

# Multichannel Retailing in Beauty Product: Understanding Customer Purchase Decisions between Offline Stores, Websites, and Augmented Reality

**Nila Armelia Windasari\***

School of Business and Management  
Institut Teknologi Bandung  
Jl Ganesha No 10 - Bandung, Jawa Barat  
40132  
nila.armelia@sbm-itb.ac.id

**Nadine Shafira**

School of Business and Management  
Institut Teknologi Bandung  
Jl Ganesha No 10 - Bandung, Jawa Barat  
40132  
nadine.shafira@sbm-itb.ac.id

**Halim Budi Santoso**

Institute of Service Science  
National Tsing Hua University  
No 101 Kuang Fu Rd. Sec 2, Hsinchu City 300

Information System Department  
Universitas Kristen Duta Wacana  
Jl. Dr. Wahidin 5 – 25 Yogyakarta, Indonesia  
Email: halim.budi@iss.nthu.edu.tw

## Abstract

*The multichannel retail environment has gained attention for online retailers by utilizing and deploying different touchpoints, starting from offline stores, websites, and augmented reality (AR). Those different touchpoints offer enjoyment and trigger customer hedonic motivation simultaneously. By utilizing the hedonic motivation and technology acceptance model (TAM) framework, this study provides insightful research on how those three touchpoints differ in customer purchase behavior. Using within-subject research on Sephora multichannel environments, this study tries to compare offline stores, websites, and Sephora Virtual Artist in shaping customer purchase behavior. A survey was conducted on 200 female respondents. This study used partial least squares (PLS) to find that product information and telepresence on AR can positively affect customer purchase decisions. Surprisingly, no significant difference in purchase decisions compared to two other purchase channels, i.e., traditional websites and offline stores. This study highlights that female customer tend to focus more on the products they want to purchase rather than the technology and channel of buying.*

**Keywords:** Augmented Reality, Experience Marketing, Multichannel Retailing, Purchase Decision, Technology Acceptance Model, Virtual Artist

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\* Corresponding Author

## Introduction

Online retail is increasing worldwide due to internet usage to deliver data, information, goods, and services. However, although internet usage is growing, there are some questions on how to purchase and repurchase decisions during online shopping associated with product characteristics ([Saragih and Ramdhany 2012](#); [Singh and Srivastava 2019](#)). As a result, customers may feel uncomfortable buying decisions in online commerce due to a lack of physical interactions that lead to product quality uncertainty ([Jiang et al. 2020](#)). Furthermore, customers need to interact with the intact service technology to evaluate the product remotely ([Lee et al. 2020](#)).

Advances in technology have created new opportunities and challenges for retailers, such as how it establishes seamless customer experiences ([Piotrowicz and Cuthbertson 2014](#)). Online retailers create an omnichannel retail environment where customers can experience seamless shopping experiences and to close the gap between online and offline channels. The multichannel environment online retailers provide creates more flexibility for customers to evaluate the product based on perceived quality and situational benefit. Consequently, a multichannel environment can affect the customer journey and satisfy various needs by utilizing different touchpoints ([Santulli 2019](#); [Wagner et al. 2020](#)). Synergies between channels to synchronize customer interaction are required and should appear in different stages starting from pre-transaction, on-sale, and post-transaction.

The multichannel environment creates a different customer experience that might affect purchase decisions due to various technology implementations ([Mishra et al. 2021](#)). In addition, some multichannel online retailers have recently used further technology advancements to support offline stores and traditional e-Commerce sites by utilizing websites, Augmented Reality (AR) Virtual Try-On ([Han et al. 2018](#); [Kühn and Petzer 2018](#)). The development of multichannel customer touchpoint in e-Commerce started with the web application. Using web applications, customer purchase intention can be fostered by providing an attractive visual appeal and perceived usability of the e-Commerce website ([Kühn and Petzer 2018](#)). Based on the report of the beauty retail market by [Deloitte \(2018\)](#), the contribution of e-commerce and digital channels is indeed relatively much lower compared to offline stores. However, it is undeniable that the sales growth is increasing by 70-80% annually and e-commerce trends are heading towards digital tools and advice ([Deloitte 2018](#)).

Due to the fast development of technology, retail companies also provide another customer touchpoint with contemporary technology, such as AR. The utilization of AR in online retail is an emerging topic to understand the underlying mechanism of technology used to enhance customer experience. AR is an application-based technology that can integrate virtual information and reality worlds and give customers novel experiences in online shopping ([Poushneh and Vasquez-Parraga 2017](#)). In addition, AR can help to boost digital sales and has been applied in different leading industries, such as IKEA, Wayfair, and Sephora ([Rauschnabel et al. 2019](#)). AR applications can be utilized to make an immersive customer experience with the increasingly ubiquitous computing in retail. In addition, AR can give customers embedded virtual information in online shopping.

AR can also benefit the interactivity level ([Meily et al. 2021](#)) and the amount of online shopping information that customers can get. Nonetheless, AR will consequently affect customer behavior and purchase intentions ([Park and Yoo 2020](#)). AR has five elements: sense, feel, think, act, and relate, indirectly impacting customer experience, especially for the makeup product ([Schmitt 1999](#)). Therefore, it leads to interactive technology, defined as the market's potential to adjust one's inclination of presence. Furthermore, telepresence allows users to perform operations on a given system by showing the effects in real-time ([Kim and Hyun 2016](#)).

Other retail touchpoints, such as websites and offline stores, are less interactive than AR applications. Recently, in the multichannel environment, people interact with those different technologies, increasing the adoption of these touchpoints. Due to the implementation of multi-touchpoint is emerging in the retail industry, how it will affect customer purchase decisions. We identify prior research gaps in understanding these different touchpoints can affect customer purchase decisions. Earlier studies relied on the research on single customer touchpoints. Therefore, this study wants to know how different touchpoints influence customer purchase decisions in retail. Furthermore, we identify a lack of

understanding of how AR can differ from other purchase channels, such as online stores using traditional websites and offline stores ([Watson et al. 2018](#)).

