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Nexus among augmented reality, customer purchase intention, customer experience and customer brand relationship: Application on Vichy brand

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Abstract *the paper aims to investigate the relationship between augmented reality, customer purchase intention, customer brand relationship and customer experience using survey data from 320 respondents. The study uses Chi-square test via Kruskal-Walis test to determine if the hypotheses were accepted or rejected. The existence of the relationship between variables was proven via the measuring of Spearman Correlation. The research indicated that there is a positive relationship between augmented reality and customer purchase intention along with positive relationship between augmented reality and customer brand relationship, augmented reality, and customer experience. Empirically, this is the first paper to link the dots and find the relationship between the variables constructed by the researchers based on literature. Based on the research findings, policy implications and suggestions to further understand the relation and help using AR in marketing.*

Keywords: *Augmented Reality, Customer experience, Customer brand relationship, Customer purchase intention.*

JEL Codes: *M31*

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Introduction

Retailing and online shopping is changing rapidly these days which leads companies to innovate and interfere new technologies into the marketplace. By means of reaching the customers preferences and interest to deliver a better marketing way. Augmented Reality is one of these entrancing technologies that make virtual interaction of consumers easier with individual products. Augmented reality refers to the introduction of computer graphics into representations of the real world (Rauschnabel, et al, 2021; Tuner, 2022).

Augmented reality can create enjoyable and realistic experiences as it helps users to experience activities and perform tasks that may be hard or difficult for them to experience or accomplish in real life. Meanwhile, online shoppers can virtually see any product which they haven't seen it before also they can try experiential consumption. As per augmented reality is an interactive and experiential media that allows consumers to try the experience of shopping without really being in a physical store. It generates a virtual shopping experience, as if consumers were in physical store, and this virtual shopping experience is welcomed by online shoppers (Rauschnabel, et al, 2021; Turner, 2022).

Lately, in the marketing efforts there have been changes to make purchase intentions in consumers' markets that based on technology. Thought about buying or purchase intention is a critical phase that discovers determinant responses of customers to the stimuli. It is also known as customers plan to buy special products or services (Bilgili, et al., 2019; Jayawardena, et al., 2023). As some articles discussed the customer purchase intention might have an evolving relationship with the AR as it could be highly affected by it. AR is also a major factor that could affect the brand relationship as the technology level increases the easier it gets to contact and reach the customers making it convenient to convince them with this relationship (Bilgili, et al., 2019; Jayawardena, et al., 2023). Also, AR is causing a boom in the customer experiences as it's counted the trendiest technology nowadays.

A new trend in the beauty industry, become possible through AR, which is the real time video improvement and moderation of facial images. That is the example of Beauty Mirror, which takes less than a second to realize and track the features of the face of a user with the 3D tracking of the face and techniques of calibrations (Rauschnabel, et al, 2021; Hilpert & Zumstein,2023). Many different research and scholars have linked Augmented Reality to purchase intention, customer brand relationships and customer experience. Our research will be testing the effect of launching a new technology which is Augmented Reality toward purchase intention, customer brand relationships and customer experience.

Literature review

In the early 2000s retailers were adopting advanced technology in both their physical and online stores to improve the store environment and the online shopping experience. Augmented Reality refers to as one of the emerging interface technologies in computing nowadays and makes innovation of business easier by allowing decision making in real-time through virtual prototyping and imagination of content (Bonetti, et al., 2018). By using Augmented Reality, a consumer will have the ability of testing a product interactively out of a 3D representation, tempting the outlook of engagement or beginning a purchase (Lăzăroiu, et al, 2020). Videos, photos, audios, and others can be included to be the elements of the virtual life that form the connection between real life surroundings and the customers (Watson, et al., 2018; Habil, et al., 2023).

The curiosity and attention for the augmented reality is growing rapidly as the various uses of it. As it's recently creating an interest towards AR by the development of smartphones and the adoption to it, the cut in the cost used for the AR growth and the increasing mobility which leads to adding value to the product and prompting the customer's purchase intention (Watson, et al., 2018; Kang, et al., 2023).

AR Advertising: In the past years, eye-catching advertisements that applied AR at public place triggered media and attention of consumer. An example for this world, Pepsi made passengers ratify they were looking through the glass wall of the bus shelter, while they were in real viewing a live video with augmented 3D objects such as walking tiger or hitting robot (Abrar, 2018; Wanick, et al, 2023). There are results that show that the performance of AR ad is better than both QR ads and printed ads in nearly each dimension like quality, overall performance, ad success, memorability, and ad appeal. Surprisingly, although there is a need for a smart device to restore the information, participants estimated the option of AR as more time saving as well as effort saving as they could discover what was beyond the printed (Abrar, 2018; Wanick, et al, 2023).

Shopping-Oriented AR: Shopping-oriented AR applications aim to supply an attractive product experience to customers, as an immediate interaction and experience with the product is not potential in a digital environment. Moreover, it is mentioned that e-commerce is restricted, as it cannot supply

sufficient direct information to online consumers about products, which causes more return rates of products and neglect of shopping cart (Alimamy & Gnoth, 2022; Ibrahim, et al., 2023). To online retailers, tools of AR like virtual try-ons could raise the transformation and reduce the returns. Furthermore, as well for offline retailers the technology has a possibility, as it allows consumers to “attempt” the product at home before they purchase it in the store (Abrar, 2018; Ibrahim, et al., 2023).

