Using Technology Acceptance Model to Analyse the Influential Factors on Consumers' Purchase Intention

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Abstract: VR is a technology that simulates a realistic environment created through computer technology and perceptual devices. It provides users with an immersive experience by placing them in a computer-generated virtual world that they can perceive and interact with. Apple Vision Pro is a head-mounted display device that combines augmented reality (AR) and virtual reality (VR) and was recently developed by Apple. The purpose of this paper was to explore the factors that influence the purchase intention of the Apple Vision Pro among the contemporary 18–25-year-old consumer group. With the help of the technology acceptance model (TAM), this paper analyzed the product in terms of perceived ease of use, perceived usefulness, and consumer attitudes using SWOT in qualitative analysis. The conclusion of this paper was that perceived ease of use (PEOU), perceived usefulness (PU), and consumer attitudes have a positive effect on purchase intention when consumers could pay, and that PEOU, PU, and consumer attitudes do not have an effect on purchase intention when consumers do not have the ability to pay. The contribution of this paper focuses on exploring the factors that influence contemporary young people's willingness to purchase the Apple Vision Pro and its similar high-end technology products.

Keywords: SWOT analysis, technology acceptance model, Apple Vision Pro

1.   Introduction

1.1. Research Background

Nowadays, with the rapid development of technology, smart products have been widely used in various fields and have changed the way people live and work. For example, smartphones have become an essential tool in people's lives, providing a variety of services, including a wealth of applications, social media, mobile payments, and other functions. More smart services will be added later; for example, with smart home systems, remote control and automated management of home devices (such as lighting, temperature, security systems, and so on) can be accomplished, boosting home comfort and convenience. In the final sentence, artificial intelligence (AI) systems have collaborated with phone systems (e.g., Siri, Google Assistant), which can answer questions, provide information, perform tasks, and so on using voice recognition and natural language processing technology, thereby making users' lives easier. The most heinous are VR and AR, which have been widely employed in gaming, education, and healthcare to provide immersive experiences and

augmented reality interactions. Overall, AI products are in a rapid stage of development in an era of technological advancement. Key technologies such as artificial intelligence, the Internet of Things, mobile internet, VR, and AR continue to drive the innovation and application of smart products.

AR and VR are currently popular technologies in the field of information technology, and they have their own unique application status and characteristics in different fields. AR technology is an emerging technology that emerged in the 20th century, combining computer technology, electronic information technology, and virtual technology to create a virtual world in a virtual world. With features such as multi-perception, interactivity, and an immersive experience, VR technology allows players to fully immerse themselves in the computer-generated virtual world and interact with their surroundings. The technology is now widely used in industries such as film and television, education, healthcare, design, and aerospace [1].

The technology known as VR (augmented reality) is an advancement of virtual reality that uses computer interaction, display, orientation, and tracking to merge a computer-generated virtual scene with the real world, filling it in and enhancing the user's senses of hearing, vision, taste, touch, and other sensory experiences through three-dimensional alignment, real-time interaction, and virtual-real interaction. It has three distinguishing features [2].

According to Maslow's Hierarchy of Needs theory, after the problem of food and clothing is solved, people start to think about how to live a better quality of life. This generation of young people grew up in an era of material abundance and has a more diverse approach to life. Today's young people have a positive attitude towards smart products and use them as indispensable tools and entertainment in their lives. For example, young people pursue convenience and efficiency and are used to accessing information quickly; young people are keen on social media and entertainment apps; and young people are more focused on technological pursuits and a sense of innovation, and they like to try out new technologies. One of the most talked-about VR devices recently is Apple's Vision Pro, which is compatible with a wide range of software for the iOS and iPad operating systems and allows people to work, play, and shoot videos in space and interact only through their hands, eyes, and voice. Apple calls this new way of computing spatial computing.

1.2. Research Gap

With the development of technology, more and more high-tech devices have come into being to help people in their lives and work. However, current technology has been able to meet people's daily needs, and as the technology embedded in the products becomes more and more advanced, the prices are also getting higher and higher, resulting in a lot of high-tech products that attract a lot of young people but are too expensive for many people. In terms of the topic of this paper, no research has been conducted in previous academic studies on how to make high-tech products such as the Apple Vision Pro realize both technological growth and price reductions, therefore, it is especially important to investigate how to ensure that the product is rich in high-tech technology while keeping the perception value of the consumer.

