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A Study on Users Understanding, Satisfaction and Challenges in Voice Commerce

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ABSTRACT

Voice commerce helps to reduce the end user dependence on hardware like keyboards and screens. In the present study, an attempt is being made to analyze the understanding, awareness, satisfaction level in voice commerce facility. It is important to evaluate whether the voice commerce technology beneficial to the users or not whether it makes easier for buyers to order voice commands to search for and purchase products online. Voice commerce is expected to be the future of e-commerce. The study would also help to understand the purpose of using voice-commerce service measure the level of satisfaction and the problems in using voice commerce technology.

INTRODUCTION

Voice commerce, also known as v-commerce, is the process of making purchases using voice commands with virtual assistants or smart devices. It integrates natural language processing and artificial intelligence to facilitate transactions without the need for manual input. With the rise of smart speakers and virtual assistants like Amazon Alexa, Google Assistant, and Apple's Siri, voice commerce is becoming increasingly popular, offering convenience and efficiency to consumers. This technology enables users to shop, reorder items, track packages, and more, simply by speaking commands to their devices. As voice recognition technology continues to advance, voice commerce is expected to revolutionize the way people shop online. Voice commerce, also known as v-commerce, represents a cutting-edge paradigm shift in the realm of e-commerce, leveraging the power of voice-enabled technology to facilitate seamless transactions. This innovative approach enables users to interact with digital platforms, services, and devices using natural language commands, fundamentally altering the way consumers engage with brands and make purchases. At its core, voice commerce harnesses the capabilities of virtual assistants, such as Amazon's Alexa, Apple's Siri, Google Assistant, and others, to enable users to browse products, place orders, and manage their shopping experiences entirely through voice commands. By simply speaking aloud, consumers can inquire about product details, receive personalized recommendations, and initiate transactions without the need for traditional screens or keyboards.

LITERATURE REVIEW

According to **Dhuri & Metar (2023)**, Voice assistants (VAs) like Siri, Alexa, Google Assistant, Cortana, and Bixby are becoming popular among the masses. This adroitness stands to affect hugely how people perform tasks, avail themselves of services, and do business with companies; thus, who also hold a great variety of economic and social possibilities. This article reviews systematically the body of work and literature on voice assistants (VAs). The voice assistant is a new form of interaction whose development has occurred through knowledge in specialized systems, speech recognition, semantic webs, diagnostic tools, and natural language processing. Several publications churn out related literature. Yet to the best of our knowledge, no recent publications are present in this field. Thus, a field survey is proposed in this paper highlighting key trends, avenues of investigation, and opportunities for voice assistants. Another contribution is the proposal for the classification taxonomy of voice assistants. In order to achieve these aims, a systematic literature review was conducted with a PICOC (population requirements, action, contrast, outcomes, and meaning) focus. We analyze in our paper the current state, uses, security and privacy issues, fashion trends, and voice assistant architectures.

Doohee Chung, Hyeongki Kim, and Suho Ahn (2022), An Integrated Study of User Acceptance and Resistance on Voice Commerce, Considering that virtual assistants are gaining prominence in voice commerce, voice commerce offers an environment in which orders and payments can be processed, thereby increasing accessibility compared with methods of commercial transactions that exist. Surely, the area shall develop into a promising industry. Yet the voice commerce charm hinges on being accepted by the users who will employ it coupled with development in technology. This paper sets forth a conceptual framework to explain user-voice-commerce acceptance factors analyzed with structural model equations combining the technology acceptance model (TAM) and the model of innovation resistance (MIR). Variables involved include the accuracy, social presence, and interactivity of a virtual assistant together with user characteristics like user innovativeness and experience. A sample of 151 Koreans in their 20s and 30s were surveyed. Also, the influence of three factors, such as relative advantage, perceived ease of use, and perceived risk, on acceptance and

resistance to the innovation were examined to pin down the variables affecting resistance to and acceptance of voice commerce. The findings provide salient implications to firms utilizing voice commerce platforms and give guidance to emerging commercial trading systems.

Rakhmonova Maftuna Nabijan qizi, Xamroyev Doston D and Saida Safibullaevna Beknazarova (2022), Technology of Voice Commerce in E-Commerce. Voice commerce refers to an artificial intelligence tool through which shopping is enabled by a customer's voice and a smart device either a mobile phone or a smart speaker. Conversational AI makes daily errands and chores a piece of cake. In such a scenario, a customer can converse with their device to be informed about the product, to place an order, to make the payment, to track the product till delivery, and to register their feedback with respect to the product. They could then use their purchase history to reorder the product. This applies to both online and offline. Voice-activated shopping was very much in vogue and well-appreciated even before 2022.

