TMMOB Tekstil Mühendisleri Odası
UCTEA Chamber of Textile Engineers
Tekstil ve Mühendis
Journal of Textiles and Engineer

Yıl (Year) : 2024/4
Cilt (Vol) : 31
Sayı (No) : 136

Araştırma Makalesi / Research Article

IMPACTS OF AUGMENTED REALITY MARKETING ON GEN-Z FASHION CONSUMERS' BEHAVIORAL INTENTION

Beliz GÜNDURU[1]*
Deniz DENİZ[2]
[1]Izmir University of Economics, Textile and Fashion Design Department, Izmir, Turkey
[2]Izmir University of Economics, Industrial Design Department, Izmir, Turkey

Gönderilme Tarihi / Received: 25.07.2024
Kabul Tarihi / Accepted: 09.10.2024

ABSTRACT: Innovative technologies are significant for the textile and fashion industry. In this context, this research study focuses on understanding the impact of augmented reality (AR) technologies on Gen-Z fashion consumers' behavioral intention by using a specific AR app. As a methodology, the present study utilized a questionnaire based on the UTAUT2 model, which was modified to incorporate a 5-point Likert Scale to gather essential research data. The questionnaire comprised twenty-three questions distributed across seven constructs. Using a sample of 310 male and female Gen-Z consumers, the findings indicate that perceived value (PV) positively influences their behavioral intention to use AR technology for fashion shopping. Findings indicate that the research model explained 75% of behavioral intention. All research results confirm the unified theory of acceptance and the use of the technology 2 model (UTAUT2) with its six dimensions. The perceived value (PV) dimension, added to the UTAUT2, has improved the model. In terms of its originality, this recent research study defines augmented reality technology's impacts on the behavioral intention of Gen-Z consumers by focusing on this specific group of users through an advanced AR application.

Keywords: Augmented Reality, gen-z, behavioral intention, digital fashion, fashion marketing

ARTIRILMIŞ GERÇEKLİK PAZARLAMASININ Z KUŞAĞI MODA TÜKETİCİLERİNİN DAVRANIŞSAL NİYETLERİ ÜZERİNDEKİ ETKİLERİ

ÖZ: Yenilikçi teknolojiler tekstil ve moda endüstrisi için büyük önem arz etmektedir. Bu bağlamda bu araştırma çalışması, belirli bir artırılmış gerçeklik (AR) uygulamasını kullanarak AR teknolojilerinin Z Kuşağı moda tüketicilerinin davranışsal niyetleri üzerindeki etkisini anlamayı amaçlamaktadır. Bu çalışma, araştırma verilerini toplamak amacıyla 5 puanlık Likert Ölçeği ile modifiye edilmiş olan UTAUT2 modeline dayalı bir anket kullanılmıştır. Anket, yedi yapı altında dağıtılmış yirmi üç sorudan oluşmaktadır. 310 erkek ve kadın Z Kuşağı tüketicisi örneklem kullanılarak yapılan bulgular, algılanan değer (PV) boyutunun, Z Kuşağı tüketicilerinin moda alışverişi için AR teknolojisini kullanma niyetlerini olumlu yönde etkilediğini göstermektedir. Bulgular, araştırma modelinin davranışsal niyetin %75'ini açıkladığını ortaya koymaktadır. Tüm araştırma sonuçlarıyla, teknoloji kabul ve kullanım birleştirilmiş modeli-2 (UTAUT2) altı boyutu ile doğrulanmıştır. UTAUT2 modeline eklenen algılanan değer (PV) boyutu, modeli iyileştirmiştir. Orijinallik açısından, bu araştırma çalışması, gelişmiş bir AR uygulaması aracılığıyla belirli bir kullanıcı grubu olan Z Kuşağı moda tüketicilerinin davranışsal niyetleri üzerindeki artırılmış gerçeklik teknolojisinin etkilerini tanımlamaktadır.

Anahtar Kelimeler: Artırılmış Gerçeklik, z kuşağı, davranışsal niyet, dijital moda, moda pazarlaması

Sorumlu Yazarlar/Corresponding Authors: *beliz@gunduru.com*
DOI: *https://doi.org/10.7216/teksmuh.1529591* *www.tekstilvemuhendis.org.tr*

1. INTRODUCTION

In recent years, digitalization has become significant instrument for enhancing customer experience across various businesses, including fashion. Companies are gradually leveraging digital technologies to reduce expenses and enhance consumer interactions [1,2]. Nikhashemi et al. (2021) stated that, the widespread adoption of smart technologies, including smart devices and mobile applications, has significantly altered how people live and consume, leading to a global evolution in the business landscape [3]. As smart lifestyles become more prevalent in global consumer markets, the retail system has quickly adapted by incorporating "innovative retail" into its business model to a greater extent [3]. Grewal et al. (2017) and Romano et al. (2020) indicated that, the retail sector is considerably impacted by technological advancements [4,2]. Utilizing mobile applications as an emerging advanced technology and communication tool to connect with customer requirements has led to significant advancements in the realm of smart retailing [5,3]. Furthermore, ongoing technological transformation is expected to see a broad spectrum of brands adopting various technologies including Artificial Intelligence (AI), Virtual Reality (VR), and Augmented Reality (AR) since they are expected to enhance the relationship between consumers and businesses fundamentally [6,2].

In the current era of digital evolution, the fashion industry's interest in digital ventures has increased rapidly as various creative industries take more innovative steps in their business journey, resulting in substantial behavioral transformations. Augmented reality (AR) has acquired significant recognition among the various digital innovations through its immersive and interactive features. As Kumar (2021) states, AR technology is gaining growing interest from professionals, researchers, and consumers [7]. AR offers entertainment options for individuals through various lenses, filters, and try-ons as it creates various customized exceptional experiences. The emergence of this innovative technology has provided retailers with vivid and captivating customer engagement options. Furthermore, augmented reality technologies are transforming the way of shopping. As e-commerce in fashion has accelerated, retailers have recognized the significance of augmented reality technology in their business operations [8]. Brands increasingly utilize augmented reality in various applications to offer consumers an immersive shopping experience. Consumers have been increasingly exposed to augmented reality technology and its applications due to its benefits for brands in creating a significant connection with their niche audience.

Moreover, consumers mostly aim to prevent themselves from the potential risks associated with purchasing a product since high level risks could potentially indicate an unfavorable outcome in relation to their purchase [9]. In accordance, one of the critical features of AR is its capacity to enrich information that reduces consumers' risks regarding their selections in a virtual try-on environment. By allowing for product interaction, consumers can gain greater confidence in their choices [10,11,2]. Undoubtedly, consumers' possible post-purchase dissatisfaction can be evitable by the utilization of this technology as it offers consumers a broader range of product information, enabling them to access various perspectives and views on a particular item [11]. Rauschnabel et al. (2019) stated that numerous companies' increasing embracement of augmented reality in marketing strategies is leading to the distinctiveness of AR marketing from other forms of digital marketing and its recognition as a long-term strategic capability [5]. In relation to this, it is significant to comprehend the contribution of AR and its applications in influencing consumers' behavioral intentions. Using various technology acceptance models in market research to gather accurate data can create beneficial opportunities for fashion industry professionals and consumers. The potential factors that might impact behavioral intention of consumers to use AR for fashion purchases must be identified clearly, as there is a significant need for future enhancements.

As suggested by Jessen et al. (2020), according to the DigitalBridge (2017) findings, numerous advanced augmented reality applications still do not perform at their maximum potential from the customers' perspective [12]. Consequently, these AR tools may not satisfy customers' creative and imaginative needs to the fullest extent. In this regard, further research may need to be conducted using specific custom-made AR applications. Since this technology is constantly advancing, its ability to reach its full potential will always be subject to examination. As advancements continue, consumer expectations will also increase continuously. However, mobile AR applications may provide valuable insights into consumers' perspectives, expectations, and the current state of technological developments. Conducting this particular research in collaboration with TRYO (powered by QReal), an advanced mobile augmented reality application, indicates the uniqueness of this study, as its results are expected to contribute to the academic literature authentically [13].

Rapid technological progress has led to significant shifts in behavior across different generations [14]. As the digital landscape continues to progress, it is affecting the Gen-Z consumers' behavioral intention. Generation Z, often known as the post-millennials, encompasses individuals born from 1995 to 2010 who have grown up surrounded by technological advancements [15,16]. Older generations have had to adapt to new technologies and incorporate them into their lives, while younger generations like Gen-Z have grown up in a highly connected digital environment where technology is an inherent part of daily life. For Gen-Z, technology is not just a tool but an integral aspect of their identity and decision-making processes since these digital natives are known for their reliance on mobile devices and their continuous exploration of various new technologies. To effectively cater to this tech-savvy consumer group, it is significant for the fashion industry to comprehend the

motivations behind Gen-Z's acceptance and use of AR technology for fashion purchases. Therefore, this study is designed to research augmented reality technologies' role in shaping Gen-Z consumers' behavioral intentions. To achieve our research goals, we conducted an experiential research project using *"Magic Mirror"* device, designed to provide a detailed comprehension of mobile AR acceptance and its potential future effects on Gen-Z consumer behavior.

The following sections of this research include relevant academic literature, a comprehensive data collection methodology, in-depth data analysis, and a discussion of this study's contributions. Our primary goal is to provide detailed insights and an enriched understanding of augmented reality's role in shaping Gen-Z consumers' behavioral intentions.

