

# Research on Consumer Purchase Intentions Towards VR Shopping and Traditional E-commerce in the Post-Pandemic Era

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**Abstract:** In the post-pandemic era, significant changes have occurred in consumer shopping habits and preferences. This study investigates consumer purchase intentions towards virtual reality (VR) shopping and traditional e-commerce. Findings reveal that consumers are increasingly inclined towards novel and convenient shopping experiences. VR shopping, with its immersive nature, attracts a large number of young and tech-savvy consumers. Meanwhile, traditional e-commerce maintains its importance due to a wide selection of products and stable shopping environments. The pandemic accelerated consumer acceptance of online shopping, and VR shopping, as an emerging technology, is gradually unleashing its market potential. However, both methods have their advantages and disadvantages, and consumers consider personal needs, technological acceptance, and shopping experience factors in their purchase decisions. Using collected samples, this thesis analyzes consumer purchase intentions towards VR shopping and traditional e-commerce, and proposes recommendations with identified issues as the basis.

**Keywords:** Post-Pandemic era, VR Shopping, Traditional E-commerce, Purchase Intentions.

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## 1. Introduction

With the comprehensive lifting of restrictions in 2023, the world officially entered the post-pandemic era, witnessing subtle shifts in consumer shopping behaviors and habits. On one hand, due to the pandemic's impact, online shopping has become the preferred choice for an increasing number of consumers. On the other hand, with continuous technological advancements, VR shopping has gained attention as an emerging shopping method. VR shopping involves creating interactive 3D shopping environments using VR technology. In this shopping experience, consumers wear specialized VR devices such as VR headsets or glasses to "enter" a virtual shopping environment, which could simulate shopping malls, stores, or even living rooms at home. Within this virtual environment, consumers can browse and select products, virtually try on, taste, or test them, and interact with other virtual shoppers. The advantage of VR shopping lies in its ability to transcend time and space limitations, allowing consumers to shop anytime, anywhere without the constraints of physical stores. Additionally, VR shopping provides a richer shopping experience, enhancing consumer enjoyment and satisfaction during the shopping process.

This study aims to explore consumer purchase intentions towards VR shopping and traditional e-commerce in the post-pandemic era, holding significant research implications for e-commerce platforms, retailers, and consumers themselves.

For e-commerce platforms and retailers, understanding consumer purchase intentions can help them better formulate marketing strategies and optimize services to meet consumer needs and enhance competitiveness. Simultaneously, for consumers, understanding their preferences and demands for different shopping methods can aid in making better shopping decisions and improving shopping experiences. Moreover, this research can provide data support for policymakers and researchers, facilitating a better understanding of consumer

behavior and shopping trends.

## 2. Literature Review

Currently, some studies have focused on comparing consumer experiences between VR shopping and traditional e-commerce scenarios. For instance, Liao Feng's study Comparison of Consumer Experiences in VR Shopping and Traditional E-commerce Scenarios [1], based on a survey of 300 volunteers, found significant moderating effects of sensory vividness, interactivity, and website design for quality-conscious consumers. Brand-loyal consumers showed no significant moderating effects on sensory vividness, interactivity, and web design perception. Variety-seeking consumers showed no significant moderating effects on sensory vividness, interactivity, and web design. Leisure-oriented consumers demonstrated significant moderating effects on sensory vividness, interactivity, and web design. Their research indicates that VR shopping, with its higher interactivity and sensory vividness in virtual marketing scenarios, appeals more to consumers seeking high leisure and entertainment value compared to traditional e-commerce scenarios. Moreover, quality-conscious consumers demonstrate a stronger moderating effect on sensory atmosphere perception in VR marketing scenarios than in traditional e-commerce, suggesting that traditional e-commerce scenarios have yet to fully meet the needs of such consumers.

In addition, some studies have examined influencing factors on cross-border e-commerce platforms. For example, Zhou Wenjuan's study Factors Influencing Consumer Purchase Intentions on Cross-border E-commerce Platforms [2] found that product factors have a positive impact on consumer perceived usefulness and perceived ease of use. Customer experience factors have a positive impact on consumer perceived usefulness and perceived ease of use, and a negative impact on perceived risk. E-commerce platform

factors have a positive impact on consumer perceived usefulness and perceived ease of use, and a negative impact on perceived risk. Consumer perceived trust in e-commerce platforms positively influences their purchase intentions. Perceived usefulness and perceived ease of use of e-commerce platforms both positively affect perceived trust and purchase intentions. Consumer perceived risk of e-commerce platforms significantly negatively influences perceived trust and purchase intentions.