Online web-based AR: The online web based is an application of the AR and counted to be very convenient and crucially important for the customer. Its main function is to transfer the experience of online shopping to the customers in a fluent and easy way just through their laptops or computer. This type of AR is used through which customers scan their bodies, faces and homes and allow them to try on some products whether makeup, cloth, hair wigs and home furniture in a virtual way (Caboni & Hagberg, 2019; Alimamy & Gnoth, 2022). This method is more accessible and effortless technique as it takes place through online platforms and on home through computer devices. Also, another advantage is covering a wide range of customers as the easiness to reach them online (Caboni & Hagberg, 2019; Alimamy & Gnoth, 2022).

In store application; Cabon & Hagberg, (2019) showed that lately the retails have been more eager to enhance the shopping process which leads them to use new methods as the AR. They want the customers to have a lively and extraordinary life experienced through shopping their stores as a result they used AR in videos and mirrors. The AR in stores is mainly projected to customers in the sake of making an interesting and interactive shopping experience.

Mobile application: This application has increased in a remarkable way lately as the handled devices existence in booming with time. Accordingly, it grabs the retailers and companies' attention to use it more in their products. In which bug companies like Ikea, L'Oreal, and Sephora introduce new application to the marketplaces that allows customers to use their products anywhere to see how it will be on their bodies, faces and homes. All you need to do is to use your camera to merge the augmented reality and real life together as these applications that are settled on the phone will make this happen (Caboni & Hagberg, 2019; Kang, et al., 2023).

Purchase intention :As reported by Liu, et al., (2021), The purchase intention is determined as the intention of the individual to buy a particular brand, individual who wants to buy a specious brand that they have chosen for themselves after a certain evaluation. Customers'' purchase intention demonstrates their willingness to purchase products from a specific shop. Purchase intention includes feelings, ideas, experience as well as external factors that he\she counted before buying any product. Consumer's Purchase intention describes and indicates their behaviour and how they are making decisions about their purchasing process (Liu, et al., 2021). The purchase intention is the wide forecaster of the company's sales of customer's actual purchases. It holds a vital role in businesses as it is used to boost sales of a certain product or service. It relies on some factors as customer loyalty, satisfaction, and retention (Ven, 2020). Customer purchase intention is affected by word of mouth, quality of the product, brand image, product attributes, product knowledge and product involvement.

Factors affecting purchase intention.

Shopping enjoyment:

One of the important factors affecting customer purchase intention is shopping enjoyment. Online shopping enjoyment is perceived as a hedonic and a wilful action besides customer's interest as they are emotionally stimulated (Liu, et al., 2021). Consumers who appreciate shopping create a joyful experience and invest energy during purchasing items. Adding interesting shopping backgrounds and creating a nice atmosphere in the site would help customers more to enjoy their shopping experience and sequentially increasing their purchase intention (Othman, et al., 2019). The meaning of Reusability is to get benefit from using the material.

Ease of use and convenient transaction

Social commerce provides customers with convenience shopping experience. Consumers perceive convenience as a critical tool in online shopping and literature approves that acceptance or use of technology would increase if the customer observed this technology as convenient and easy to use (Sims, et al., ND; Ibrahim, et al., 2023). People find online shopping an easy and super-fast way to use these days, as they are living in a busy and hectic lifestyle that makes it difficult for them to do outdoors shopping. Easier access of internet and mobile phones places a positive customer attitude therefore creating a joyful and interesting shopping experience leading to a regular purchase intention (Othman, et al., 2019).

Perceived risk

Due to the rapid growth of technology and e-commerce over the past few decades, customer trust and perceived risk have been discussed and studied widely lately (Liu, et al., 2021; Kumar, et al., 2023). Risk consists of two important dimensions which are environment uncertainty and behavioural uncertainty and both of them have a significant negative effect on customer purchase intention. As reported by Liu, et al., (2021); Nugroho & Wang (2023), there are different types of perceived risk which are financial risk perceived, functional threat perceived, physical risk perceived, and psychological risk perceived all four forms of risks have a strong negative influence on purchasing intention. Less perceived risk may produce a greater chance of buying from an online retailer as the impact of perceived risk on intentions to buy was strong.

Perceived-informativeness.

Perceived in-formativeness helps addressing the amount of information presented on the online product (Poshneh, et al., 2017; Ibrahim, et al., 2023). Online stores provide information about the product attributes and benefits, but they cannot provide product attributes experience information as for fit, shape or textile (Smink, et al, 2019). Researchers agreed that direct product experience is better as it provides a clearer mental image about the product better engagement for the senses and allow customer to compare quality of the product by other. Moreover, direct product experience gives extra information than the indirect product experience. For illustration, previous studies showed that the more the experience is direct as for 360 views or videos, the higher the perceived informativeness than indirect experience (Bonetti, et al., 2018; Kumar, et al., 2023).