2. THEORETICAL BACKGROUND

2.1 Augmented Reality – Mobile Augmented Reality Apps

Augmented Reality incorporates digital content into individuals' visual perspective, including practical applications and immersive experiences, where virtual components resemble real objects realistically [17,7]. It enables users to engage with digital objects in their real environment and perceive their surroundings through various devices [18]. AR allows consumers to engage with virtual objects that enhance their real-world experiences by changing their interactions with standardized products and services into an interactive experience [19,12]. As Jessen et al. (2020) stated, since augmented reality is increasingly considered as a significant customer experience design tool, a growing number of companies benefit from this technology in creating enhanced experiences for customers [12,20,21]. Through AR facilities, brands augment visual experiences interactively [22]. As Hilken et al. (2017) indicate that AR technology has become more significant in both physical and digital retailing [23], there is a necessity to obtain a greater insight of the distinct advantages that AR offers in creative marketing activities [12]. In fashion, augmented reality can allow consumers to experience a particular fashion item's appearance by providing virtual try-on experiences that can be utilized in physical and digital retailers. In physical atmospheres, consumers can see the fashion item on a smart mirror without requiring physical fitting by smart mirrors in the virtual dressing rooms [24,2], whereas mobile applications or websites can provide virtual fitting options to consumers in the digital environment [25,26,2].

On the other hand, augmented reality marketing involves incorporating AR experiences, independently or alongside diverse media forms to accomplish overall marketing goals and generate brand value for business professionals and a more comprehensive range of communities [27]. AR Marketing aims to develop digital opportunities for customer interactions, which involve digital signals in a real-world setting intended to support and enhance customer activities and experiences. These digital cues effectively connect with customers in an immersive way [28].

As stated by Trivedi et al. (2022), across the markets, both for businesses and consumers, the rapid integration of mobile applications provides enriched experiences within the retail sector. [29]. As technology has increasingly gained significance in our daily routines, the utilization of AR experiences delivered through mobile applications is becoming more prevalent to enrich the customer journey [5,2,29]. Mobile augmented reality apps, also known as MAR apps, allow consumers to use their smartphones or other smart devices to instantly see and evaluate products or services in their physical environment. These apps offer a tangible and immersive practices by adding virtual elements upon real world, allowing individuals to visualize and engage with virtual objects simultaneously [30]. During the decision-making process, mobile augmented reality apps enable immediate interaction, providing realistic presentations of various products. These AR technologies enhance consumers' shopping experiences by triggering favorable mental responses, resulting in beneficial consumer behavioral intentions [31]. AR apps impact consumers' purchase intent and emotional and functional satisfaction by enhancing their determination process [23]. Furthermore, augmented reality creates immersive experiences that result in favorable brand perception. Customers can satisfy their basic needs for social interaction and connection through AR technology [5].

2.2 Gen- Z Attitudes toward technology

Consumers' attitude represents their overall assessment of a specific object in a specific way, reflecting continual emotions about it. It affects customers' beliefs, their motives to purchase, and behavioral intentions. The attitude towards technology has a significant role in embracing various digital innovations including mobile applications and augmented reality, among others [32]. As Sahoo and Pillai (2017) stated, consumers' behavior is influenced by their attitude, affecting their motivation and favorable assessments, ultimately impacting their actions. Engaged consumers exhibit an optimistic stance towards products and related services when compared to others [33,34,32].

Differences in particular generations influence consumers' style, expertise, abilities, and behavioral intentions [35,36]. Therefore, examining the different generations within their own scope is significant. Gen Z exhibits a greater expectation with the purchasing process compared to previous consumer groups since they prioritize innovation and emphasize the overall buying journey [37,38,16]. Gen-Z, born into a digital-based world, is known as a "tech native" generation [39]. Growing up in a digital atmosphere has meant that the internet-based interactions have substantially influenced this generation's attitudes, behaviors, and expectations from their early ages.

Furthermore, as Meola (2023) stated, they are estimated to have a considerable effect throughout diverse businesses as they are expected to form the greatest customer group by 2026. In this regard, businesses need a comprehensive understanding of the uniqueness of this generation cohort to develop lasting connections [40,41].

Gen-Z generation is considered technological natives [42], with access to various digital communication technologies [43]. They are known as frequent technology users as they use it as a tool to explore the latest technological advancements and are connected to the digital world by engaging and purchasing their favorite brands virtually [44]. As a younger cohort, they believe that their acceptance of technology will be beneficial for accomplishing their own goals [45]. Gen-Z has a considerable interest in advanced technologies, which significantly impacts their purchasing choices. Advanced technological devices, as consumers "extended self' 'have a substantial impact on Gen-Z individuals' purchasing behaviors [46], such as using their smartphones to make online purchases [47]. Moreover, this generation cohort can be characterized as smart consumers who strongly rely on smart technologies to search for information, considering alternative options and post-sale processes [38]. Many recent studies have been researching the level of digital technology embracement since they show considerable effort to be involved with digital technology by learning its features and benefits [48].

On the other hand, Gen-Z individuals prefer to prioritize, get informed, and discover while making their online purchases, in comparison to Generation Y, who tend to make rational decisions [49,46]. Likewise, they emphasized the value of enjoyment and usefulness when reflecting on their prior interactions with smart retail technology. Moreover, they search for and rely on practicality across all types of spending, including product features and user experiences [46]. In this context, it is crucial to gain deeper insight into this generation cohort, Gen-Z, to create a mindset towards their behavioral intentions.

3. METHOD

3.1 Questionnaire design and data collection

Real-time experiments, such as those using existing augmented reality (AR) applications, are essential for gaining a more profound understanding of individuals' attitudes toward new technologies. These experiments enable researchers to observe how the technology affects users [18]. In this study, 310 Gen-Z university students in Izmir, aged between 18 and 24, were recruited as participants using a simple random sampling method. The participants were required to use TRYO (powered by QReal) AR filters for fashion accessory purchases via the *"Magic Mirror*" device specifically designed for this study. The distribution of respondents was as follows: 203 female participants (65.5%) and 107 male participants (34.5%) used this particular mobile AR application between September 2023 and November 2023 [13].

The app features four primary categories of fashion accessories: sunglasses, hats, shoes, and watches. Participants were informed ahead of time about the app's interface and the purpose of the research, as well as the anonymous questionnaire they would complete following their experiences on the application. The app's AR functionality allowed users to try various fashion accessories when pointing toward the *"Magic Mirror"* device for 3D representation of selected fashion items. The participants were requested to explore the app's interface, user-friendliness, and AR functionality.

3.2 Measurement

Venkatesh et al. (2003) introduced the Unified Theory of Acceptance and Use of Technology (UTAUT) based on eight different technology acceptance models to research users' adoption of information technology by a unified theoretical model [50,51,18]. Subsequently, to form the model in a more consumer-focused way, Venkatesh et al. (2012) extended UTAUT to the UTAUT2 model by adding hedonic motivation (HM), price value (PV), and habit (H) as new constructs [51]. This research study utilized a questionnaire based on Venkatesh et al. 's (2012) UTAUT2 model [52], which was modified to incorporate a 5-point Likert Scale to gather essential research data. The questionnaire comprised twenty-three questions distributed across seven dimensions: Performance Expectancy (PE), Hedonic Motivation (HM), Effort Expectancy (EE), Habit (H), Individual Innovativeness (II), Perceived Value (PV), and Behavioral Intention (BI). To measure participants' performance expectancy, they were asked to evaluate the statement (S1) PE1: "I find augmented reality (AR) technology applications and devices useful for my online fashion shopping", (S2) PE2: "When purchasing fashion accessories such as hats and glasses online, augmented reality (AR) technology applications and devices facilitate my shopping experience", (S3) PE3: "Devices utilizing augmented reality (AR) technology, such as 'Magic Mirror,' increase my ability to make more accurate purchasing decisions during online fashion shopping", (S4) PE4: "Devices utilizing augmented reality (AR) technology, such as 'Magic Mirror,' enable me to complete my shopping more quickly" and (S5) PE5: "When purchasing fashion accessories such as hats, glasses, shoes, or watches online, augmented reality (AR) technology applications and devices will enhance my shopping satisfaction. (Please choose the accessory group you have experienced)" by selecting one of the following responses: "Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree."

Image 1. TRYO App (Powered by QReal)

Moreover, to measure their effort expectancy, participants were asked to evaluate following statements; (S6) EE1: "The use of augmented reality (AR) technology applications and devices is easy", (S7) EE2: "It was easy for me to learn how to use this 'Magic Mirror' device utilizing augmented reality (AR) technology", (S8) EE3: "The shopping options on this 'Magic Mirror' device utilizing augmented reality (AR) technology are clear and understandable". To understand participants' hedonic motivation following statements were asked; (S9) HM1: "Utilizing augmented reality (AR) technology applications and devices is enjoyable", (S10) HM2: "Using augmented reality (AR) technology applications and devices is pleasurable", (S11) HM3: "Using augmented reality (AR) technology applications and devices is highly enjoyable" Participants were also asked to evaluate the habit impact by answering following statements; (S12) H1: "Using augmented reality (AR) or face-filtering features in applications and devices is habitual for me" (S13) H2: "Augmented reality (AR) or face filtering features in applications and devices are significant to me", (S14) H3: "Using applications and devices with augmented reality (AR) technology and face filtering features is a familiar and natural experience for me."

