The impact of Augmented reality technology on consumers' purchase intention of furniture through online stores: Applied on Chic Homz Store

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Abstract:

This paper aims to investigate the impact of Augmented Reality (AR) in enhancing customer purchase intention from the online shoppers' perspective in Egypt. First, relevant academic articles that examined the influence of Augmented reality on customer purchase intention in furniture industry were reviewed. Then, the research depends on the quantitative research method. The primary data was collected from 399 respondents by an online questionnaire. The findings of this research indicate that that there is a significant relationship between the use of AR and customers' purchase intention in the online furniture market. Further analysis developed into specific dimensions of AR, such as Perceived ease of use, perceived usefulness, perceived enjoyment, and perceived augmentation. The results indicated that all these dimensions significantly influence customer purchase intention, except for the

relationship between perceived ease of use and consumer purchase intention in the furniture sector.

Keywords: Augmented reality (AR), Perceived Ease of use, Perceived usefulness, Perceived Enjoyment, Perceived Augmentation, & Customer Purchase intention.

1. Introduction:

The world is completely moving into the digital era because of new technologies and inventions that make daily activities easier. This is causing huge changes in how people act and how businesses work. For example, more and more people prefer to buy things online instead of using traditional methods. This has caused the e-commerce sector to grow by rapidly. Since the COVID-19 pandemic started in March 2020, businesses all over the world have changed in multiple ways. Recent changes in how people act have had a big effect on retailers and suppliers. Before buying something, customers used to be able to try it out in a physical store. The only problem with this theory is that, customers have switched from shopping in personally to shopping online. They use digital tools to do different things while shopping online. This lets them start businesses that depend on the Internet to operate. (Phuthong, 2022).

According to the Central Bureau of Statistics (BPS, 2020), As of the third quarter of 2022, 38.1% of Egyptian internet users made at least one transaction online per week. Even though a lot of people shop online, it is challenging for online retailers to create a

shopping experience and journey that are as satisfying as shopping in a store. One of the main problems of shopping and online purchase is that customers would not be able to physically inspect and test things, especially when it comes to furniture purchases. Due to the integration of digital technology and the internet in the retail industry, retailers nowadays must overcome numerous challenges in order to adopt innovative store operations for their customers and affect their level of success and profitability (Vojvodić, 2019). Therefore, several advanced tools used in the retailing industry have appeared, one of those tools is Augmented reality (AR) which is defined as a type of informative media that enhances reality by presenting such virtual information as three-dimensional product images in different shapes, colors, and styles. (Poushneh & Vasquez-Parraga, 2017).

Furniture is a necessity for every household and its inhabitants. However, most individuals do not visit furniture stores weekly. It is only reasonable if they give it more thought and deliberate before purchasing it. Due to the low frequency of customer visits, the shop needs periodic updates to maintain the customer experience engaging. In this research , the emphasis will be on providing customers in need of furniture with the best possible service to increase their intention to purchase When it comes to furniture, in particular, augmented reality is a great tool for catering to individual tastes and preferences. Customers are eager to visualise the products in their own environments,

whether it is their own homes or workplaces. (Huang & Tedjojuwono, 2020).

It is important for businesses to know what encourage people to seek to use specific technology; these insights have been of concern to many past researchers; many studies have sought to develop theories and models to explain the consumer buying behavior towards the adoption of technology. The first model that was developed accordingly is the TAM (technology acceptance model), which will be the basis of this study. Therefore, the purpose of this research is to investigate if AR technology may enhance consumers' online purchasing intention behavior while also focusing on important factors, such as ease of use, usefulness, enjoyment, and Augmentation towards this technology which is essential for encouraging customer purchasing intention and satisfaction as well.

1.2 Research Problem:

With the increasing popularity of online furniture shopping, consumers often face challenges in accurately visualizing items, assessing fit, color, and texture, and avoiding disappointment due to mismatches between expectations and actual appearance. Additionally, imagining the product in real life is difficult, While returning a furniture that didn't fit is a more complex process. As a result, clients frequently have doubts while purchasing products online and find it difficult to make more informed decisions.