Hedonic motivation

It is the expanse of perceived entertainment, joy as well as pleasure that consumers gained through online shopping experience. Previous studies established that enjoyment and hedonic factors are essential factors when it relates to applying of a new technology and had a direct impact on purchasing intention as well as decision-making (Raska & Richter, 2017).

H1: Augmented reality has a significant effect on customer purchase intention.

Studies proved that augmented reality intensively affect brand engagement in addition to customer purchase intention (Abar, 2018). If the customer is well educated and can interact easily with internet via smart

phones, he will be more likely to understand the pros and cons of any product before the actual purchase by evaluating the information which will consecutively enhance brand engagement leading to increasing the purchase intention (Abar, 2018). The AR identifies having four different ways to make enhance the purchase intention through new customer experiences. Firstly, customer feel the wide range of products they can try on when they use the AR as a result, they gain more purchase intention for the product.

Secondly, they feel that the AR technology narrow down and consume the time and effort wasted to choose one item. Thirdly, it has been found that this boosts the value of the product and the brand and encourage customers to buy it more (Romano, et al., 2020).

Nowadays, the technological progress and the adoption of retailers to new advanced technology aren't necessarily easy to use or accepted by customers (Bonetti, et al., 2018). One of the key factors of accepting new technologies is perceived ease of use in addition to perceived usefulness of the technology in improving customer activity (Bonetti, et al., 2018).

According to (Smink, et al., 2019) consumers have a positive attitude towards AR value experience, interactivity, entertaining and fast purchase decision. Levels of customer cognitive innovativeness plays an important role in accepting AR as customers with high cognitive innovativeness put in their consideration the usefulness, ease of use and the perfection of the service which creates a positive attitude towards AR shopping experience (Bonetti, et al., 2018). So, AR helps diminishing the risk of uncertainty of not being able to see the product components, as the virtual interaction before the purchase of the products gives the customer all the required information so that the consumer feel he examined the product really well (Smink, et al., 2019).

Customer brand relationship

The definition of branding is to build, keep, save, and boost a product's brand. A brand can as well be considered as a sign, term, name, symbol or a combination of all of these, that distinguishes the uniqueness of the producer or seller. The brand can be considered as a technique that attracts the seller and the buyer along with the intention of building a long-term customer brand relationship, which is known as the relationship builder (Muth, et al., 2019). The brand relationship is a crucially important element in sustaining the connection between the customers and the company through their perception and attitudes. It's definite as sharing the mutual values between the brand and the customers in which it expands and develop itself

through multiple factors over time (Ahn & Back, 2018) . It's also the first way through conducting a good customer's loyalty for the brand and keep that with a better connection and communication platforms (Khamitov, et al., 2019). The quality of the brand relationship is described based on customer measure strength and depth of customer brand relationship. An active relationship with brands can be enhanced by clients If they interact with them, a multifaceted construct consists of several relationship elements such as affective and social motivation attachments. These elements will lead to successful and balanced customer brand relationships (Xie,2017).

Customer brand relationship stages

Cognitive stage: The customer brand relationship is the initial step in building a relationship between the brand and their customers. It has multiple number of dimensions that might affect it the first one is a two-way communication. As per it's referred to when the customers recognize the power of communication across him and the brand. The company is responsible in giving some information about the brand and they expect to get information as the customer's feedback (Ahn & Back, 2018; Nugroho, & Wang, 2023). The second dimension is the emotional exchange as the remarkable trade that actually can settle a brand in a favourable place is this dimension. As it's about exchanging the emotions including love, trust and psychological connection resulting in the enjoyment and satisfaction of the customer. This stage helps the company to understand their customers more as per their need, wants expectation and future intention leading to a better communication and advanced product types (Ahn & Back, 2018).

The third dimension is the brand partner quality, and it refers to the evaluation of the company's performance through the customer's eyes and point of view. This also affect their attitudes, perception, and behaviours for the company it similarly has an effect on the customer's purchase intention of the customer towards the brand. This owns the credibility and trust of the customers for the brand which support the whole cognitive dimensions as well (Ahn & Back, 2018).

Affective stage: Is the stage that targets the feeling of the customers that's associated with the brand. The customers get exposed to numerous numbers of brands in their lives but only this stage can make it be different and astonishing for them. As per it will be remarkable and will have a strong drive in the future purchase intention. It will have a positive influence and feedback from the customer's side leading to a brand commitment and loyalty. It's more likely that the customer will choose this brand for a long time in addition to the good word of mouth that will enhance the company's image (Ahn & Back, 2018; Alvarez, et al, 2023).

Cognitive stage: This indicates the willingness of the customers to repurchase this product again and it's determined the company's success. The conative relates to the intention to act in a certain way repeatedly to the brand. The goal in the relationship marketing is through creating a strong behavioural intention for a certain brand. So, the loyalty and attitudes in this stage is created by the brand and direct to a specific direction in which all will benefit the general customer brand relationship (Ahn & Back, 2018; Alvarez, et al, 2023).

H2: The impact of augmented reality on customer brand relationship.