Shaw and Sergueeva (2019) state that perceived value is more relevant than monetary value in various cases of mobile commerce [53]. As the construct of price value was not applicable to the free mobile augmented app, TRYO, the price value factor was replaced with the perceived value to align with the nature of the research. To understand participants' perceived value perceptions, they were asked to evaluate following statements; (S18) PV1: "The effort I put into learning how to use augmented reality (AR) technology applications and devices is reasonable", (S19) PV2: "Spending time to learn how to use augmented reality (AR) technology applications and devices is worthwhile" and (S20) PV3: "Learning to use augmented reality (AR) technology applications and devices is beneficial for me".

Furthermore, the UTAUT2 model in this study was modified by including the individual innovativeness dimension as it is relevant to the primary objective of the research. To understand their motives, participants were asked to evaluate following statements; (S15) II1: "When I become aware of a new technological application or device, I seek ways to experience it", (S16) II2: "I am usually the first among my peers to try new technological applications and devices" and (S17) II3: "I enjoy trying new technological applications and devices". In addition to all these statements to understand participants' behavioral intention towards AR technology, following statements were asked to participants as well; (S21) BI1: "I intend to use augmented reality (AR) applications and devices in my future online fashion shopping" , (S22) BI2: "I will explore other augmented reality (AR) applications and devices for future shopping needs", (S23) BI3: "Whenever possible, I will always try to use augmented reality (AR) applications and devices in my online fashion shopping".

4. ANALYSIS AND RESULTS

4.1 Test of Normality

Before analyzing the gathered data, whether the data were normally distributed was tested. The normal distribution is a crucial element in structural equation modeling. Compliance of the data with normal distribution was tested using Kolmogorov-Smirnov and Shapiro-Wilk tests. Since p-value = 0.000, it was seen that the data were not normally distributed. However, since the number of data is high, the values of kurtosis and skewness, which are other parameters, should be checked.

As shown in Table 1, the normality distribution, kurtosis, and skewness values of the data are given. When these values are examined, the data are normally distributed since the kurtosis skewness values are between -3 and +3 values, according to Fisher [54].

This outcome allows for further examination of consumer responses to the selected technology since demographic factors, such as age and gender, may influence technology acceptance. In this context, consumers' acceptance of Augmented Reality (AR) technology may vary based on their exposure and familiarity with emerging technologies. The general skewness and kurtosis values suggest that the majority of respondents have a positive inclination toward the technology, with a relatively balanced distribution of attitudes. These findings provide a foundational understanding of how AR technology is perceived and used among different consumer groups.

Table 1. Skewness and Kurtosis Value

Dimensions	Skewness	Kurtosis
Performance Expectation	-1,306	1,837
Effort Expectation	-1,576	2,645
Hedonic Motivation	-1,572	2,976
Habit	-0,524	-0,882
Innovativeness	-1,279	-2,861
Perceived Value	-0,972	1,773
Behavioral Intention	-0,961	1,138

After determining the demographic and structural characteristics within the scope of the research, questions about the technology acceptance model were asked to the participants. The aforementioned scale has been commonly used in academic researches, and its validity and reliability have been tested. In this section, Confirmatory Factor Analysis (CFA) was conducted with Lisrel 8.80 to demonstrate that the data validated the measurement tools and test the construct validity. Cronbach's Alpha (α) coefficient was calculated for all dimensions for reliability.

Table 2. Cronbach's Alfa

Dimensions	Cronbach's Alfa
Performance Expectation	0,859
Effort Expectation	0,785
Hedonic Motivation	0,937
Habit	0,754
Innovativeness	0,744
Perceived Value	0,740
Behavioral Intention	0,792

As it is shown in Table 2, the internal consistency coefficient (Cronbach Alpha (α)) of all dimensions that make up the technology acceptance model was higher than 0.70. According to the values in the table, it can be said that the scale is reliable [55]. This reliability suggests that the questions posed in the questionnaire effectively measure the dimensions of technology acceptance among Gen-Z consumers. High internal consistency in constructs such as performance expectancy and perceived value indicates that participants are likely to have consistent perceptions about the utility and advantages of AR technology. These findings also suggest that the model's dimensions are well-suited for capturing the behavioral intentions of consumers toward adopting it.

Confirmatory factor analysis (before modification indices) results are shown in Figure 1. According to standardized results, when factor loadings are examined, all values are below 1, and the lowest is 0.56, and these values show that there are good values in terms of factor loadings. It has been revealed that the values observed here have a good ability to represent latent variables. Another issue in the DFA model is the t values. All t values are greater than 1.96 at the 0.05 level and are statistically significant.

Table 3. Goodness of Fit Values (Before Modification)

Fit Measure	Value	Goodness of Fit
χ^2 / (sd=155)	2,10	Acceptable Fit
RMSEA	0.060	Acceptable Fit
SRMR	0.051	Acceptable Fit
NFI	0.951	Good Fit
NNFI	0.967	Good Fit
CFI	0.973	Good Fit
GFI	0.904	Acceptable Fit

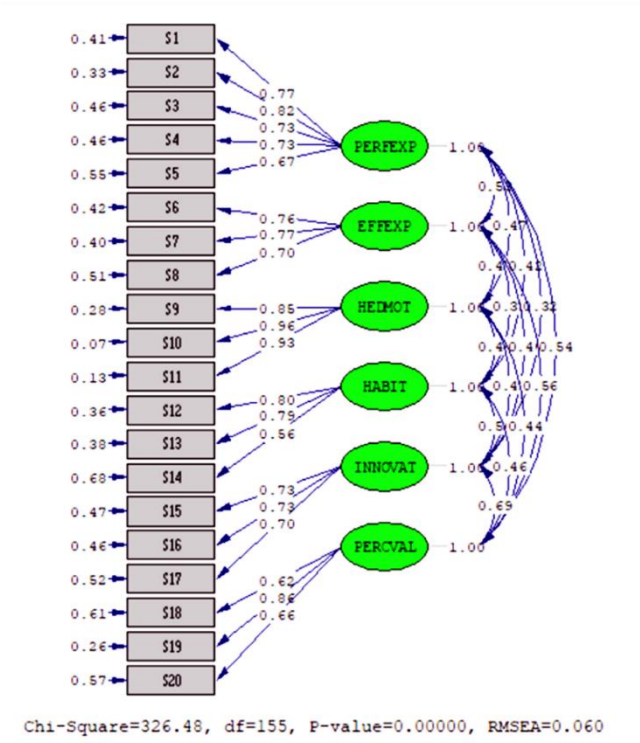

Figure 1. Technology Acceptance Model Confirmatory Factor Analysis (CFA) (Before Modification)

As it is shown in Table 3, the goodness of fit values is adequate. The model's RMSEA (Root Mean Square Error of Approximation) value indicates a good fit when RMSEA < 0.05 and an acceptable fit when 0.05<RMSEA<0.08. The ratio of the chi-square value to the degrees of freedom (2.10) is between 2 and 3, which indicates an acceptable fit. The RMSEA value ((90% confidence interval), 0.060) falls between 0.05 and 0.08, which indicates an acceptable fit. Since the normalized fit index (NFI: 0.951), the non-normalized fit index (NNFI: 0.967), and the comparative fit index (CFI: 0.973) all have values greater than 0.95, they indicate good fit values. The goodness of fit index (GFI: 0.904) also indicates an acceptable fit, as it is greater than 0.90 [56,57,58,59]. These results indicate that the model effectively captures key factors influencing Gen-Z consumers' behavioral intentions toward adopting AR technology. The RMSEA value of 0.060, while indicating an acceptable fit, suggests that slight improvements could further enhance the model's alignment with consumer perceptions. Moreover, the χ^2/df ratio of 2.10 demonstrates that the model performs adequately in explaining how constructs such as performance expectancy, habit, and perceived value influence Gen-Z consumers' intentions to engage with AR technologies. Moreover, the RMSEA value of 0.060 falls within the acceptable range, indicate that the model sufficiently captures the relationships between the constructs and the behavioral intention (BI) of consumers toward adopting AR technology. Since key fit indices such as the NFI (0.951), NNFI (0.967), and CFI (0.973) are all above of 0.95 demonstrates that consumers' responses align well with the theoretical framework of the model.

However, even though good and acceptable fit values were achieved when examining the goodness of fit values of the model, the Lisrel 8.8 program suggested some modification indices. These modifications indicate that the question statements are similarly understood and that their errors are common. After these modifications, a confirmatory factor analysis was applied again. A total of four modification indices were proposed in the scale. The statements S1-S2, S3-S4, S6-S7, and S14-S15 were modified by combining their errors. This means that modifications were applied and they did not affect the model structure but instead enhanced the model's fit. The proposed modifications were made to address technical requirements of the model solely and did not alter the significant relationships within the results. The modified values are shown in the Figure 2.