Fabiam Reinkemier of the University of Goettingen, Germany; Ulrich Gnewuch of KIT-Karlsruhe Institute of Technology, Germany; and Waldemar Toporowski of the University of Goettingen, Germany, worked together to complete a research paper on HUMANIZING VOICE ASSISTANTS IN VOICE COMMERCE. The voice commerce study states that customers engage in sales dialogues with voice assistants (VASs) using ordinary spoken interaction. Its adoption, however, lags. Three empirical pre-studied followed by a lab experiment (N=323) were carried out to help identify how to overcome barriers of adoption in voice-assisted shopping and assess VAs' humanness in interaction with customers; the research has been very much inconclusive in this regard. Humanizing a VA is perceived by customers to lead to a stronger presence and a better-ultra parasocial interaction, improving perceived relationship quality that ultimately increases the intention to shop via the VA. but it was also found that humanization harms parasocial interaction directly, which in turn is outweighed by the more considerable positive indirect effect through social presence. This may be one explanation for conflicting findings in the literature. Our findings suggest that it is necessary for practitioners to carefully consider how to design humanizing characteristics of voice assistants so as to enhance acceptance in voice commerce.

Alex Mari (2019), Voice Commerce: Analyzing Shopping-Related Voice Assistants and Their Impact on Brands. A greater impact on consumer behavior will be experienced by voice assistants as they become more proficient in learning consumer preferences and behavior (Simms, 2019). Thus, VAs may emerge as eminent social actors in the consumer marketplace and in slowly mediating market interactions. The fast-rising tide of market changes, regarding voice shopping, may generate severe consequences for consumer brands and retailers. Some of these consequences include the loss of opportunities for brands to be seen, increased relevance of retailers' private labels, and growing numbers in advertising expenditure, all expected according to marketing and technology experts. Researchers are therefore asked to focus on how brand and retailer behaviors are exercised in light of the potential behaviors of consumers as "machine behaviors" (Rahwan 2019). Providing structure and guidance to researchers and marketers is fundamental to advancing an emerging stream of research in this area.

Aurelie Vachaudez (2020),An empirical study on Voice commerce for luxuarybrands.Luxury goods consumption habits may experience a shift owing to voice assistants. Literature concerning luxury shopping through voice assistants is very much in its infancy. This study seeks to contribute to the academic literature on voice commerce and luxury from the perceived risk theory in luxury shopping and signaling. A conceptual model is proposed after an in-depth literature review of voice commerce and a theoretical background of perceived risks. Voice commerce would be considered the result of voice-based interaction taking place in the mind of the consumer and the voice assistant to find and purchase products. By 2024, there will be more voice assistants on the planet than humans!

STATEMENT OF THE PROBLEM

Voice commerce is a technology that allows users to make purchases and transactions online using only their voice. Today, voice commerce is at the forefront of technological advancement in the ecommerce industry, having revolutionized the way peopl navigate the internet and interact with brands. Voice-commerce will prioritize customer experience, making shopping more convenient and efficient. Imagine a future where you can effortlessly make online purchases with nothing but the power of your voice. Hence an attempt is made to analyse “The user understanding, awareness and satisfaction level in voice commerce”.

OBJECTIVES OF THE STUDY

- To study about factors that influence customers who use Voice Commerce.
- To analyse the awareness level of the users in Voice Commerce.
- To assess the level of satisfaction of the users of Voice Commerce.
- To identify the difficulties faced by the users while using Voice Commerce.

SCOPE OF THE STUDY

Voice commerce allows customers to operate device, shop through voice, payment through voice, assist in location tracking, assist in calling, create and set reminders etc. All these are performed via Google Assistant, Alexa, Apple Siri etc. This study was conducted to know the awareness level,

satisfaction level, factors which influence customers to use voice commerce, difficulties faced by Voice Commerce customers. The study covers 60 respondents, the users of voice commerce were selected by sampling method.