This study aims to analyze the use of AR applied to online retail compared to the traditional website and offline stores, particularly in affecting customer purchase decisions. To understand the implementation of multichannel customer touchpoint, we study Sephora online retail. Sephora provides an enormous variety of mainstream and boutique skincare and online beauty retailers with multichannel touchpoints. For Sephora, AR helps the consumer with the "Virtual Artist" feature to apply virtual makeup to the customer's face before purchase. Therefore, this study seeks to understand the effect of multichannel on purchase decisions by answering the following research questions: (1) What antecedents influence customer purchase intention using AR application? (2) How does AR touchpoint affect customer purchase decisions compared to two different channels, i.e., traditional websites and offline stores

The paper is structured as follows. The first section discusses experiential retailing in the experience economy by examining AR usage and AR technology usage. Next, we discuss how hypotheses are developed and followed by the methodology used in this research. The presentation of the research finding is shown in the next section and elaborated deeply in the following section. Lastly, we address the conclusion, study limitation, and theoretical and practical contribution.

## Literature Review

### *Hedonic Motivations across Multichannel Customer Touchpoints*

The store environment can affect customer behavior. Customers' motivation occurs when they have the needs, either hedonic or utilitarian ([Holbrook and Hirschman 1982](#)). Customers with a higher hedonic reason in their shopping behavior tend to involve multisensory, fantasy, and emotional experiences ([Chang et al. 2011](#)). Hedonic motivations are related to fun and enjoyment in the shopping experience ([Childers et al. 2001](#)). Consumers with higher hedonic motivation are more willing to involve and engage in the interactive aspect of shopping ([Chang et al. 2011](#)) since they tend to seek acceptance and affection during the shopping experience. Therefore, retailers create an environment in the offline store that accentuates some characteristics, such as ambient, design, and social ([Chang et al. 2011](#)).

The advancement of information and communication technology (ICT) allows retailers to implement other touchpoints besides offline stores. As a result, retailers adapt and create a multi-touchpoints environment to enhance customer experiences, either offline or online. Furthermore, the online environment can be provided by integrating technology with the current environment, bridging the gap between offline and online environments ([Singh and Srivastava 2019](#)). Multi-touchpoint can generate positive cognitive, affective, emotional, social, and physical responses on the customer journey ([Wagner et al. 2020](#)). For customers, a sense of authenticity and realism arises when the interaction between customers and touchpoints leads to purchase decisions on products or services. Recently, there has been a challenge to combine and merge offline and online settings and explain how people can naturally engage in information processing, preference formation, and decision making ([Semin and Smith 2013](#)). Therefore, it can be realistic and compelling to customers to get an embedded, embodied, and vast experience with the product ([Hilken et al. 2018](#)).

As an earlier touchpoint technology, retail websites offer a novel way of shopping. Websites enable convenience, information, customization, and interaction ([Ghosh 1998](#)). Customers also can have time efficiency while they do shopping online. Moreover, websites also trigger intrinsic experiential value such as enjoyment and aesthetic experience when customers interact with the websites ([Mathwick et al. 2001](#)). This experiential value should be regarded as a hedonic value. The company's message will be delivered without distractions through live, memorable, and experiential campaigns ([Watson et al. 2018](#)). [Yuan and Wu \(2008\)](#) defined experiential marketing as a marketing strategy for developing customer recognition and creating a real-life experience that will be remembered after they experience activities and perceived stimulations. Customer experiences will lead the customer to rational, emotional, sensorial, physical, and spiritual ([Verhoef et al. 2009](#)). Experiential marketing is a strategy that engages consumers using branded experiences. Sometimes referred to as "live marketing" or "event

marketing experience," the thought is to make a significant yet memorable effect on the consumers ([Schmitt 1999](#)).

ICT development has created a new approach and opportunity for retailers to deploy other interactive technologies, such as AR. AR can improve customer shopping behavior efficiency since it can improve the availability of product information ([Scholz and Duffy 2018](#)). Therefore, it can enrich the multichannel shopping environment. AR as an emerging technology can create an immersive customer experience in the current technology development by providing a natural application for a situated cognitive perception. AR can help to reduce the gap between online and offline environments through embedded, embodied, and ample experience ([Hilken et al. 2018](#)). Therefore, AR as an emerging technology can be seen as a tool to fulfill customer needs in this experience economy, where customers are more concerned with experience (Yuan and Wu 2008). Nevertheless, the company sells products and offers excellent authentic experiences and memories through different touchpoints.

AR provides myriad opportunities to enable multichannel experiences by integrating different elements in the online environment that traditionally have been reserved for in-store experiences. For example, in online retail, the implementation of AR through Virtual Try-On brings customer empowerment to try out products as if they try products in the offline store ([Hilken et al. 2018](#)). Furthermore, as an authentic technology, AR can provide customers with an embedded experience by presenting relevant information and closing the offline-online environment gap ([Meily et al. 2021](#)). Meanwhile, AR can give embodiment experience by providing a natural interaction and simulation of physical control over virtual offerings. As a result, AR sometimes provides futuristic and beyond customer expectations that cannot appear on offline or traditional websites ([Poushneh and Vasquez-Parraga 2017](#)). On the other hand, AR also can provide vast experience by sharing their experience with other customers. For example, customers can give iterative feedback through AR, becoming active contributors through different communication channels ([Scholz and Smith 2016](#)).

The deployment of technology such as websites and AR in the retail industry can affect the combined effects of customer experience at multiple touchpoints and customer behavior. Hedonic motivation created from the authentic and pleasurable experience can be crucial for purchasing decisions in various customer channels ([Tyrväinen et al. 2020](#)). Consequently, it might improve customer shopping behavior and affect customers' cognitive and affective viewpoints.

### ***Technology Acceptance Model for Multichannel Environment***

Customers expect different customer experiences ([Juaneda-Ayensa et al. 2016](#)) between channels – offline stores, websites, and AR – depending on their preferences, product category, technology affordances, and shopping time. A multichannel environment lets customers access the information by performing product information searches, comparing products, and even “try before you buy.” Therefore, customers can benefit from the experience of the multichannel environment. Technology Acceptance Model (TAM) has been considered a reliable framework for determining the users' behavioral intentions across different technologies ([Herrero-Crespo et al. 2022](#)). Users have different motivations for adopting recent technologies, from intrinsic and extrinsic. Prior research found that perceived ease of use and usefulness are relevant predictors for users' behavioral intention toward technology adoption ([Davis 1989](#)).