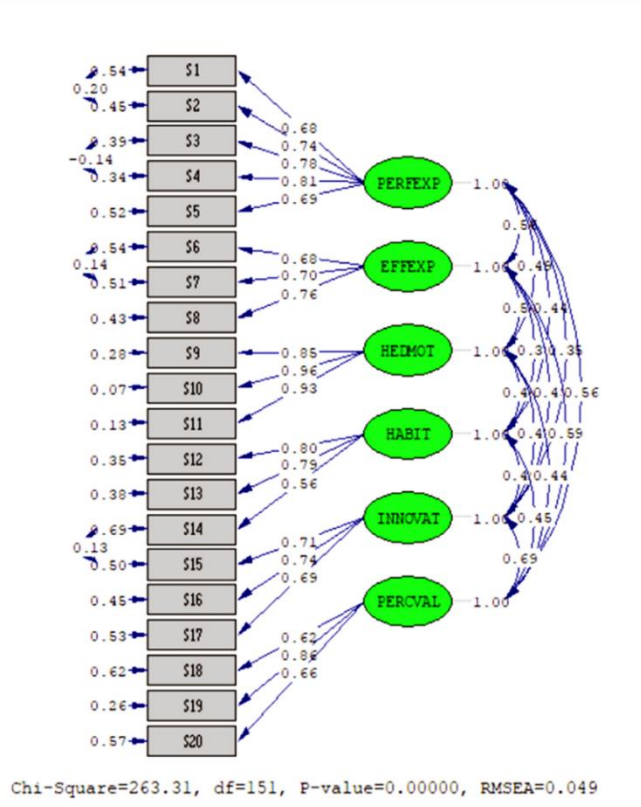

Figure 2: Unified Theory of Acceptance and Use of Technology 2 Model Confirmatory Factor Analysis (CFA) (After Modification)

Table 4: Goodness of Fit Values (After Modification)

Fit Measure	Value	Goodness of Fit
χ^2 / (sd=151)	1,74	Good Fit
RMSEA	0.049	Good Fit
SRMR	0.043	Good Fit
NFI	0.960	Good Fit
NNFI	0.978	Good Fit
CFI	0.982	Good Fit
GFI	0.921	Acceptable Fit

The model generally produced good fit values when examining the goodness of fit values after modifications. The significant indicators, such as $\chi 2/(df=151)$, RMSEA, and SRMR (Standardized Root Mean Square Residual), have reached good fit values from acceptable fit values. Moreover, it can also be seen that all other values have improved. However, unlike standard exploratory factor analysis, which seeks to uncover latent variables, this study used confirmatory factor analysis (CFA) to confirm an established theoretical structure. The modifications suggested by the Lisrel 8.8 program improved the model fit without altering its theoretical foundation.

Table 5. Unified Theory of Acceptance and Use of Technology 2 Model Scale Factor Loadings, R2 Value, T Value

Dimensions	Q no	Factor Loading	R^2	T values
Performance Expectation	S1	0.68	0.46	12.75
	S2	0.74	0.55	14.33
	S3	0,78	0,61	14.68
	S4	0,81	0,66	15.63
	S5	0.69	0.48	13.17
Effort Expectation	S6	0.68	0.46	11.06
	S7	0.70	0.49	11.51
	S8	0.76	0.57	12.90
Hedonic Motivation	S9	0.85	0.72	18.39
	S10	0.96	0.93	22.75
	S11	0.93	0.87	21.43
Habit	S12	0.80	0.65	14.61
	S13	0.79	0.62	14.23
	S14	0.56	0.31	9.66
Innovativeness	S15	0.71	0.50	12.87
	S16	0.74	0.55	13.51
	S17	0.69	0.47	12.24
Perceived Value	S18	0.62	0.38	11.09
	S19	0.86	0.74	16.76
	S20	0.66	0.43	11.99

According to the factor loadings of the scale, all factor loadings are above 0.30, and their T-values are also above 1.96, which indicates statistical significance. The explained variance value is also provided in the table. Based on all these results, UTAUT2 model confirmed with its six dimensions. Moreover, the perceived value dimension, added to the UTAUT2, has improved the model. The significance of these loadings indicate that consumers perceive AR technology as highly useful, which influences their willingness to adopt it. Furthermore, the perceived value (PV) dimension shows that consumers who recognize the tangible benefits of AR are more likely to develop positive behavioral intentions toward using this innovative technology.

4.2 Measurement Model of Unified Theory of Acceptance and Use of Technology 2 Model

Looking at the research model, the relationship between the dimensions of the technology acceptance model and behavioral intention (BI) has been examined. After the confirmatory factor analysis of the scales, internal consistency coefficients, and

analysis of whether the data are normally distributed or not, the stage of validation of the structural model has been reached to measure whether the dimensions of the technology acceptance model, which is one of the aims of the research, affect behavioral intention. A two-stage method was applied to create the said structural model. The first stage of the two-stage method aims to understand whether the model has a problem before revealing the relationships among the variables. Testing the measurement model is, in a sense, an analysis similar to confirmatory factor analysis. The measurement model testing is carried out to detect any measurement-related problem of the model. A problem in the measurement model can be solved with modification suggestions, and the second stage can be passed without any problems. Otherwise, moving on to the second stage, that is, to test the structural model, will not be meaningful.

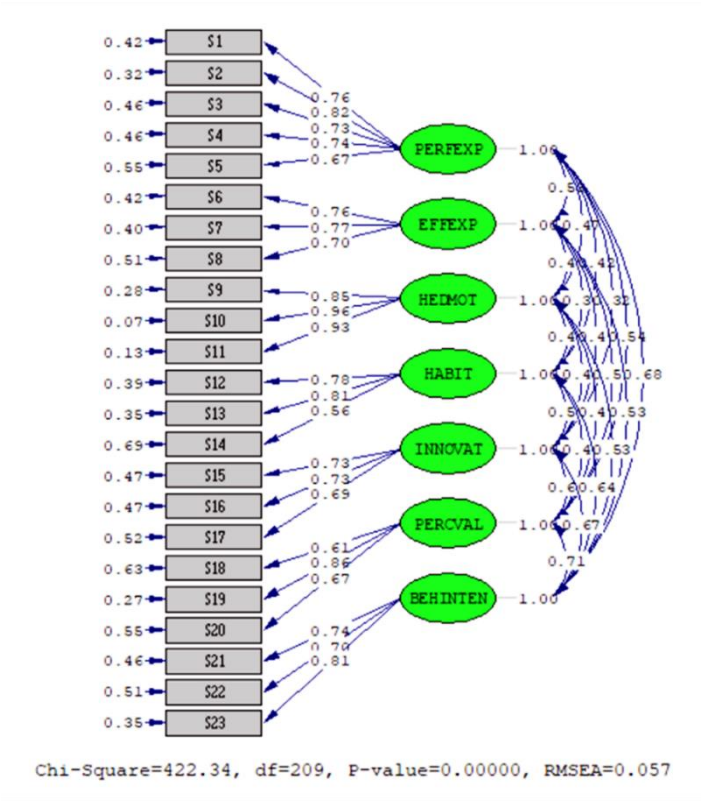

Figure 3. Measurement Model of the Unified Theory of Acceptance and Use of Technology 2 Model Before Modification

Looking at the Figure 3, the behavioral intention (BI) variable has been included in the measurement model. Initially, the factor loadings seen in the figure are above 0.30, which is an acceptable value [60]. When looking at the values of the measurement model, the pre-modification values are given in the table. When the values are examined, the $\chi 2$ / (df=209) is above 2, at 2.01, and the RMSEA value is calculated as 0.057. These values indicate an acceptable fit. However, the GFI value in the table is calculated as 0.89, which indicates an inadequate fit.

Looking at the modification indices, there are three suggested modifications: S1-S2, S4-S5, and S15-S14. The measurement model after modification is given in the Figure 4.

Table 6. Goodness of Fit Values for the Unified Theory of Acceptance and Use of Technology 2 Model Measurement Model (Before Modification)

Fit measure	Value	Goodness of Fit
χ^2 / (sd=209)	2,01	Acceptable Fit
RMSEA	0.057	Acceptable Fit
SRMR	0.050	Good Fit
NFI	0.950	Good Fit
NNFI	0.970	Good Fit
CFI	0.980	Good Fit
GFI	0.890	Inadequate Fit

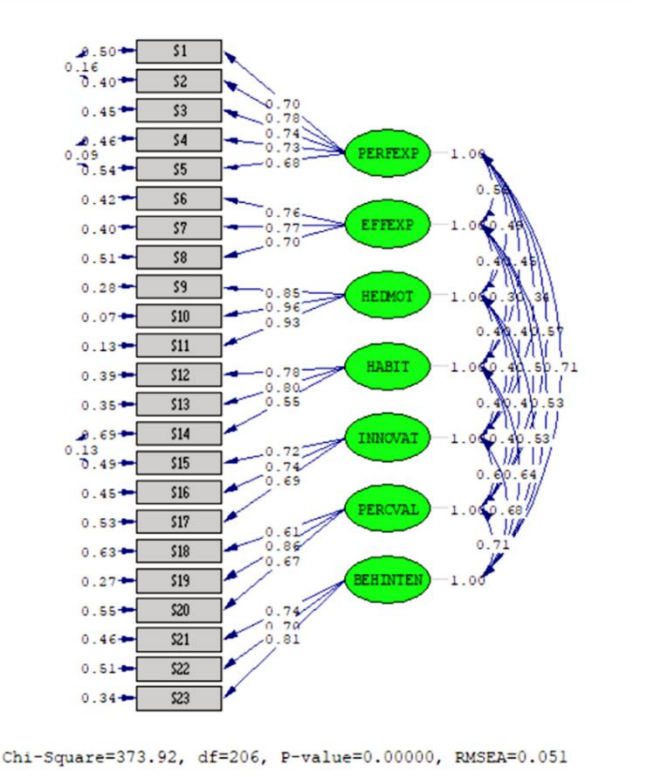

Figure 4. Unified Theory of Acceptance and Use of Technology 2 Model Measurement Model Post-Modification

The modified measurement model is presented in the Figure 4. As it shows, the factor loadings and t-values are statistically significant. The goodness of fit indices is presented in the table. The $\chi 2$ / (df=206) value has decreased to 1.87, below 2, which indicates a good fit, and another value, the GFI, improved from inadequate fit to acceptable fit after applying the modification indices.

