

Analysis on The Effectiveness of VR Exclusive Games on Customers' Purchase Intention

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Abstract. Since the "first year of VR" was launched in 2016, Virtual Reality (VR) related industries had high hopes of development, but so far, VR-exclusive games have not sold well and failed to expand the market. The study aimed to explore the aspects of VR exclusivity that affect consumers' purchase intention. This paper will analyze customers' purchase intention for VR-exclusive games based on the Marketing Mixed theory (4Ps Theory). The conclusion of this study is that product experience will affect customers' purchase intention. The high additional cost of the product will reduce the customer's purchase intention. Diversified promotion methods will increase customers' purchase intention. A single sales platform will reduce consumers' willingness to buy. This article will give suggestions to VR game companies from various aspects: enhance the user experience, optimize the performance of the game to adapt to more models, adopt diversified publicity methods and choose multiple channels for sales.

Keywords: Virtual Reality; VR games; Marketing Mixed Theory; Swot.

1. Introduction

1.1 Research Background

In recent years, with the rise of the Virtual reality field, related hot issues emerge in an endless stream. Virtual reality (VR) is an immersive, multi-sensory experience. It is also known as a virtual environment, micro-world or virtual world [1]. The name virtual reality was born in 1987, and through continuous development, it has been widely used in various fields so far [2]. Users of VR devices can move, feel and interact with the virtual world. So that people in the virtual environment have a sense of being there. The VR industry is poised for a major explosion in 2016. In the massive capital in the background of VR, manufacturers are planning to officially launch in 2016, opening the so-called first year of VR [3]. TalkingData claims that the scale of VR will reach 30 billion by 2020, and entertainment projects including games, video, apps and theme parks will dominate [4].

VR games, as one of the main application sectors, have always been given high expectations. VR games have a stronger sense of engagement than computer games. But so far in 2022, the VR games market only has a small increase every year.

Steam is the major VR gaming platform; the platform has released its annual report on VR games. According to Steam's 2020's annual report, VR games on PC continued to grow in 2020, with game sales up 32% year over year [5]. According to the April 2021 annual report, new VR users grew by 11% in 2021 and 22% without repeated game sessions [5]. By analysis of both reports from steam, VR games from the steam platform have been growing steadily every year, but it's far from an explosion.

1.2 Research Gap

At present, some research includes research on students' addiction to VR games. In previous studies, including in the field of psychology, Cruz et al. have examined how VR games can become addictive in adolescents [6]. In addition to the psychological aspect, Lemmens et al. also study how VR games affect the body and what physiological reactions they will cause [7]. Qiao has studied the role of VR games in the education industry [8]. Although there are plenty of studies on VR games, with the development of VR technology and VR games in different fields, one primary problem with

VR games is that VR games do not expand the market well. While sales of VR games have been rising every year, the numbers posted on the steam Store show only modest gains. Nowhere near the magnitude and trend of growth that people were expecting at the beginning. This phenomenon shows that consumers are not very willing to buy VR games.

As far as it can be known, no previous research has investigated why VR-exclusive games are not expanding the market and the purchase intention of VR-exclusive games. So, the research question of this paper is: Why haven't VR games broadened the market well? What factors affect consumers' willingness to buy VR games?

1.3 Fill the Gap

First, this paper will review the marketing mix theory in the literature review. Qualitative analysis of VR exclusive games. SWOT analysis was used to verify the relationship between VR games and customers' purchase intention. Finally, the VR games market and purchase intention will be discussed in the conclusion.

2. Literature Review

2.1 Definition & Development

Research on Marketing Mixed theory has a long history. The Marketing Theory of the 4Ps became popular in 1960s in America and emerged with the proposal of the marketing mix theory [9]. In 1953, Neil Borden created the "marketing mix" in his inaugural speech at the American Marketing Association. This means that market demand is influenced to a certain extent by the so-called "marketing variables" or "marketing factors". The 4Ps, in their modern form, was first proposed in 1960 by E. Jerome McCarthy [9]. The four p's are product, price, place and promotion.

Simply put, product refers to the function of a product that focuses on development, the item or service being sold must satisfy a consumer's need or desire.