Online shopping has increased significantly in the past twenty year, purchasing experiences and the technological improvements have made the buying experiences much more efficient in saving time, clear and simpler. Because of development of a wide range for e-commerce platforms, so customers have more cost controls and faster transaction times, will be more aware of the importance of this channel. The factors that strengthen the relationship between customers and online retailers must be clearly represented by scholars and practitioners alike to increase brand value and increase revenue and benefit. It is important to recognize the variables that influence online buying and purchasing intention as multi-channel retail business models become more based on online shopping (Fazal-e-Hasan et al.,2018). As cited by Xie (2017); Kim., et al (2023), The adjustments in consumer awareness and technological communication have now made the customers more skilled and active throughout the processes of service development and delivery. Marketing or service managers have begun to focus on the actions of the customer citizenship which customers behave as partial workers to provide labours or experience.

Effectively managing customers as human resources will increase the productivity, production, services efficiency, and perception of service

quality of the organization. Considering that customers have fun lifestyle based on the enjoyable experience. It is not unexpected that a brand offering functional advantages and great brand experience will create a high-quality relationship with its clients. The mechanism involves the link between brand experience and the behaviour of consumer citizenship is not clear. Will the performance of brand relationships play a major role in their relationship? Customer involved with specific brand will be more likely to help the brand as well as other involved customer too (Xie,2017; Kim., et al, 2023).

Customer experience

Customer experience emerges from a collection of interactions between the product, customer as well as the company (Muth, et al., 2019). As a result, it's the feelings, excitement and imaginations that the customer get exposed to from the companies throughout life span (Kumar & Kaushik, 2020). Customer experience is characterized as internal consumer interactions with the main three elements of attitude which are feelings, emotions, and cognition (Xie, 2017; Wanick, et al., 2023). However, there's research that's discussing that the cognitive effect on the emotional experience but in both cases they affect the general behaviour (Kumar & Kaushik, 2020).

Experience is object that is created in the customers' mind and thus it's mainly personal and various for every person (Muth, et al., 2019). The experience is particular to each customer, that's why this personal experience involve different levels of involvement as emotional, rational, sensorial, spiritual, and physical (Grzegorzcyk, et al., 2019). However, it can be affected by external factors as well Brand experience is thus conceptualized as feeling, sensations, knowledge and behavioural responses that are triggered by brand related stimuli like a brands packaging, identity, design, communication, and environment of the brand (Muth, et al., 2019; Habil, et al., 2023). Additionally, it could be a negative or positive experience which will shape the customer's perception and attitude towards the brand.

Brand experience:

Brand experience can be known as perception of customers of the interaction with the brand like the brand image views in personal contact, advertising or quality level regarding the personal treatment that received by the customers. An experience is built when customers use the brand such talking about it, search for information, promotions as well as events of the brand. Experience is as well interested with familiarity as well as knowledge

in a specific area, which is obtained from exposure of the brand and prior encounters with the brand (Maklan & Klaus, 2016).

Brand experience consists of four elements including sensory, affective, behavioural, and intellectual brand experience. First, the sensory brand experience related to physical experience based on colours, sounds, fragrance, smells, tastes, and sense. Second, affective brand experience refers to emotions and feelings. Third, behavioural brand experience refers to physical acts, physical interactions, and activities. Last one, intellectual brand experience refers to thinking, interest enhancement and how solving (Xie, 2017).

Experiences tend to affect memories, higher than the real features and advantages of a product. So, brand experience must have the ability to attract emotions of customers through the process of consumption. That's why, brand experience is considered as a marketing tool to strengthen the relationship as well as linkage to the brand, where experiences are kept. Including features to the brand experience like something alive making the brand distinguish in the market, it is preferable to be memorable than product itself and get competitive advantage (Maklan & Klaus, 2016; Habil, et al., 2023).

Product experience

The experience occurs because of customer interaction with the business organization, its employees or products and services. Accordingly, Product experience is an inclusive structure that should embrace three main purchase stages; pre-purchase, purchase, and post purchase (Bueno, et al., 2019; Shukla., et al, 2023). Consumer experience isn't something to be measured. However, it's better to understand this phenomenon, several aspects should be taken in consideration as satisfaction, quality of products and product experience (Grzegorzcyk, et al., 2019). Consumer experience affect both consumer willingness to buy this product and try it which leads to consumer satisfaction (Bueno, et al., 2019; Shukla., et al, 2023).

Service experience

Service experience is recognized as a service process that helps developing consumer cognitive, behavioural, and emotional response which keeps a remarkable memory (Bueno, et al., 2019, Kozinets, et al., 2023). The service experience is composed of four main parts, public, actors, physical environment, and service performance (Grzegorzcyk, et al., 2019). Therefore, experience is unique for each customer and impossible to be generalized. There are four dimensions for service experience counting; product experience, moment of truth, focus on the result and peace of mind

(Poushneh, et al., 2017; Kozinets, et al., 2023). Researchers conducted three dimensions for service experience; predisposition which are needs, values, personality traits and others, interaction which is interaction with technology, staff, employees or the service and reactions which are mainly feelings, perceptions, intentions and desires (Poushneh, et al., 2017; Kozinets, et al., 2023)

H3: There is a relationship between customer experience and augmented reality.

