From Clicks to Fits: Understanding Consumer Attitudes towards Virtual Try-On in Online Fashion Retail

A quantitative study

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Abstract

This thesis investigates the impact of Virtual Try-On (VTO) technology, powered by Augmented Reality (AR), on consumer behavior within e-commerce. Specifically, we seek to address the following research question: To what extent do media usefulness and psychological inspiration influence attitude towards VTO, and subsequently behavioral intention to use VTO and to recommend it? As online retailers, notably Amazon Europe, increasingly integrate VTO features into their platforms, understanding consumer engagement and response becomes critical. This study extends the Technology Acceptance Model (TAM) by incorporating perceived media usefulness and psychological inspiration to assess their influence on consumer attitudes towards VTO. A quantitative approach was employed, utilizing a survey to collect data from a sample of online shoppers in Europe. The findings reveal that both perceived usefulness and psychological inspiration significantly affect consumer attitudes, which in turn drive behavioral intentions to use and recommend VTO technology. This research contributes to the existing literature on consumer behavior and technology acceptance, providing practical insights for enhancing VTO adoption in the fashion e-commerce industry.

Keywords: Virtual Try-On (VTO) technology, Consumer behavior, Technology acceptance, E-commerce, Attitude, Media Usefulness, Psychological Inspiration

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1. Introduction

Emerging technologies are reshaping the shopping experience and influencing consumers' behavior. One notable advancement is Virtual try-on (VTO) technology, fueled by Augmented Reality (AR). Online retailers have embraced the VTO technology as it allows users to virtually try on products, addressing persistent challenges related to garment size selection, the inclusion of diverse body shapes, and discrepancies in product specifications among different retailers (Hilpert & Zumstein, 2023, p. 194). VTO represents a novel technological approach designed to facilitate customers in trying on and mixing various apparel items without the need for a physical fitting room (Hwangbo et al., 2020, p. 2), ultimately enhancing consumer satisfaction.

Despite the potential benefits, there is a need to understand how consumers engage with and respond to VTO. Scholars have highlighted the need to bridge the physical gap between consumers and products with well-crafted, digitally enhanced product presentations to create effective online experiences (Bleier, Harmeling & Palmatier, 2019, as cited in Kowalczuk et al., 2021, p. 1). By incorporating AR-based product presentations into their e-commerce platforms, retailers can enhance customer value and create exceptional experiences at every touchpoint along the customer journey (Heller, Chylinski, de Ruyter, Mahr, & Keeling, 2019; Lemon & Verhoef, 2016, as cited in Kowalczuk et al., 2021, p. 1). Earlier VTO technologies primarily relied on virtual reality (VR) technologies to construct 3D virtual models within computer-mediated environments, but with new trends in augmented reality (AR), many VTO applications are now integrating AR technologies with 3D visualization features (Lee & Chai, 2017; Lee & Xu, 2019, as cited in Lee et al., 2021, p. 1).

Given the continuous evolution of e-commerce technologies and their impact on consumer behavior, this study intends to identify the drivers of consumer behavior regarding VTO technology and examine consumers' attitude towards it. To answer these questions, this study builds on the Technology Acceptance Model (TAM) originally proposed by Davis (1989). TAM serves as a theoretical framework that aids in comprehending and predicting users' acceptance and adoption of novel technologies. TAM is widely recognized as the predominant framework utilized to assess

individuals' attitudes toward adopting emerging technologies across various contexts and fields (Breiki & Al-Abri, 2022b, p. 5), including exploring peoples' perceptions of VTO technology. Subsequently, a positive attitude towards VTO is followed by users' behavioral intention to utilize the technology. According to TAM, when individuals perceive VTO technology positively, believing it to be useful, they are more likely to express a behavioral intention to adopt it (Venkatesh & Davis, 2000). Within TAM, two key constructs, Perceived Usefulness (PU) and Perceived Ease of Use (PEOU), play pivotal roles in shaping users' attitudes toward technology adoption. Perceived Usefulness refers to the user's perception of the extent to which a particular technology enhances their job performance or simplifies tasks, while Perceived Ease of Use denotes the user's perception of the effort required to utilize the technology effectively (Davis, 1989). However, studies have shown that there are limitations of solely relying on perceived usefulness and perceived ease of use in forecasting the intention to adopt new technology, highlighting the influence of numerous external factors on technology adoption intentions (Lee & Oh, 2022, p. 1). Therefore, this study uses only the construct of perceived usefulness to analyze consumers' attitudes toward VTO technology.

Among the adopters of this technology is Amazon Europe, which has integrated VTO features into its online shopping experience. By leveraging Augmented Reality (AR) technology, Amazon Europe offers customers the ability to virtually try on a wide range of fashion products, starting with sunglasses and expanding to footwear. Retailers such as Amazon Europe can gain insights into the factors influencing its adoption and identify strategies to enhance its perceived usefulness. As online fashion retailers increasingly embrace this innovation, understanding how consumers engage with and respond to VTO becomes imperative.

Additionally, this study introduces psychological inspiration as a key factor influencing attitude. Inspiration is defined as a motivational state where new possibilities are revealed, potentially leading to new ideas (Böttger et al., 2017; Oleynick et al., 2014, as cited in Rauschnabel et al., 2019, p. 46). According to research, we are inspired when 'insights or ideas imbue a task with a sense of necessity and excitement' (Thrash & Elliot, 2003, as cited in as cited in Rauschnabel et al.,

2019, p. 46). Therefore, when feeling inspired, attitude is likely influenced in a positive way as it represents the degree of affect towards or against an object (Fishbein and Ajzen, 1975; Thurstone, 1931, as cited in Spears & Singh, 2004b, p. 55). The incorporation of psychological inspiration is crucial for several reasons. Firstly, it expands the Technology Acceptance Model (TAM) by introducing a motivational component that deeply influences how users perceive and approach technology. While TAM traditionally focuses on perceived usefulness and ease of use, integrating psychological inspiration provides a broader understanding of what motivates user engagement and adoption. By including psychological inspiration in the model, this study aims to investigate how motivational states shape technology perception. Inspired users are inclined to explore and appreciate innovative features, thereby fostering a more favorable attitude towards the technology.

Understanding users' attitudes towards VTO is crucial for predicting and promoting its adoption, as it directly influences their behavioral intentions. Besides intention to use, users' favorable attitudes towards technology also often correspond with their intention to recommend it to others. Recommendation intention pertains to how inclined a consumer is to suggest a product or service to others. While there's ample research on how much consumers heed others' recommendations, fewer studies delve into what prompts consumers to make such recommendations, be they positive or negative (Furner et al., 2021, p. 89). Boulding et al. (1993) stated that they strongly believe that service quality positively affects important behavioral outcomes such as loyalty and positive word-of-mouth, which aligns with the idea that if a customer has a positive experience while using VTO, such as finding the perfect fit or enjoying the interactive try-on process, they are more likely to recommend the VTO to others. These positive endorsements not only contribute to shaping consumer perceptions but also play a crucial role in driving the adoption of VTO technology in the fashion e-commerce industry. Previous research has primarily focused on earlier versions of VTO technology, with limited studies on the latest advancements. Additionally, existing studies on VTOs in e-commerce platforms have not included Amazon. Given the lack of up-to-date research on VTO in the current literature, this study aims to extend the

knowledge of VTO to contemporary contexts by validating the impact of perceived usefulness on attitude and incorporating the new variable of psychological inspiration to examine its effect on attitude. Furthermore, this study will validate the influence of attitude on the intention to use VTO and introduce the new outcome variable of intention to recommend. While previous studies have predominantly validated purchase intention as an outcome using technology adoption models, research on intention to use is more limited, and the concept of intention to recommend has not yet been explored in the context of VTOs. Based on the above discussion, the following research question is proposed:

To what extent do media usefulness and psychological inspiration influence attitude towards VTO, and subsequently behavioral intention to use VTO and to recommend it?

To address the research question, this study employs a quantitative approach. Specifically, a survey was conducted to collect data from a sample of online shoppers residing in Europe aged 18 to 55, whom either have or do not have prior knowledge (information, familiarity, and experience) about VTO. This age range includes a mix of digital natives and those who have adapted to digital technologies, and it allows for varying perspectives on technology use. The study's aim is to understand the adoption of VTO technology within the European fashion e-commerce context, and so Amazon Europe was chosen as an example in the survey.

Academically, this research contributes to the intersection of consumer behavior, technology acceptance, and experiential marketing. By integrating the Extended Technology Acceptance Model (eTAM) and building on the insights by Gabriel et al. (2023), this study aims to examine the impact of media usefulness and psychological inspiration on attitude to better elucidate behavioral intentions in the context of VTO and e-commerce. The study also uses the concept of subjective knowledge as a control variable to test its impact on the relationships between media usefulness and psychological inspiration, and attitude. That is because subjective knowledge is believed to play an influential role

on consumer decision-making processes, including product evaluation, decision confidence, risk perception, preference formation, and brand loyalty (Alba & Hutchinson, 1987).

This study makes two significant contributions: firstly, it scrutinizes how shoppers' perceived media usefulness and psychological inspiration directly and indirectly influence their attitude towards VTO. Secondly, it evaluates whether the proposed model applies equally across the subjective knowledge participants have about VTO. Furthermore, by employing multiple-group structural equation modeling, we aim to pinpoint variations in VTO adoption, enhancing the explanatory and predictive capabilities of the eTAM. Unlike most TAM studies that only test a single model, our approach accounts for potential errors in generalization by examining model fit across different groups. This sheds light on the adoption dynamics of VTO by different groups of people.

This model is used for the development of the survey. In this study, the eTAM model informs the understanding of attitude towards VTO and the adoption of the technology by experienced or inexperienced consumers. Besides, it is relevant as it helps to illuminate how consumers perceive a new technology and what drives them to use it, an understanding which the e-commerce industry can use to its advantage.

2. Literature Review and Theoretical Framework

2.1 Overview

This chapter will go deeper into the literature in line with the research question. The literature in this chapter will focus on the relationships between media usefulness and psychological inspiration, and attitude and subsequently behavioral intention to use and to recommend and will conceptualize the most important terms for this branch of literature. Eventually this chapter will, based on the findings in the literature, propose 4 hypotheses that will be tested.

2.2 AR and Virtual Try-On in e-commerce

Augmented Reality (AR) represents a fusion of real-world and virtual environments, offering users an immersive experience characterized by rich sensory input (Azuma et al., 2001; Suh & Prophet, 2018, as cited in Kim & Choo, 2021, p. 1). Unlike Virtual Reality (VR), which creates entirely simulated environments, AR overlays virtual objects onto physical surroundings, enhancing sensory perceptions such as visual, auditory, and haptic experiences (Hancock, Kaplan, Cruit, & Endsley, 2020). This integration allows users to interact with digital objects within their immediate environment, creating immersive and interactive experiences (Smink, Reijmersdal, & Noort, 2022).

AR technology enables consumers to visualize products in different colors and angles, adjust zoom levels to their preference, and experience simulated control over the product through natural movements (Zhang, Lv, Chen, & Jiang, 2020, as cited in Qasem, 2021, p. 2; Hilken et al., 2017, as cited in Plotkina & Saurel, 2019, p. 365). This capability allows AR to provide a more engaging and personalized user experience compared to traditional digital interfaces. Early research on AR, rooted in technology acceptance theory, media characteristics, and experiential values, underscores the significance of AR attributes such as simulated physical control, environmental embedding, interactivity, and vividness, in enhancing consumer experiences (Hilken et al., 2017; Yim et al., 2017; Huang & Liao, 2015, as cited in Kim and Choo, 2021, p.4).