Furthermore, some studies have pointed out the disadvantages of traditional e-commerce in the current market. For example, Yu Hua and Xu Na's "Comparative Analysis of Live E-commerce, TV Shopping, and Traditional E-commerce" [3] states that users often cannot see the details of the product clearly and cannot accurately perceive the product. The lighting, camera, and other factors in the live room have a great impact on the appearance of the product and may mislead consumers; the host's own image and demeanor will affect consumers' perception of the product; when the number of live viewers is high and relatively active, the host may not be able to take care of the needs of every viewer; some hosts use pre-recorded videos to save time, giving consumers a poor shopping experience; the group effect in the live room is stronger, and consumers are more likely to make impulse purchases, leading to high return rates.

In summary, consumer purchase intentions towards VR shopping and traditional e-commerce are influenced by various factors, including the moderating effects of sensory vividness, interactivity, and web design. However, there is currently a lack of systematic research on consumer purchase intentions towards VR shopping and traditional e-commerce in the post-pandemic era. Therefore, this study aims to fill this gap and explore consumer purchase intentions towards VR shopping and traditional e-commerce in the post-pandemic era, as well as their influencing factors.

### 3. Data Collection and Analysis

#### 3.1. Data Collection

The author conducted a survey to investigate consumer purchase intentions towards VR shopping and traditional e-commerce marketing. The experiment invited 153 volunteers to participate in the questionnaire survey, which included questions related to VR shopping and traditional e-commerce. For example, questions asked included opinions on the advantages and disadvantages of VR shopping technology compared to traditional e-commerce, acceptance of prices in VR shopping versus traditional e-commerce, and whether VR shopping and traditional e-commerce have a positive or negative impact on traditional physical stores, among others.

The sample collected for this study consisted of 153 responses. The gender distribution is shown in Table 1, with males accounting for 43% and females for 57%. In terms of age (Figure 2), the majority of respondents were between 21-40 years old, comprising 69% of the sample. Regarding educational background (Figure 3), undergraduates constituted the largest group, comprising 59% of respondents.