1.3. Fill the Gap

In order to investigate the above topic based on the attitudes and preferences of today's young people towards smart products, this article will analyze the advantages and disadvantages of Apple's latest product, the Vision Pro, and explore the willingness of today's young people to buy the Vision Pro. By exploring this topic, the paper will be able to understand the strengths and weaknesses of Vision Pro and predict the future direction of this and similar products.

Furthermore, this paper will use TAM as the underpinning theory and Apple Vision Pro as the research case to analyze its advantages and disadvantages through SWOT analysis, analyze young

people's willingness to buy Vision Pro in relation to their views on this product and their preference for technology products, and make predictions on the future direction of high-tech products.

2. Literature Review

2.1. Definition

To study user acceptance of information systems, the American academic David proposed the TAM in 1989 [3]. Its original purpose was to explain the determinants of widespread computer acceptance. The model proposes two main determinants: perceived usefulness and perceived ease of use.

PU refers to the extent to which a person believes that the use of a particular system will improve his or her job performance. Research in this area has shown that user acceptance of an information system is strongly related to its perceived usefulness. If a system is perceived as improving work performance, then users are likely to accept it. Thus, PU is one of the important factors influencing user acceptance of an information system.

PEOU is the degree to which a person finds it easy to use a particular system. This factor is related to people's cognitive psychology and technical skills. If a system is easy to use, users are more likely to accept it. Ease of use is a very important factor for users who are less technically competent or who do not like to learn new skills.

TAM has a wide range of applications and is not limited to the computer field. It can be applied to any information system that requires user acceptance. The study of PU and PEOU can lead to a better understanding of user acceptance of information systems, which can lead to better design of information systems and improved user satisfaction.

In conclusion, the TAM is an important research framework that provides important guidance for understanding user acceptance of information systems. In the future design of information systems, the degree of user acceptance of information systems can be improved through the study of perceived usefulness and perceived ease of use to increase the practical value of information systems.

2.2. Important Results

Most of the researchers assert that the PEOU of the innovation technology product has a positive effect on their purchase intentions. For instance, Ma et al. came to the same conclusion by studying the PEOU and PU of sustainable labels on apparel products [4]. They found that the greater the PEOU of God's sustainable labels on clothing brands, the greater the consumer's willingness to purchase [4]. Another example is from Saleem et al., who obtained the same conclusion by studying the motivation of Pakistani consumers to adopt e-shopping [5]. They found that the greater the PEOU of e-shopping, the greater the purchase intentions of Pakistani consumers [5]. Moon et al. also came to the same conclusion; they obtained the same conclusion by examining the structural relationship between food quality, PU, PEOU, convenience, brand trust, and willingness to pay [6]. They found that the greater the PEOU of a food product, the greater the consumer's willingness to purchase it [6].

Most researchers assert that the PU of innovative technology products has a positive effect on consumers' purchase intentions. For example, Chen came to the same conclusion by studying the factors influencing the purchase intention of electric vehicles based on TAM [7]. He found that the stronger the PU of EVs, the stronger their purchase intention [7]. Another example comes from Lang and Li, who reached the same conclusion by investigating cross-border e-commerce consumers' purchase intentions based on TAM [8]. They found that the higher the usefulness of cross-border e-commerce, the stronger the consumers' purchase intention [8]. By examining the variables influencing consumers' purchase intentions for Yunnan Jianshui purple pottery, Lin et al. came to the same conclusion [9]. They found that the higher the consumers' perceived usefulness of Yunnan Jianshui purple pottery, the stronger their purchase intention [9].

Most of the researchers have concluded that consumer attitudes towards products have a positive effect on purchase intention. For example, Ramachandran et al. came to the same conclusion by studying the moderating effect of brand loyalty on consumers of technology products [10]. They found that the higher the consumer's loyalty to the product, the higher the intention to consume [10]. In another example, Camacho et al. came to the same conclusion by examining "the effect of exotic centrism on consumer purchase intentions: the mediating role of product attitudes" [11].

2.3. Summary

This paper argues that the above three arguments are consistent with the research question of this paper. 18–25-year old's' purchase intentions towards the Apple Vision pro are influenced by three factors: PU and PEOU and consumer attitudes towards the product. The stronger or more positive the product's usefulness, ease of use and consumer attitude towards the product, the stronger the consumer's willingness to purchase.