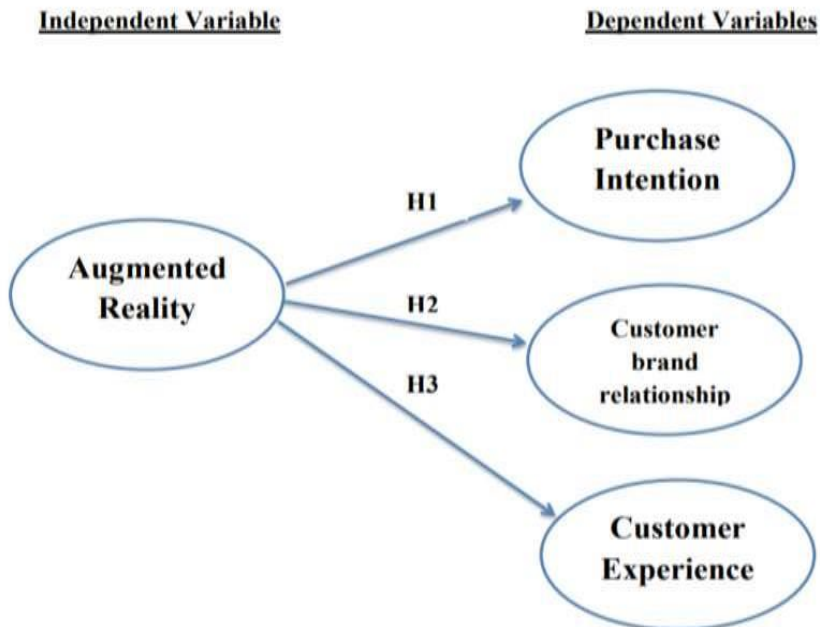
According to Chylinski, et al., (2020); Vaidyanathan, et al., (2023), Leading management goal to create a strong customer experience. When executives were asked about their main focuses for the next twelve months, enhancing the customer experience were the highest ranking. Various companies now have chief customer experience officers, vice presidents of customer experience, or customer experience managers responsible for organizing and maintaining their customers ' experience. It was addressed that the impact of experiences today and the possibilities for companies to benefit from establishing strong and lasting customer experiences. Marketing science, and customer management in specific has been hesitant to accept these developments in literature of marketing. Customer management focused mainly on creating value for companies by customers, with a focus on criteria such as customer lifetime value. The AR is causing a boom in the customer experiences as it's counted the trendiest technology nowadays. Accordingly, marketers should use this as an advantage to foster the customers to try out their product or services throughout a new experience. That's why the AR and technology is considered an advantage for customers (Romano, et al., 2020; Vaidyanathan, et al., 2023).

Methodology

In this study, researchers analyzed, compared, collected as well as explained many types of research approaches and data to be able to identify and understand the impact of Augmented Reality in Beauty industry on Customer Purchase Intentions, as well as discovering the answers for their hypothesis. The researchers used both qualitative methods in this study, which are exploratory research and in-depth interviews. Also, quantitative method which is online questionnaire.

Where method deals with quantifying and analysis variables in order to get results. It involves the utilization and analysis of numerical data using specific statistical techniques to answer questions like who, how much, what, where, when, how many, and how (Schoonenboom, 2023).

The conceptual model



Research Techniques Questionnaire

A questionnaire is a research tool that consists of several questions regarding a specific topic; its aim is to collect information about this topic from multiple respondents (Braun, et al., 2021). Research questionnaires were tracked back to year 1838 and developed by the Statistical Society of London. According to Braun, et al., (2021), any questionnaire consists of a mix of open-ended questions and closed-ended questions. Moreover, a questionnaire could be either structured or non-structured questionnaire. A questionnaire might be in the form of survey or may not, but a survey is always a questionnaire (Braun, et al., 2021).

Our research group collected around 320 respondents in two days through online platforms. For example, sharing it to friends and family in WhatsApp and Messenger, on Facebook groups and posts beside Instagram stories. This is based on the current corona virus pandemic which lead to using the online methods. We collected a larger number so the accuracy of the questionnaire will be maintained. We targeted anyone who are aware enough about the augmented reality and Vichy brand to fill our Questionnaire.

Research population

Our research population is determining a comprehensive group of individuals who used Vichy's website and have the knowledge about the augmented reality technology by conducting a survey to collect data about the research.

In our research we used the non-probability judgmental sampling technique. Our sample is implemented on a group of individuals who will participate in the research as non-probability sampling technique is based on non-random selection of the sample also the non-probability sampling technique is easier and cheaper to access. We choose the judgmental samples because we chose only females as our respondents, yet it is a hard technique to use. We conducted an online questionnaire that spread over high school students, university students, graduated students, unemployed people, employee at public or private sectors and business owners who were interested in the topic of the research and willing to fill it with their background of information about AR technology and Vichy's website.

Sample size

The sample almost consisted of only females aging from 18 to 47. As women are more concerned with beauty care and highly aware of Vichy, so they might know the AR technology applied by the company and are interested about it. Most of the sample was conducted in 6th of October city especially in MSA University and some others were conducted over other regions in Egypt.

Our research group collected around 320 respondents in two days through online platforms. For example, sharing it to friends and family in WhatsApp and Messenger, on Facebook groups and posts beside Instagram stories. This is based on the current corona virus pandemic which lead to using the online methods. We collected a larger number so the accuracy of the questionnaire will be maintained. We targeted anyone who are aware enough about the augmented reality and Vichy brand to fill our Questionnaire.