Price refers to the different pricing strategies and the selection of the right price through product strategy and positioning. Place refers to the distribution channel. The channel is the sum of all the links and drivers that a good go through in its entire journey from the producer to the consumer. Choosing the right location can increase sales. Promotion is a form of communication used by a company or organization to make its target market aware of its products, services, image and philosophy and to persuade and remind them of their trust, support and interest in the company's products and the organization itself. This is generally done through advertising, promotional publicity, people selling and sales promotion.

2.2 Important Results

In 2016, Syamsier suggest that product quality has an impact on customers' purchase intention. In his research, he found that product quality is one of the most significant factors affecting consumers' purchase intention [10]. However, three years later, in 2019, Yao found that for people with more professional knowledge, product quality had a greater impact on customers' purchase intention [11]. In 2021, Shyue Chuan et al. further found that the quality of the product will affect the purchase intention. Their research found that higher product quality will lead to higher product attractiveness [12].

To determine the effects of price on purchase intention, Tung in 1994, found that low-priced products would stimulate customers' purchase desire and influence their purchase intention [13]. Later, in 2020, Deonir et al. found that higher pricing may make customers clarify that this product is of high quality, thus affecting customers' purchase intention [14]. In 2021, Sri Rahayu found that different kinds of customers would have different purchase intentions in the face of different prices [15]. The three studies all prove that price is an important factor affecting customers' purchase intention.

Some scholars have proved that online shopping can affect consumers' willingness to purchase. Muhammad stated that shopping online can easily check competing offers and attitudes toward products from different online stores from price, quality, variety, etc., which can influence customers' purchase intentions [16]. In addition, Lesedi et al. also found the same answer in the survey of online shopping in South Africa, which showed that online shopping had a positive impact on local people's purchase intention [17]. Rasha et al. found that more and more people would be willing to shop online in the future, and online sales greatly increased people's purchase intention [18].

In terms of promotion, celebrity endorsement plays a very positive role in customers' purchase intention. Shama found in her research that the use of celebrity endorse creates an impact on consumer purchase intention [19]. Anas agreed with Shama's research and added: Personal endorsement greatly affects purchase intention, but it is different among people with different degrees of cultural education [20]. Kofi et al suggest that due to the attractiveness, familiarity and credibility of celebrities, consumers are more likely to recall celebrity advertising, which increases their willingness to buy [21].

2.3 Summary

Together, these studies outline that high-quality products have a positive effect on customers' purchase intention, which will increase the purchase intention. At the same time, these studies highlight that different pricing strategies have different effects on customers. In addition, online sales can allow the online customer to view more details about the product, and thus affect the purchase intention. Finally, celebrity endorsement can significantly increase the degree of favorable from customers, and it will lead to higher purchase intention. However, no research pays much attention to multi-dimensional comparisons, such as price versus quality.

3. Method

3.1 Research Design

This article will be analyzed using qualitative research with SWOT analysis, It involves collecting and analyzing non-numerical data to make sense of concepts, ideas or experiences. It can be used to gather insights into issues or to generate new research ideas.

And SWOT analysis is a kind of qualitative analysis, Learned et al. describe SWOT analysis, which has become a key tool for solving complex strategic situations and improving decision-making by reducing the amount of information [22]. SWOT is a classic business analysis model, which includes four aspects, which are strength, weakness, opportunity and threat. By integrating the collected data with the conclusions of other studies and using the swot model, a very comprehensive analysis can be made of why VR-exclusive games are not expanding the market well.

3.2 Virtual Reality Exclusive-Games

Immersive VR enables users to participate in a virtual world created by a computer using interaction. The device allows people to experience an immersive effect [23]. Virtual reality technology is accelerating the penetration and integration of various fields, bringing change and momentum to these areas. Take games for example. The characteristics of VR make it a relevant technology for gaming purposes [24]. It can interact more closely with the game's content. VR games are divided into VR-supported games and VR-exclusive games. VR-supported games refer to games that can be run on VR devices or other devices. VR-exclusive games are games that only support VR devices. There are about 6,800 VR games on steam, and the number of VR-exclusive games is about 5,600, about 85 per cent [5]. At present, VR game sales are showing a trend of year-by-year growth, but it has not achieved a significant increase in sales and the realization of market expansion.