3. Method

3.1. Research Design

This paper uses qualitative analysis as the research method and SWOT analysis as the main direction of analysis to explore whether Apple's electronic product Vision Pro has the willingness to buy among contemporary young people. Qualitative analysis is one of the research methods in communication science that qualitatively analyzes and researches the attributes of a certain thing through logical reasoning, philosophical discernment, historical examination, regulatory judgment, and other ways of thinking. Applying this method to the study of Vision Pro aims to analyze in depth its strengths and weaknesses and whether it has a stimulating effect on young people's desire to buy it.

The object of the study is Apple's electronic product Vision Pro, which is a high-end electronic product with an expensive price tag, targeting a consumer group that is mainly professionals and high-end users. The research topic of this paper is whether contemporary young people have the desire to buy. This paper focuses on whether the Apple Vision Pro can entice young people to purchase it in the highly competitive electronic product market of today.

3.2. Apple Vision Pro

The Vision Pro is a mixed reality device that combines AR and VR. This device allows users to fully immerse themselves in the virtual world and enjoy a variety of VR experiences, such as gaming, film watching, and work.

Vision Pro, in addition to VR capabilities, can project people and items from the real world into the virtual world for AR capabilities. Users can use the device in the real world while simultaneously watching, interacting with, and enjoying the virtual world. The Vision Pro's initial sales projections were fairly high, with Apple aiming to sell 3 million units. That aim, however, has dropped over time and is presently reduced to 150,000 units [12]. This means that the sales image for Vision Pro is not as bright as initially thought. The Vision Pro's lower target sales could be attributed to its expensive pricing. Furthermore, while VR and AR technologies are advancing, they are largely underutilized, particularly in the consumer sector. As a result, the Vision Pro may face increased market competition.

Overall, the Vision Pro is a powerful mixed reality device with both AR and VR capabilities. Although sales expectations are not as high as initially anticipated, it is still an exciting technological advancement that will provide users with a new virtual experience [12].

3.3. SWOT Analysis

3.3.1. Strength

Apple Vision Pro has a significant advantage in brand Influence, quality products, technological innovations, and ecosystem Integration.

Strong Brand Influence: As a globally recognized brand, Apple has strong brand recognition and loyalty, which will help drive market recognition and sales growth for Vision Pro. For example, Apple can leverage its brand recognition and loyalty to capture market share within the target market more quickly than its competitors and increase its competitiveness in this market. At the same time, a strong brand presence represents the high quality of Apple's past products, which can increase consumers' perceived usefulness of the product and thus positively affect their willingness to buy. However, this is only for consumers who have the ability to pay a high amount of money. In the consumer group of 18–25 years old, most of them do not have high savings or a stable high income, and even many of them have to rely on their parents to help them. Therefore, for those who cannot afford to pay a high amount of money, although it will also increase the consumer's perceived usefulness of the product, it will not affect their willingness to buy because they can't afford it. simply can't afford it.

Quality products and technological innovations: Vision Pro uses state-of-the-art technologies for superior product performance and user experience, such as high-resolution displays and advanced visual enhancements. These technologies have been largely mastered by many competitors, but how to better apply them to the device is an ability that many manufacturers do not have, thus, this greatly improves the attractiveness of the Apple Vision Pro for the target audience. 18–25-year-old consumers are very important to the performance of the product and technology. High-quality products and advanced technology can be a very good way to improve consumers perceptions of products. Quality products and advanced technology can improve consumers' perceptions of a product's ease of use, which in turn has a positive effect on their willingness to buy. Again, this is only for those who can afford it and will not have an effect on those who cannot.

Ecosystem Integration: Apple has a complete ecosystem of hardware, operating systems, and apps, and Vision Pro integrates seamlessly with other Apple devices and services to provide a more integrated experience, which is extremely attractive to those who are used to Apple products. Because many users appreciate its convenience and it offers customers a perceived ease of use, Apple's ecosystem is alluring to users who own multiple Apple products at once. This in turn influences consumers' willingness to buy. Again, this is only for those who can afford to pay and will not have an effect on those who cannot.

3.3.2. Weakness

The Apple Vision Pro has a significant weakness in its high price as well as its dependence on other devices.

High price: The Vision Pro is positioned at the top end of the market, and as such, it is relatively expensive. This affects the purchasing decisions of many users who have the willingness to buy or potential willingness to buy, thus affecting its market penetration and sales volume. This is in fact the biggest drawback of the Apple Vision Pro; although the technology it contains is very advanced and the functions it possesses are very rich, its price is too high, which discourages many people who love it. This research is intended for users aged 18 to 25. Most people in this age bracket do not have a lot of disposable savings, and they value money more than anything else, therefore, a high price will have a negative impact on their attitude toward consuming and thus their inclination to buy. Although a high price is feasible for those who can afford it, it can also make buyers apprehensive, which has a detrimental influence on their readiness to buy.