Table 7. Compatibility Values of the Unified Theory of Acceptance and Use of Technology 2 Model Measurement Model (After Modification)

Fit Measure	Value	Goodness of Fit
χ^2 / (sd=206)	1,87	Good Fit
RMSEA	0.051	Acceptable Fit
SRMR	0.046	Good Fit
NFI	0.959	Good Fit
NNFI	0.976	Good Fit
CFI	0.980	Good Fit
GFI	0.905	Acceptable Fit

Looking at the fit indices, the measurement model has generally achieved good and acceptable fit values. These improved fit values suggest that consumers' perceptions of AR technology were more accurately captured after addressing potential redundancies in the original questionnaire items. These adjustments enhanced the model's ability to reflect the behavioral intention (BI) construct, highlighting that performance expectancy and perceived value are the most influential factors driving consumers to adopt AR technology.

After this stage, it is possible to continue with the testing stage of the structural model given in the research model.

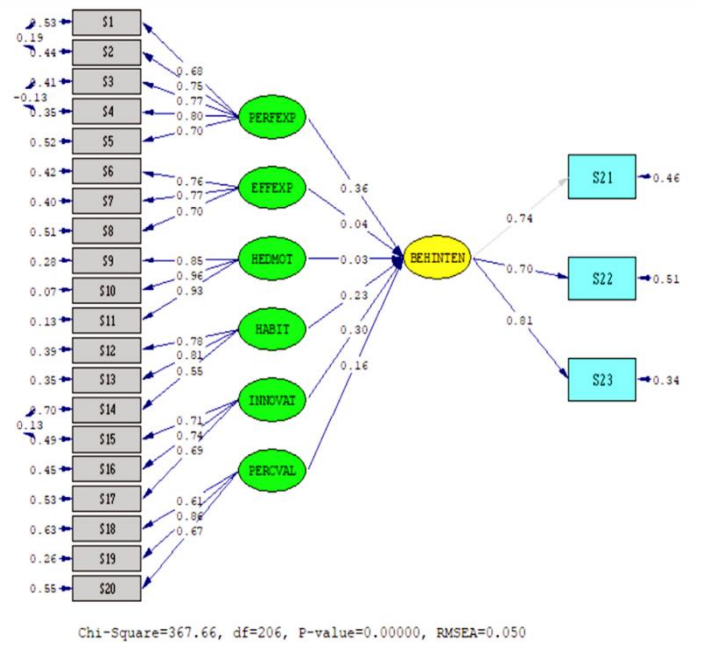

Figure 5. Unified Theory of Acceptance and Use of Technology 2 Model Structural Equation Model

Looking at the structural model, factors that affect behavioral intention can be seen. When looking at the path values of the model, the lowest values are effort expectancy (0.04) and hedonic motivation (0.03). These small effects are statistically insignificant since the t-values of effort expectancy (t-value: 0.51) and hedonic motivation (t-value: 0.60) are less than 1.96. The results indicate that these factors do not significantly contribute to consumers' intention to use AR technologies. While consumers may value the performance and utility of AR technology, they are less influenced by its perceived ease of use or the enjoyment derived from its use.

On the other hand, when looking at the R2 values in the table 8, it can be seen that the explained variance for behavioral intention (BI) is 75%. The high R^2 value (75%) for behavioral intention indicates that the model explains a significant portion of the variance in consumers' intent to adopt AR technology. This suggests that the key dimensions included in the model, such as performance expectancy, hedonic motivation, habit, and perceived value, are impactful in explaining consumer behavior. The high R^2 value highlights that these factors collectively influence consumers' behavioral intention towards AR technology adoption. In particular, the role of perceived value appears to be significant, reflecting that consumers' evaluation of the usefulness and benefits of AR technology plays a major role in shaping their intent to adopt. These findings emphasize that consumers are more likely to adopt AR technology when they perceive it to offer tangible benefits, rather than being motivated by hedonic factors or habitual use solely.

Table 8. Factor Loadings and R2 Value of the Unified Theory of Acceptance and Use of Technology 2 Model Structural Model

Dimensions	Q no	Factor Loading	R^2
Performance Expectation	S1	0.52	0.47
	S2	0.64	0.56
	S3	0,63	0,59
	S4	0,68	0,65
	S5	0.61	0.48
Effort Expectation	S6	0.56	0.58
	S7	0.58	0.60
	S8	0.54	0.49
Hedonic Motivation	S9	0.68	0.72
	S10	0.76	0.93
	S11	0.72	0.87
Habit	S12	0.88	0.61
	S13	0.92	0.65
	S14	0.50	0.30
Innovativeness	S15	0.62	0.51
	S16	0.85	0.55
	S17	0.52	0.47
Perceived Value	S18	0.48	0.37
	S19	0.64	0.74
	S20	0.45	0.45
Behavioral Intention	S21	0.59	0.54
	S22	0.61	0.49
	S23	0.63	0.66

The goodness of fit values of the model are presented in Table 9. As it is shown, the structural model generated generally good fit values. The $\chi 2$ / (df=206) value was calculated as 1.77, indicating a good fit value. The RMSEA value of 0.050 also produced a good fit value. Furthermore, the SRMR (0.045), NFI (0.96), NNFI (0.98), and CFI (0.98) values indicate good fit values as well. Finally, the GFI value achieved an acceptable fit value, and the model was confirmed as a result [56,57,58,59].

Table 9. Structural Model Goodness Fit Indices for Unified Theory of Acceptance and Use of Technology 2 Model

Fit measure	Value	Goodness of fit
χ^2 / (sd=206)	1,77	Good Fit
RMSEA	0.050	Good Fit
SRMR	0.045	Good Fit
NFI	0.96	Good Fit
NNFI	0.98	Good Fit
CFI	0.98	Good Fit
GFI	0.91	Acceptable Fit

The goodness of fit indices further supports the adequacy of the proposed model in explaining consumers' technology acceptance. With values such as RMSEA (0.050) and GFI (0.91), the model demonstrates a good fit, which indicates that the relationships between constructs adequately reflect the observed data. These findings suggest that consumers are receptive to the integration of AR technology in their experiences, particularly when their expectations of performance are met. However, the relatively lower significance of effort expectancy and hedonic motivation demonstrate that the usability and entertainment aspects of AR must be enhanced for broader consumer appeal. Consequently, effort expectation and hedonic motivation were removed, and the final version of the structural model is depicted below.

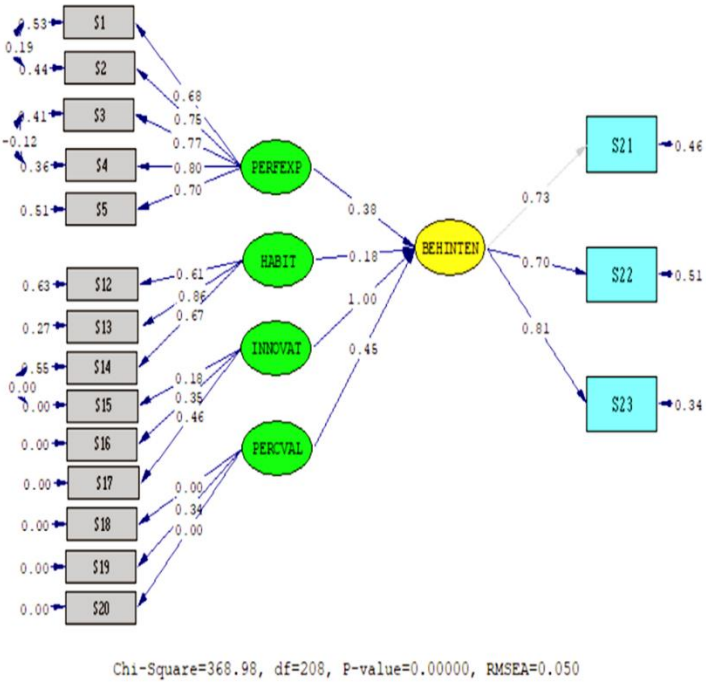

Figure 6: Structural Model

Table 10. Perception Levels of Dimensions by Gender Independent T-Test

	Gender	N	$\bar{x}$	Std Dev.	p
Performance Expectation	Female	203	4,28	0,635	0,004 *
	Male	107	4,05	0,692	
Effort Expectation	Female	203	4,43	0,627	0,006 *
	Male	107	4,22	0,61	
Hedonic Motivation	Female	203	4,46	0,698	0,006 *
	Male	107	4,22	0,786	
Habit	Female	203	3,55	0,832	0,001 *
	Male	107	3,21	0,902	
Innovativeness	Female	203	3,84	0,756	0,104
	Male	107	3,99	0,764	
Perceived Value	Female	203	4,14	0,608	0,759
	Male	107	4,16	0,59	
Behavioral Intention	Female	203	4,15	0,692	0,009 *
	Male	107	3,94	0,66	

The above Table 10 examines whether the technology acceptance model constructs differ by gender of the questionnaire participants. When looking at the p-values in the table, it is seen that performance expectancy (PE), hedonic motivation (HM), effort expectancy (EE), habit (H), and behavioral intention (BI) ($p<0.05$) are perceived differently between female and male participants. Overall, females perceive these dimensions at a statistically higher level than male ones. However, female and male participants did not perceive innovation (I) and perceived value (PV) dimensions differently.

