CESM	0.634	0.637	0.031	20.262	0.000	Accepted
AIT → RI	0.072	0.072	0.051	1.401	0.014	Accepted
CRO → RI	0.105	0.106	0.071	1.482	0.039	Accepted
CESM → RI	0.187	0.188	0.057	3.300	0.001	Accepted
CH → RI	0.471	0.470	0.054	8.667	0.000	Accepted
CH*CESM → RI	0.023	0.025	0.032	0.717	0.004	Accepted

Note: *p < 0.05, **p < 0.01, ***p < 0.001. *AIT: Artificial Intelligence Technology; CESM: Customer Engagement on Social Media; CRO: Conversion Rate Optimization; CH: Customer Habit; RI: Repurchase Intention*

The results show that Artificial Intelligence Technology → Conversion Rate Optimization as per the documented discussions, AI significantly enhances conversion rate optimization (CRO) by analyzing behavioral data, and conducting efficient A/B testing. These tools help streamline decision-making and improve purchase outcomes, as evidenced by its success in driving higher conversion rates (Nazir et.al., 2023). Additionally, according to (Patil et.al., 2024), AI plays a pivotal role in customer engagement on social media by enabling personalized and real-time interactions that foster trust and loyalty, which are key determinants of repurchase intention, supporting the hypothesis Artificial Intelligence Technology → Customer Engagement on social media. The Hypothesis also indicates that Artificial Intelligence Technology → Repurchase Intention; the technology's ability to predict repurchase intention is particularly noteworthy, as it leverages customer data to offer tailored recommendations, thereby increasing gratification and repeat purchases (Rane et.al, 2024). (Endarwati et.al., 2024) in her published articles stated that the connection between CRO and repurchase intention lies in optimizing the customer journey, creating frictionless processes that encourage repeat transactions, supporting the hypothesis, Conversion Rate Optimization →Repurchase Intention. The results also show the positive connection between Customer Engagement on social media → Repurchase Intention as stated in a

published article that, customer engagement on social media sustains emotional connections with customers, further driving loyalty and repeat behavior. Finally, customer habits, such as purchasing patterns, when combined with social media engagement, reinforce repurchase behaviors through consistent positive reinforcement, demonstrating the interplay between customer habits and engagement and thus supporting the hypothesis, Customer Habit →Repurchase Intention; Customer Habit x Customer Engagement on social media →Repurchase Intention.

Table 10: Specific Indirect Path

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values	Decision
AI → CESM → RI	0.119	0.120	0.037	3.234	0.001	Accepted
AI → CRO → RI	0.041	0.042	0.029	1.443	0.019	Accepted

Discussion

To test the significance, alpha value for Pearson correlation was selected 0.01 and 0.05 alpha value was selected for PLS analysis. Three hypotheses were formulated and tested and all the hypotheses in the study were supported by the data. The digital technology i.e. virtual reality (VR) and augmented reality (AR) plays a vital role in the consumer engagement, which increases the online sales ratio in Pakistan (Rahma, 2024). The results showed a positive and strong correlation between artificial intelligence technology and repurchase intention, where mediators are also playing a strong positive effect. This study used S-O-R theory, by which firms can stimulate the response of the customer using AI integrated social media marketing. Results found that customer engagement positively mediates the connection between artificial intelligence technology and repurchase intention with the moderation of customer habit. Therefore, H1 is supported and accepted.

Furthermore, results found a positive association between artificial intelligence technology and repurchase intention. Additionally, having a smooth buying experience with a brand develops the habit of purchasing from them again in the future (Chauke & Dhurup, 2017). Results showed that artificial intelligence technology has a strong impact on repurchase intention. Therefore, H2 is supported and accepted. Moreover, results indicate a strong, positive relationship between artificial intelligence technology and repurchase intention is also mediated by conversion rate optimization. When firms use artificial intelligence technology in their social network marketing campaigns, it helps them convert the visitors into customers (McDowell et al., 2016). Therefore, consumers respond and repurchase the products they are familiar with. Therefore, H3 is supported and accepted.

Theoretical Contribution

Understanding consumer needs and purchase behavior is still a challenge for brands in Pakistan. Therefore, this research focuses on Artificial Intelligence evaluation of consumer engagement, which can help organizations improve various aspects of product or service by providing with real-time data, converting viewers into customers. The study contributes theoretically by using the S-O-R model to study how surrounding cues affect consumers' emotional states and future intentions of online shopping. Chatbots or Artificial Intelligence technology are used to deliver services to

customers before, during, and after their purchase. Artificial Intelligence algorithms have the ability to scan large datasets and unearth hidden consumer insights that conventional approaches miss. AI can deliver individualized product advice in online shopping. These individual touches draw attention and instill a sense of worth in customers Furthermore, it investigates the effect of AI on customer interaction, examining how it encourages deeper connections and, ultimately, drives brand loyalty. This study enhances the field of research on services by proving the predictive ability of AI marketing tactics on consumer engagement. It also provides vital information to researchers interested in using AI to study consumer decision-making and behavior. The current study is based on the factors affecting repurchase intention in the context of sportswear brands that use artificial intelligence technology which was previously not studied.

Managerial Implications

Firms can increase their sales volume by using AI-integrated social media platforms. Effective communication with the customers is an integral part for identifying their needs and expectations from the company. Customers tend to buy online within their home comfort. Social media networks help companies analyze the consumer responses to convert them into buyers. Analyzing post purchase behavior is very important as if the customer is happy with the purchased product or service, he will repurchase it. The study examined the change in habits of consumers i.e. if the consumers are given a discount or promotion, they may buy the product impulsively.

Limitations and future research

This study has a few limitations, which can be addressed in the future to produce more precise results. Firstly, the study participants in this research are the individuals based in Pakistan, which are users of social media and buy products online. Cross cultural study can be conducted to examine the consumer behaviors in various countries. Second, this study is conducted in the context of international sportswear brands, using artificial intelligence technology in their social media marketing campaigns. Other sectors or industries, such as Banking, Restaurants, Hotel, Insurance or Fashion industry can also be studied using the framework. Additionally, this research study overlooks some variables that can influence repurchase behavior which includes self-efficacy, customer advocacy, brand name, brand authenticity and online star rating on social media as a moderator. Moreover, the data collected from respondents was using cross-sectional method, and habit develops over time. A longitudinal method can be used to retest the factors influencing repurchase behavior. Lastly, this study used WhatsApp and Facebook groups for data collection. Social media platforms, such as Instagram, Telegram, Threads or the offline mode of data collection can be used in future studies.

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