RESEARCH ARTICLE

The impact of augmented reality on consumer shopping behaviour towards pump industry

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Abstract

This research paper investigates the impact of voice commerce on consumer search behaviour, utilizing survey data on users' daily interactions with voice assistants such as Alexa, Bixby and Siri. The result shows a positive relationship between voice commerce and consumer search behaviour, suggesting that people of all ages are using digital assistants more frequently for their shopping requirements because of the ease these technologies offer the market in the context of voice commerce, the study delves deeper into the vriables impacting customer satisfaction, convenience, confidence and privacy. As AI-powered voice assistants facilitate technology-mediated transactions, consumers are entering a new domain of commercial interactions that bypass the necessity for tactile engagement.

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1. INTRODUCTION

Shopping used to entail going to actual stores and looking for the ideal item depending on needs. But the emergence of e-commerce has revolutionized this procedure and made it incredibly convenient. Customers may now easily place orders, browse a wide selection of products on a single platform, and select between immediate and deferred payment options. The e-commerce sector in India is expected to grow to US$ 200 billion by 2026, driven by rising smartphone and internet usage. Digital assistants such as Siri, Google Assistant, and Alexa are powering voice commerce, which is quickly becoming a crucial aspect of online shopping. Voice commerce creates new channels for interaction between customers and sellers by enabling voice commands for purchase and interaction, in contrast to traditional e-commerce, which relies on touchscreens and visual displays.

Conversational recommender systems, such as voice commerce and chatbots, actively involve consumers to comprehend their preferences and incorporate real-time input. Studies reveal a favorable association between client contentment and the precision of these systems. Recommender systems also lessen information overload and expedite user web searches. The usefulness of recommendation engines in e-commerce has been studied by researchers, who have taken into account variables including product category and complexity. In conclusion, speech and e-commerce have completely changed the way people shop by providing them with never-before-seen convenience and customized experiences.

2. Literature Review:

The impact of speech advertisements on consumer search behavior and the customer journey is being examined by Eva Bohm, Andreas Eggert, Ina Garnefeld, Hartmut H. Holzmuller, Tobias Schaefers, Lena Steinhoff, and David M. Woisetschlager. The essay gives readers a foundation for understanding voice commerce, defines it, emphasizes its benefits, and draws comparisons with traditional forms of advertising. The increasing prevalence of voice assistants in consumers' daily lives (Bawack et al., 2021) is the reason behind the growing popularity of this e-commerce paradigm.

Voice advertisements have the ability to alter the way that clients and suppliers interact, communicate,

and forge bonds. (Maria and Algeshmeir, 2021; Whang and Im, 2021; Dellaert et al., 2020). The authors of this research provide a conceptual framework based on the customer journey, which shows how voice assistants can affect customers in both positive and bad ways at every point in the customer journey.

This paper by Daniel Kraus, Victoria Reibenspiess, and Andreas Eckhardt compares voice commerce and e-commerce and concludes that voice commerce can alter customer satisfaction. They initially examine research-related literature in order to determine the elements that influence consumer satisfaction for voice commerce. Research models are created in accordance with satisfaction and its predictors based on that review. The study approach and methodology they used to empirically validate their models for speech and e-commerce are then described.

In addition, they use structural equation modeling to analyze and present the data obtained from a survey. The paper concludes by discussing the theoretical and practical consequences for management, outlining its limitations and providing guidance for future research areas. Conversational recommender systems, such as chatbots and voice commerce, talk with users to understand their preferences and take user feedback into account. According to Liang et al., there is a favorable correlation between customer happiness and the suggestion accuracy of these systems. Recommender systems, as noted by Xiao and Benbasat, can lessen the amount of information that customers are faced with and the intricacy of internet searches.

3. Research Design:

A research design is an organized set of guidelines for gathering and analyzing data that aims to support the objectives of the study and ensure procedural efficacy. The process involves selecting what to research, where to do it, when to do it, how much information to collect, and how to carry out the investigation or study.

4. METHOD OF DATA COLLECTION:
QUESTIONNAIRES:

Utilizing questionnaires is an easy and effective method of collecting data. Participants are given a list of questions regarding the topic of interest; these questions may be closed-ended or open-ended.

ARTICLES:

Online articles authored by various scholars that address voice commerce in relation to the pump industry are used in this data collection technique. This kind of data is incidental.