In addition, as the percentage of marriages continues to rise, there is a subsequent demand for furniture, as newlyweds often seek to furnish their homes. According to the statistics, published by Statista Research Department, in 2021, the number of marriages amounted to around 880,000 in Egypt, showing a rise compared to the previous years, With the growing popularity of online shopping, understanding the impact of AR on consumers' purchase intentions in the online furniture industry becomes crucial. AR has the potential to enhance the online shopping experience. The research problem thus focuses on investigating how the implementation of AR features influences consumers' intentions to purchase furniture from online stores.

2. Literature Review:

2.1 Augmented Reality

Augmented reality was initially developed in the 1950s. First, Morton L. Heilig made a device called Sensorama. Sensorama is a device contained a 3D colour screen, fans, odour sources, a stereo sound system, and a moving chair. These traits were made to appeal to the users' different senses. Then you could say it looked like a game machine. And at the time, it was a very important step forward for augmented reality which was thought to be the first example of augmented reality. Then, Thomas Caudell and David Mizell used the word "augmented reality" for the first time in 1992. After that, as technology and

cell technology got better, the number of people using augmented reality went up by a huge amount. (Sünger & Çankaya, 2019).

Kazmi et al., (2021) defined Augmented Reality (AR) as "technology integration between real-world information added by virtual objects to enhance certain realities." AR allows users to feel the addition of virtual items that appear to blend in with their surroundings. It also presents a complementary system between the real and virtual worlds, so the things exhibited appear to be side by side in the same place. AR systems combine things in actual and virtual worlds, operate interactively and in real time, and integrate objects in three dimensions (3D).

In addition, Anifa and Sanaji (2022) stated that Augmented Reality is a technology that enables users to view virtual objects that augment the actual world in real time through a suitable device. The user can interact with, handle, touch, and control real objects while viewing a new reality with virtual objects superimposed. This complements actual environments by giving users access to knowledge they would not otherwise be able to gather with their own senses. The most important characteristics about an AR technology are that it combines real and virtual objects, that it registers real and virtual worlds in three dimensions (3D), and that it lets real and virtual worlds communicate in real time.

Whang (2021) stated that Augmented Reality can be classified into three categories. First, is vividness and it can be

defined as the quality of the product image. It refers to a technology's "ability to create a sensory-rich mediated environment." Vividness is sometimes referred to as realness, realism, or richness. It encompasses both the sensory experience of actual items and the non-sensory experience of hypothetical objects. Second category is interactivity which is defined as "the extent to which users can participate in real-time modification of the form and content of a mediated environment". Interactivity enjoys users and allows them to customize information in a 3D virtual model, and they prefer interacting with virtual objects to manipulating or observing physical ones. (Poushneh & Vasquez-Parraga,2017).

The third category is Novelty and According to Saleem et al. (2022), novelty does not address the 'newness' of augmented reality capabilities. Instead, novelty refers to content (stimuli) that is personalised, new, unique, dynamic, and innovative via augmented reality technology. Furthermore, Diaa (2022) characterized novelty as the quality of being novel, distinct, and unique.

According to Ozturkcan (2021) claims retailers and customers can benefit from augmented reality because it affects engagement and choices and makes experiences better. First of all, AR enables retailers to provide consumers with detailed information that helps in decision-making. In addition, augmented reality improves the evaluation of products and allows consumers to think about alternatives they would not have otherwise. AR significantly increases the willingness of

consumers to purchase. In addition, AR's benefits for retailers include the ability to conduct virtual trials, which can increase conversion and return rates. AR allows for an interactive, exciting, and enjoyable personalised purchasing experience that makes up for the static shelf displays.

2.1.1 AR Factors affecting purchase intention:

Wang, Cao, and Ameen (2022) demonstrate that perceived ease of use, usefulness, enjoyment, and subjective norms of technology influence consumer satisfaction and usage intention of brands that have adopted augmented reality technology.