Data analysis

In this study, we have used the SPSS provides solutions for data management which allow researchers to perform case selection, create derived data, and perform file reshaping. to evaluate and analyse their data by using the SPSS different and several graphs and tests that will accordingly offer the answers they need to test and evaluate their hypothesis and provide information that will help in understanding the relationship between the variables whether its negative or positive relationship. In addition, SPSS helped in providing the researchers with various statistical techniques including frequencies, valid percentages, mean, mode and standard deviation that facilitates the evaluating process.

Researchers proved that all the questionnaire is consistent and reliable using the reliability test. Moreover, they used the Kruskal-Walli's test in order to find the chi-square has been used to identify whether the hypothesis is accepted or rejected. Thus, the researchers have used Spearman correlation test to measure the relationship the hypothesis discussed in the study. In this study the researchers used the statistical significance (p-value) that refers to the probability value of observing an effect from a sample. P-value is to identify whether the hypothesis is accepted or rejected and evaluate whether the relationship between the variables is strong or weak. This will be examined according to the p-value, which means if the p-value is less than 0.05 accordingly this will represent strong evidence against the hypothesis, so the hypothesis is accepted. However, if the p-value is greater than 0.05, this means than there's weak evidence against the hypothesis, so the hypothesis is rejected.

Results

According to table one, see appendix, that classifies the demographic characteristics, the sample unit represents a total of 320 respondents, with mainly female respondents (320). The majority of the respondents are from 20 to less than 30 years old as respondents in that age are more familiar and aware with Augmented Reality technology that is used by Vichy brand. The majority of the respondents are university students with a major income less than 3000 EGP.

Testing Hypothesis 1

H1: The relation between augmented reality and customer purchase intention

According to table 2 see appendix, that measures the idea of Augmented Reality technology by Vichy's website, it is clarified that most of the respondents agreed that they are affected by some variables such as knowledge, ease of use, interactivity, usefulness, word of mouth advertising as well as safety. The majority of respondents strongly agreed that Vichy's website is trustworthy. The standard deviation is low which means that the sample is representative and homogenous.

Table 3 Reliability table of Augmented reality

Cronbach's Alpha	N of items
0.836	8

According to the above table that shows the reliability statistics of the measuring the idea of Augmented Reality technology by Vichy's website, the 8 statements have a Cronbach's alpha = 0.836 which states the reliability and consistency between the statements. The table 4, see appendix, above represents the significant effect of augmented reality on customer purchase intention. It clarifies that the majority of customers buy Vichy's products according to their interests. It also shows that great portion of customers buy from Vichy as there is enough information about the products. Moreover, the majority of customers buy from Vichy as they think their personal information is safe along with the joyful experience, ease of use and the fastness of the purchase process. Also, the table proves that customers would buy from Vichy's website because it saves their effort. Meanwhile, a lot of customers purchase Vichy's products because of Vichy's good reputation.

Table 5 Reliability table of Customer purchase intention

Cronbach's Alpha	N of items
0.866	8

According to the above table that shows the reliability statistics of the effect of augmented reality on customer purchase intention, the 8 statements of the significant effect of augmented reality on customer purchase intention have a Cronbach's alpha = 0.866 which states the reliability and consistency between the statements.

Table 6 Chi Square of Customer Purchase Intention

P-value	0.000
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The previous table indicates that the Chi-square test was determined by Kruskal Wallis test. The P-value equals 0.000 which is less than 0.005, and this indicates that there is a significant impact of augmented reality on customer purchase intention.

Table 7 correlation of Customer Purchase Intention

Correlation coefficient	0.626
P-value	0.000
N	319

The relation between augmented reality and customer purchase intention is a positive relationship.

Results of hypothesis one:

There is a strong and positive relationship between augmented reality and customer purchase intention. The hypothesis is accepted.

Testing hypothesis 2

H2: The relation between augmented reality and customer brand relationship

According to table 8 , see appendix, that refers to whether is there impact of augmented reality on customer brand relationship or not, it

clarified that a huge portion of the respondents agree that they like Vichy's products. Along with being interested to know more information about the products. They also agreed that Vichy is the first brand that comes to their minds when they want to buy any skin care products.

Table 9 Reliability table of Customer Brand Relationship

Cronbach's Alpha	N of items
0.810	4

According to the above table that represents Reliability statistics of the customer brand relationship, the 4 statements refers to the significant impact Augmented reality on customer brand relationship have Cronbach's Alpha= 0.810 this result indicates high reliability and consistency between the statements.

Table 10 Chi Square of Customer Brand Relationship

P-value	0.000
---------	-------

The above table shows that the Chi-square test was determined by Kruskal Wallis test. The P-value equals 0.000 which is less than 0.005, and this indicates that there is a significant impact of augmented reality on customer brand relationship (CBR).

Table 11 Correlation table of Customer Brand Relationship

Correlation coefficient	0.606
P-value	0.000
N	320

The relation between augmented reality and customer brand relationship is a positive strong relationship which means that both variables move in the same direction when one variable decreases as the other variable decreases, or one variable increase while the other increases.