3.3 SWOT Analysis

This article will explore VR exclusive games from four aspects: strength, weakness, opportunity and threaten

Strength. The experience of the product of VR games is the strength. As mentioned above, the quality of products will affect consumers' purchase intention. Compared with traditional games, VR games have a stronger sense of immersion. Players can be more immersed in the world of VR games. Elena Kalina et al. propose that VR is more immersive than a PC because the player's sight and hearing are all covered by the content in VR glasses and are not easily interfered with by external factors [25]. More than just sensory immersion, VR games offer players more emotional and inner immersion. In VR games, players no longer need a mouse or keyboard to control their characters but interact by sensing their body movements. In this mode of operation, Players can physically perform the actions of their characters to bring them into the game experience. The player can see and experience the world from the first point of view of an in-game character. This perspective and scale give the player a stronger sense of presence and connection to the world [26]. This will help the player bring their senses into the game and create a more powerful emotional change. As an example, Half-Life is a phenomenally popular VR exclusive, Half-Life: Alyx received acclaim for its graphics, voice acting, narrative, and atmosphere, and can give the player a strong sense of immersion. The game has sold over two million copies on the steam Store [5].

In conclusion, compared to traditional PC games or mobile games, VR games can provide players with more physical and psychological immersion, in addition to better emotional engagement. VR games can provide players with a different experience, thus greatly increasing the purchase intention of customers.

Weakness. The weakness of VR is monopolizing games. Although the above-mentioned VR exclusive games have the strength of the product, at the same time, the characteristics of VR games also have their disadvantages. One of the disadvantages is that VR exclusivity can have a detrimental effect on people's health. Since VR-exclusive games can only be played on VR devices, players will need to wear VR glasses while playing. Wearing VR glasses for a long period will have different effects on different users. xxx pointed out that for children Prolonged use of VR goggles may cause cybersickness, visual discomfort and sleep disturbances [27]. VR cybersickness is always a problem for players. It would cause extreme physical discomfort to the users and the discontinuation of use. Cybersickness usually brings three kinds of bad feelings to the user, namely nausea, disorientation and oculomotor [28].

Consumers will worry about whether these symptoms will happen to them, and the probability of such problems will be much less in PC games. Whether to buy VR glasses becomes a problem for consumers to consider. These factors will have a certain degree of influence on consumers' purchase intention.

Opportunity. The promotion of VR-exclusive games will be a big opportunity. Although VR games haven't quite broadened the market, the outside world is still very optimistic about the market's growth. Many concepts and promotions related to VR have been born. Like the metaverse that has been burning for the past two years, the metaverse will be an improved digital environment in which people can move seamlessly between work, play, shopping, socializing and creativity. Lee. Et al. mentioned that the metaverse is seen as a new opportunity to lead the way in the post-Internet era and that major IT companies around the world are paying close attention to it [29]. Therefore, the related market has the opportunity to grow rapidly [29]. And VR technology and VR games, as important components of the meta-universe, will benefit from the popularity of the concept. Apart from the Meta comes themselves, there are many ways to promote VR games and the concept of meta comes, such as Ready Player One, the Matrix, and so on. These films, set in the meta-universe, have helped boost the hype around VR games, and the year Ready Player One was released, the role of the film significantly increased the willingness of many consumers to buy VR devices and games. To sum up, the diversified marketing strategy of VR games has greatly improved the purchase intention of customers.

Threaten. There are some threats in the aspects of products, price and places of VR exclusive games.

First, since VR exclusive games are not compatible with devices other than VR glasses, players will need to purchase a pair of VR glasses. In other words, if you want to play a VR exclusive game, you need to spend extra money on a VR device. Currently, VR devices on the market can be divided into three main types. The first is Smartphone VR headsets, which have virtual reality effects by placing the phone inside the device. These devices tend to be the cheapest, but they can't run most VR games.

The second category is the Treaded VR headset (high-end VR headset, PC VR, desktop VR). This type of VR eye is connected to a computer device via a physical data cable such as HDMI. Bolted VR headsets are currently more immersive than other types of virtual reality because they provide a high-quality experience. Although this type of VR equipment has an excellent experience, it is expensive. Players need not only an expensive VR lens but also a console with excellent performance. Prices for Tethered virtual reality headsets are generally higher.