A positive interaction between users and technology can provide a sense of enjoyment and pleasure. As a result, system developers tend to create a system that can be easy to use to speed up the adoption rate of the systems by offering a fun and pleasurable human-system interaction. In addition, customers' shopping behavior has dramatically changed in the multichannel environment, asking for more interactive technology by providing a multisensory experience. A multichannel retail environment can provide better information for prospective customers and help in shaping customer purchase decisions. TAM model postulates the perceived ease of use exerts a positive effect on perceived usefulness ([Herrero-Crespo et al. 2022](#)).

Several researchers have conducted studies on retail websites by relying upon TAM as a theoretical framework ([Ha and Stoel 2009](#); [Tong 2010](#)). Website developers must provide customers with enjoyment since it can lead to an attitude toward customer e-shopping ([Ha and Stoel 2009](#)).

Furthermore, it can also determine the customers' intention to adopt the technology. "Since e-shopping is a retail format innovation and makes use of innovative technology systems and e-shopping behavior (e.g., browsing, transaction, etc.) is a type of consumer usage system, TAM provides a useful foundation for research investigating consumer acceptance of online shopping" ([Ha and Stoel 2009](#)). Furthermore, Tong (2010) found that perceived ease of use of online shopping can negatively affect the perceived risks across the two countries in the study.

Meanwhile, TAM is also used for AR applications in the retail industry ([Huang and Liao 2015](#)). Using AR applications in the retail sector also affects emotional and behavioral responses ([Huang and Liao 2015](#)). However, this relationship is moderated by hedonic motivation. For example, AR can provide enjoyment and playfulness to the simulated shopping environment ([Watson et al. 2018](#)). In addition, [Javornik \(2016\)](#) emphasizes that AR provides more hedonic value rather than utilitarian value. Therefore, customers who utilize more hedonic motivation must fulfill their needs of the fun experience, fantasy, and sensory experience. On the other hand, using virtual try-on as one of the AR applications in the clothing and garment online retail can provide an integrative view of its utilitarian value, hedonic value, and risk toward customer purchase decisions across different ages and genders ([Zhang et al. 2019](#)).

Although the adoption of AR in the shopping environment can provide a sense of fun, enjoyment, and authentic experience, users are willing to use AR due to perceived ease of use ([Yavuz et al. 2021](#)). According to the TAM, perceived ease of use also plays an essential role in adopting the technology. In addition, the quick learning process of the AR application will attract people to use it, and people can feel immersed in the technology ([Chiang et al. 2021](#)). Therefore, using AR applications brings fun and enjoyment into the shopping experience. In addition, a similar effect of perceived ease of using retail websites stimulates customer purchase decisions ([Chang et al. 2019](#); [Khanna and Wahi 2014](#)).

### ***Hypothesis Development***

Product features are significant decision variables used by online retailers to influence customer evaluation of a specific product. Product information can provide the customer with the necessary knowledge ([Grandi et al. 2021](#)). In addition, product information leads to customer-perceived informativeness of the product, which can be seen as a subjective evaluation of how much information the product presentation offers. Finally, providing the product information can lead to customer behavioral intentions ([Hillenbrand et al. 2020](#)) across a multichannel retail environment, such as the offline store, Sephora website, and Sephora Virtual Artist. Customers can touch, feel, or smell the product's detailed information in the offline environment. As a result, customers can feel more vivid mental images of the product, and more sensory engagement, enabling customers to judge better the quality of the experience's attributes ([Yaoyuneyong et al. 2016](#)).

Meanwhile, an online environment cannot offer customers much information about the products. Customers can not touch, feel, and sense the product experience and detailed product information. On the other hand, retailer websites can provide richer product information ([Kühn and Petzer 2018](#)). Meanwhile, as a 3D virtual online store, Sephora Virtual Artist is expected to be perceived as the most informative feature in online shopping. Multisensory and vivid experience from AR enables consumers to visually examine specific experience characteristics of the product ([Yaoyuneyong et al. 2016](#)). Thus, a similar effect of product information on customer purchase decisions will happen on Sephora websites and Virtual Artist by embedding necessary information on the product display. Therefore, we hypothesize:

***Hypothesis 1 (H1): Product information positively affects the product purchase intention***

Presence is the experience established in a representational climate via media ([Steuer 1992](#)); the individual has sensations of being present in the background ([Biocca and Delaney 1995](#)). The virtual experience in the online environment can develop the presence of product presentations in a computer-mediated environment. In addition, the virtual experience of AR can bring telepresence to the customer, which is defined as the sense of being present in a virtual store where one can browse and shop as in a brick and mortar store ([Kim and Hyun 2016](#)). Telepresence is affected by the sensory information about

the product quality and quantity of stimulated sensory information. Therefore, customers can interact with the product through telepresence

AR characteristics, such as interactivity and its provision of virtual information, are associated with telepresence, which refers to an environment's mediated perception ([Kim and Hyun 2016](#)). With interactivity and 3D presentation, customers can have a series of communication exchanges. [Reichheld and Schefer \(2000\)](#) show that customers tend to increase repetitive usage of functions or services provided by interactivity. Meanwhile, a prior study found that product experience can affect consumers' beliefs and attitudes more intensely, persistently, clearly, and confidently ([Fazio and Zanna 1981](#)). In addition, an increase in product purchase intention can be stimulated through product presentations ([Jasper and Ouellette 1994](#)) due to the enhancement of being present.

AR can bring a higher level of telepresence ([Kim and Hyun 2016](#)). A higher level of telepresence through customer involvement in the product experience is expected to have a similar effect on increasing customer attitudes to purchasing the products. Therefore, we synthesize H2 as follows:

**Hypothesis 2 (H2):** *Telepresence positively affects the product purchase intention using Sephora Virtual Artist*

Hedonic can be connected with feelings of pleasure ([Seo et al. 2017](#)). [Holbrook and Hirschman \(1982\)](#) outlined that the consumption of the experience can be an intrinsically satisfying customer by providing customers pleasure to the senses, fun, feelings, and fantasies. In addition, customer pleasure experiences are related to experiential (hedonic) value ([Kim and Forsythe 2008](#)). Telepresence sensations have a commonality in which it is felt when a user is absorbed in an activity or surroundings ([Seo et al. 2017](#)). Therefore, customer interactive and subjective experience with the Sephora Virtual Artist through telepresence can result in a fun and pleasurable experience. We hypothesize our third hypothesis as follows:

**Hypothesis 3 (H3):** *Telepresence positively affects hedonic motivation on Sephora Virtual Artist*

Hedonic motivation requires fun, enjoyment, pleasure, and fantasy ([Holbrook and Hirschman 1982](#)). In the offline store, retailers enhance hedonic motivation through store ambient, design, and sociable ([Chang et al. 2011](#)). Meanwhile, in the technology-mediated retail environment, such as websites and augmented reality, pleasure and hedonic factors are essential in using new technologies ([Venkatesh 2015](#)). Customers with a hedonic motivation in purchasing a product are primarily concerned with hedonic fulfillment such as fun, amusement, fantasy, and sensory stimulation ([Watson et al. 2018](#)).