5. CONCLUSIONS, IMPLICATIONS, AND LIMITATIONS

5.1 Discussion

This recent study examined the acceptance and use of augmented reality technology among Gen-Z consumers. Findings indicate that the extended version of the Unified Theory of Acceptance and Use of Technology 2 (UTAUT2) model for this research was able to explain a substantial portion (75%) of the behavioral intention to use AR technology. This confirms the applicability and effectiveness of UTAUT2 in understanding the factors influencing adoption of AR. Furthermore, by including the perceived value and personal innovativeness dimensions, the model provided a more substantial comprehension of Gen-Z users' acceptance and usage behavior since it became more comprehensive.

Despite prior studies having significant contributions to the augmented reality literature, this research study examines Gen-Z consumers' acceptance and use of AR by extending the UTAUT2 model with perceived value and personal innovativeness dimensions. The research findings demonstrated that the UTAUT2 model constructs used in this research had good construct validity and reliability, providing an accurate assessment of the latent variables. The CFA results indicated that the measurement model had an acceptable fit, which improved further after the suggested modifications. The factor loadings, T-values, and variance values confirmed the significance and strengths of the relationships between the dimensions of the

UTAUT2 model. Adding the perceived value and personal innovativeness dimensions to the model enhanced its overall performance. The measurement model, which explored the relationship between the dimensions of the technology acceptance model and behavioral intention, also exhibits a good fit after modifications, indicating that the model's dimensions significantly influenced behavioral intention. This research study's results contribute to understanding of technology acceptance and usage by validating the extended UTAUT2 model in the context of behavioral intention.

Furthermore, the research findings explored that gender differences exist in the perception of some UTAUT2 constructs. Female Gen-Z participants perceived the dimensions of performance expectancy (PE), hedonic motivation (HM), effort expectancy (EE), habit (H), and behavioral intention (BI) at a statistically higher level than male Gen-Z participants. These results indicate that female Gen-Z consumers may have higher expectations relating to the performance and user-friendliness of technology, as well as a greater tendency towards hedonic experiences and habitual technology use. Since these dimensions are significantly related to the use and acceptance of AR technology, female Gen-Z consumers may be more receptive to various technological innovations. The absence of considerable gender differences in the perception of innovation (I) and perceived value (PV) constructs suggests that both male and female Gen-Z consumers perceived the innovative aspects and value proposition of the AR technology similarly. This finding implies that factors such as originality and perceived benefits may not be influenced by gender, and both genders may equally recognize the potential value of adopting new technologies including augmented reality.

Throughout the questionnaire experience, there was no substantial differences in participants' engagement across the app's four categories of fashion accessories. However, a pronounced preference was observed for the shoe category, with participants notably inclined towards experimenting with AR shoe filters. They articulated high levels of satisfaction with the authenticity conveyed by these filters. However, this interest was verbally expressed by participants and is not reflected in the statistical data of the study.

On the other hand, all of these research findings are based on the two-month period which the research was conducted. Even though the study was limited to a specific timeframe, this did not have a negative impact on the research outcomes as it provided valuable insights into Gen-Z consumers' interest in AR technology. Nevertheless, it is significant to acknowledge that augmented reality adaptation and interest towards this technology may vary across different time periods. Various researches to be conducted over different time periods may reveal additional findings to be discussed.

5.2 Contributions to theory

This research study contributes to the literature by exploring the impacts of augmented reality on fashion consumers' behavior. Although various types of research on AR exist, there is still a loophole in the literature regarding its significant impacts, specifically on Gen-Z fashion consumers' behavioral intentions. In this study, Gen-Z consumers' behavioral attitudes towards augmented reality technology are defined throughout their experience with *"Magic Mirror"* device, which is designed for their AR experience with an advanced augmented reality app, TRYO.

Online purchases need more human interaction since they cause insufficient product information. This issue makes product evaluation difficult from consumers' perspective, which can increase their risks [25]. However, AR virtual try-on technology has the potential to address this issue by providing an enhanced evaluation of various products. AR can significantly intensify the digital purchasing experience by offering delightfulness [31,61]. Furthermore, virtual try-on technology allows consumers to see their try-ons from various perspectives, which is impossible in actual try-on situations [62,63].

On the other hand, many apps are free of charge, so consumers do not have to pay anything to use those digital facilities [53]. In this research study, price value is replaced by perceived value, as the TRYO app offers a free-of-charge advanced AR experience. This study's findings showed that perceived value, as an extended dimension, was statistically significant and affected the behavioral intention of Gen-Z consumers. This research study confirms that as an extended dimension, perceived value has a unique contribution to the UTAUT2 model since the model explained 75% of the behavioral intention. According to Watson et al. (2018), augmenting the shopping experience using AR technology provides consumers with an enhanced emotional reaction as it provides a powerful sensory engagement that affects their reactions. However, the reaction towards AR may differ in accordance with consumers' purchasing motivations and individuality levels. While most research studies on AR technology are experiments, some studies filter participants based on prior experience in using AR apps [10,65]. Despite these researches improving the knowledge of AR, several significant gaps still exist. In this regard, using the TRYO app specifically for this experiential research is the first attempt to explore Gen-Z consumers' in-person responses to close these gaps in the literature.

5.3 Managerial Implications

Augmented Reality applications are becoming a game-changer for businesses [28]. Especially, textile and fashion industry is interested in exploring the potential incorporation of AR throughout the customers' engagement with fashion brands. However, there needs to be more clarity regarding their

acceptance and usage of this innovative technology. Understanding how AR can be significantly integrated into textile and fashion marketing is crucial for their future success. Thus, clarifying how AR affects consumers' behavioral intentions is necessary.

Enhancing consumers' positive behavioral intention by emphasizing their ideal selves and fitting confidence through AR-based try-on experiences can ultimately increase their purchasing intentions. In this regard, this study provides several significant findings for textile and fashion industry, as well as for AR app developers by examining the factors influencing Gen-Z consumers' behavioral intentions towards the usage and adoption of augmented reality. By considering the impact power of the UTAUT2 constructs of this study, developers are able to design more targeted strategies to enhance Gen-Z generation's AR adaptation. This research study findings explored that perceived value (PV) has considerable importance in influencing Gen-Z consumers' behavioral intention. Thus, practitioners should focus on improving users' perceived value of augmented reality technology by improving its functionality, usability, and overall features. By understanding the factors that contribute to Gen-Z consumers' behavioral intention, providers of AR apps are able to design more satisfactory AR-based services.

Furthermore, there are some gender differences in the perception of certain UTAUT2 constructs among Gen-Z consumers. App developers should acknowledge that their apps are not solely focused on usefulness and safety; the experience should also be prioritized [53]. Understanding that female Gen-Z consumers have higher expectations regarding performance, effort, hedonic motivations, and habitual use may be beneficial for businesses in designing more targeted campaigns that address these specific preferences. By customizing marketing communications and experiences to align with gender-specific attitudes, practitioners can improve the acceptance level of AR technology among Gen-Z customers. Moreover, providing ongoing value through AR experiences can enhance the habit formation of consumers. Encouraging them to use this technology repeatedly may create long-term engagement among Gen-Z cohort. According to research study findings, effort expectancy (EE) and hedonic motivation (HM) have a relatively low effect on Gen-Z consumers' behavioral intention to use AR. To overcome this, augmented reality apps' practical benefits and utility may be prioritized. By demonstrating how the app can improve efficiency or deliver tangible consumer benefits, businesses can increase the probability of user adoptation and behavioral intention within Gen-Z.

On the other hand, both female and male Gen-Z users, perceived innovativeness (I) and perceived value (PV) dimensions similarly. This result indicates that emphasizing AR technology's innovative aspects and value proposition can be practical for both genders. Companies may highlight AR technology's uniqueness and transformative characteristics, demonstrating its ability to strengthen user experiences and offer beneficial advantages. By emphasizing perceived value (PV) and innovation (I), businesses can develop an attractive argument for Gen-Z consumers to accept and utilize AR technology. This research focused on providing insights into the influential factors regarding Gen-Z consumers' acceptance and usage of AR. However, continuous evaluation of consumers' behavioral intentions is significant for long-term success as their preferences and attitudes constantly evolve. In summation, as AR technology is continually developing, integrating AR into the fashion business can positively affect consumers' behavioral intentions regarding their fashion consumption. This technology may intensify consumer engagement and positive brand perception while simplifying their decision-making process. Thus, conducting various experiential researches frequently can provide more robust insights regarding its practical implications.