The third is a VR all-in-one device, which contains all the necessary components to provide a virtual reality experience integrated into a headset. This is despite increased portability and better cost performance. However, refresh rates and gamut, as well as hardware technology, don't Tether virtual reality headsets and only support a small percentage of VR games.

In conclusion, if you want themed virtual reality headsets that can there most VR games, Tethered virtual reality headsets are the best choice, but their high cost can significantly affect the drop-down of customers. In addition, another threat is the place-steam platform of VR games.

4. Results & Discussion

To conclude, start with the advantages of VR exclusive Games. The strength of VR exclusive games lies in its products. VR exclusive games can bring more immersion and emotional mobilization to users, thus greatly improving customers' purchase intention. The promotion of VR-related technologies and concepts, such as the meta-universe, will bring great opportunities for VR to monopolize games and greatly increase customers' purchase intention. Focus again on the disadvantages of the VR-exclusive game. The product of the VR-exclusive game itself is also flawed. May cause physical discomfort to the player. At the same time, products, prices and channels may become threats. The high cost of playing VR-exclusive games could significantly reduce consumers' desire to buy. Being attracted to other types of games can, to some extent, influence consumers' desire to buy.

Based on these results, it's easy to see the pros and cons of VR exclusives. VR exclusives are good for gameplay but can cause physical problems. The gameplay of the product increases the purchase intention of the customer, but the physical burden of the game is negative for the purchase intention. From the price point of view, the additional price is too expensive and may affect the customer's purchase intention. From the point of view of the promotion of VR, the effect is very good. From a place of perspective, steam, despite its huge numbers, still has a weakness for VR games. Selling in a channel with many products may reduce exposure and influence customers' purchase intentions.

Here are some suggestions for VR game makers and publishers: Firstly, try to solve the problem of player vertigo while increasing gameplay and richness. Secondly, continuously optimize the game to make it easier to adapt to low - and mid-range devices. Thirdly, the publisher can try different methods of publicity, such as celebrity endorsement. Finally, release your game on more than one platform.

The conclusions of this paper confirm two conclusions from previous studies. First of all, the quality of products will affect customers' purchase intention. Secondly, the price of the product will also affect customers' purchase intention. This article adds in place that selling in a channel with many products may reduce exposure. There is s limitation in this article: there are not enough data to prove the influence of celebrity endorsements on VR exclusive games, future research can focus on this.

5. Conclusion

This paper studies the situation from 2016 to the present, and studies the VR exclusive games and customers' purchase intention. The research question is why haven't VR games broadened the market well? What factors affect consumers' willingness to buy VR games?

Through sorting out the 4p theory and customers' purchase intention, this paper analyzes customers' purchase intention with the method of qualitative research-SWOT analysis for "VR exclusive game". In the discussion, the conclusion is that VR-exclusive games have their advantages and opportunities, but there are also shortcomings of the game itself and threats from the outside world, so it does not open the market well.

By reviewing the literature, this paper once again demonstrates that the price of a product will affect customers' willingness to consume, and finds that the high price cost may reduce customers' willingness to buy. Next, in terms of products, the research finds that the experience of products will affect customers' purchase intention. In addition, this study also found that the multi-channel advertising of products will increase the purchase intention of customers. Finally, a single sales platform will reduce customers' willingness to buy.

The empirical research in this article is helpful for VR game companies to improve the market of VR games from different angles. First, help the game research and development department find the problems that VR products lead to poor customer experience, and try to solve such problems to improve the game experience of players in the future. Secondly, it points out that the product value added is too high, so that the game can be continuously optimized for cheaper models. At the same time, it is useful for marketing departments to choose a variety of publicity methods, as well as to choose more distribution platforms.

At the same time, this paper also has some shortcomings. As for the research method of the article, the summary analysis based on the author himself has subjective influence and belongs to his personal opinion and evaluation. For the content of the article. This paper does not have enough sample data. There is no analysis of the price of VR games themselves. Researchers in the same industry conducted verification/extension/modification to clarify the impact of the product's price on consumers' purchase intention. This article only analyzes VR exclusives from the perspective of the 4p, which has evolved into the 7p. In future study and research, a more comprehensive study of the 7p can be carried out, and a more detailed analysis of each 'p' can be carried out.

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