In addition to the positive relationship between hedonic motivation and exploratory information seeking, researchers have found that hedonic consumers are more likely to engage in impulse buying ([Arnold and Reynolds 2003](#)). Impulsive consumption refers to unplanned or spontaneous purchases. Impulse buying engages consumers' hedonic or affective values ([Rook and Fisher 1995](#)). Hedonic Web consumers might easily surrender to unplanned purchases while shopping online. The Web is not constrained, as are traditional retailers, by opening and closing times, physical locations, or, to a large extent, product availability. Such opportunities may lead to uncontrolled or impulsive purchases ([LaRose et al. 2001](#)). Furthermore, we synthesize our hypothesis 4 as follows:

**Hypothesis 4 (H4):** *Hedonic motivation positively affects the product purchase intention*

Perceived ease of use is defined as how far someone can view the use of a technology system as free of effort ([Davis 1989](#)). Perceived ease of use also can be defined as the customers' subjective perception regarding the amount of effort to learn and use a particular website ([Ling et al. 2011](#)). Furthermore, technology systems that are considered easy to use can help the user complete a task, increase productivity, and improve the performance and efficiency of that person. Nevertheless, a technological application perceived to be easy to use has a higher chance of being accepted by users ([Miladinovic et al. 2018](#)).

[Childers et al. \(2001\)](#) found that a clear and understandable online shopping website that does not require much effort can increase purchase intentions. Meanwhile, emerging technology such as AR is not many adopted by many retailers. We assume that users need to learn this new technology, and technology's ease of use influences the learning process of this technology. Since virtual try-on is also

one of the touchpoints in online retail, it is expected to gain a similar result on perceived ease of use to customer purchase intention. Consequently, perceived ease of use jointly influences behavioral intention (Davis 1989). Therefore, we synthesize our hypothesis as follows:

**Hypothesis 5 (H5):** *Perceived ease of use positively affects the product purchase intention*

Mortazavi et al. (2014) found that the perceived ease of use can attract more customers, including the potential ones. In addition, perceived ease of use has been outlined as influencing consumers to access the website (Ling et al. 2011). Customers prefer to trust online retail when their websites can be accessed easily. Moreover, perceived ease of use is highly relevant to clients' online shopping experience according to internet applications (Mortazavi et al. 2014). The online shopping experience can lead to perceived enjoyment and pleasure, which is seen as customer hedonic motivation in online shopping (Watson et al. 2018). Meanwhile, AR, as one of the customer touchpoints for online shopping, can provide experiential customer value as a hedonic experience (Kim and Hyun 2016). Therefore, we propose our hypothesis as follows:

**Hypothesis 6 (H6):** *Perceived ease of use positively affects customer hedonic motivation*

## Research Methodology

### Population and Sample

We conducted a study by collecting responses from people aged 16-35 years old in Indonesia classified as z-generation and millennials as the primary target market of the service. We choose these two generations that are considered more open-minded to new technology adoption and want different online buying experiences. Furthermore, we limit the respondents only to female respondents since males are more rarely buying and using makeup and cosmetics. These sample criteria are deemed appropriate since they reflect beauty products' target segment. We selected 200 participants for this study. The element of PLS requires the sample size must be at least 100 or 150 because of the sensitivity of the  $\chi^2$  statistic to sample size and be a good starting point (Gefen et al. 2000).

In this study, the sample used as the research object is the user who has used the three different platforms from Sephora to consider that the samples have different shopping experiences on the three different touchpoints. The participant should experience or try to use Sephora Virtual Artist in-store by installing it on their mobile phone, followed by a traditional website and offline store. This study design aims to let the respondents share their information about their experience and perception of shopping through different Sephora channels. In this study, we used a purposive sampling technique. This technique is used for group selection based on traits or traits of a well-known population.

### Data Collection

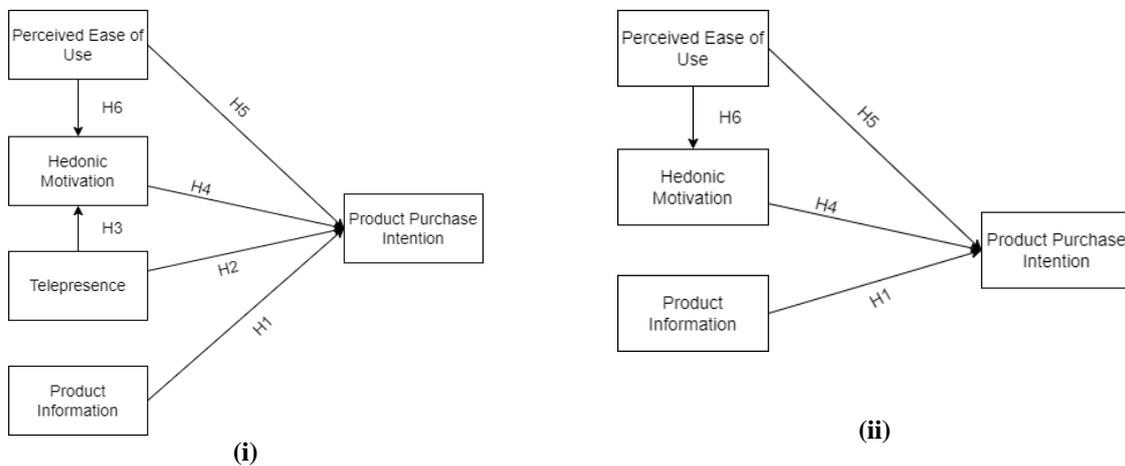
To collect data using survey methodology, we did an onsite survey in a Sephora offline store to visitors of Paris Van Java shopping mall, Bandung, Indonesia. Data collection period from May – June 2020. Due to the onsite survey approach, we collected a 100 percent response rate from the respondents, with 200 people ranging from 18-35 participating in this study. In addition, we did participant screening procedures which are: (1) participants consent to participate in this survey voluntarily; (2) checked if they only filled in the questionnaire once; (3) participants should be fluent in using English to communicate.