RESULT AND DISCUSSION

TABLE 1 GENDER

GENDER	**FREQUENCY**	**PERCENTAGE**
Male	49	81.7%
Female	11	18.3%
TOTAL	**60**	**100%**

The above table shows that the majority of the respondents are male (81.7 percent) and the percentage of female respondents is 18.3 percent

TABLE 2 AGE

AGE	FREQUENCY	PERCENTAGE
Below 20	11	18%
20-30	46	77%
30-40	3	5%
Above 40	0	0%
Total	60	100%

The above table show that the majority (78.7 percent) of respondents comes from under the age group 20-30. 18 percent of respondents comes under the age group of below 20. Only 5 percent of respondents comes under 30- age group 30- 40 and No are the age group of above 40.

TABLE 3 EDUCATION QUALIFICATION

QUALIFICATION	**FREQUENCY**	**PERCENTAGE**
10th	0	0%
Plus Two	15	25%
DEGREE	37	62%
PG	8	13%
TOTAL	**60**	**100%**

Table 3 shows that 62 percent of respondents are under graduates, 25 percent passed plus two, and only 13 percent of respondents are post graduates. So it is clear that majority of respondents are college students.

TABLE 4 VOICE COMMERCE PLATFORM

PLATFORMS	**FREQUENCY**	**PERCENTAGE**
Google assistant	49	82%
Apple Siri	8	13%
Alexa	2	3%
Bing – Copilt AI	1	2%
TOTAL	**60**	**100**

Table 4 indicate the different types of voice commerce platform used by respondents.

82 percent of respondents are using the Google assistant as a voice commerce platform, 13 percent of respondents using the Apple Siri, 3 percent of respondents using the Alexa and only 2 percent using the Bing - Copilt AI as a platform. So it is clear that the respondents are using different types of platform for voice commerce and it varying based on their phone.

TABLE 5 USE OF VOICE COMMERCE

USE OF VOICE COMMERCE	FREQUENCY	PERCENTAGE
Rarely	19	32%
Daily	18	30%
Weekly	14	23%
Monthly	9	15%
TOTAL	**60**	**100%**

Table 5 shows the rspondence frequency of using voice commerce technology. Out of 60 respondent 30 percent uses daily. 23 percent of respondents use voice commerce weekly and 15 percent use monthly. 32 percent of respondents uses voice commerce rarely only when they want.

TABLE 6 FACTORS INFLUENCING THE VOICE COMMERCE USAGE

	RANK 1 (7)	RANK 2 (6)	RANK 3 (5)	RANK 4 (4)	RANK 5 (3)	RANK 6 (2)	RANK 7 (1)	TOTAL WEIGHT SCORE	MEAN VALUE	RANK
Convenience	10	9	9	9	8	6	9	250	4.16	1
Personalization	12	6	8	10	8	4	12	244	4.06	3
Order track	8	6	9	6	10	8	13	220	3.66	7
Easy recording	6	11	4	14	13	6	6	241	4.01	4
Hand free shopping	10	8	11	7	4	15	5	248	4.13	2
Expand discovery opportunities	11	8	9	7	4	7	14	238	3.96	6
Fostering speaking skills	3	12	10	7	13	14	1	239	3.98	5

The Table 6 exhibit the factors influence to use voice commerce.

Factors influence voice commerce usage classified into 7 factors. The respondents ranked the factors based on their preference and expectation.

Out of the 7 factors given, 10 respondents were given Rank 1 to convenience. The mean value of convenience factor is 4.16, therefore Rank 1 given to convenience factor. Hand free shopping stands as 2nd position with a mean value of 4.13.

Most respondents were given rank 2 to personalization, based on mean value (4.06) it ranked as 3rd. 3rd rank is obtained by personalization with a mean value of 4:06. Easy

reordering holds the position of 4th rank with a mean value of 4.01. The 5th rank

stands for forecasting speaking skills with 3.98 mean value Expand discovery opportunities stands in 6thposition and order tracking is on the last position.

TABLE 7 AWARENESS LEVEL OF RESPONDENTS ABOUT VOICE COMMERC USAGE

	HIGHLY AWARE (5)	AWARE (4)	NEUTRAL (3)	LESS AWARE (2)	NOT AWARE (1)	TOTAL WEIGHT SCORE	MEAN VALUE
Shopping through voice commerce	17	18	15	7	3	219	3.65
Device operating	19	21	16	4	0	235	3.91

through commands							
Payment through voice commands	10	14	14	14	8	184	3.06
Assist in location tracking	13	26	13	6	2	222	3.7
Create and set reminders	20	21	16	1	2	236	3.93
Assist in calling	20	23	13	3	1	264	4.4
Total	99	123	87	35	16	1360	3.78

The table 7 shows that the overall mean value for the awareness level of respondents for using voice commerce was 3.78 which is higher than the average value (3). So, it is clear that the respondents are aware about the different usages of voice commerce technology.