Perceived Ease of Use:

Anifa and Sanaji (2022) defined perceived ease of use as a person's level of confidence in utilising a system without much effort, so that users readily accept it. Perceived ease of use is described as the extent to which the party running a system believes that using technology from a specific site is simple and easy to understand without requiring additional effort, informative, and simple to use. Perceived ease of use is also defined by Kristi and Kusumawati (2021) as the degree to which individuals view the use of technology as simple or straightforward, resulting in greater productivity, efficiency, control, and performance.

Perceived ease of use stands for how easy you think it will be for you to use AR. The more AR seems easy to use, the more

likely people are to accept it. Technology is more likely to be used and accepted by the public if it is user friendly, easy to use, and fits the user's way of life. When people think that augmented reality will be easy to use and help them do their jobs better, they are more likely to accept it. (Ghobadi et al., 2022)

Perceived Usefulness:

According to Liu and Napitupulu (2020) Perceived Usefulness (PU) is defined as the degree to which an individual believes that using a system will enhance job performance. In the context of e-commerce, PU means that people think that shopping on the internet is better than shopping in other ways and improves the shopping experience. This perception influences consumer attitudes and intentions to purchase online. Consumers view online shopping as beneficial if it meets their specific purchasing requirements. The perceived usefulness of a product category or product variant will decrease if it fails to satisfy consumer needs. Customers' purchasing decisions are helped as well by the availability of precise product information.

According to Saleem et al. (2022), in the technology assessment model, perceived usefulness is defined as the extent to which an individual believes that the system, he or she is using will improve his or her job performance. In virtual shopping with augmented reality apps, perceived usefulness attributes aid consumers in evaluating and purchasing a virtual product. The

perceived usefulness of augmented reality increases when it provides potential information about the product's prominent characteristics, such as variety, quality, size, color, price, and fit.

Perceived Enjoyment:

In contrast to usefulness, enjoyment refers to the degree to which activities are regarded delightful and fun, regardless of all expected performance outcomes. Enjoyment indicates consumer perceptions of the potential for enjoyment in online buying, where it is defined as a sense of enjoyment felt throughout the purchasing experience rather than the completion of shopping activities. Because of the joy felt, a purchase may occur suddenly. Consumers may obtain lots of information and search and compare products from numerous internet sites without having to speak with waiters, making them feel more challenged to choose appropriate products. If customers find online shopping fun, they are more likely to believe it is valuable and to create higher usage intentions. (Liu & Napitupulu, 2020). Also, Saleem et al. (2022) said that using an updated form of augmented reality apps could be fun, which would make people more likely to use them. Adding clear pictures, color, size, animation, humor, and other interactive features to augmented reality apps would help people do their online shopping.

Perceived Augmentation:

According to Liu and Napitupulu (2020), Perceived augmentation quality is defined as the degree to which users believe that augmented content is realistic, When the quality of the augmentation is high, customers will have the impression that reality and the virtual world are working together to create an experience. The following items reflect the quality of augmentation:

1. Correspondence quality (mapping quality), is the degree to which augmented reality (AR) is able to integrate content (for instance, information, images, or objects into the relevant reality).
2. Self-empowerment (also known as self-awareness), which refers to the degree to which augmented reality is able to increase user awareness of their surroundings
3. The information quality is the degree to which augmented reality integrates accurate and relevant Virtual items with the physical world.

2.2 Purchase Intention:

Whang et al. (2021) stated that online purchase intention refers to the desire of a consumer to engage in online purchasing activities. The intention to purchase is a reliable predictor of subsequent consumer behaviour in terms of actual purchase. The purchasing intention of customers is impacted by their attitude, which can be influenced by factors such as reputation, size, and

recommendations from third-party sources. In addition, the user's intention to make a purchase is positively influenced by the website's user-friendliness and creative design.

In addition, Jayathilaka and Park (2022) defined purchase intent as a customer's desire to buy a particular product or service. The increase in return on investment for marketing efforts is the consequence of marketing that measures purchase intent. Knowing a client's intentions in advance or being able to precisely measure them would allow for more targeted marketing efforts and the achievement of the desired results, such as increased consumer engagement and return on investment. This occurs because a brand does not need to raise customer awareness of a product or service it offers before advertising it. When a consumer attempts to make a purchase but the transaction is declined or the purchase does not occur, the intention to buy may be explicitly recorded or predicted based on the client's behavior or engagement record.