AR has been discovered to enhance pleasure, assurance, and convenience regarding products and brands while diminishing customers' uncertainty, potentially influencing their behavioral inclinations (Ozturkcan, 2021; Zagorc & Bernik, 2022), and providing them with both entertainment and utility (Grzegorczyk et al., 2019). Retailers can enhance customer value and deliver exceptional experiences throughout the customer journey by incorporating AR-powered product demonstrations into their online shopping platforms (Heller et al., 2019; Lemon and Verhoef, 2016, as cited in Kowalczuk et al., 2021, p. 1).

Despite the advantages, there are differing viewpoints on the impact of AR on consumer behavior. According to Lavoye et al. (2021, p. 16), the use of AR in retail settings can lead to several potential negative effects. Based on his research, privacy concerns are a primary issue, as AR may involve filming the user's body or immediate environment, leading to discomfort and negatively impacting brand attitudes. Consumers might feel intrusive when using AR applications that involve viewing their own faces, raising privacy concerns and affecting their decision comfort. Additionally, AR usage can cause media irritation, potentially eliciting negative consumer reactions. Consumers may perceive AR content as intrusive, particularly when it involves personal information or visuals of themselves. These negative effects, such as privacy concerns and media irritation, can significantly influence consumer perceptions and attitudes towards brands. Discomfort resulting from a lack of privacy in AR experiences can have adverse impacts on brand attitudes and consumer behavior (Lavoye et al., 2021, p. 16).

Nevertheless, AR technology helps brands differentiate themselves from competitors by offering unique digital interactions with products (Grzegorczyk et al., 2019, p. 1259). These immersive capabilities of AR have been effectively harnessed in the realm of e-commerce through Virtual Try-On (VTO) technology. VTO allows customers to visualize products in their own environment, enhancing conversion and reducing the hassle of returns (Dacko, 2017 as cited in Watson et al., 2018, p. 437). Research indicates that VTO significantly impacts purchase intention and attitudes toward online fashion shopping (Beck & Crié, 2018, as cited in Kim & Choo, 2021, p. 4),

with factors like perceived ease-of-use and usefulness shaping consumers' adoption intentions (Kim & Forsythe, 2008, p. 48). Additionally, the incorporation of AR technology into online shopping has attracted attention, with investigations into its effects on consumer perceptions and purchasing behaviors in the fashion sector (Kim & Choo, 2021). AR tools for VTO have predominantly been developed and studied in the context of jewelry, glasses, and makeup (Cho and Schwarz, 2012; Hilken et al., 2017; Rese et al., 2017; Yim et al., 2017, as cited in Plotkina & Saurel, 2019, p. 1), yet AR research must expand its investigation into broader contexts, with clothing being a pertinent and significant setting for exploration (Baytar et al., 2016; Beck and Crié, 2018, as cited in Plotkina & Saurel, 2019, p. 1).

As a leading global e-commerce conglomerate renowned for its diverse product offerings and technological prowess, Amazon continually endeavors to enhance the online shopping experience through the integration of cutting-edge features and immersive functionalities. Notably, the introduction of VTO for eyewear and shoe-wear in summer 2022 signifies a strategic move towards empowering customers with convenient and informative means of making purchasing decisions. With numerous options accessible, this feature enables customers to seamlessly engage in the exploration of various fashion options. Facilitated within the Amazon Shopping App on devices, users are afforded the opportunity to peruse VTO eligible fashion styles directly from the Amazon Fashion homepage. By activating the “Virtual Try On” function on the product detail page, customers can leverage their device’s front camera to visualize how glasses or shoes complement their selves from diverse perspectives and color iterations. This interactive process not only aids in fostering informed decision-making but also engenders a sense of personalized engagement. Furthermore, the integration of social sharing functionalities enables users to disseminate their VTO experiences, thereby fostering community interaction and feedback exchange. Overall, Amazon’s adoption of VTO technology underscores its dedication to redefining the digital fashion retail landscape through user-centric, experiential innovations.

The role of prior knowledge in the adoption of VTO technology is another crucial aspect to consider. Prior knowledge, including information, familiarity, and experience with VTO technology, can influence how consumers perceive and interact with these tools. Studies suggest that consumers with higher levels of prior knowledge are more likely to have favorable attitudes towards new technologies and are more likely to adopt them (Park et al., 1994). This study will also control for the variable of prior knowledge to better understand its impact on consumer attitudes towards VTO.

In conclusion, the integration of VTO, facilitated by AR, in retail and e-commerce represents a significant shift in consumer engagement and shopping experiences. While numerous studies have examined the value of VTO technology, there remains a dearth of research focusing on consumers' perceptions and attitudes towards VTO. Most existing studies primarily concentrate on the functionality of trying products on virtual 3D models, but this study examines the contemporary abilities of VTO. Hence, the objective of this study is to delve deeper into understanding the antecedents of consumer attitudes towards VTO, and how that can lead to behavioral intentions.

2.3 Technology Acceptance Model (TAM) - eTAM Framework

To elucidate how consumers adopt VTO technology, this study utilized an extended Technology Acceptance Model (eTAM) framework. The original TAM, proposed by Davis (1989), is a theoretical framework used to predict and explain the acceptance and adoption of technology by users. Based on the TAM framework, users' impressions about the ease of use and usefulness of a system mainly induce a behavioral intention (BI) and attitude to use or not to use the system (Nov & Wang, 2008, as cited in Breiki & Al-Abri, 2022, p. 6). However, research indicates that predicting the intention to adopt a new technology cannot be solely based on perceived usefulness and perceived ease of use. The intention to use new technology is influenced by numerous external factors beyond these two variables of the TAM model (Choi et al., 2020; Han & An, 2019, as cited in Lee & Oh, 2022, p. 2). Additionally, the variables in TAM are more relevant to decisions where there are limited

technology usage options (such as in a workplace setting) rather than to scenarios where users have voluntary choices, such as with virtual reality (Vijayasarathy, 2004 as cited in Manis & Choi, 2019, p. 504).

Heijden (2000) adapted the original TAM for a Web site context, proposing the Extended Technology Acceptance Model (eTAM) framework. eTAM offers valuable insights into users' behaviors regarding the adoption of new technologies, particularly within the realm of e-commerce. Hence, within the context of the new technology of VTO, when online shoppers perceive it as effective in migitating product risk, enhancing shopping enjoyment, or both, the likelihood of adoption increases (Kim & Forsythe, 2008, p. 46).

Therefore, this study extends the original TAM by incorporating psychological inspiration as an antecedent variable along with perceived usefulness and integrates subjective knowledge as a control variable. TAM and its extensions have been validated in numerous studies across various technologies and settings, demonstrating their ability to predict user acceptance and behavioral intentions accurately. These core components of TAM are crucial for examining how media usefulness (a utilitarian value) influences user attitudes towards VTO technology and eTAM allows for the inclusion of psychological inspiration (a hedonic value), providing a more holistic understanding of the factors that drive technology adoption beyond just utilitarian considerations. Furthermore, by considering individual differences such as subjective knowledge, eTAM ensures a more nuanced analysis of variations in users' prior knowledge about VTO technology.

2.3.1 Attitude

Attitude plays a significant role in the context of eTAM. The concept of attitude towards a technological system pertains to the user's favorable or unfavorable feelings about participating in that system (Davis, 1989). Therefore, Attitude Towards Use (ATU) stands out as a crucial determinant influencing user acceptance of VTO technology and reflects the extent to which users

harbor favorable or unfavorable sentiments regarding the utilization of a specific technology. A more positive attitude towards the technology correlates with a higher likelihood of user adoption and usage (Breiki & Al-Abri, 2022, p. 6168). Research on AR apps has expanded on Schwarz's (2007) view that attitudes are evaluative judgments influenced by current information and contextual factors, despite the traditional notion of attitudes as enduring personal traits (Rauschnabel et al., 2019, as cited in Nikhashemi et al., 2021, p. 5). Therefore, it is necessary to assess the impact of media usefulness and psychological inspiration on attitude towards VTO, and how attitude, it turn, can influence behavioral intentions to use and to recommend VTO.

2.3.2 Utilitarian and Hedonic Values

The TAM provides a framework for investigating how consumers react cognitively, conatively, and affectively to technology. Research findings indicate that embracing technology is crucial for individuals to adopt information technology. Babin et.al (1994) propose that evaluating a shopping experience involves two aspects: utilitarian and hedonic value. Hedonic value relates to satisfaction derived from the virtual shopping experience, while utilitarian value hinges on achieving a goal, such as the intention to purchase (Nayak et al., 2021, p. 4). In the context of the eTAM framework, utilitarian value is conceptualized as media usefulness, referring to the practical benefits and value perceived in media technologies. Conversely, hedonic value is associated with psychological inspiration, indicating the satisfaction and motivational state derived from engaging with the technology.

2.3.3 Media Usefulness on Attitude

In the context of technology adoption, perceived usefulness (PU) plays a significant role, as demonstrated by Heijden's adaptation of the original TAM for websites, known as the eTAM framework. *Media usefulness*, as identified by Rauschnabel (2018), refers to the cognitive

gratification derived from interactive media, such as augmented reality (AR), that elicits intentions and usage patterns. It involves the practical benefits and value users perceive in media technologies, particularly in terms of aiding decision-making, enhancing efficiency, and contributing to a positive user experience (Rauschnabel, 2018). The TAM framework, particularly the construct of perceived usefulness, closely corresponds with the concept of media usefulness, which underscores users' perceptions of the practical benefits and value offered by augmented reality (AR) features, thereby influencing their consideration to adopt this innovative technology. Our emphasis on the perceived usefulness variable in this study is rooted in the validation of the Technology Acceptance Model (TAM), through replications and real-world applications, which consistently highlight perceived usefulness as the principal factor influencing individuals' intention to adopt technology in professional settings (c.f., Davis, 1993; Davis et al. 1989; Mathieson, 1991; Taylor & Todd, 1995, as cited in Childers et al., 2001, p. 514).

2.3.4 Psychological Inspiration on Attitude

Psychological inspiration, in a figurative sense, refers to a state of heightened motivation and creativity triggered by external stimuli rather than deliberate action or without any apparent cause (Thrash and Elliot, 2003). In the context of consumer behavior, psychological inspiration manifests as a motivational state where individuals perceive new possibilities or ideas (Böttger et al., 2017, Oleynick et al., 2014, as cited in Rauschnabel et al., 2019, p. 45), which may lead to creative insights or innovative thinking (Rauschnabel et al., 2019). Böttger et al. (2017) illustrate that when customers actively seek and are receptive to novel concepts, external influences can elicit feelings of inspiration. This inspiration arises, in part, from the perceived acquisition of both practical and emotional rewards, which could then prompt shifts in consumption patterns. Emotions, as defined by Mehrabian & Russell (1974), are essentially reactions to experiences, characterized by feelings.