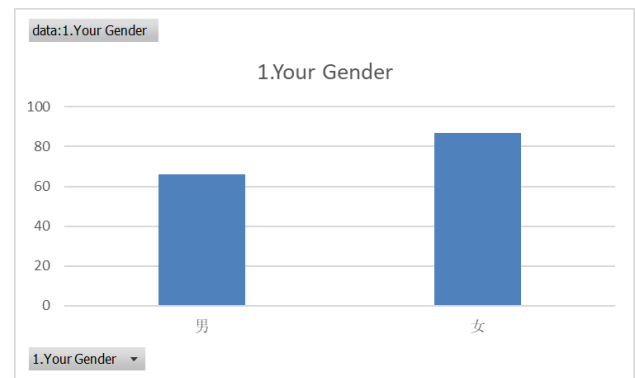


Figure 1. Your Gender

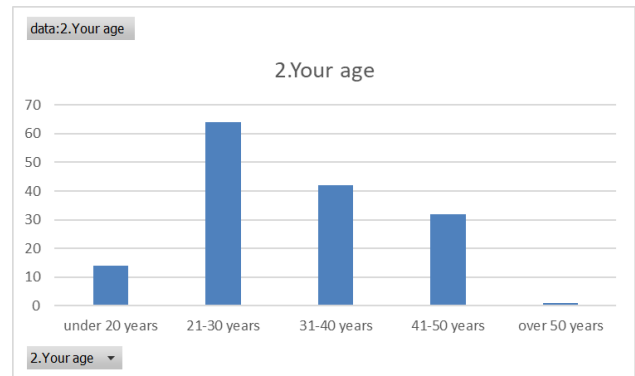


Figure 2. Your Age

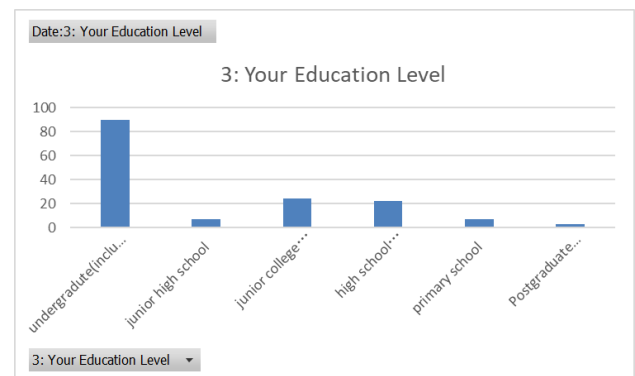


Figure 3. Your Education Level

#### 3.2. Data Analysis

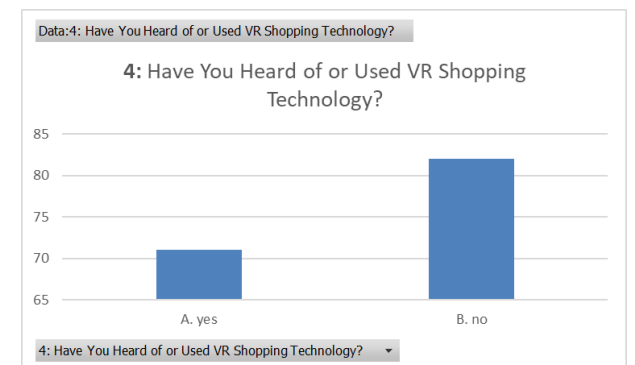


Figure 4. Have You Heard of or Used VR Shopping Technology?



**Figure 5.** How Familiar Are you with VR Shopping Technology?

From the analysis of Figure 4 and 5, it is observed that 71 participants have used VR devices, while 82 have not. Although the usage numbers are relatively similar, 117 respondents indicated either limited or no knowledge about VR shopping technology, whereas 36 respondents reported a relatively high level of understanding.

From the perspective of whether VR shopping can better serve consumers, 104 participants believed it could provide positive feedback, and 94 expressed “willingness to use VR shopping technology for their purchases”.

**Table 1.** Advantages of VR Shopping over Traditional E-commerce

Advantages of VR Shopping over Traditional E-commerce <sup>a</sup>	factor	Relevant		percentage of cases
		number of cases	percentage	
Advantages of VR Shopping over Traditional E-commerce <sup>a</sup>	factor1	89	25.4%	58.2%
	factor2	94	26.8%	61.4%
	factor3	79	22.5%	51.6%
	factor4	79	22.5%	51.6%
	factor5	10	2.8%	6.5%
Total		351	100.0%	229.4%

a. Values of 1 were used to create a two-way table for the groups.

**Table 2.** Disadvantages of VR Shopping Compared to Traditional Shopping

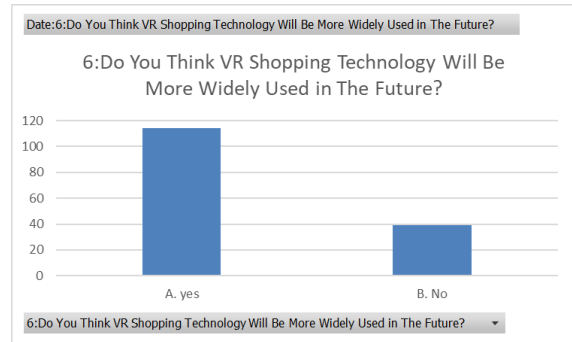
Disadvantages of VR Shopping Compared to Traditional Shopping <sup>a</sup>	factor	Relevant		percentage of cases
		number of cases	percentage	
Disadvantages of VR Shopping Compared to Traditional Shopping <sup>a</sup>	factor1	86	24.9%	56.2%
	factor2	89	25.8%	58.2%
	factor3	83	24.1%	54.2%
	factor4	76	22.0%	49.7%
	factor5	11	3.2%	7.2%
Total		345	100.0%	225.5%

a. Values of 1 were used to create a two-way table for the groups.

In Table 1, which examines “What advantages do you think VR shopping technology has over traditional e-commerce?” (Factor 1: ‘Allows a more realistic experience of products’; Factor 2: ‘Provides more product information and display options’; Factor 3: ‘Offers a better shopping experience’; Factor 4: ‘Saves shopping time and effort’; Factor 5: Other), Factor 2 (‘Provides more product information and display options’) is favored more by consumers.