According to Whang et al. (2021), the positive effects of augmented reality (AR) include increasing customer satisfaction and the likelihood of making a purchase, as well as the likelihood of engaging in behaviour that promotes word-of-mouth communication and the probability of re-intention to use the website. This is as a result of the comprehensive information provided by AR as well as its capacity to persuade customers that the product they have purchased is suitable for their needs.

Customers have a greater chance of accessing a wider variety of products due to augmented reality's display of options and variants of those things. n addition, consumers experience trialability and customization, which are not typically available with traditional online purchasing.

2.3 Relationship between AR and purchase intention:

According to Ehab et al. (2020), customers are more likely to purchase Augmented Reality (AR)-supported products than products with no augmentation. It facilitates decision-making and has a significant impact on their purchase intent. In addition, it has been demonstrated that novel and exciting technologies, such as Augmented Reality (AR), have the ability to capture consumers' attention; consequently, there will be a significant impact on purchase intention. According to Abrar (2018), high-quality product presentations reduce risk by fostering a sense of non-mediation, thus reducing the barrier between consumers and products. When consumers perceive that the products are physically present, negative impressions can decrease. As the AR experience provides a more realistic product presentation with a sense of high telepresence, consumers who experience AR may find it simpler to make purchasing decisions than consumers who do not experience AR.

3. Research Methodology

3.1 Research Philosophy:

This research used the positivism philosophy in order to investigate the impact of Augmented Reality (AR) technology on customers' Purchase Intention. It relied on existing theories and previous studies as the basis for its research. This approach was chosen as it relied on established theories and previous studies in the area of study. The current research on this topic gave a basis for the hypotheses and constructs that would be confirmed or rejected. The hypotheses presented in our study seek to determine whether AR technology has a significant and beneficial impact on the consumers' purchase intention. Because a deductive research approach is typically connected with a positivist viewpoint, it appears to be the most appropriate choice for our study.

3.2 Research approach:

The research will depend on primary data that will be collected using quantitative technique, as according to Barnham (2015), market research is undertaken when a more "in-depth" understanding of customer views, behavior, and motives is required; therefore, a clearer understanding of the problem was needed to be gathered through primary data collection. the researcher will use Quantitative approach. As the researcher will start with primary data through the questionnaire. Moreover, the researcher will use the descriptive method to fully understand the

accuracy of population, situation, or phenomenon. However, it can answer what, where, when and how questions but not why questions. Its design can also be used in wide variety of research method by helping investigate more than one variable.

3.3 Research Design:

In this research, a conclusive research approach will be used in order to provide an adequate and valid answer to the previously stated research question, which is how augmented reality may enhance the consumers' purchase intention of, specifically in Egypt. When evaluating and examining relationships and the factors affecting consumers' purchase intention, the conclusive research design is best. Furthermore, conclusive research demonstrates and provides data that can be used as input into the decision-making process.