In their study, Rauschnabel et al. (2019) examine how AR apps affect customers' attitudes

toward AR, mediated by utilitarian and hedonic benefits. Their findings indicate that while both utilitarian and hedonic benefits impact attitudes toward the app, only hedonic benefits prompt psychological inspiration. By engaging with AR-enhanced VTO systems, for example, consumers may be inspired to explore new fashion styles, experiment with different product combinations, or envision how products fit into their daily routines. Therefore, it is crucial to examine how positive attitude towards VTO is triggered by psychological inspiration.

2.3.5 Individual Differences

While the original TAM primarily focused on PU and PEOU as predictors of technology adoption, eTAM expands this by integrating additional factors, including individual differences in influencing technology acceptance and use. Subjective knowledge, the consumer's self-perception of how much he knows about a product or service (Brucks, 1985; Park et al., 1994; Selnes and Gronhaug, 1986, as cited in Vergura et al., 2020, p. 125), can affect attitude towards using VTO. Subjective knowledge was found to be an impactful factor influencing attitudes and behaviors (e.g., Feick et al., 1992; Pieniak et al., 2006, as referenced in Vergura et al., 2020, p. 125), and certain studies (Mandal & Paul, 2012, as cited in Zhang & Liu, 2015, p. 1199) propose that people's acceptance of, for instance, genetically modified (GM) foods is heavily shaped by their level of knowledge. Hence, in constructing a conceptual research framework for consumers' attitudes toward VTO technology, particular emphasis will be placed on prior knowledge. Besides, research is lacking in examining the relationship between knowledge about a technology and attitude towards it. Thus, we examine the influence of media usefulness and psychological inspiration on attitude towards VTO, by controlling for prior knowledge of VTO among respondents.

2.3.6 Behavioral Intentions

2.3.6.1 Intention to Use

Behavioral intention (BI) plays a pivotal role in the TAM framework, influenced by individuals' attitudes towards using a system and their perception of its usefulness in enhancing job performance (referred to as perceived usefulness) (Jackson et al., 1997). Warshaw and Davis (1985) define BI as the degree to which a person has formulated conscious plans to perform or not perform some specified future behavior. In the context of VTO technology within fashion e-commerce, BI manifests as users' intentions to utilize augmented reality (AR) features through VTO in their future interactions. This intention is influenced by users' attitudes towards the technology, which are in turn shaped by their experiences and perceptions of media usefulness (MU). As users engage with AR features embedded within VTO and perceive practical benefits and value, their attitudes towards the technology become more positive, subsequently influencing their intention to use AR features in future shopping experiences. TAM suggests that individuals develop their intention to engage in specific behaviors partly based on their emotional responses to the systems—a factor known as attitude—and partly influenced by their beliefs, which in turn shape their attitude. In this framework, attitude is conceptualized as a unified emotional construct (Yang & Yoo, 2004).

2.3.6.2 Intention to Recommend

Electronic Word of Mouth (eWOM) serves as a crucial source of information, significantly impacting customer decisions on brands and products (Smith et al., 2005). It is often cited as one of the strongest influencers on the adoption of new products and services (Chevalier & Mayzlin, 2006; Hogan, Lemon, & Libai, 2003; Kumar, Peterson, & Leone, 2007, as cited in Meuter et al., 2013). It is defined as the dynamic and ongoing information exchange process between potential, actual, or former consumers regarding a product, service, brand, or company, which is available to a multitude of people and institutions via the Internet (Ismagilova et al. 2017, p. 17). Consumers can share their evaluations and viewpoints regarding a product or service through various online channels, including

blogs, social networking sites (SNSs), discussion forums, and review websites (Cheung and Thadani 2010, ac cited in Ismagilova et al. 2017, p. 18). e-WOM can encompass either positive or negative discussions about a company or product among present, potential, or past customers, available on the internet (Hennig-Thurau et al., 2004; Reimer and Benkenstein, 2016, as cited in Dixit et al., 2019). Online communicators tend to display fewer inhibitions and social anxieties compared to face-to-face interactions, leading to more honest and forthcoming viewpoints (Sun et al., 2006; Roed, 2003, as cited in Meuter et al., 2013). Thus, customers who view a new technology positively are more likely to spread positive word of mouth, and specifically to recommend the technology to acquaintances. In this context, recommendation intention becomes a crucial factor as it pertains to how inclined a consumer is to suggest that another person utilize a product or service.

2.4 Research model and Hypotheses development

Our model hypothesizes that two factors determine consumers' attitude toward the VTO technology: media usefulness and psychological inspiration. Attitude towards the VTO technology then determines behavioral intention to use the technology, and to recommend the technology to others. This study expanded the original TAM framework factors like perceived usefulness, to include other factors like psychological inspiration and, control variables like prior knowledge. In the following section, we discuss each hypothesis in detail.

2.4.1 Perceived media usefulness (utilitarian value)

PU is defined as the degree to which a person believes that use of a system would improve his or her performance (Davis, 1989, p. 320), and when it applies to technology, it reflects its functionality (Kim & Forsythe, 2008). Previous research has extensively explored the role of perceived usefulness in technology acceptance, highlighting their significance in shaping users' adoption behaviors towards new technologies (Karahanna & Straub, 1999). The utility of interactive

media can be viewed as representing the practical aspects of shopping, influencing one's inclination to engage with interactive shopping methods. Therefore, in this study, we will utilize the notion of perceived usefulness synonymously with the term "media usefulness". That is to say, when users perceive greater media usefulness, it is more likely that their attitude towards VTO becomes more positive. Thus, understanding the impact of media usefulness on users' perceptions is essential for predicting and explaining the adoption and utilization of VTO technology within the fashion e-commerce industry. Drawing from these insights, we hypothesize:

H1: *Media Usefulness (MU) positively influences attitude towards VTO.*

2.4.2 Psychological inspiration (hedonic value)

Psychological inspiration, identified as a hedonic value, is pivotal in influencing user attitudes towards Virtual Try-On (VTO) systems, as evidenced by recent empirical studies. The researchers propose that when customers are motivated by the benefits they perceive from engaging in an augmented reality (AR) experience, they are inclined to manifest behavioral, attitudinal, or emotional changes. In the context of virtual reality (VR), the evaluation of specific aspects and formal attributes within a virtual environment is linked to the affective appraisal of that simulated setting (Martínez-Navarro et al., 2019). Consequently, inspiration serves as a notable mechanism by which perceived benefits steer customers toward desired behavioral results. Studies have demonstrated that inspiration alters current perceptions and standpoints, leading to potential changes in attitude (Böttger et al., 2017; Figgins et al., 2016; Oleynick et al., 2014).

Furthermore, hedonic values, which prioritize enjoyable and emotionally satisfying interactions, are fundamental to user experience preferences (Yang and Lee, 2010 as cited in, Yuan et al., 2022, p. 3). Hedonic value is highly subjective and personal, serving as a motivator for users seeking enjoyment (Holbrook and Batra, 1987 as cited in, Yuan et al., 2022, p. 4). Compared to traditional shopping, engaging with VTO technology allows consumers to digitally try on products, enhancing convenience and reducing the uncertainty associated with online purchases. For instance,

the emotional benefits perceived by users significantly influence their valuation of AI assistants, increasing their readiness to adopt and integrate these technologies into daily life (Zhang and Li, 2005 as cited in, Yuan et al., 2022, p. 4). Thus, enhancing emotional satisfaction and enjoyment through immersive AR experiences is expected to enhance user acceptance and engagement with VTO systems. Drawing on these findings, the following hypothesis is proposed:

H2: *Psychological Inspiration (PI) influences attitude towards VTO.*

2.4.3 Attitude

A growing body of literature suggests that attitude plays a crucial role in examining the adoption of technological advancements. For instance, Kim et al. (2020) discovered that ATU significantly predicted the intention to use AR technology within smart healthcare contexts. Similarly, Alzahrani et al. (2020) noted that ATU exerted a significant influence on the intention to use VR technology within higher education settings. Furthermore, other research works have underscored ATU as a critical predictor of user acceptance regarding VR/AR technologies. Wang et al. (2019) revealed the significant impact of ATU on user adoption and usage of Augmented Reality technology, particularly in the realm of online shopping. Likewise, Shahrabani and Popper-Giveon (2020) observed the significant effect of ATU on the intention to use VR technology, particularly within the domain of mental health services. These findings emphasize the pivotal role of ATU in predicting and assessing user acceptance of VR/AR technologies (Breiki & Al-Abri, 2022). Fostering a positive attitude towards the use of these technologies holds the potential to enhance their adoption and utilization rates.

2.4.4 Behavioral Intentions as a result of attitude

As users engage with AR features embedded within VTO and perceive practical benefits and value, their attitudes towards the technology become more positive, subsequently influencing their

behavioral intentions which include their willingness to use AR features in future shopping experiences and to recommend the VTO. Hence, this study focused on intention to use and to recommend as specific forms of behavioral intentions.

Despite considerable research exploring how much consumers depend on others' recommendations, there's limited investigation into the factors influencing consumers to either positively or negatively endorse products or services (Furner et al., 2021). Our study aims to contribute to this body of literature by examining the factors influencing people's intentions to recommend a specific technology, particularly the VTO feature. Previous studies have shown that perceived usefulness and positive attitudes towards a technology can significantly affect users' behavioral intentions. For instance, Paris et al. (2010) found that PU positively affected users' attitudes toward using Facebook, which in turn motivated them to attend events promoted on the platform. Building upon this context, the following hypotheses are proposed:

H3: *Positive attitude towards VTO positively influences intention to use VTO.*

H4: *Positive attitude towards VTO positively influences intention to recommend VTO.*

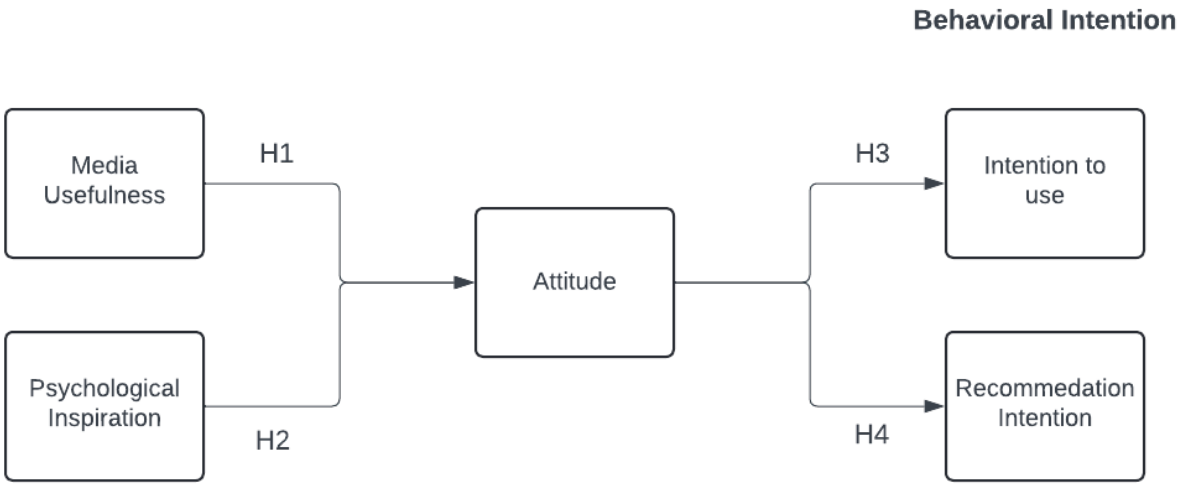

Figure 1. Conceptual Model

3. Method

In this section, the research design and methodology used in this study will be explained. A justification for the method will be provided, followed by an explanation of the operationalization process. Next, the sampling strategy will be covered, followed by an explanation of the data collection and analysis methods. For the data collection, a survey is conducted, and for the analysis, statistical analysis is applied. To conclude the chapter, the validity and reliability of the study will be examined followed by a discussion of the ethical implications. The steps taken in the research are explained in more detail in the subsequent sections.