It is clear from the table that respondents are highly aware about the voice commerce assistance in calling as the mean value 4.4. Respondents aware about create and set reminders with the help of voice commands, the mean value of this variable is 3.93. The mean value of variable Device operating through commands is 3.91, which shows that respondents aware about this usage. Respondents also aware about shopping through voice commands (3.65) and voice commands used in location tracking (3.70). The mean value of variable payment through voice commands is 3.06.The respondents are aware about all these 6 usages of voice commerce technology.

TABLE 8 SATISFACTION LEVEL OF REPONDENCE IN VOICE COMMERCE.

	HIGHLY SATISFIED (5)	**SATISFIED (4)**	**NEUTRAL (3)**	**LESS SATISFIED (2)**	**NOT SATISFIED (1)**	**TOTAL WEIGHT SCORE**	**MEAN VALUE**
Voice active shopping	17	28	12	2	1	238	3.96
Accessibility	14	31	15	0	0	239	3.98
Order and reordering	10	21	26	3	0	218	3.63
Voice based payment	8	20	24	5	3	205	3.41
Integration with small home device	8	31	14	3	4	216	3.6
Assist in phone	22	23	11	4	0	243	4.05
Fostering English speaking skills	16	27	14	2	1	235	3.91
Total	95	181	116	19	9	1594	3.79

The Table.8 shows the overall mean value for the Satisfaction level of respondents for the usage of voice commerce technology was 3.79, which is higher than average

(3). So it is clear that the Respondents are satisfied with all usages of voice commands technology stated above.

The facility assist in phones (4.05) is higher than the average value, it means that

Respondents satisfied with this facility. The mean value of accessibility is 3.98 is also more than average which shows that the respondents satisfaction level is high.

Respondents satisfied with the Voice activated shopping as the mean value3.96 is

much higher than average. The respondents satisfaction level of Fostering English speaking skills through voice commands Shows a mean value of 3.91. The mean value of ordering and reordering is 3.63.

TABLE 9 PROBLEMS FACED WHILE USING VOICE COMMERCE

PROBLEMS	FREQUENCY	PERCENTAGE
Lack of trust	13	22
Speech recognition error	35	58
Privacy concerns	24	40
Language challenges	25	42
Lack of knowledge	8	13

The Table .9 shows that about 58 percent of respondents have experienced Speech recognition error while using Voice Commerce.42 percent of respondents said that they had faced language challenges while using voicecommerce. 40 percent of respondents had faced problems relating to privacy concerns. 22percent of respondents have lack of trust in using voice commands technology because of different reasons and 13 percent had faced problem of lack of knowledge about voice commerce technology.

TABLE 10 RESPONDENTS RECOMMENDATION LEVEL CLASSIFICATION

WOULD YOU RECOMMEND VOICE COMMERCE	FREQUENCY	PERCENTAGE
YES	53	88%
NO	7	12%
TOTAL	**60**	**100%**

From the Table 4.10, it is clear that 88 percent of respondents will recommend voice commerce to their friends and families but only 12 percent respondents will not ready to recommend voice based technology.

TABLE 11 RESPONDENTSBAD EXPERIENCE WHILE USING V COMMERCE

FEEL ANY BAD EXPERIENCE WHILE USING V COMMERCE	FREQUENCY	PERCENTAGE
YES	21	35%
NO	39	65%
TOTAL	**60**	**100%**

The Table 11 shows that 35 percent of respondents had faced bad experience while using voice commerce and the major portion, that is 65 percent had not faced any such problems.

CONCLUSION

In fast growing era the customers should be even much more aware of v commerce to enjoy the benefit fully. As the v commerce is the technology of the future, most customers understand the needs and necessity of voice commerce. The service of voice commerce is increasing day by day in various services such as order tracking, payment through voice, device operating through voice etc. Hence it is one of the most important motivations among the customers to use the v commerce services. The penetration of voice commerce has highlighted various important factors regarding the usage, awareness, benefits, barriers and motivation for using v commerce services. Hence the customers need to put their efforts into making the best use of voice commerce.

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