5.4 Limitations and recommendations for further studies

Many studies focus on digital advancements affecting young fashion consumers' behavioral intentions. Hence, this research study focuses to make contribution to the literature regarding the usage and acceptance of augmented reality by providing valuable insights from the research results. However, it is necessary to acknowledge the limitations that might impact the results' interpretation. This research was conducted with a specific Gen-Z population in Turkey, which could limit the generalizability of the findings to other populations. Conducting cross-cultural research could significantly contribute to providing insights into the cultural adaptability of accepting technological advancements. Additionally, due to the greater interest shown by female Gen-Z consumers compared to male ones towards this voluntary questionnaire, a gender disparity emerged in terms of participation rates. This disparity could limit the generalizability of the findings. On the other hand, the fact that female Gen-Z consumers demonstrated more interest in augmented reality technology than their male counterparts could be a significant indicator for further studies. Female consumers may become a central focus in future researches, since exploring ways to enhance their satisfaction with this interest could provide meaningful contributions to the literature. Moreover, while this study provides valuable insights into the attitudes and behaviors of Gen Z consumers toward augmented reality (AR) technology, it does not explore potential variations in outcomes based on age within the Gen-Z cohort. The decision to focus on Gen Z as a whole was driven by the objective of understanding their general perspectives on AR, rather than conducting comparisons across different age groups within this generation. Future research could address this limitation by investigating whether significant differences exist among younger and older members of Gen Z, potentially offering deeper insights into how AR is received across age segments within this generation.

Furthermore, as this research findings may be limited due to the specific period in which the study was conducted, it is significant to acknowledge that technological advancements over time may influence the applicability of the findings regarding the acceptance

and use of AR among Gen-Z consumers. Future studies could focus on mixed methods practices by uniting qualitative and quantitative research approaches to comprehensively understand Gen-Z consumers' behavioral intentions. Possible future adaptation of the UTAUT2 model could be a valuable asset in comprehending the distinct dynamics associated with emerging technologies.

REFERENCES

1. Van Doorn, J., Lemon, K.N., Mittal, V., Nass, S., Pick, D., Pirner, P. and Verhoef, P.C. (2010). Customer engagement behavior: Theoretical foundations and research directions. *Journal of Service Research*, [online] 13(3), pp.253–266. doi:https://doi.org/10.1177/1094670510375599.
2. Romano, B., Sands, S. and Pallant, JI (2020) 'Augmented reality and the customer journey: An exploratory study', *Australasian Marketing Journal*, 29(4), pp. 354–363. doi:10.1016/ j.ausmj. 2020.06.010.
3. Nikhashemi, S.R. *et al.* (2021) 'Augmented reality in smart retailing: A (N) (a) symmetric approach to continuous intention to use retail brands' Mobile AR Apps', *Journal of Retailing and Consumer Services*, 60, p. 102464. doi:10.1016/j.jretconser. 2021.102464.
4. Grewal, D., Roggeveen, A.L. and Nordfält, J. (2017) 'The future of retailing', *Journal of Retailing*, 93(1), pp. 1–6. doi:10.1016/ j.jretai.2016.12.008.
5. Rauschnabel, P.A., Felix, R. and Hinsch, C. (2019) 'Augmented reality marketing: How mobile AR-apps can improve brands through inspiration', *Journal of Retailing and Consumer Services*, 49, pp. 43–53. doi:10.1016/j.jretconser.2019.03.004.
6. Larivière, B. *et al.* (2017) '"service encounter 2.0": An investigation into the roles of technology, employees and customers', *Journal of Business Research*, 79, pp. 238–246. doi:10.1016/j.jbusres.2017.03.008.
7. Kumar, H. (2021) 'Augmented reality in online retailing: A systematic review and Research Agenda', *International Journal of Retail & Distribution Management*, 50(4), pp. 537–559. doi:10.1108/ijrdm-06-2021-0287.
8. Cruz, E., Orts-Escolano, S., Gomez-Donoso, F., Rizo, C., Rangel, J.C., Mora, H., & Cazorla, M. (2019). An augmented reality application for improving shopping experience in large retail stores. *Virtual Reality*, *23*(3), 281–291.
9. Nysveen, H. and Pedersen, P.E. (2005) 'Search mode and purchase intention in online shopping behaviour', *Int. J. Internet Marketing and Advertising*, Vol. 2, No. 4, pp.288–306.
10. Kang, H.J., Shin, J. and Ponto, K. (2020) 'How 3D virtual reality stores can shape consumer purchase decisions: The roles of informativeness and playfulness', *Journal of Interactive Marketing*, 49(1), pp. 70–85. doi:10.1016/j.intmar.2019.07.002.
11. Suh, K. and Lee, Y.E. (2005). The Effects of Virtual Reality on Consumer Learning: An Empirical Investigation. *MIS Quarterly*, [online] 29(4), pp.673–697. doi:https://doi.org/10.2307/25148705.
12. Jessen, A. *et al.* (2020) 'The playground effect: How augmented reality drives creative customer engagement', *Journal of Business Research*, 116, pp. 85–98. doi:10.1016/j.jbusres.2020.05.002.
13. QReal, The Glimpse Group. (2022). TRYO (Version 1.0.6). (Mobile App). (Accessed September 2023)
14. Dimock, M. (2019) '"Defining generations: where millennials end and generation Z begins"', *https://www.pewresearch.org*, 17 January. Available at: https://www.pewresearch.org/short-reads/ 2019/01/17/where-millennials-end-and-generation-z-begins/ (Accessed: 22 December 2023).
15. Seemiller, C. and Grace, M. (2016). *Generation Z Goes to College.* John Wiley & Sons.
16. Azhar, M. *et al.* (2023) 'Measuring buying intention of generation Z on social networking sites: An application of Social Commerce Adoption Model,' *Journal of Economic and Administrative Sciences* [Preprint]. doi:10.1108/jeas-02-2022-0047.
17. Dwivedi, Y.K., Ismagilova, E., Hughes, D.L., Carlson, J., Filieri, R., Jacobson, J., Jain, V., Karjaluoto, H., Kefi, H., Krishen, A.S., Kumar, V., Rahman, M.M., Raman, R., Rauschnabel, P.A., Rowley, J., Salo, J., Tran, G.A. and Wang, Y. (2021), "Setting the future of digital and social media marketing research: perspectives and research propositions", International Journal of Information Management, May, p. 102168, doi: 10.1016/ j.ijinfomgt. 2020.102168.
18. Schapsis, C., Chiagouris, L. and Pham, N.C. (2021). Are Consumers Ready for Augmented Reality? Factors Influencing Online Footwear Purchasing Intentions Using AR Technology. *Journal of Marketing Development and Competitiveness*, 15(2). doi:10.33423/jmdc.v15i2.4331.
19. Scholz, J. and Smith, A.N. (2016) 'Augmented reality: Designing immersive experiences that maximize consumer engagement', *Business Horizons*, 59(2), pp. 149–161. doi:10.1016/j. bushor.2015.10.003.
20. Flavián, C. and Orús, C. (2018). The impact of virtual, augmented and mixed reality technologies on the customer experience. *Journal of Business Research*, [online] 100(100), pp.547–560. doi:https://doi.org/10.1016/j.jbusres.2018.10.050.
21. Tom Dieck, M.C., Jung, T. and Han, D.-I. (2016). Mapping requirements for the wearable smart glasses augmented reality museum application. *Journal of Hospitality and Tourism Technology*, 7(3), pp.230–253. doi:https://doi.org/10.1108/jhtt-09-2015-0036.
22. Van Esch, P. *et al.* (2019) 'Anthropomorphism and augmented reality in the retail environment', *Journal of Retailing and Consumer Services*, 49, pp. 35–42. doi:10.1016/j.jretconser. 2019.03.002.
23. Hilken, T. *et al.* (2017) 'Augmenting the eye of the beholder: Exploring the strategic potential of augmented reality to enhance online service experiences', *Journal of the Academy of Marketing Science*, 45(6), pp. 884–905. doi:10.1007/s11747-017-0541-x.
24. Beck, M. and Crié, D. (2018) 'I virtually try it … I want it ! virtual fitting room: A tool to increase online and off-line exploratory behavior, patronage and purchase intentions', *Journal of Retailing and Consumer Services*, 40, pp. 279–286. doi:10.1016/j. jretconser.2016.08.006.
25. Kim, J. and Forsythe, S. (2008). Adoption of virtual try-on technology for online apparel shopping. *Journal of Interactive Marketing*, 22(2), pp.45–59. doi:https://doi.org/10.1002/dir.20113.
26. Pantano, E. and Gandini, A. (2017), "Exploring the forms of sociality mediated by innovative technologies in retail settings", *Computers Human Behavior*, Vol. 77, pp. 367-373, http://dx.doi.org/10.1016/j.chb.2017.02.036
27. Rauschnabel, P.A. *et al.* (2022) 'What is Augmented Reality Marketing? its definition, complexity, and future', *Journal of Business Research*, 142, pp. 1140–1150. doi:10.1016/ j.jbusres.2021.12.084.

28. Poushneh, A. and Vasquez-Parraga, A.Z. (2017). Discernible impact of augmented reality on retail customer's experience, satisfaction and willingness to buy. *Journal of Retailing and Consumer Services*, [online] 34(34), pp.229–234. doi:https://doi.org/10.1016/j.jretconser.2016.10.005.