3.1 Justification of the choice of method and Research design

The current research aims to answer the research question: *To what extent do media usefulness and psychological inspiration influence attitude towards VTO, and subsequently behavioral intention to use VTO and to recommend it?* In order to achieve this, this study derives insights from the TAM theory to test the relationship between media usefulness and attitude, and subsequently behavioral intentions. In addition, this study examines how psychological inspiration could also have an influence on attitude. Therefore, a quantitative approach was selected as the research method to measure participants' perceptions and preferences regarding VTO technology in the fashion e-commerce industry. Drawing from the insights of Creswell (2009), this approach is well suited for collecting and analyzing numerical data related to attitudes and intentions, and offers an objective and impersonal approach, suitable for measuring and analyzing participants' perceptions and preferences in a systematic and structured manner. Furthermore, quantitative research enables the use of statistical analysis techniques to identify patterns, trends and associations in the data which help in drawing meaningful conclusions and informed decisions. This study also employs a survey method, as suggested by Creswell (2009), which provides an economical and efficient means of data collection, allowing for a rapid turnaround in gathering responses from a large number of

participants. By utilizing a questionnaire, this study gathers easy to administer and standardized responses from participants which allows for convenience and consistency in data collection. Finally, questionnaires can be easily scaled to accommodate a large sample size that enhances the generalizability of the findings (Creswell, 2009). Specifically, the study aims to quantify concepts in the tested model including media usefulness, psychological inspiration, attitude, and behavioral intentions etc.

3.2 Population and sampling criteria

This study focuses on understanding the adoption of Virtual Try-On (VTO) technology within the European fashion e-commerce context. The target population consists of adults residing in Europe aged 18 to 55. This age range was chosen for two primary reasons. First, individuals within this age range are more likely to be active online shoppers, making them pertinent for studying VTO technology adoption. Second, this age range includes a mix of digital natives and those who have adapted to digital technologies, ensuring varied perspectives on technology use. Additionally, since the survey used Amazon Europe as an example, it was essential that participants had European residence to ensure relevance and familiarity with the specific context of the study.

Given the impracticality to gather data from every individual in the target population (Barbie, 2016), a sampling strategy is necessary to select representative participants for the study. The sampling process involves of deciding suitable observations to represent the target population (Barbie, 2016). Specific criteria for participation included being within the age range of 18 to 55, residing in Europe and having varying degrees of subjective knowledge regarding VTO technology, including those who have subjective knowledge, no subjective knowledge, or experience with Amazon's VTO.

To enhance the survey's generalizability, the goal was to recruit a minimum of 150 respondents. This sample size is sufficient to perform statistical analyses and draw meaningful

conclusions about the factors influencing VTO technology adoption. Despite its advantages, online survey methods may also have drawbacks, including sampling bias. Some individuals may be more inclined to complete surveys, while others may not show interest, potentially introducing systematic bias (Wright, 2005) and affecting result generalizability. Additionally, access issues may arise (Wright, 2005). Nevertheless, a large sample size can help mitigate these concerns.

3.3 Data Collection

In line with the research objectives, the sampling procedure used convenient sampling and snowball sampling were combined. Convenient sampling involved recruiting individuals readily accessible and willing to participate (Etikan et al., 2016). Taking the approach of an online survey, respondents were approached on different online platforms with a survey link of the questionnaire designed via Qualtrics, a commonly used online survey platform that could be accessed for free by students at Erasmus University Rotterdam. Respondents were recruited by distributing the online survey link in groups of Facebook, Reddit, WhatsApp and LinkedIn where people are allowed to share their surveys and gain participants. Utilizing these groups, keywords such as "survey" and "survey exchange" were used to identify relevant groups, with permission obtained from group admins to share the survey link. Snowball sampling involved reaching individuals in the target population through those already accessible to the researcher (Barbie, 2016). This method facilitated reaching individuals who aligned with the research interests but were otherwise difficult to locate. Respondents who were reached assisted in sharing the survey with others via private messaging and social media accounts.

Online survey research should be sensitive to ethical concerns, such as privacy and confidentiality (Ho, 2014). With such consideration, respondents were shown a consent form that explains that their participation is voluntary, and their data remains anonymous and confidential. This form was incorporated into the introduction page where the topic of the survey, which was VTO

in e-commerce, was also communicated. As for the main content of the questionnaire, it was purposively designed with regard to the order of items. The general order was in line with the theoretical framework. Demographic data was retrieved at the start of the survey. This was out of the purpose to guarantee that the target population demographics were met, and otherwise, participants who did not meet the criteria were automatically excluded from completing the survey.

At the beginning, respondents were asked about their demographic background. Questions including gender, age, country of residence, level of education and shopping frequency were asked. Then, respondents were asked to report their knowledge, experience and familiarity with VTO by responding to five items. Since VTO technology is relatively new in e-commerce, its meaning could be obscure and unclear. Considering this, a definition of VTO technology was given, being a technology that allows people to try on products virtually before purchasing them, without the need to visit a physical store. This helped to make the context more concrete.

Following the video, participants were asked if they had previous experience with Amazon's VTO feature. Next, respondents' perceptions of VTO's usefulness were collected. Afterwards, respondents were asked about their inspiration levels considering the video they had previously watched. Respondents were then asked to assess their attitude towards VTO based on the previous video. After, they were asked measure their intention to use VTO with four items. Finally, the recommendation intention of respondents towards dogs was measured. Respondents were asked to report their likeliness to recommend the VTO technology to a friend, if asked.

3.4 Demographic profile and respondent characteristics

EU residence, gender and education level will be presented in table 4.1. In general, the observed age range of the valid sample was 18 to 55 (M = 32.22, SD = 1.36). The survey results reveal diverse patterns in online fashion shopping frequency among respondents. A notable 23.9% of respondents either never or rarely shop for fashion products online, suggesting a preference for traditional shopping or limited online engagement, whereas 33.1% shop online sometimes, showing

occasional use, 38.4% shop often, indicating frequent online shopping, and 4.6% always shop online, highlighting a small minority who consistently rely on online platforms for their fashion needs. Additionally, the survey results revealed a varied spectrum of familiarity, knowledge, or experience with VTO technology among respondents. When asked about their level of knowledge, the majority of respondents somewhat or strongly disagreed that they know a lot about VTO with 24.5% and 25.8% respectively, while only a small percentage (5.3%) strongly agreed. Conversely, when evaluating experience, a higher percentage (31.8%) strongly disagreed with having great experience with VTO technology, suggesting a potential disparity between perceived knowledge and practical application. Additionally, while familiarity with VTO was relatively evenly distributed, with most people strongly disagreeing (29.1%), understanding of its features and benefits saw a significant shift, with 35.1% somewhat agreeing and 5.3% strongly agreeing. Interestingly, when comparing one's knowledge relative to peers, a substantial portion (39.1%) neither agreed nor disagreed, indicating uncertainty or variability in perceived knowledge within their social circles. Moreover, practical engagement with VTO technology appears limited, as only 2.0% reported having tried Amazon's VTO feature, and a significant 98% have not tried it.

Table 3.4

Descriptive demographic statistics

Sample	152
EU residency	
Cyprus	92 (60.9%)
Netherlands	25 (16.6%)
Greece	5 (3.3%)
Spain	4 (2.6%)
France	4 (2.5%)
Other European countries	Less than 4 respondents each
Gender	
Male	40 (26.5%)

Female	109 (72.2%)
Non-binary/third gender	1 (0.7%)
Prefer not to say	1 (0.7%)
Education level	
Primary Education	1 (0.7%)
Secondary Education	17 (11.3%)
Bachelor's or equivalent level	80 (53.0%)
Master's or equivalent level	50 (33.1%)
Doctoral or equivalent level	3 (2.0%)

3.5 Operationalization of concepts

This study aims to demonstrate the association between media usefulness and psychological inspiration and attitude towards VTO, and subsequently the relation between attitude and behavioral intentions. To answer the research question, four hypotheses specifying the relations among variables were introduced. To further quantify such relations, the related variables and their corresponding measurements are identified. Besides, control variables (i.e. knowledge) are also defined and operationalized. Each concept was assessed using a 5-point Likert scale ranging from strongly disagree to strongly agree, ensuring clarity and ease of response for participants.

3.5.1 Media usefulness

As discussed in the theoretical framework, media usefulness is used synonymously with perceived usefulness, and refers to the degree which a person believes that using a particular system would enhance their job performance (Davis, 1989). This variable was assessed using six items adapted from Davis (1989) and optimized to the context of VTO technology, with one of the items being "Using VTO would improve my shopping experience". These items have been extensively tested and validated in numerous studies across various technological contexts, demonstrating high reliability and validity. One study within the context of VTO (T. Zhang et al., 2019), found that attitude was affected by perceived usefulness, using the same scale by Davis, 1989.

3.5.1.1 Factor Analysis and reliability analysis of media usefulness

With a number of cases larger than 150, a factor analysis was conducted to test whether the six items formed one single scale. The 6 items which were Likert-scale based were entered into a confirmatory factor analysis using Principal Components extraction with Direct Oblimin rotation with one factor to be extracted, *KMO* = .90, χ^2 (*N* = 152, 15) = 621.94, *p* < .001. The resultant model explained 70.5% of the variance in media usefulness. Factor loadings of individual items onto the factor found are presented in Table 1. After this, a reliability analysis was conducted. The Cronbach's Alpha of this scale was .91 and could not be improved by removing any items. This indicates that the measurement was reliable. The score of the scale was derived from the average score of the six items with a mean score of 22.5 and a standard deviation of 4.9.

Table 3.5.1.1

Factor and reliability analysis for scales for media usefulness (N=152)

Item	*Media Usefulness*
Using VTO while shopping online would enable me to find my suitable size more quickly.	.68
Using VTO would improve my shopping experience.	.85
Using VTO in an online store would increase my satisfaction with a product.	.85
Using VTO would enhance my effectiveness to choose between sizes, colors, etc.	.90
Using VTO would make it easier to choose a product.	.85
I would find VTO useful in my shopping experience.	.89
R^2	70.5%
Eigenvalue	4.23
Cronbach's α	.91

3.5.2 Psychological Inspiration

AR, being highly experiential (Bulearca and Tamarjan, 2010 as cited in P.A. Rauschnabel et al. 2019), allows individuals to better comprehend how goods, products, and experiences could impact their offline life. Psychological inspiration is heightened when consumers perceive emotional gratification (hedonic value) and recognize utilitarian value (perceived usefulness) in AR applications. The Customer Inspiration scale by Böttger et al. (2017) was utilized to measure psychological inspiration in this study. The five items, with one being "I was intrigued by a new idea", were modified to fit the specific research context and capture the extent to which consumers feel inspired or motivated by the VTO technology. The items in this scale allow this study to comprehend if participants feel inspired by VTO's capabilities, therefore helping in best answering if psychological inspiration influences attitude.