The hypothesis is accepted as there is a strong and positive relationship between augmented reality and customer purchase intention.

Results of testing hypothesis two:

The hypothesis is accepted as there is a strong and positive relationship between augmented reality and customer purchase intention.

Testing Hypothesis 3**H3: There is a relationship between augmented reality and customer experience.**

According to the previous table that studies the impact of augmented reality on the customers experience shows some understandable results. It shows that the majority of our respondents agree that the features of the products highly affect the customer experience. Most of them were supporting that some factors as knowledge, satisfaction, products features, interaction and exposure affect their experience towards Vichy brand. Also this showed that the standard deviation is low which means the questionnaire sample were representative, homogenous and assessing the results perfectly.

Table 13 Reliability test of customer experience

Cornbrach's Alpha	N of Items
0.807	5

The previous table illustrates the reliability analysis of the impact of augmented reality towards customer experience. These Five statements showed the there's an existing Cronbach's Alpha equals to 0.807 which shows there's a high reliability, consistency and dependability between the two factors.

Table 14 Chi test of customer experience

P-value	0.000

According to the previous table that illustrates the Chi-square analysis based on the Kruskal Wallis test (non-parametric test). The P-Value is equal to 0.000 which means less than 0.005 which means there's a relationship between the augmented reality and customer experience.

Table 5 correlation table of customer experience

Correlation coefficient	0.597
P-value	0.000
N	320

According to this table there's a positive moderate relationship between the augmented reality and customer experience. Yet the relationship is almost strong which support the idea of the impact that augmented reality has on customer experience.

Results of hypothesis three:

According to this table there's a positive moderate relationship between the augmented reality and customer experience. Yet the relationship is almost strong which support the idea of the impact that augmented reality has on customer experience.

Discussion

The results that researchers came up with supported what was found in the literature which indicate that there is a relationship between augmented reality and customer purchase intention. As, the majority of respondents strongly agreed they are affected by some variables such as knowledge, ease of use, interactivity, usefulness, word of mouth advertising as well as safety. Also, customers would buy from Vichy's website because it saves their effort. Meanwhile, a lot of customers purchase Vichy's products because of Vichy's good reputation. Moreover, it was found that the results of the research were consistent with the literature which indicate that there is a relationship between augmented reality and customer brand relationship. A huge portion of the respondents agree that they like Vichy's products. Along with being interested to know more information about the products. They also agreed that Vichy is the first brand that comes to their minds when they want to buy any skin care products. Lastly, the research encountered the relationship between augmented reality and customer experience. The majority of the respondents agree that the features of the products highly affect the customer experience. Most of them were supporting that some

factors as knowledge, satisfaction, products features, interaction, and exposure affect their experience towards Vichy brand.

Research Implications:

After analysing the research hypothesis and results, the researchers recommend Vichy with some implication that can shift their market share and sales as adjusting Vichy's website to be better designed and it should have more colourful and interactive interface along with being fast in processing interactions. Additionally, Vichy should work on increasing awareness among people by adjusting a huge marketing campaign and applying the IMC tools. It was also found that not many respondents had information about how to use the augmented reality feature in Vichy's website so it should explain to customers how to use it, give them guidelines and simple review before using it. Moreover, the majority of respondents engage in a lot of thinking while using Vichy's website, Vichy might use more simple ways to offer knowledge about the product and the new feature it applies along with simple instructions to use the augmented reality.

Research Limitation:

Since most of our respondent were university students who aged from 20 to less than 30 years old with a mean of 21 and they were unemployed with an income level less than 3000 LE with a mean of 3,909, which means that the sample wasn't sufficiently expressing the whole population of interest. This was generated from the population that were interested in Vichy's website and have information about augmented reality not the whole and general one. Furthermore, due to the pandemic of Corona virus, we collected only 320 questionnaires without any interviews from different respondents especially females. Subsequently, the researchers suggest for future researchers to conduct a larger sample to better explain the population. The researchers also recommend conducting one to one interviews to develop a clearer overview Also we can try experimental approach to encourage our population to try the augmented reality of Vichy's website.

Conclusion

This research was conducted to measure the impact of Augmented Reality in Beauty industry on Customer Purchase Intentions. This research involves three hypotheses. The researches proved that in the first hypothesis there is a positive strong relationship between augmented reality and customer purchase intention. Spearman correlation is utilized to measure the relationship between variables. The reliability test proved that the statements were consistent and reliable. Moreover, the results showed that there is a significant impact of augmented reality on customer brand relationship that led to accept the second hypotheses. Moreover, the measure of reliability exposed that there was reliability and accuracy between claims. Additionally, the results proved that there is a positive moderate relationship between augmented reality and customer experience. Although, it supports the idea of the impact of augmented reality on customer experience. Thus, the third hypotheses were also supported by the reliability test that proved that the statements are consistent and reliable.