We adopted questions for prior research for different constructs, adjusted a little bit with our research context, and used English. This survey also collected demographic and behavioral data such as respondent domicile, spending per month (in IDR), makeup purchase frequency for the last six months, and makeup product usage time. These are the survey procedures: (1) The participant visit Sephora offline store in Paris Van Java shopping mall; (2) The participant opens and tries the Sephora AR application; (3) The participant answers a questionnaire; (4) The participant experiences or tries the Sephora traditional website; (5) The participant answer questionnaire for the traditional store; (6) The participant answer questionnaire for the offline store.

**Data Analysis**

As mentioned in the survey procedure section, we employ a within-subjects design in this research. Therefore, the participant should try three different types of Sephora touchpoints and fill out the questionnaire for each touchpoint. We use the exact measurement and construct for each touchpoint from prior literature. However, we adjusted the sentence a little bit to adapt to the context of different touchpoints. Since telepresence only affects AR due to device characteristics (Kim and Hyun 2016), we do not measure telepresence for traditional websites and offline stores. Therefore, we did not test H2 and H3 for traditional websites and offline stores, as shown in Figure 1. After finishing the data collection, we analyzed the data using PLS-SEM to examine the measurement and structural model and compared the significant result for each touchpoint. Analyzing data using PLS-SEM can help authors understand the underlying relationship between measurement variables.

Furthermore, using PLS-SEM can help authors understand the measurement's reliability and validity. Specifically, Average Variance Extracted (AVE) was conducted with a cut-off value over 0.5, and the assessment of composite reliability was undertaken to measure the internal consistency. Finally, we study the finding and provide a discussion based on the theoretical framework.



**Figure 1. Research Model for (i) Sephora AR application; (ii) Sephora Traditional Website and Offline Stores**

**Findings**

**Demographic Data**

Table 1 shows our demographic data for this study. The diversity of participant origin regions leads that the buyer of Sephora could represent Indonesian consumers in general. In terms of makeup purchase spending for the last six months, most respondents answered that they spend between IDR 1,000,000 to 2,999,000 with around 54.3 percent with the average purchase frequency between 1-3 times. The respondents also responded that they had already used Sephora for more than one year, ranging from 1 to 3 years, showing that our participants are not first-time buyers of Sephora.

**Table 1. Respondent Demographics Data**

Variables	Responses	Number of Response	Percentage
Domicile	Bandung	70	35
	Jakarta	69	34.5
	Yogyakarta	20	10
	Surabaya	11	5.5
	Surakarta	7	3.5
	Others	23	11.5
Spending per Month	Less than IDR 1,000,000	43	20.6
	IDR 1.000.000 – 2.999.000	109	54.3
	IDR 3.000.000 – 5.999.000	41	21.6
Makeup Purchase for the last six months	1-3 times	99	49.5
	4-6 times	82	41
	7-9 times	16	8
	More than nine times	3	1.5
Makeup Product Usage Time	Less than one year	17	8.5
	1-3 years	95	47.5
	More than three years	88	44

### *Descriptive Statistics*

The descriptive analysis explained the overall condition result, as shown in [Table 2](#). If the mean variable is higher than 3, the respondents generally agree with the statement. Conversely, if the respondent answers a comment lower than 3, the respondents generally disagree. [Table 2](#) also shows that the respondents have a positive attitude toward the shopping experience in three different channels of Sephora since the mean score is greater than 4.

### *Measurement Model*

Before we conducted the structural model, we employed a measurement model to validate some constructs in this study. We ran reliability and validity for the measurement model. In addition, we also conducted a measurement model for two other tests using the Sephora website and Sephora offline stores. First, reliability measures the underlying factors that have been established as one of the essential prerequisites for construct validity ([Mentzer and Kahn 1995](#)). To understand the reliability, [Garver and Mentzer \(1999\)](#) recommended Cronbach's alpha should be greater than 0.70. As shown in [Table 3](#), none of the measurement models has Cronbach's alpha less than 0.70. Therefore, internal consistency was achieved from all constructs.

Discriminant validity refers to the dissimilarity between the targeted and other constructs. Prior studies suggested comparing the square root of average variance extracted (AVE) for any two constructs with the correlation estimates between the two constructs ([Fornell and Larcker 1981](#)). As shown in [Table 3](#), each indicator in each variable has an AVE score higher than 0.5 to determine the discriminant validity. Thus, we can see that discriminant validity is achieved through this measurement model.

Next, we calculate the convergent validity to understand the construct validity of the questions and answers from the questionnaire ([Siah et al. 2018](#)). As we can see from [Table 3](#) below, all variables are valid since they have an AVE value higher than 0.5. Therefore, the convergent validity of each construct can be measured to ensure that each measurement item can effectively reflect its corresponding constructs. This research shows that convergent validity is established in our model, led by composite reliability higher than 0.7.