3.5.2.1 Factor Analysis and reliability analysis of psychological inspiration

The 5 items which were Likert-scale based were entered into a confirmatory factor analysis using Principal Components extraction with Direct Oblimin rotation with one factor to be extracted, $KMO = .84$, $\chi^2 (N = 152, 10) = 330.12$, $p < .001$. The resultant model explained 64.3% of the variance in psychological inspiration. Factor loadings of individual items onto the factor found are presented in Table 2. After this, a reliability analysis was conducted. The Cronbach's Alpha of this scale was .86 and could not be improved by removing any items. This indicates that the measurement was reliable. The score of the scale was derived from the average score of the six items with a mean score of 18.7 and a standard deviation of 4.1.

Table 3.5.2.1

Factor and reliability analysis for scales for psychological inspiration (N=152)

Item	*Psychological Inspiration*
My imagination was stimulated.	.75
I was intrigued by a new idea.	.76

I unexpectedly and spontaneously got new ideas.	.85
My horizon was broadened.	.84
I discovered something new.	.81
R^2	64.3%
Eigenvalue	3.22
Cronbach's α	.86

3.5.3 Attitude

The conceptualization of "Attitude towards using VTO" is informed by seminal studies such as those conducted by Rese et al. (2014), and Al Morabet (2021), which synthesized and adapted items from prior research. Al Morabet (2021) incorporated insights from Ahn et al. (2004) and Rese et al. (2014) to develop a comprehensive set of statements tailored to assess attitudes towards utilizing VTO technology. Additionally, some of the items that were derived from the work of Rese et al. (2014), drew upon the frameworks established by Ahn et al. (2004) and Porter and Donthu (2006). As the items were used and validated in different studies, this study incorporates them to best answer the the question whether the attitude of participants towards VTO is positive. Additionally, they were carefully crafted to resonate with the specific context and applications of VTO technology. One item was "Using VTO technology is a good idea".

3.5.3.1 Factor Analysis and reliability analysis of attitude

The 5 items which were Likert-scale based were entered into a confirmatory factor analysis using Principal Components extraction with Direct Oblimin rotation with one factor to be extracted, *KMO* = .87, χ^2 (*N* = 152, 10) = 593.08, $p < .001$. The resultant model explained 76.7% of the variance in attitude. Factor loadings of individual items onto the factor found are presented in Table 3. After this, a reliability analysis was conducted. The Cronbach's Alpha of this scale was .92 and could not be improved by removing any items. This indicates that the measurement was reliable. The score of the scale was derived from the average score of the six items with a mean score of 19.8 and a standard

deviation of 4.1.

Table 3.5.3.1

Factor and reliability analysis for scales for attitude (N=152)

Item	*Attitude*
I am positive about the VTO technology	.91
The VTO technology is so interesting that you just want to learn more about it	.80
It just makes sense to use VTO technology	.85
Using VTO technology is a good idea	.91
Using VTO technology is an appealing idea	.91
R^2	76.7%
Eigenvalue	3.84
Cronbach's α	.92

3.5.4 Behavioral Intentions

Behavioral intentions in this study include the intention to use the VTO technology and the intention to recommend it.

3.5.4.1 Intention to Use

The measurement of users' intention to use the VTO feature were executed using Venkatesh et al's (2012) behavioral intention questions, which included "I intend to use VTO". The specific set of items was carefully selected to answer best if participants intend to use VTO.

3.5.4.2 Intention to Recommend

The measurement of recommendation intention was comprised of one question borrowed from Furner, Racherla, and Zhu (2012) to examine the likelihood of recommending VTO to a friend. The question was chosen based on its ability to answer most appropriately whether participants would recommend the VTO, and not overlap with the set of items measuring intention to use.

3.5.4.3 Factor Analysis and reliability analysis of Intention to Use

The 4 items which were Likert-scale based were entered into a confirmatory factor analysis using Principal Components extraction with Direct Oblimin rotation with one factor to be extracted, *KMO* = .84, χ^2 (*N* = 152, 6) = 546.61, *p* < .001. The resultant model explained 81.4% of the variance in intention to use. Factor loadings of individual items onto the factor found are presented in Table 4. After this, a reliability analysis was conducted. The Cronbach's Alpha of this scale was .92 and could not be improved by removing any items. This indicates that the measurement was reliable. The score of the scale was derived from the average score of the six items with a mean score of 14.7 and a standard deviation of 3.8.

Table 3.5.4.3

Factor and reliability analysis for scales for Intention to Use (N=152)

Item	*Intention to Use*
I intend to use VTO.	.94
I predict I will use VTO.	.94
I plan to use VTO in the future.	.94
In the future, I will use VTO in online sites significantly more often than other online sites who don't have VTO.	.77
R^2	81.4%
Eigenvalue	3.26
Cronbach's α	.92

3.5.5 Prior Knowledge

The conceptualization of "Knowledge about VTO technology" forms a pivotal aspect of this thesis and serves as a control variable. Product knowledge plays a crucial role in consumers' decision-making processes (Alba and Hutchinson, 1987; Brucks, 1985, as referenced in Vergura et al., 2020, p. 125). Particularly, subjective knowledge which includes an individual's confidence in their knowledge within a specific domain, can play a crucial role in shaping attitudes and behaviors

(Brucks, 1985). Subjective knowledge reflects consumers' self-perception of their familiarity with a product or service (Brucks, 1985; Park et al., 1994; Selnes and Gronhaug, 1986, as cited in Vergura et al., 2020, p. 125). Subjective knowledge has been identified as a more influential determinant of attitude and behavior compared to objective knowledge (e.g., Feick et al., 1992; Pieniak et al., 2006, as cited in Vergura et al., 2020, p. 125).

The information processing paradigm focuses on cognitive processes occurring between exposure to a stimulus and the subsequent behavioral response. A fundamental aspect of this model is the role of stored information in memory, or prior knowledge. Numerous empirical studies support the notion that prior knowledge influences information processing activities (e.g., Chase and Simon 1973a, 1973b; Chi, Glaser, and Rees 1981; Chiesi, Spilich, and Voss 1979; Larkin et al., 1980, as cited in Brucks, 1985, p. 1). In consumer behavior research, various studies have investigated the impact of variables associated with prior knowledge (e.g., familiarity, product experience) on different information processing activities (e.g., Alba 1983; Bettman and Park 1980; Johnson and Russo 1984; Park 1976; Srull 1983, as cited in Brucks, 1985, p. 1).

In the context of VTO, when individuals interact with new technology like virtual try-on systems, their subjective knowledge about the technology and its potential benefits can influence their attitudes and responses. Perceived usefulness and psychological inspiration from using the virtual try-on technology may impact individuals' confidence in their ability to use the technology effectively and make informed decisions based on the virtual try-on experience. Therefore, as higher level of knowledge might result in more favorable attitudes, we use subjective knowledge as a control variable in the test of H1 and H2, where attitude towards VTO serves as the dependent variable. The construct of prior knowledge (information, familiarity, and experience) about VTO technology is operationalized through a series of modified questions drawn from Park et al. (1994), which fit best within the context of this study.

3.5.5.1 Factor Analysis and reliability analysis of Prior Knowledge

The 5 items which were Likert-scale based were entered into a confirmatory factor analysis using Principal Components extraction with Direct Oblimin rotation with one factor to be extracted, *KMO* = .83, χ^2 (*N* = 152, 10) = 414.98, *p* < .001. The resultant model explained 68.6% of the variance in prior knowledge. Factor loadings of individual items onto the factor found are presented in Table 5. After this, a reliability analysis was conducted. The Cronbach's Alpha of this scale was .89 and could not be improved by removing any items. This indicates that the measurement was reliable. The score of the scale was derived from the average score of the six items with a mean score of 12.7 and a standard deviation of 4.8.

Table 3.5.5.1

Factor and reliability analysis for scales for Prior Knowledge (N=152)

Item	*Prior Knowledge*
I know a lot about VTO technology	.82
I have great experience with VTO technology	.83
I am familiar with VTO technology	.89
I understand the features and benefits of VTO technology	.77
My knowledge about VTO technology is better relative to the people I know	.82
R^2	68.6%
Eigenvalue	3.43
Cronbach's α	.89

3.6 Data Analysis

Once data collection concluded, the gathered data underwent input into SPSS for further analysis. In total, 215 respondents were reached, among whom, 188 respondents completed the questionnaire. Among all recorded responses, five criteria were applied to select the valid sample for the analysis afterwards, namely age, country of residence, time spent filling the survey, distribution channel and progress. Respondents who were under 18, above 55, reported living in a country

outside of Europe, spent less than 1 minute or more than 10 minutes on the survey, or did not progress 100% to the end of the survey were filtered out. This led to a number of 152 valid cases.

The choice of statistical techniques depended on the measurement levels of the variables. Given that all variables, including perceived media usefulness, psychological inspiration, attitude towards VTO, intention to use, and intention to recommend, are continuous variables, linear regression analysis was deemed appropriate. Specifically, hierarchical linear regression was employed to test all hypotheses. Hierarchical linear regression is a methodological approach used to assess whether a new set of variables enhances the predictive capacity of preceding variables (Leech, Barrett, & Morgan, 2015). Thus, this method enables the examination of chain effects and facilitates the inclusion of control variables that may impact the dependent variable but are not the primary focus of the study. In testing Hypotheses 1 and 2, the control variable of prior knowledge was included to account for any pre-existing familiarity with VTO technology that might influence participants' attitudes. Hierarchical linear regression analysis was employed, with prior knowledge entered in the first model, followed by the predictor variables (media usefulness and psychological inspiration) in the second model. Similarly, to assess the impact of attitude on the behavioral intentions to use and recommend VTO (H3 and H4), hierarchical regression analysis was also employed.

3.7 Validity and Reliability

Validity pertains to whether a study effectively measures its intended constructs. It closely aligns with measurement validity, which assesses whether the operationalization accurately captures the concepts of interest in research (Heale & Twycross, 2015). In the present study, validity was bolstered through four key approaches. Firstly, established scales were utilized and adapted to fit the current study's contexts. Employing previously validated scales enhances the survey's validity (Hyman, Lamb, & Bulmer, 2006). Secondly, factor analyses were conducted on the adapted scales to

ensure each scale effectively measured a single concept. Thirdly, participant recruitment was facilitated through snowball sampling, broadening survey distribution beyond the researcher's personal network to encompass individuals from various European countries, backgrounds, and demographics. Fourthly, respondents were filtered based on criteria including age, country of residence, survey completion time, distribution channel, and progress, enhancing confidence in recruiting target population respondents and obtaining accurate data.

Reliability, another crucial aspect influencing research quality, pertains to the consistency of measurements (Heale & Twycross, 2015). It ensures that repeating the study using the same research designs would yield consistent results. Reliability in the current research was strengthened by employing a standardized questionnaire format with clear instructions for survey completion. This approach ensured all respondents were presented with identical questions and responded in a standardized manner. Additionally, reliability analyses, including Cronbach's α, were conducted to assess internal consistency, ensuring all items within each scale measured the same concept. Sample diversification was achieved by purposively distributing the survey across diverse groups on platforms such as Facebook, Reddit, and LinkedIn. To enhance reliability, incomplete and error answers were filtered out from the data set.