Appendix

Table 1 Demographic characteristics
Demographic characteristics

Demographic characteristics		Frequency	Percentage
Gender	Female	320	100 %
Total		320	100%
Age	Less than 20 years old	1	0.3 %
	From 20 to less than 25 years old	286	89.7 %
	From 25 to less than 30 years old	23	7.2 %
	From 30 to less than 35 years old	5	1.6 %
	Above 35 years old	4	1.3 %
Mean Age	21		
Education Level	High School student	1	0.3. %
	University student	250	78.1 %
	Bachelor's degree or equivalent holder	49	15.3 %
	Post graduate degree holder.	19	5.9 %
	Others	1	0.3 %
Total		320	100 %
Occupation	Unemployed	245	76.6 %
	Public sector employee	2	0.6 %
	Private sector employee	48	15 %
	Business owner	25	7.8 %
Total		320	100 %
Monthly Income	Less than 3000 EGP	274	85.6 %
	From 3000 to 6000 EGP	3	0.9 %
	From 6000 to 9000 EGP	20	6.3 %
	From 9000 to 12000 EGP.	7	2.2 %
	From 12000 EGP and above	16	5 %
Mean Income	3,909		
Total		320	100 %

Table 2 Augmented reality

Statements	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)	Mean	Standard deviation
I have the knowledge necessary to use Vichy's Website.	117 36.6 %	81 25.3 %	86 26.9 %	0 0 %	36 11.3 %	3.76	1.263
Vichy's Website is easy to use.	112 35 %	107 33.4 %	76 23.8 %	0 0 %	25 7.8 %	3.88	1.131
Vichy's website motivates me to interact more.	94 29.4 %	110 34.4 %	93 29.1 %	0 0 %	23 7.2 %	3.79	1.091
Vichy's website has a strong impression on my visual senses.	88 27.5 %	117 36.6 %	87 27.2 %	0 0 %	28 8.8 %	3.74	1.127
My feeling is affected by Vichy's website.	75 23.4 %	96 30 %	99 30.9 %	0 0 %	50 15.6 %	3.46	1.288
6) I engage in a lot of thinking when I use Vichy's website.	84 26.3 %	82 25.6 %	102 31.9 %	0 0 %	52 16.3 %	3.46	1.324
7) My friends recommended Vichy's website to me.	119 37.2 %	71 22.2 %	67 20.9 %	0 0 %	63 19.7 %	3.57	1.475
I think that Vichy's website is trustworthy.	122 38.1 %	103 32.2 %	70 21.9 %	1 0.3 %	24 7.5 %	4.17	1.134

Table 4 Customer Purchase intention

Statements	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)	Mean	Standard deviation
would purchase Vichy products based on my interests.	158 49.4%	97 30.3%	46 14.4%	0	19 5.9%	4.17	1.071
Availability of Vichy products information encourages me to purchase it.	152 47.5%	92 28.7%	52 13.6%	1 0.3%	23 7.2%	4.09	1.139
would purchase Vichy product online because I know my personal information is safe.	117 36.6%	92 28.7%	84 26.3%	0	27 8.4%	3.85	1.170
would purchase Vichy's products due to the enjoyable experience.	126 39.4%	90 28.1%	74 23.1%	1 0.3%	29 9.1%	3.88	1.204
would purchase Vichy's products online as it is super easy.	120 37.5%	99 30.9%	70 21.9%	0	31 9.7%	3.87	1.207
intend to buy Vichy's products online as its fast.	115 36.1%	78 24.5%	84 26.3%	1 0.3%	41 12.9%	3.71	1.308
would buy Vichy's products online because it's effort saver.	126 39.4%	103 32.2%	61 19.1%	0	30 9.4%	3.92	1.196
prefer purchasing Vichy's products because it has a good reputation.	146 45.6%	102 31.9%	53 16.6%	1 0.3%	18 5.6%	4.12	1.065

Table 8 Customer brand relationship

Statements	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)	Mean	Standard deviation
I am always interested to know more information about Vichy products.	131 40.0%	88 27.5%	68 21.3%	0%	33 10.3%	3.89	1.242
I like the products of Vichy products.	144 45.0%	100 31.3%	55 17.2%	0 0.0%	21 6.6%	4.08	1.100
When it comes to skin care products Vichy is the first in my mind.	93 29.1%	89 27.8%	92 28.7%	1 0.3%	45 14.1%	3.58	1.296
I have an intention to repurchase from Vichy brand.	134 41.9%	90 28.1%	74 23.1%	0 0.0%	22 6.9%	3.98	1.128

Table 12 Customer experience

Statements	5 Strongly Agree	4 Agree	4 Neutral	2 Disagree	1 Strongly Disagree	Mean	Standard Deviation
I have a good amount of knowledge about Vichy brand.	102 31.9%	96 30.0%	86 26.9%	0	36 11.3%	3.71	1.234
I experience satisfaction while using Vichy's products.	103 32.3%	119 37.2%	71 22.2%	0	27 8.4%	3.85	1.133
Product features affect my experience towards Vichy brand.	111 34.7%	121 37.8%	67 20.9%	1 0.3%	20 6.3%	3.94	1.064
I enjoy interacting with Vichy Brand activities to enhance my experience.	111 34.7%	106 33.1%	71 22.2%	0	32 10.0%	3.83	1.201
5) I feel exposed to Vichy's product frequently.	99 30.9%	105 32.8%	82 25.6%	0	34 10.6%	3.73	1.207

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