Table 2, which explores “What disadvantages do you think VR shopping technology has compared to traditional e-commerce?” (Factor 1: ‘Requires additional device support’; Factor 2: ‘May encounter technical failures and instability’; Factor 3: ‘Cannot experience the actual quality and feel of products’; Factor 4: ‘May involve privacy and security risks’; Factor 5: Other), shows that Factor 2 (‘May encounter

technical failures and instability’) is the most concerning to consumers.



**Figure 6.** Do You Think VR Shopping Technology Will Be More Widely Used in The Future?

From Figure 6, 114 respondents expressed interest in the widespread future use of VR shopping, indicating a promising outlook for VR shopping.



**Figure 7.** Are You Satisfied with The Customer Service Technology of VR Shopping Technology?



**Figure 8.** Are You Satisfied with The Customer Service Attitude of Traditional E-commerce Shopping?

From Figure 7 and 8, it is evident that customer service support for both VR shopping and traditional e-commerce is relatively mediocre (79 respondents rated VR shopping as ‘average’, while 59 respondents rated traditional e-commerce similarly), suggesting a need for improvement.

## 4. Research Conclusions and Recommendations

### 4.1. Research Conclusions

This thesis utilized ANOVA analysis to comprehensively study consumer purchase intentions towards VR shopping and traditional e-commerce, as well as the future development trends of VR shopping. The following conclusions were drawn:

(1) VR shopping exhibits certain hardware limitations:

Despite its unique advantages, high technological thresholds and costs remain significant barriers to its widespread adoption.

(2) Service attitudes in VR shopping need improvement: Enhancing service attitudes in VR shopping is crucial for improving customer experiences, enhancing consumer trust, and driving the development of VR shopping.

(3) VR shopping's popularity is not sufficiently pronounced: VR shopping has limited popularity, with the general public lacking understanding, which hinders broad recognition of its application scenarios and advantages.

(4) Bright future market prospects for VR shopping: The future market prospects for VR shopping are promising. With the widespread adoption of technology and increased consumer awareness, VR shopping is expected to lead innovations across various industries.

## 4.2. Recommendations

### 4.2.1. Strengthen Technological Research and Cost Optimization

For VR shopping, the maturity of technology and cost-effectiveness are critical factors. Continuous investment in technology research and development is necessary to enhance the realism, interactivity, and stability of VR technology. Developing more advanced VR devices and software can provide users with a more natural and seamless shopping experience. Cost optimization is equally important. As technology becomes more widespread and production scales up, the cost of VR devices is expected to gradually decrease, allowing more consumers to access and experience VR shopping. Additionally, optimizing algorithms and server architectures can reduce operational costs, creating greater value for both merchants and consumers.

### 4.2.2. Enhance User Experience

User experience is a key factor in determining the success of VR shopping. To enhance user experience, businesses need to focus on the following aspects: 1. Ensure that the interface design of VR shopping is clear, intuitive, and easy to navigate; 2. Provide a wide range of product choices and detailed information to enable consumers to make informed purchasing decisions; 3. Optimize the shopping process to ensure that consumers' shopping experiences in VR environments are as convenient as traditional e-commerce; 4.

Prioritize after-sales service to promptly address any issues consumers may encounter during VR shopping.

### 4.2.3. Promote the Concept of VR Shopping

To make VR shopping mainstream, it is crucial to increase consumer awareness and acceptance of this concept. This can be achieved through various means, such as organizing VR shopping experience events, sharing related content on social media platforms, and collaborating with opinion leaders. Furthermore, businesses can leverage VR shopping technology to create unique marketing activities that attract consumer attention. Through continuous promotion and popularization, VR shopping is expected to gradually integrate into people's daily lives as a new shopping method.

### 4.2.4. Diversified Market Strategies

When promoting VR shopping, businesses need to adopt diversified market strategies to cater to the needs and preferences of different consumers. Customized VR shopping experiences can be tailored for consumers of different ages, genders, and regions. Integration with physical stores can create an omnichannel shopping model. Collaboration with other industries can introduce cross-sector VR shopping products and services. Attention should also be given to emerging markets and consumer groups to continuously expand the application scenarios of VR shopping. Through diversified market strategies, VR shopping is poised to attract more consumers and achieve broader market coverage.

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