4. Results

This chapter analyzes various factors influencing attitudes towards using Virtual Try-On (VTO) technology. It is structured into four sections. Section 5.1 examines the influence of media usefulness on attitudes towards VTO. Section 5.2 explores the impact of psychological inspiration on attitudes towards VTO. Section 5.3 investigates the relationship between attitude towards VTO and the intention to use the technology. Finally, section 5.4 analyzes the influence of attitude on the intention to recommend VTO. Each section presents the results of the analysis.

4.1 Influence of Media usefulness on attitude towards VTO

In H1, a positive relationship between media usefulness and attitude towards using VTO was expected. In order to test the predictions, a hierarchical regression analysis was conducted, with two blocks of variables. To control possible influences from the control variable, *prior knowledge* was put into the first model. Then *media usefulness*, which was the predictor, was put into the second model, with attitude as the dependent variable.

Overall, the results showed that the first model was not significant F (1, 149) = 1.13, p = .289, R^2 = 0.8%. *Prior knowledge* by itself, had no significant influence on *attitude* (β = .08, t (149) = 1.07, p = .289). The second model F (1, 148) = 144.4, p < .001, R^2 = 66.1%, which included media usefulness (β = .82, t (148) = 16.90, p < .001) showed significant improvement from the first model p < .001, ΔR^2 = 65.7%. Therefore, H1 was accepted.

Table 4.1

Summary of Hierarchical Regression Analysis for Variables Predicting Attitude (N = 151)

	Model 1	Model 2
	β	*β*
Prior Knowledge	.08	-.03
Media Usefulness		.82*
R^2	.01	.66

Note. Significance levels: *$p < .05$. **$p < .01$. ***p < .001.

4.2 Influence of psychological inspiration on attitude towards VTO

In H2, a positive relationship between psychological inspiration and attitude towards using VTO was expected. In order to test the predictions, a hierarchical regression analysis was conducted, with two blocks of variables. To control possible influences from the control variable, *prior knowledge* was put into the first model. Then *psychological inspiration*, which was the predictor, was put into the second model, with *attitude* as the dependent variable.

Overall, the results (Table 5.2) showed that the first model was not significant F (1, 149) = 1.13, p = .289, R^2 = 0.8%. *Prior knowledge* by itself, had no significant influence on *attitude* (β = .08, t (149) = 1.07, p = .289). The second model F (1, 148) = 108.1, p < .001, R^2 = 59.4%, which included *psychological inspiration* (β = .78, t (148) = 14.61, p < .001) showed significant improvement from the first model p < .001, ΔR^2 = 58.8%. Therefore, H2 was accepted.

Table 4.2

Summary of Hierarchical Regression Analysis for Variables Predicting Attitude (N = 151)

	Model 1	Model 2
	β	β
Prior Knowledge	.08	.05
Psychological Inspiration		.78*
R^2	.01	.59

Note. Significance levels: *$p < .05$. **$p < .01$. ***p < .001.

4.3 Intention to Use as a descendant of attitude

In H3, a positive relationship between *attitude* and *intention to use* was expected. Simple linear regression analysis was conducted to evaluate the extent to which *attitude* could *predict intention to use*.

A significant regression was found F (1, 149) = 317.41, $p < .001$. Results show that *attitude* accounted for 68.1% of the variation on the *intention to use*. *Attitude* was shown to have a significant positive effect on the *intention to use* (β = .96, t (149) = 17.82, $p < .001$). Therefore, H3 was accepted.

4.4 Intention to recommend as a descendant of attitude

In H4, a positive relationship between *attitude* and *intention to recommend* was expected. Simple linear regression analysis was conducted to evaluate the extent to which *attitude* could predict *intention to recommend*.

A significant regression was found F (1, 149) = 226.80, $p < .001$. Results show that *attitude* accounted for 60.4% of the variation on the *intention to recommend*. *Attitude* was shown to have a

significant positive effect on the *intention to recommend* (β= .99, *t* (149) = 15.06, *p* < .001).

Therefore, H4 was accepted.

5. Discussion and Conclusion

The findings of this research offer valuable insights into the factors shaping attitudes towards VTO technology, particularly the roles of media usefulness and psychological inspiration in influencing consumer attitudes, and how these attitudes affect intentions to use and recommend VTO. However, these results need to be interpreted with caution due to certain limitations of the study. This chapter presents a thorough reflection on the research process, addressing the limitations and potential impacts of the study's design, and discussing the implications for interpreting the results. The chapter concludes with several recommendations for future research to extend these findings.

5.1 Summary of Findings and Discussion

This study revealed significant correlations and patterns among the variables investigated. It validated the development of a positive attitude towards VTO impacted by the variables of media usefulness and psychological inspiration, and how that positive attitude influences behavioral intentions including intention to use and intention to recommend.

In response to the first part of the conceptual model, both perceived media usefulness and psychological inspiration had a significant positive relationship with attitude toward VTO. These findings illustrate a clear relationship where higher perceptions of media usefulness and stronger feelings of inspiration lead to more favorable attitudes towards VTO. Hypothesis 1 posited that perceived media usefulness would positively influence attitudes towards VTO. This finding aligns with existing research suggesting that perceived usefulness is a critical determinant of technology adoption and user satisfaction (Davis, 1989). Hypothesis 2, which proposed a positive relationship between psychological inspiration and attitudes towards VTO, was also supported. The study found that individuals who felt emotionally inspired by VTO had more positive attitudes towards its usage. This reinforces the idea that emotional engagement can significantly enhance user acceptance and enthusiasm for new technologies (Agarwal & Karahanna, 2000). In arguing for the position that

perceived usefulness and psychological inspiration are pivotal, it is essential to recognize the role of experiential and emotional engagement in modern technology adoption. As technologies become more advanced and integrated into daily life, users' emotional responses and perceived benefits play increasingly critical roles in shaping their attitudes and behaviors.

Additionally, the control variable of prior knowledge was included in the analyses for H1 and H2 to isolate the effects of media usefulness and psychological inspiration on attitudes towards VTO. The non-significant impact of prior knowledge suggests that while familiarity with VTO might enhance understanding, it does not independently shape attitudes without the presence of perceived usefulness or emotional engagement. Moreover, the lack of a significant impact of prior knowledge on attitudes aligns with some studies suggesting that knowledge alone is insufficient to drive technology acceptance (Venkatesh et al., 2003). Instead, a combination of perceived utility and emotional engagement appears to be more influential. One possible explanation is that while knowledge enhances comprehension, it does not necessarily translate into positive attitudes without the presence of perceived usefulness or psychological inspiration. This highlights the necessity of not only informing users but also engaging them emotionally and demonstrating the practical benefits of VTO. An alternative explanation for the limited impact of prior knowledge could be the varying levels of prior exposure among participants. If most participants had similar levels of prior knowledge, its influence might not have been detectable. Another possibility is that the specific context of VTO technology requires experiential learning, where direct interaction with the technology is more impactful than abstract knowledge.

Next, Hypotheses 3 and 4, included in the second part of the conceptual model, which predicted that positive attitudes would lead to higher intention to use and to recommend VTO, respectively, were confirmed as well. These findings suggest that favorable attitudes towards VTO not only increase personal usage intentions but also encourage individuals to recommend the technology to others, indicating a strong word-of-mouth potential. This is consistent with the TAM framework, which highlights the relationship between attitude and intention (Davis, 1989). Recent

research in the field of e-commerce, positive consumer attitudes have been shown to significantly influence purchase intentions. For example, Lin and Shen (2023) found that favorable attitudes within community e-commerce platforms like “Xiaohongshu” directly enhanced users’ purchase intentions by leveraging community engagement and content marketing. What is more, a study on student’s perceptions and attitudes towards technology, revealed that students’ attitudes towards technology have a significant influence on their intention to use technology (Teo & Zhou, 2014). However, research on recommendation intention is limited in regard to VTO. This indicates a need for further studies to explore the factors that drive consumers to recommend VTO technology, which could provide valuable insights for enhancing its adoption and diffusion in the market.

In conclusion, the study's findings underscore the importance of perceived media usefulness and psychological inspiration in shaping positive attitudes towards VTO technology. The non-significant impact of prior knowledge highlights that familiarity alone is insufficient to drive positive attitudes without the support of perceived usefulness and emotional engagement. Moreover, the confirmation of Hypotheses 3 and 4 demonstrates that positive attitudes towards VTO significantly influence the intention to use and recommend the technology, emphasizing the critical role of attitudes in driving both personal adoption and word-of-mouth promotion. These insights contribute to the broader understanding of technology acceptance, emphasizing the need for a holistic approach that includes both practical utility and emotional engagement in order to facilitate positive attitudes among consumers to achieve adoption behaviors and promote the potential of using a new technology. Future research should continue to explore these dimensions, considering additional factors that might influence attitudes and adoption behaviors in various technological contexts.

5.2 Theoretical Implications

Understanding the theoretical implications of the study's findings is crucial for advancing knowledge in the field of technology acceptance and adoption, and to practitioners. This section

discusses the broader theoretical implications of the results obtained from the empirical investigation into the factors influencing users' attitudes and behaviors regarding VTO technology.

The observed positive relationship between perceived media usefulness and attitude towards VTO underscores the critical role of perceived utility in shaping user attitudes. According to the Technology Acceptance Model (TAM), perceived usefulness reflects the extent to which individuals believe that a particular technology enhances their performance or productivity (Davis, 1989). In the context of VTO, users who perceive the technology as useful are more likely to develop favorable attitudes towards its adoption. This finding aligns with prior research emphasizing the pivotal role of perceived utility in driving technology acceptance (Venkatesh et al., 2003). Therefore, as per this studying's findings, retailers should focus on ensuring the VTO feature is perceived as useful by consumers to foster positive attitudes.

The significant positive association between psychological inspiration and attitude towards VTO highlights the influence of emotional engagement on user perceptions and attitudes. While traditional models of technology acceptance often focus on rational decision-making processes, the incorporation of emotional factors adds a nuanced dimension to our understanding of user behavior (Jiang et al., 2019). Emotional responses, such as inspiration, can evoke positive affective states and enhance the attractiveness of innovative technologies (Zhou et al., 2010). Recognizing the role of psychological inspiration in shaping attitudes towards VTO emphasizes the importance of considering both cognitive and affective factors in technology adoption models. This indicates that e-retailers should also aim to evoke positive emotions in consumers when using the VTO feature.

Interestingly, prior knowledge did not have a significant influence on attitude towards VTO, indicating that whether a consumer is already aware of the VTO feature or not, perceived usefulness and emotional engagement are more critical factors. This suggests that e-retailers should prioritize making the VTO feature useful and emotionally engaging regardless of consumers' prior knowledge.

The positive relationships observed between attitude towards VTO and both intention to use and intention to recommend highlight the predictive power of attitude in shaping user behavioral

intentions. According to the Theory of Reasoned Action (TRA) and its extension, the Theory of Planned Behavior (TPB), attitudes towards a behavior significantly influence individuals' intentions to engage in that behavior (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975). By demonstrating the strong link between attitude and behavioral intentions within the context of VTO adoption, this study reaffirms the utility of these theoretical frameworks in understanding technology acceptance processes. Moreover, the findings underscore the importance of fostering positive attitudes towards VTO to encourage both usage and advocacy among potential adopters.