**Table 2. Descriptive Statistics for each variable**

Variables	Indicator	Mean	SD	Min	Max
Hedonic Motivation on Sephora Virtual Artist (HM)	HM1	4.215	0.776	2.00	5.00
	HM2	4.160	0.773	2.00	5.00
	HM3	4.320	0.749	2.00	5.00
Product Information Sephora Traditional Website (PI)	PI1	3.880	0.883	1.00	5.00
	PI2	3.925	0.902	2.00	5.00
	PI3	3.805	0.866	2.00	5.00
	PI4	4.040	0.832	1.00	5.00
	PI5	4.165	0.849	1.00	5.00
Product Information Sephora Offline Stores (PI)	PI1	4.280	0.828	1.00	5.00
	PI2	4.140	0.914	1.00	5.00
	PI3	4.140	0.835	2.00	5.00
	PI4	4.170	0.869	1.00	5.00
	PI5	4.415	0.752	2.00	5.00
Product Purchase Intention Sephora Virtual Artist (PPI)	PPI1	4.145	0.753	2.00	5.00
	PPI2	4.160	0.792	1.00	5.00
	PPI3	4.175	0.847	1.00	5.00
Product Purchase Intention Sephora Traditional Website (PPI)	PPI1	3.950	0.895	1.00	5.00
	PPI2	3.860	0.919	1.00	5.00
	PPI3	3.775	0.915	1.00	5.00
Product Purchase Intention Sephora Offline Store (PPI)	PPI1	4.340	0.823	1.00	5.00
	PPI2	4.385	0.755	2.00	5.00
	PPI3	4.380	0.774	2.00	5.00
Telepresence Sephora Virtual Artist (T)	T1	3.785	0.929	2.00	5.00
	T2	3.625	0.953	1.00	5.00
	T3	3.695	0.993	1.00	5.00

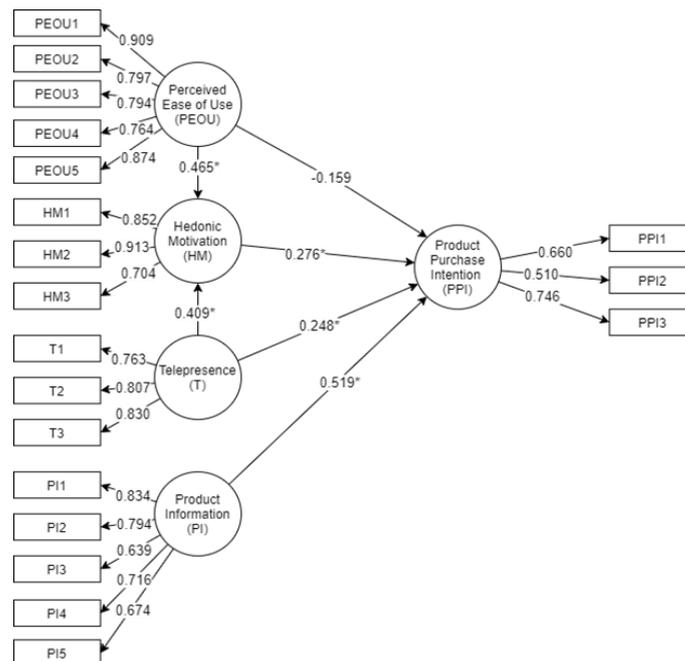
In addition to our measurement model, we conducted a collinearity test. Multicollinearity affects the result of a structural model when there is a high correlation ( $R > 0.80$ ) among the exogenous constructs (Reisinger and Turner 1999). The collinearity test is to verify strong correlations between variables, which can be done by calculating the Variance Inflation Factor (VIF). VIF is counted as "1/Tolerance" with its preferred value of 5 or lower to avoid collinearity problems. As a result of this calculation, we get that all variables' VIF is lower than 5. Therefore, it indicates no collinearity problem in this measurement model.

**Table 3: Reliability Measurement for Three Different Cases**

Case	Variable	Cronbach's Alpha	Composite Reliability	AVE
Sephora Virtual Artist	Hedonic Motivation	0.969	0.980	0.942
	Perceived Ease of Use	0.925	0.945	0.776
	Product Information	0.962	0.969	0.841
	Product Purchase Intention	0.740	0.884	0.792
	Telepresence	0.933	0.957	0.881
Sephora Website	Hedonic Motivation	0.983	0.989	0.967
	Perceived Ease of Use	0.990	0.992	0.961
	Product Information	0.988	0.990	0.942
	Product Purchase Intention	0.984	0.989	0.969
Sephora Offline Stores	Hedonic Motivation	0.986	0.991	0.973
	Perceived Ease of Use	0.968	0.975	0.886
	Product Information	0.979	0.983	0.905
	Product Purchase Intention	0.964	0.977	0.934

**Hypothesis Testing for Sephora Virtual Artist**

To answer the hypotheses for Sephora Virtual Artist, we employ the Structural Equation Model (SEM) technique to analyze the structural model. The result of our structural model can be seen in [Figure 2](#). H1 is supported since Product Information (PI) on Sephora Virtual Artist shows a positive relationship with Product Purchase Intention (PPI) ( $\beta = 0.519$ ) and is significant with a confidence interval of 95 percent. Similarly, Telepresence (T) on Sephora Virtual Artist affects PPI positively ( $\beta = 0.248$ ) and is significant with a confidence interval of 95 percent. Furthermore, both Telepresence (T) and Perceived Ease of Use (PEOU) indicate a significant positive impact on Hedonic Motivation (HM) with  $\beta = 0.409$  and  $\beta = 0.465$ , respectively. At the same time, Hedonic Motivation significantly positively affects Product Purchase Intention (PPI) ( $\beta = 0.276$ ), with a confidence interval of 95 percent. However, perceived Ease of Use (PEOU) does not positively influence Product Purchase Intention (PPI). Our study found that H1, H2, H3, H4, and H6 are supported, but H5 is not supported.



**Figure 2. Structural Model of Sephora Virtual Artist**

**Hypothesis Testing for Sephora traditional websites and offline stores**

We conducted the structural model to compare the effect proposed model on two different Sephora Purchase channels (Traditional Websites and Offline stores). After data analysis, we found that product information significantly affects purchase information ( $\beta = 0.524$ ). It also has the same effect on offline stores ( $\beta = 0.670$ ). Therefore, it is supported for H1 on both traditional websites and offline stores. In comparison, hedonic motivation is also found to significantly affect product purchase intention for both touchpoints (Traditional websites  $\beta = 0.314$ ; Offline stores  $\beta = 0.464$ ), and H4 for both touchpoints is supported. However, we found that perceived ease of use does not affect product purchase intention for both touchpoints (traditional websites  $\beta = 0.083$ ; offline stores  $\beta = -0.131$ ) and rejected H5. On the contrary, perceived ease of use significantly affects hedonic motivation for traditional websites ( $\beta = 0.750$ ) or offline stores ( $\beta = 0.825$ ). Consequently, H6 for both touchpoints is supported. The complete summary of our hypothesis testing is shown in [Table 4](#) below.