Tools for Analysis:
- Percentage analysis
- Chi-Square
- ANOVA

5. Analysis Discussion:
Percentage Analysis:

Table 1:

S.No	Variable	Category	No.of Respondents	Percentage(%)
1	Age	Under 18	2.1	1.9
		18 – 24	18.2	16.99
		25 – 35	4.0	3.8
		36 – 49	50.9	48
		Above 50	30.9	29.3
2	Objective	Weather updations	20.9	21.4
		Playing music	66.8	67.3
		Ordering	15	14.9
		Browsing	50	50
		Making queries	50	50
		Clling/Messaging	55	54.9
		Others	3	2.9
3	Issues that arose when using virtual assistance in pump industry	Yes	55.9	52
		No	49.9	46.9
4	Utilizing digital assistance to ensure accessibility	Yes	46	45.3
		No	54	56.7

Source: Primary Data

ANOVA Analysis:

UTILIZATION OF VOICE COMMERCE IN RELATION TO GENDER

Hypothesis:

Null Hypothesis (H$_o$):

There is no significant association between voice commerce and gender

Alternative Hypothesis (H$_1$):

There is significant association between voice commerce and gender

6. Findings:

• 48.1% of the respondents, or a sizable portion, are between the ages of 18 and 24. This age group is the majority, which emphasizes how important it is to the survey. The data indicates that the majority demography among participants is younger people.

• A notable 38.7% of users are classified as low users of voice commerce. This group represents the largest segment, indicating a relatively limited engagement with voice-activated shopping. The data suggests that the majority of participants have yet to fully embrace voice commerce technology. Majority of 74.5% of respondents search for agricultural products in online by themselves.

• An overwhelming 79.2% of respondents prefer shopping in physical stores over using voice assistants. This majority demonstrates a clear preference for in-person shopping experiences. The data suggests that voice-assisted shopping has yet to surpass the appeal of traditional store visits for most consumers while purchasing pumps.

• A significant 66% of respondents have never used a voice assistant for purchasing. This majority reflects a low adoption rate of voice-activated shopping tools. The data indicates that many consumers are still unfamiliar with or hesitant to use this technology for making purchases.

• The majority, 63.5% of respondents, believe that their virtual helper fosters a positive relationship with them. This suggests a strong level of satisfaction and comfort in interactions with the technology. The data highlights the trust and rapport users have developed with their voice assistants.

7. Suggestions:

• In order to obtain a more comprehensive understanding of the intricacies of speech interfaces, a subsequent study may collect data from voice-only scenarios, avoiding the potentially confusing impacts of the systems that combines both voice and visual aspects

• Developing additional features in voice commerce can enhance user confidence and convenience. By introducing new functionalities, users may feel more secure and comfortable using voice-activated shopping. These improvements can drive greater adoption and trust in the technology.

• To educate people of all ages about the benefits of incorporating voice commerce into their daily lives.

• To increase the amount of time customers spend looking on average and to provide better privacy

• To improve the consumer experience by making recommendations from digital assistants more dependable.

• The increasing significance of these systems provides marketers and academics with useful frameworks and direction, which are necessary for additional research into this developing field of study.

Table 2 UTILIZATION OF VOICE COMMERCE IN RELATION TO GENDER

ANOVA						
		Sum of squares	df	Mean Squares	F	Sig
Which would you prefer—searching the internet on your own or with your digital assistant?	Among Clusters	.076	1	.076	.387	.537
	Within Clusters	19.98	102	.196		
	Total	20.06	103			
If you were shopping for pumps, would you rather visit a physical store or use your digital assistant to shop online?	Among Clusters	.302	1	.302	1.874	.175
If you were shopping for pumps, would you rather visit a physical store or use your digital assistant to shop online?	Within Clusters	16.501	103.1	.162		
	Total	16.801	103.9			
If you had to shop on a mobile e-commerce site, would you use a digital assistant or do it alone?	Among Clusters	.099	1	.099	.957	.331
	Within Clusters	10.532	103.3	.101		
	Total	10.630	104.1			

Source: Primary Data

8. Conclusion:

In order to shed lights on how vice commerce and e-commerce interact, this in-depth study compares and contrasts the effects of both on customer search behaviour. It is noteworthy because it is one of the rare types of research that uses comparison models for hypothesis evaluation, which increases the dependability of the findings. Through the use of questionnaires to gather primary data directly from respondents, the study guarantees a comprehensive and reliable analysis.

Voice commerce is a part of the large e-commerce market, but because it makes task execution easier and more efficient, it has become popular with a variety of target audiences. However, the way it is used varies according on the age group; younger consumers (those between the ages of 18 and 24) use it more frequently sine they are accustomed to technology more quickly. Voice commerce's impact on consumer search is anticipated to grow dramatically as technology use spreads throughout different age groups.

In conclusion, this study emphasizes the significance of voice commerce, shows how it might expand across age groups and offers insightful information on customer behaviour and e-commerce.

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