In conclusion, the VTO technology is rooted in the eTAM framework which sheds light on the complex dynamics of user attiudes and behaviors towards VTO. By elucidating the roles of perceived media usefulness, psychological inspiration, and attitude in shaping user intentions, this research contributes to a deeper understanding of the cognitive and affective processes driving technology acceptance. These findings are significant for the e-retailers who are implementing the VTO technology to their e-commerce platforms, although those with already established VTOs can also learn from the findings of this study. Integrating these insights into theoretical frameworks and practical interventions can facilitate the successful adoption and integration of VTO technologies in the retail sector.

5.3 Practical Implications

The findings of this study have several practical implications for businesses and practitioners aiming to implement VTO technology effectively. First, the strong positive impact of perceived media usefulness and psychological inspiration on attitudes towards VTO underscores the importance of designing VTO applications that not only offer practical utility but also engage users emotionally. Businesses should focus on enhancing the functionality and user-friendliness of VTO platforms to demonstrate clear benefits, while also creating emotionally appealing and inspiring experiences to foster positive attitudes. Given that prior knowledge did not significantly influence attitudes towards

VTO, businesses should prioritize educating potential users about the benefits and practical applications of VTO technology, focusing on hands-on demonstrations and experiential learning opportunities. This approach can help bridge the gap between abstract knowledge and positive user attitudes.

Additionally, the significant relationship between positive attitudes and both the intention to use and recommend VTO highlights the importance of fostering favorable perceptions to drive adoption and word-of-mouth promotion. Companies should invest in marketing strategies that emphasize the advantages and enjoyable aspects of VTO technology, encouraging users to share their experiences and recommend the technology to others.

Another contribution of this research is the investigation of VTO, which provides evidence of how this technology can influence consumer attitudes and behaviors. As this technology is still relatively new, addressing technical and usability challenges is crucial for its successful deployment. Ensuring compatibility across various devices, improving rendering accuracy, and optimizing user interfaces can enhance user satisfaction and trust. Businesses must also address privacy and security concerns by implementing robust data protection measures and transparent privacy policies to build consumer trust and mitigate potential risks.

In conclusion, the study highlights the need for a holistic approach to VTO technology adoption that encompasses both practical utility and emotional engagement. By focusing on these aspects and addressing the identified practical limitations, businesses can effectively leverage VTO technology to enhance the online shopping experience, drive consumer engagement, and stay competitive in the evolving retail landscape.

5.4 Research limitations and directions for future research

The research conducted, while yielding valuable insights, is not without limitations. The study's reliance on self-reported data from an online survey may introduce response biases and limit the generalizability of the findings. As the data were gathered from online shoppers residing in the

European Union, the results may be more applicable to only European residents. This research may be extended to countries outside of the EU. Therefore, future research could include participants from diverse geographic locations to obtain a more comprehensive understanding of VTO adoption and acceptance. In addition, most participants lacked prior experience with VTO technology, potentially affecting the applicability of the findings to broader populations, particularly those more familiar with such technology. Future studies should aim to recruit participants with varying levels of familiarity with VTO to better capture its potential impact across different user groups. Lastly, the study's cross-sectional nature limits its ability to infer causality or temporal relationships between variables. Longitudinal studies tracking consumer perceptions and behaviors over time could offer valuable insights into the dynamics of VTO adoption and its evolving impact on consumer decision-making processes.

The study examined the influence of media usefulness and psychological inspiration on attitudes toward VTO technology. While these factors proved significant, other variables may also play crucial roles in shaping consumer perceptions and behaviors regarding VTO. Exploring additional predictors, such as social influence or perceived ease of use, could provide a more comprehensive understanding of consumer adoption and acceptance of VTO solutions. Moreover, the research focused solely on the attitudinal outcomes namely intention to use and intention to recommend. While attitude is an important predictor of behavior, actual usage behavior and its impact on purchase decisions were not directly assessed in this study. Future research could explore the relationship between attitudes, usage behavior, and purchase intentions to elucidate the practical implications of VTO adoption in the retail sector.

In summary, while this study contributes to our understanding of consumer attitudes toward VTO technology, there remain avenues for future research to explore. By addressing the limitations and delving into additional variables and methodologies, researchers can advance our knowledge of VTO adoption and its implications for retailers and consumers alike.

References

Alba, J. W., & Hutchinson, J. W. (1987). Dimensions of consumer expertise. *Journal of Consumer Research*, *13*(4), 411–454. https://doi.org/10.1086/209080

Böttger, T., Rudolph, T., Evanschitzky, H., & Pfrang, T. (2017). Customer inspiration: conceptualization, scale development, and validation. *Journal of Marketing*, *81*(6), 116-131. https://doi.org/10.1509/jm.15.0007

Breiki, M. A., & Al-Abri, A. (2022). The Extended Technology Acceptance Model (ETAM): Examining students' acceptance of online learning during COVID-19 pandemic. *International Journal of Emerging Technologies in Learning (iJET)*, *17*(20), 4–19. https://doi.org/10.3991/ijet.v17i20.29441

Brucks, M. (1985). The effects of product class knowledge on information search behavior. *Journal of Consumer Research*, *12*(1), 1–16. https://doi.org/10.1086/209031

Childers, T. L., Carr, C. L., Peck, J., & Carson, S. J. (2001). Hedonic and utilitarian motivations for online retail shopping behavior. *Journal of Retailing*, *77*(4), 511–535. https://doi.org/10.1016/s0022-4359(01)00056-2

Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches*. SAGE Publications, Inc. https://www.ucg.ac.me/skladiste/blog_609332/objava_105202/fajlovi/Creswell.pdf

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, *13*(3), 319–340. https://doi.org/10.2307/249008

Dixit, S., Badgaiyan, A. J., & Khare, A. (2019). An integrated model for predicting consumer's intention to write online reviews. *Journal of Retailing and Consumer Services*, *46*, 112-120. https://doi.org/10.1016/j.jretconser.2017.10.001

Furner, C. P., Drake, J. R., Zinko, R., & Kisling, E. (2021). Online Review Antecedents of Trust, Purchase, and Recommendation Intention: A Simulation-Based Experiment for Hotels and AirBnBs. *Journal of Internet Commerce*, *21*(1), 79–103. https://doi.org/10.1080/15332861.2020.1870342

Grzegorczyk, T., Śliwiński, R., & Kaczmarek, J. (2019). Attractiveness of augmented reality to consumers. *Technology Analysis & Strategic Management*, *31*(11), 1257-1269. https://doi.org/10.1080/09537325.2019.1603368

Heale, R., & Twycross, A. (2015). Validity and reliability in quantitative studies. *Evidence-Based Nursing*, *18*(3), 66–67. https://doi.org/10.1136/eb-2015-102129

Ismagilova, E., Dwivedi, Y. K., Slade, E., & Williams, M. D. (2017). *Electronic Word of Mouth (EWOM) in the marketing context*. Springer Charm. https://doi.org/10.1007/978-3-319-52459-7

Jackson, C., Chow, S., & Leitch, R. A. (1997). Toward an understanding of the behavioral intention to use an information system. *Decision Sciences*, *28*(2), 357–389. https://doi.org/10.1111/j.1540-5915.1997.tb01315.x

Kaplan, A. D., Cruit, J., Endsley, M. R., Beers, S. M., Sawyer, B. D., & Hancock, P. A. (2020). The effects of virtual reality, augmented reality, and mixed reality as training Enhancement Methods: A Meta-Analysis. *Human Factors*, *63*(4), 706–726. https://doi.org/10.1177/0018720820904229

Karahanna, E., & Straub, D. W. (1999). The psychological origins of perceived usefulness and ease-of-use. *Information & Management*, *35*(4), 237–250. https://doi.org/10.1016/s0378-7206(98)00096-2

Kim, & Forsythe, S. (2008). Adoption of Virtual Try-on technology for online apparel shopping. *Journal of Interactive Marketing*, *22*(2), 45–59. https://doi.org/10.1002/dir.20113

Kim, T. H., & Choo, H. J. (2021). Augmented Reality as a product presentation tool: Focusing on the role of product information and presence in AR. *Fashion and Textiles*, *8*(1). https://doi.org/10.1186/s40691-021-00261-w

Kowalczuk, P., Siepmann, C., & Adler, J. (2021). Cognitive, affective, and behavioral consumer responses to augmented reality in e-commerce: A comparative study. *Journal of Business Research*, *124*, 357–373. https://doi.org/10.1016/j.jbusres.2020.10.050

Lavoye, V., Mero, J., & Tarkiainen, A. (2021). Consumer behavior with augmented reality in retail: A review and research agenda. *The International Review of Retail, Distribution and Consumer Research*, *31*(3), 299–329. https://doi.org/10.1080/09593969.2021.1901765

Lee, H., Xu, Y., & Porterfield, A. (2021). Antecedents and moderators of consumer adoption toward AR-enhanced virtual try-on technology: A stimulus-organism-response approach. *International Journal of Consumer Studies*, *46*(4), 1319–1338. https://doi.org/10.1111/ijcs.12760

Lee, K., & Oh, S. (2022). The users' intention to participate in a VR/AR sports experience by applying the Extended Technology Acceptance Model (ETAM). *Healthcare*, *10*(6), 1117. https://doi.org/10.3390/healthcare10061117

Manis, K. T., & Choi, D. (2019). The virtual reality hardware acceptance model (VR-HAM): Extending and individuating the technology acceptance model (TAM) for virtual reality hardware. *Journal of Business Research*, *100*, 503–513. https://doi.org/10.1016/j.jbusres.2018.10.021

Martínez-Navarro, J., Bigné, E., Guixeres, J., Alcañíz, M., & Torrecilla, C. (2019). The influence of virtual reality in e-commerce. *Journal of Business Research*, *100*, 475–482. https://doi.org/10.1016/j.jbusres.2018.10.054

Mehrabian, A., & Russell, J. A. (1974). The basic emotional impact of environments. *Perceptual and Motor Skills*, *38*(1), 283–301. https://doi.org/10.2466/pms.1974.38.1.283

Meuter, M. L., McCabe, D. B., & Curran, J. M. (2013). Electronic Word-of-Mouth versus interpersonal Word-of-Mouth: Are all forms of Word-of-Mouth equally influential? *Services Marketing Quarterly*, *34*(3), 240–256. https://doi.org/10.1080/15332969.2013.798201

Nayak, S., Suhan, M., Nayak, R., Spulbar, C., Birau, R., & Gull, S. M. (2021). Antecedents to purchase intention in virtual market space in India: an empirical investigation. *Cogent Business & Management*, *9*(1). https://doi.org/10.1080/23311975.2021.2003502

Nikhashemi, S. R., Knight, H. H., Nusair, K., & Liat, C. B. (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*, 102464. https://doi.org/10.1016/j.jretconser.2021.102464

Öztürkcan, S. (2021). Service innovation: Using augmented reality in the IKEA Place app. *Journal of Information Technology Teaching Cases*, *11*(1), 8–13. https://doi.org/10.1177/2043886920947110

Papakostas, C., Troussas, C., Krouska, A., & Sgouropoulou, C. (2022). Exploring Users' Behavioral Intention to Adopt Mobile Augmented Reality in Education through an Extended Technology Acceptance Model. *International Journal of Human-computer Interaction*, *39*(6), 1294–1302. https://doi.org/10.1080/10447318.2022.2062551

Paris, C.M., Lee, W., Seery, P. (2010). The Role of Social Media in Promoting Special Events: Acceptance of Facebook 'Events'. In: Gretzel, U., Law, R., Fuchs, M. (eds) *Information and Communication Technologies in Tourism 2010* (pp. 531-541). Springer, Vienna. https://doi.org/10.1007/978-3-211-99407-8_44