**Table 4: Structural Model for Sephora Virtual Artist (AR), Traditional Websites, and Offline Stores**

Case	Variable	Path Coefficient	Result
Sephora Virtual Artist	H1: Product Information → Product Purchase Intention	0.519	Supported
	H2: Telepresence → Product Purchase Intention	0.248	Supported
	H3: Telepresence → Hedonic Motivation	0.409	Supported
	H4: Hedonic Motivation → Product Purchase Intention	0.276	Supported
	H5: Perceived Ease of Use → Product Purchase Intention	-0.159	Rejected
	H6: Perceived Ease of Use → Hedonic Motivation	0.465	Supported
Sephora Website	H1: Product Information → Product Purchase Intention	0.524	Supported
	H4: Hedonic Motivation → Product Purchase Intention	0.314	Supported
	H5: Perceived Ease of Use → Product Purchase Intention	0.083	Rejected
	H6: Perceived Ease of Use → Hedonic Motivation	0.750	Supported
Sephora Offline Stores	H1: Product Information → Product Purchase Intention	0.670	Supported
	H4: Hedonic Motivation → Product Purchase Intention	0.464	Supported
	H5: Perceived Ease of Use → Product Purchase Intention	-0.131	Rejected
	H6: Perceived Ease of Use → Hedonic Motivation	0.825	Supported

**Table 5. Bootstrapping Result of the Proposed Model for Three Different Purchase Channels**

Case	Structural Path	Path Coefficient	T-statistic	R <sup>2</sup>	Q <sup>2</sup>
Sephora Virtual Artist	H1: Product Information → Product Purchase Intention	0.519	4.489	0.671	0.235
	H2: Telepresence → Product Purchase Intention	0.248	2.367	0.671	0.235
	H2: Telepresence → Hedonic Motivation	0.409	5.024	0.606	0.378
	H4: Hedonic Motivation → Product Purchase Intention	0.276	2.515	0.671	0.235
	H5: Perceived Ease of Use → Product Purchase Intention	-0.159	0.484	0.671	0.235
	H6: Perceived Ease of Use → Hedonic Motivation	0.465	5.797	0.606	0.378
Sephora Website	H1: Product Information → Product Purchase Intention	0.524	5.328	0.697	0.453
	H4: Hedonic Motivation → Product Purchase Intention	0.314	3.140	0.697	0.453
	H5: Perceived Ease of Use → Product Purchase Intention	0.083	1.614	0.697	0.453
	H6: Perceived Ease of Use → Hedonic Motivation	0.750	13.969	0.563	0.371
Sephora Offline Stores	H1: Product Information → Product Purchase Intention	0.670	5.543	0.881	0.485
	H4: Hedonic Motivation → Product Purchase Intention	0.464	4.468	0.881	0.485
	H5: Perceived Ease of Use → Product Purchase Intention	-0.131	1.008	0.881	0.485
	H6: Perceived Ease of Use → Hedonic Motivation	0.825	15.713	0.881	0.413

To support our analysis, we conducted bootstrapping for our proposed model in three different Sephora purchase channels. Bootstrapping is when subsamples are randomly generated from the original data set to test the hypotheses. According to [Wong \(2013\)](#), to verify the hypothesis, SmartPLS can generate T-statistics for testing the significance of inner and outer models. In bootstrapping many subsamples, estimate the T-value to test structural path significance. The path coefficient will be significant in this bootstrapping test if the t-statistics is higher than 1.96 (two-tailed t-test, confidence interval of 95 percent). We employ 500 subsamples generated automatically. As a result, we found none of the t-statistics of all measurements lower than 1.96. Thus, we can conclude that our hypotheses strongly correlate between two variables. The result of bootstrapping can be found in [Table 5](#).

## Discussion

### *Telepresence Effect on Customer Purchase Decision for Sephora Virtual Artist*

In identifying the factors that make customers willing to purchase using Sephora virtual artist app, the finding shows that telepresence builds a firm decision to purchase. Therefore, the telepresence factor significantly impacts the customer purchase decision to use Sephora virtual artist app. Furthermore, using Sephora Virtual Artist can bring customers a higher level of telepresence and better understand the product knowledge and product information. Customers can have experience with objects as two-dimensional images, and they can resemble real objects through telepresence. In addition, Sephora Virtual Artist also enables complex data to interface with the real world. It allows customers to absorb more information than the other two channels: traditional websites and Sephora offline stores.

Sephora virtual artist as an AR channel can give the customers the ability to control the content and form a 3D product presentation. In addition, Sephora virtual artist goes beyond the traditional websites and offline stores by giving customers virtual try-on cosmetics products anywhere for a virtual makeover. By giving customers this kind of experience, customers can be more engaged with online shopping. Prior studies found that telepresence can lead to customer engagement ([Algharabat 2018](#)). Customers get a sense of being trans-ported mentally, and they can feel as if they are shopping in the offline context.

Giving customers a novel experience, Sephora Virtual Artist enables behavioral responses to stimuli provided by this application, such as purchase intention. Purchase intention as a measurement for conative customer dimensions is believed to be increased with these stimuli ([Algharabat 2018](#)). Customers also get more powerful illusions of trying out the products due to a higher telepresence level, leading to higher purchase intention ([Kim and Biocca 1997](#)). As a result, customers have a more authentic experience and more realistic expectations towards a specific makeup product that they want to buy

### *Purchase Decision over Sephora three different channels*

Firstly, product information towards purchase intention concluded that product purchase intention certainly does lead to a positive intent to purchase Sephora makeup products. For makeup, product information was interpreted as the completeness of product information, consisting of product size, color, composition, shape, texture, and fit ([Smink et al. 2019](#)). Our finding shows that customers perceive that Sephora provides complete product information on its three channels, leading to customer product purchase intention. Furthermore, as a creative direction to overlay the product information, AR resembles the most direct product experience with its interactive and real-time features rather than shopping through the Sephora website itself. Using Sephora Virtual Artist, customers can indirectly try a particular makeup product based on their preferences.