29. Trivedi, J. *et al.* (2022) 'The effect of augmented reality in mobile applications on consumers' online impulse purchase intention: The mediating role of perceived value', *Journal of Consumer Behaviour*, 21(4), pp. 896–908. doi:10.1002/cb.2047.

30. Qin, H., Peak, DA and Prybutok, V. (2021) 'A virtual market in your pocket: How does mobile augmented reality (MAR) Influence Consumer Decision Making?', *Journal of Retailing and Consumer Services*, 58, p. 102337. doi:10.1016/j.jretconser. 2020.102337.

31. Loureiro, S.M., Guerreiro, J. and Ali, F. (2020) '20 years of research on virtual reality and augmented reality in tourism context: A text-mining approach', *Tourism Management*, 77, p. 104028. doi:10.1016/j.tourman.2019.104028.

32. Arghashi, V. and Yuksel, C.A. (2022) 'Interactivity, inspiration, and perceived usefulness! how retailers' ar-apps improve consumer engagement through flow', *Journal of Retailing and Consumer Services*, 64, p. 102756. doi:10.1016/ j.jretconser.2021.102756.

33. Sahoo, D. and S. Pillai, S. (2017). Role of mobile banking servicescape on customer attitude and engagement. *International Journal of Bank Marketing*, 35(7), pp.1115–1132. doi:https://doi.org/10.1108/ijbm-09-2015-0144.

34. Molinillo, S., Navarro-García, A., Anaya-Sánchez, R. and Japutra, A. (2020). The impact of affective and cognitive app experiences on loyalty towards retailers. *Journal of Retailing and Consumer Services*, 54, p.101948. doi:https://doi.org/10.1016/ j.jretconser.2019.101948.

35. McCrindle, M., Buckerfield, S. and Fell, A. (2021). *Generation Alpha*. Sydney, New South Wales: Hachette Australia.

36. Thangavel, P., Pathak, P. and Chandra, B. (2022). Consumer Decision-making Style of Gen Z: A Generational Cohort Analysis. *Global Business Review*, 23(3), pp.710–728. doi:https://doi.org/ 10.1177/0972150919880128.

37. Schlossberg, M. (2016). *Teen Generation Z is being called 'millennials on steroids,' and that could be terrifying for retailers*. [online] https://www.businessinsider.com/. Available at: https://www.businessinsider.com/millennials-vs-gen-z-2016-2 [Accessed 12 Dec. 2023].

38. Priporas, C.V., Stylos, N. and Fotiadis, A.K. (2017), "Generation Z consumers' expectations of interactions in smart retailing: a future agenda", *Computers in Human Behavior*, Vol. 77, pp. 374-381.

39. Van den Bergh, J., De Pelsmacker, P. and Worsley, B. (2023) 'Beyond labels: Segmenting the gen Z market for more effective marketing', *Young Consumers*, 25(2), pp. 188–210. doi:10.1108/ yc-03-2023-1707.

40. Meola, A. (2023). *Generation Z news: latest characteristics, research, and facts*. [online] www. insiderintelligence.com. Available at: www. insiderintelligence.com/insights/generation-z-facts/ [Accessed 10 Dec. 2023].

41. Haddouche, H. and Salomone, C. (2018). Generation Z and the tourist experience: tourist stories and use of social networks. *Journal of Tourism Futures*, [online] 4(1), pp.69–79. doi:https://doi.org/10.1108/jtf-12-2017-0059.

42. Bassiouni, D.H. and Hackley, C. (2014). 'Generation Z' children's adaptation to digital consumer culture: A critical literature review. *Journal of Customer Behaviour*, 13(2), pp.113–133. doi:https://doi.org/10.1362/147539214x14024779483591.

43. Shin, H., Eastman, J. and Li, Y. (2021). Is It Love or Just like? Generation Z's Brand Relationship with Luxury. *Journal of Product & Brand Management*, 31(3), pp.394–414. doi:https://doi.org/10.1108/JPBM-08-2020-3049.

44. Van den Bergh, J. and Behrer, M. (2016). *How cool brands stay hot : branding to Generation Y and Z*. London, United Kingdom: Kogan Page.

45. Singh, A. (2014). Challenges and Issues of Generation Z. *IOSR Journal of Business and Management*, [online] 16(7), pp.59–63. doi:https://doi.org/10.9790/487x-16715963.

46. Summer Dahyang Jung, Claire, S. and Kim, S. (2024). Gen Z consumers' expectations for smart convenience stores in the USA, South Korea, and Japan. *Young Consumers: Insight and Ideas for Responsible Marketers*. doi:https://doi.org/10.1108/yc-10-2022-1623.

47. Dabija, D.C. and Lung, L. (2019), "Millennials versus gen Z: online shopping behaviour in an emerging market", in Vaduva, S., Fotea, I., Vaduva, L. and Wilt, R. (Eds), *Applied Ethics for Entrepreneurial Success: Recommendations for the Developing World. GSMAC 2018*. Springer Proceedings in Business and Economics, Springer, Cham, pp. 1-18.

48. Cheung, M.L., Leung, K.S.W. and Chan, H.S. (2020). Driving healthcare wearable technology adoption for Generation Z consumers in Hong Kong. *Young Consumers*. doi:https://doi.org/ 10.1108/yc-04-2020-1123.

49. Agrawal, D.K. (2022). Determining behavioural differences of Y and Z generational cohorts in online shopping. *International Journal of Retail & Distribution Management*, 50(7), pp.880–895. doi:https://doi.org/10.1108/ijrdm-12-2020-0527.

50. Venkatesh, V., Morris, M.G., Davis, G.B., & Davis, F.D. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly*, pp. 425–478.

51. Tak, P. and Panwar, S. (2017). Using UTAUT 2 model to predict mobile app based shopping: evidences from India. *Journal of Indian Business Research*, 9(3), pp.248–264. doi:10.1108/jibr-11-2016-0132.

52. Venkatesh, V., Thong, J.Y.L. and Xu, X. (2012). Consumer Acceptance and Use of Information Technology: Extending the Unified Theory of Acceptance and Use of Technology. *MIS Quarterly*, 36(1), pp.157–178. doi:10.2307/41410412.

53. Shaw, N. and Sergueeva, K. (2019). The non-monetary benefits of mobile commerce: Extending UTAUT2 with perceived value. *International Journal of Information Management*, 45, pp.44–55. doi:https://doi.org/10.1016/j.ijinfomgt.2018.10.024.

54. Kalaycı, Ş. (2010). *SPSS uygulamalı çok değişkenli istatistik teknikleri*. 5th ed. Ankara: Asil Yayın.

55. Nunnally, J.C. (1979). *Psychometric theory*. New York: McGraw Hill.

56. Hair, J.F., Black, W.C., Babin, B.J., Anderson, R.E. and Tatham, R.L. (1998). *Multivariate data analysis*. Upper Saddle River, Prentice Hall, New Jersey, pp.207–219.

57. Jöreskog, K.G. and Sörbom, D. (1996). *LISREL 8 : user's reference guide*. Lincolnwood, Il: Scientific Software International.

58. Schermelleh-Engel, K., Moosbrugger, H. ve Müller, H. (2003). Evaluating The Fit of Structural Equation Models: Tests of

Significance and Descriptive Goodness-of-Fit Measures. *Methods of Psychological Research Online*, 8(2): 23-74.

59. Raykov, T. and Marcoulides, G.A. (2012). *A first course in structural equation modeling*. New York, N.Y.: Routledge. New York.

60. Barnes, J., Cote, J., Cudek, R. ve Malthouse, E. (2001). Factor Analysis-Checking Assumptions of Normality Before Conducting Factor Analysis. *Journal of Consumer Psychology*. 10(1,2): 79-81

61. Jiang, Y., Wang, X. and Yuen, K.F. (2021). Augmented reality shopping application usage: The influence of attitude, value, and characteristics of innovation. *Journal of Retailing and Consumer Services*, 63, p.102720. doi:https://doi.org/10.1016/j.jretconser.2021.102720.

62. Marelli, D., Bianco, S. and Ciocca, G. (2019). A Web Application for Glasses Virtual Try-on in 3D Space. *2019 IEEE 23rd International Symposium on Consumer Technologies (ISCT)*, pp.299–303. doi:https://doi.org/10.1109/isce.2019.8900979.

63. Feng, Y. and Xie, Q. (2018). Privacy Concerns, Perceived Intrusiveness, and Privacy Controls: An Analysis of Virtual Try-On Apps. *Journal of Interactive Advertising*, 19(1), pp.43–57. doi:https://doi.org/10.1080/15252019.2018.1521317.

64. Watson, A., Alexander, B. and Salavati, L. (2018) 'The impact of experiential augmented reality applications on fashion purchase intention', *International Journal of Retail & Distribution Management*, 48(5), pp. 433–451. doi:10.1108/ijrdm-06-2017-0117.

65. Tran, T.P., Furner, C.P. and Albinsson, P.A. (2021). Understanding drivers and outcomes of brand attachment in mobile branded apps. *Journal of Consumer Marketing*, 38(1), pp.113–124. doi:https://doi.org/10.1108/jcm-02-2020-3657.