Park, C. W., Mothersbaugh, D. L., & Feick, L. (1994). Consumer Knowledge Assessment. *Journal of Consumer Research*, *21*(1), 71–82. https://doi.org/10.1086/209383

Plotkina, D., & Saurel, H. (2019). Me or just like me? The role of virtual try-on and physical appearance in apparel M-retailing. *Journal of Retailing and Consumer Services*, *51*, 362–377. https://doi.org/10.1016/j.jretconser.2019.07.002

Qasem, Z. (2021). The effect of positive TRI traits on centennials adoption of try-on technology in the context of E-fashion retailing. *International Journal of Information Management*, *56*, 102254. https://doi.org/10.1016/j.ijinfomgt.2020.102254

Rauschnabel, P. A., Felix, R., & Hinsch, C. (2019). Augmented reality marketing: How mobile AR-apps can improve brands through inspiration. *Journal of Retailing and Consumer Services*, *49*, 43–53. https://doi.org/10.1016/j.jretconser.2019.03.004

Rauschnabel, P.A., Krey, N. (2018). Virtually Enhancing the Real World with Augmented Reality Holograms: Use and Gratification Perspective: An Abstract. In: Krey, N., Rossi, P. (eds) Back to the Future: Using Marketing Basics to Provide Customer Value. AMSAC 2017. Developments in Marketing Science: Proceedings of the Academy of Marketing Science. Springer, Cham. https://doi.org/10.1007/978-3-319-66023-3_204

Rese, A., Schreiber, S., & Baier, D. (2014). Technology acceptance modeling of augmented reality at the point of sale: Can surveys be replaced by an analysis of online reviews? *Journal of Retailing and Consumer Services*, *21*(5), 869–876. https://doi.org/10.1016/j.jretconser.2014.02.011

Smink, A. R., Van Reijmersdal, E. A., & Van Noort, G. (2021). Consumers' use of augmented reality apps: Prevalence, user characteristics, and gratifications. *Journal of Advertising*, *51*(1), 85–94. https://doi.org/10.1080/00913367.2021.1973622

Teo, T., & Zhou, M. (2014). Explaining the intention to use technology among university students: A structural equation modeling approach. *Journal of Computing in Higher Education*, *26*(2), 124–142. https://doi.org/10.1007/s12528-014-9080-3

Venkatesh, V., Thong, J. Y., & Xu, X. (2012). Consumer Acceptance and use of Information technology: Extending the unified theory of acceptance and use of technology. *Management Information Systems Quarterly*, *36*(1), 157. https://doi.org/10.2307/41410412

Vergura, D. T., Zerbini, C., & Luceri, B. (2020). Consumers' attitude and purchase intention towards organic personal care products. An application of the S-O-R model. *Deleted Journal*, *38*(1), 121–137. https://doi.org/10.7433/s111.2020.08

Warshaw, P. R., & Davis, F. D. (1985). Disentangling behavioral intention and behavioral expectation. *Journal of Experimental Social Psychology*, *21*(3), 213–228. https://doi.org/10.1016/0022-1031(85)90017-4

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

Yang, H., & Yoo, Y. (2004). It's all about attitude: Revisiting the technology acceptance model. *Decision Support Systems*, *38*(1), 19–31. https://doi.org/10.1016/s0167-9236(03)00062-9

Yuan, C., Zhang, C., & Wang, S. (2022). Social anxiety as a moderator in consumer willingness to accept AI assistants based on utilitarian and hedonic values. *Journal of Retailing and Consumer Services*, *65*, 102878. https://doi.org/10.1016/j.jretconser.2021.102878

Zagorc, A., Bernik, A. (2022). Influence of Augmented Reality on Purchase Intention. In: Arai, K. (eds) Intelligent Computing. SAI 2022. *Lecture Notes in Networks and Systems*, *vol 506*. Springer, Cham. https://doi.org/10.1007/978-3-031-10461-9_24

Zhang, M., & Liu, G. (2015). The effects of consumer's subjective and objective knowledge on perceptions and attitude towards genetically modified foods: Objective knowledge as a determinant. *International Journal of Food Science & Technology*, *50*(5), 1198–1205. https://doi.org/10.1111/ijfs.12753

Zhang, T., Wang, W. Y. C., Cao, L., & Wang, Y. (2019). The role of virtual try-on technology in online purchase decision from consumers' aspect. *Internet Research*, *29*(3), 529–551. https://doi.org/10.1108/intr-12-2017-0540

Appendix

Survey Questionnaire

Virtual Try-On Survey

Start of Block: Introduction

Q1.1 Dear Participant,

Welcome and thank you for taking the time to participate in this survey. My name is Margarita Prodromou and I am doing my Master in Media & Business at Erasmus University Rotterdam. As a Master student who is in the process of conducting my thesis, I need your help to fill out this survey about virtual try-on technology in the fashion e-commerce industry.

If you are between the age of 18-55 and reside in one of the countries of the European Union, then this survey is for you. It is okay if you don't have experience with virtual try-on technology.

The survey will take approximately 5-10 minutes to fill in. Please answer each question carefully and honestly. There are no right or wrong answers.

CONFIDENTIALITY OF DATA
Rest assured that all responses will be kept strictly confidential and are collected in anonymous form. There are no risks or discomforts associated with participating in this research.

VOLUNTARY
Your participation in this survey is voluntary, and you may withdraw at any time without any penalty.

FURTHER INFORMATION
If you have any questions about this research, in advance or afterwards, you can contact this email: 680433mp@eur.nl

P.S: This survey contains credits to get free survey responses at SurveySwap.io
PS: Users of the research platform SurveyCircle.com will receive SurveyCircle points for their participation.

By clicking 'Next', you agree to participate in this survey.

End of Block: Introduction

Start of Block: Demographic Questions

Q2.1 How old are you?

▼ Under 18 years old (6) ... Over 55 years old (77)

Skip To: End of Survey If How old are you? = Under 18 years old

Skip To: End of Survey If How old are you? = Over 55 years old

Q2.2 In which EU country do you currently reside?

▼ I do not live in the EU (28) ... Sweden (27)

Skip To: End of Survey If In which EU country do you currently reside? = I do not live in the EU

Q2.3 What is your gender?

- ○ Male (1)
- ○ Female (2)
- ○ Non-binary / third gender (3)
- ○ Prefer not to say (4)
- ○ Other, please specify (5) _____

Q2.4 What is the highest level of education that you have completed?

- ○ Primary Education (1)
- ○ Secondary Education (2)
- ○ Bachelor's or equivalent level (3)
- ○ Master's or equivalent level (4)
- ○ Doctoral or equivalent level (5)
- ○ Other (6)

Q2.5 How often do you shop fashion products online?

- ○ Never (1)
- ○ Rarely (2)
- ○ Sometimes (3)
- ○ Often (4)
- ○ Always (5)

End of Block: Demographic Questions

Start of Block: Video/ Knowledge/ Media Usefuless/ Psychological inspiration

Q3.1 Virtual Try-On (VTO) is a new technology that e-commerce stores start to use in their online sites.

Please rate your level of agreement with the following statements regarding your familiarity, knowledge or experience with this technology.

After this page, the definition of Virtual Try-On (VTO) will be further explained.

	Strongly disagree (8)	Somewhat disagree (9)	Neither agree nor disagree (10)	Somewhat agree (11)	Strongly agree (12)
I know a lot about VTO technology (1)	○	○	○	○	○
I have great experience with VTO technology (6)	○	○	○	○	○
I am familiar with VTO technology (2)	○	○	○	○	○
I understand the features and benefits of VTO technology (3)	○	○	○	○	○
My knowledge about VTO technology is better relative to the people I know (5)	○	○	○	○	○

Page Break

Q3.2 Virtual try on (VTO) is a new technology that allows people to try on products virtually before purchasing them. Fashion brands and e-commerce sites use it to allow people to try on their products like sunglasses, shoes or clothes in a virtual environment before actually purchasing them to allow people to see how it looks on them through their device's camera, without the need to visit a physical store.

For better understanding, please click play to watch the video below which will show Amazon's feature of virtual try-on.

Please watch the video carefully and answer the follow-up statements as honest as possible. For the rest of the survey questions, virtual try on will be referred to as VTO.

Q3.3 Have you tried Amazon's VTO feature before?

- ○ Yes (1)
- ○ No (2)

Q3.4 Based on the video about VTO to what extent do you agree with the following statements?

	Strongly disagree (8)	Somewhat disagree (9)	Neither agree nor disagree (10)	Somewhat agree (11)	Strongly agree (12)
Using VTO while shopping online would enable me to find my suitable size more quickly. (1)	○	○	○	○	○
Using VTO would improve my shopping experience. (2)	○	○	○	○	○
Using VTO in an online store would increase my satisfaction with a product. (3)	○	○	○	○	○
Using VTO would enhance my effectiveness to choose between sizes, colors, etc. (4)	○	○	○	○	○
Using VTO would make it easier to choose a product. (5)	○	○	○	○	○

I would find VTO useful in my shopping experience. (6)	○	○	○	○	○

Q3.5 After watching the video about VTO, state your level of agreement with the following statements

	Strongly disagree (8)	Somewhat disagree (9)	Neither agree nor disagree (10)	Somewhat agree (11)	Strongly agree (12)
My imagination was stimulated. (1)	○	○	○	○	○
I was intrigued by a new idea. (2)	○	○	○	○	○
I unexpectedly and spontaneously got new ideas. (3)	○	○	○	○	○
My horizon was broadened. (4)	○	○	○	○	○
I discovered something new. (5)	○	○	○	○	○

End of Block: Video/ Knowledge/ Media Usefuless/ Psychological inspiration

Start of Block: Attitude towards using

Q4.1 After watching the video about VTO, please read each statement carefully and indicate your level of agreement.

	Strongly disagree (8)	Somewhat disagree (9)	Neither agree nor disagree (10)	Somewhat agree (11)	Strongly agree (12)
I am positive about the VTO technology (1)	○	○	○	○	○
The VTO technology is so interesting that you just want to learn more about it (2)	○	○	○	○	○
It just makes sense to use VTO technology (3)	○	○	○	○	○
Using VTO technology is a good idea (4)	○	○	○	○	○
Using VTO technology is an appealing idea (5)	○	○	○	○	○

End of Block: Attitude towards using

Start of Block: Intention to use/recommedation intention

Q5.1 Based on what you now know about VTO, please state your level of agreement with each statement below:

	Strongly disagree (8)	Somewhat disagree (9)	Neither agree nor disagree (10)	Somewhat agree (11)	Strongly agree (12)
I intend to use VTO. (1)	○	○	○	○	○
I predict I will use VTO. (2)	○	○	○	○	○
I plan to use VTO in the future. (3)	○	○	○	○	○
In the future, I will use VTO in online sites significantly more often than other online sites who don't have VTO. (5)	○	○	○	○	○

Q5.2 Based on what you now know about VTO, please answer the following question:

	Not at all likely (9)	Somewhat unlikely (10)	Neither likely or unlikely (11)	Somewhat likely (12)	Very likely (13)
Based on the video about VTO, how likely are you to recommend the VTO technology to a friend, if asked (1)	○	○	○	○	○

End of Block: Intention to use/recommendation intention