Secondly, telepresence exhibited a significant positive effect on willingness to purchase. Telepresence is one of the predictors of purchase intention when using AR technology in online shopping. Telepresence means the user can apply makeup directly to their face using the Sephora virtual artist application. According to [Santulli \(2019\)](#), using makeup virtually triggered the user to purchase a particular product because telepresence created an interactive system directly with the customers. [Miladinovic et al. \(2018\)](#) find that telepresence uses AR technology in online shopping to indicate

Purchase Intention. Therefore, this study supports the prior studies and suggests that telepresence positively impacts customer purchase intention. However, telepresence only happens on the Sephora Virtual Artist.

The indicators of telepresence are directly related to hedonic motivation. The result of this study also indicated that Telepresence positively affected hedonic motivation. The AR technology could approximate a real-life try-on experience, making it more fun, feel, and act as stated on telepresence variables. Thus, it affects hedonic motivation, wherein, in this case, Sephora customers are primarily women. Women make purchase decisions more emotionally than men (Plabdaeng 2010). Prior studies also found that customer enjoyment is significantly affected by the ability of AR technology to create a real-life experience (Miladinovic et al. 2018).

Based on the previous result explanation where telepresence affected hedonic motivation, it also shows in this study that in all three Sephora channels, hedonic motivation positively affects product purchase intention. Hedonic motivation is interpreted as the perceived enjoyment and pleasure provided by the shopping experience to consumers. When we enjoy the shopping experience purchasing journey, that experience triggers customer purchase intentions. Whom in the first place had no choice to buy yet, with that fun and enjoyable experience of shopping customers will choose to buy. It is related to Plabdaeng's (2010) findings that women are primarily hedonic shoppers (Plabdaeng 2010). They tend to shop when they create emotional shopping experiences that resonate with them and how they will make them feel. Hedonic motivation is a significant factor in user acceptance of technology.

On the other hand, in this study, perceived ease of use was found to have failed to explain the variations in purchase intention. The same result was found on Sephora's three channels. Thus, customers' shaping decision was not affected by the perceived ease of use. Whenever the customer wanted to purchase a specific Sephora item, how complex or straightforward the application was, the purchase decision remained the same regarding the particular thing they wanted to buy. The participants tend to focus on the item rather than which channel is easier to use in building purchasing decisions.

Lastly, the study found that perceived ease of use positively affects hedonic motivation. Even perceived ease of use did not directly impact the purchase intention. It affects hedonic motivation. Therefore, the more accessible a specific channel (AR, website, and stores), the more enjoyment users would experience. For example, the user feels more relief when the Sephora channel provides a more accessible customer shopping experience. Hence, according to these findings, perceived ease of use indirectly positively affected product purchase intention, but not a direct one

## Conclusion

Three Sephora shopping channels show that virtual artist apps positively affect purchase intention, similar to traditional websites and offline stores. However, AR-based virtual apps do not create any difference in women's purchasing intention. AR-based virtual apps affect customer purchase intention merely due to telepresence. With the AR feature offered to customers, they can interactively with certain products. Telepresence provides a combined experience of both offline and online stores. From offline, customers can physically try their makeup, and online customers need to come to stores to shop, do online shopping from where they are, yet feel a similar experience when they shop offline.

The perceived ease of use was found not to significantly drive purchase intention in the three models (AR, traditional websites, and offline stores). Rather than focus on the particular channel of Sephora, the customer probably put their focus on the specific product that they wanted to purchase, despite what channel the customer will buy it. The buying decision remains the same regarding the particular item they intend to buy. Customers prefer to rely on the specific item rather than which platform is easier to navigate to create purchasing decisions. Through the three channels of Sephora, perceived ease of use shows that the AR feature is just another promoting channel for Sephora, apart from offline stores and websites.

The telepresence variable shows a significant predictor of purchase intention. Customers feel enjoyment and engagement when using the AR feature. Customers have a sense of connection with AREM, known as customer engagement, because customers are bound more interactively when using AR. With

telepresence, customers gain AREM, where the makeup product will bind the user because of the sense of enjoyment felt when virtually utilizing the product. Those factors lead to consumer purchase intention dominated by an enjoyment feeling from both telepresence and hedonic motivation, making AR features enjoyable to use.

### ***Theoretical Contribution***

Our study contributes to the literature by explicitly examining the impact of AR compared to other sales channels on female purchase intention. The finding is crucial since it is known that there is different technology used behavior between males and females ([Windasari and Albashrawi 2020](#)). These differences impact this AR feature, which was found in this research that most women are not as excited about developing new technology in shaping their purchase decisions. Their behavior does not differ across different channels. Women have a thicker corpus callosum, the bridge of nerve tissue that connects the brain's left and right sides. Corpus callosum helps women use both sides of their brains to solve problems quicker ([Lin and Windasari 2019](#)). A distinct brain structure contributes to women being more likely to be discovery-oriented shoppers who readily change their initial objectives if this results in a more satisfying outcome. In addition, women tend to be more analytical and consider both personal information, such as customer reviews, and objective information. Women would like to know the reasons and motivate others to purchase the item ([Lin and Windasari 2019](#)). Unlike men, women are not influenced by a website's interactivity, and therefore it is shown by our findings that the use of AR does not affect women's purchase behavior. Rather than focusing on the purchase channel, women customers tend to emphasize the products more.

### ***Practical Contribution***

Creating digital and cutting-edge channels does not automatically lead to purchase intention. The most important thing is shaping the customer's decision: how interested they are in buying a product. Instead of promoting the new AR technology provided by Sephora, the customer market segment, primarily women, are more interested in purchasing a specific product they want. Consequently, they care less about the channel that they want to buy. It shows that a woman's purchase intention is not influenced by new and sophisticated technology. Moreover, the customer purchase in the cosmetic industry for women was more affected by word of mouth, beauty vloggers, and family and friends' recommendations rather than the AR technology. Thus, Sephora virtual artists could be promoted as a new trend in shopping rather than merely as an alternative buying channel.

### ***Limitation and Future Work***

The first limitation is that Sephora is a makeup product wherein women still dominate Indonesia. Thus, because Sephora is gender-centric, not gender-neutral, Sephora's virtual artists were skewed to women. Future research suggests examining the effects of gender because it is already identical to women in makeup, so it is more for companies that use gender-neutral AR features such as retail or household furniture. In that study, we sought whether the effect would be the same or not across industries. We also acknowledge some variables to be added for future research, especially for individual measurements, such as technology readiness and AR media characteristics.

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