Dependence on other Apple devices: Connectivity to other Apple devices limits Vision Pro's functionality and user experience. This may make it less attractive to users who do not have other Apple products.

3.3.3. Opportunity

The Apple Vision Pro has opportunities for growing in the market and expanding into professional markets.

Growing in market: As AR technology develops and application scenarios increase, Vision Pro could take the lead in this market and meet user demand for a richer, immersive experience.

Expanding into professional markets: Vision Pro's advanced features and performance give it the potential for a wide range of applications in professional fields such as healthcare, design, and engineering. Apple can aggressively tap into these markets to expand Vision Pro's user base.

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4. Results & Discussion

Based on the analysis of the strengths of Apple Vision Pro, this paper suggests continuously expanding the brand's influence, retaining customers, and increasing loyalty. For example, strengthening sales training, providing better sales service and after-sales service, and solving any problems encountered by customers in a timely manner combined with the current customer demand can predict the future direction of the market, increase investment in research and development, and continue to launch new products or research and development of new technologies. Increasing investment in a particular field, such as the medical industry, is no longer limited to their own research and development but also to learning from competitors in order to provide better quality products and services. At the same time, it can also strengthen publicity and promotion so that consumers are more aware of their own advantages, expand their brand awareness, and better attract and retain customers.

The high price is the biggest disadvantage of Apple Vision Pro, based on the analysis of its strengths, this paper suggests that lowering its selling price is the most crucial task at present. As a result, in order to reduce its price, it can begin by lowering labor costs, using mechanical manufacturing as much as possible, and avoiding human manufacturing. Or reduce the cost of raw materials by using more environmentally friendly or cheaper materials.

Based on an analysis of Apple Vision Pro's opportunity, this paper suggests that through continuous R&D and the launch of new products and technologies, Vision Pro has already achieved a market leadership position and that in the future, AR and VR technology will be used in a broader range of areas. Other IT firms have had similar success. New technologies are required to maintain the leading position. Of course, it must also demonstrate to the clients or potential consumers what they have to offer, for example, by boosting promotion and marketing, which should no longer be limited to a specific age group or type of person but should be marketed globally.

Based on the analysis of the threats to Apple Vision Pro, this paper suggests that the only way to face the external threats is to launch new products and technologies faster than competitors, to capture

the market in advance, and to make sure Vision Pro maintains its competitive advantage in the market. Apple can extensively study the products of its major competitors, learn from their strengths and avoid their weaknesses, increase its investment in R&D, improve the salaries and wages of its researchers, and stimulate their potential to create better products and technologies.

5. Conclusion

The VR market is fast expanding and is being used in a variety of industries, including entertainment, education, healthcare, and industrial. This article investigates the elements influencing the purchasing intentions of a modern consumer group of 18–25-year-olds. This article collated, studied, and analysed the Apple Vision Pro's strengths, limitations, opportunities, and threats, utilizing qualitative analysis of perceived ease of use and perceived usefulness from TAM. This paper concludes that the relationship between PEOU, PU, consumer attitudes, and purchase intentions depends on whether consumers can afford to pay or not.

This paper examines the Apple Vision Pro and explores the reasons why its sales have continued to decline despite its recent high level of popularity. This paper finds that price is the biggest barrier to sales of the Apple Vision Pro, and that in the absence of price barriers, consumers' perceived ease of use and perceived usefulness are the two most important factors influencing their willingness to purchase the Apple Vision Pro. In the future, the development of Apple Vision Pro will be more rapid, the market situation will be different, and the factors that affect the consumer's willingness to buy will also increase. Therefore, in future research, studies must collect more and more accurate data and integrate all factors to draw the most accurate conclusions, which are not only applicable to one product but also applicable to other products of the same type or similar products.

However, there are also limitations to this study because Apple Vision Pro has only been available for a brief period of time, there isn't enough information about it on the Internet, and the evaluation of Apple Vision Pro is based solely on reviews posted online by a small number of users who have used Apple Vision Pro. The evaluation of Apple Vision Pro is based on the evaluation of a small number of users who have used Apple Vision Pro on the Internet and the introduction of Apple Vision Pro by Apple, and the evaluation may not be accurate, thus, the conclusions drawn can only be for the current Apple Vision Pro.

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