3.4 Research strategy:

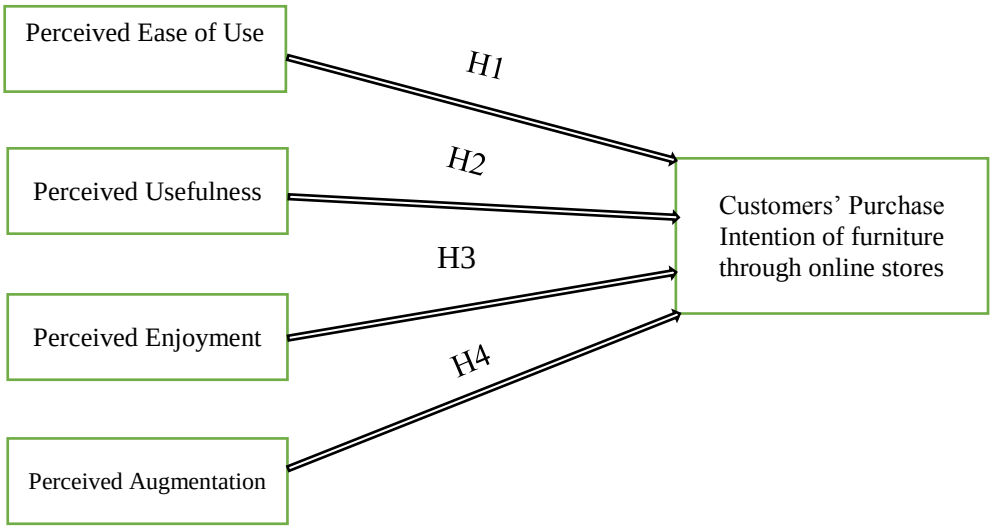
According to Mohajan and Haradhan (2020), a research strategy refers to the broad plan that outlines how a research study will be conducted. A research strategy is a valuable tool that helps researchers effectively plan, execute, and monitor their studies. In this research, the survey strategy will be used in this research, as it is a commonly used method for gathering basic data about large groups of people, including their activities, beliefs, and attitudes.

3.5 Conceptual framework:

Figure 3.1 The conceptual framework diagram below explains the purpose of the research paper which is to examine the effect of augmented reality technology on consumer's purchase intention. It was mentioned that there are many factors affecting consumers' purchasing intention, which are perceived ease of use, perceives usefulness, perceived enjoyment, and perceived augmentation.

Figure 3.1

Augmented reality



3.5.1 Research hypotheses:

According to Shah Alam et al., (2023) when users discover that there are no problems using the technology, they determine that it is easy to use. As a result, people start using such technology frequently. Many academics have investigated over the past few decades that perceived ease of use significantly positively influences usage and buying intention. Additionally, prior research has demonstrated that perceived ease of use positively affects consumer satisfaction and intention to purchase as well. Therefore, the following hypothesis is proposed:

RH1: perceived ease of use of augmented reality has an impact on customers' Purchase intention.

Previous research has demonstrated that a consumer's perception of the product's usefulness has a favorable impact on the customer's willingness to purchase the product. In online shopping with augmented reality apps, perceived usefulness attributes aid consumers in evaluating and purchasing a virtual product (Saleem et al., 2022). Therefore, the following hypothesis is proposed:

RH2: perceived usefulness of augmented reality has an impact on a customers' Purchase intention

According to Smink et al. (2019), Previous studies state that enhancing enjoyment while shopping online improves brand perception and purchase intention. At the same time, enjoyment while online purchase is characterized by a sense of immersion

and involvement, which makes customers less critical of the content and more inclined to be persuaded. Therefore, the following hypothesis is proposed:

RH3: perceived enjoyment of augmented reality has an impact on customers' Purchase intention.

According to Javornik (2015), previous studies examined the impact of perceived augmentation on customer perception of AR technology media features. It found that perceived augmentation affects affective responses towards brand and application, behavioral intentions, revisit and recommendation, and virtual try-ons. However, it did not show effects on cognitive responses, such as application-related thoughts. Therefore, the following hypothesis is proposed:

RH4: perceived Augmentation has an impact on customers' Purchase intention

3.6 Data collection methods:

This first research is deductive since it starts with hypotheses, which is a concise affirmation about the aim of the study, given the present knowledge about the variables. The quantitative method allows to test the research question precisely and on a large sample. The common mean to collect quantitative primary data is the questionnaire. The survey was developed using google form. The survey was self-administered on the Internet through popular social media, such as Facebook pages like e.g. Bridal club group and miss basket as both of them are

useful for knowing from where to get the best furniture in the easiest way. Additionally, LinkedIn, Instagram, and also WhatsApp groups have been used for getting convenience reasons. This way, the participants were able to decide the place and moment to fulfil the survey.

3.7 Data Analysis:

To analyze the quantitative data collected from the questionnaire, the researcher will use the statistical software SPSS (The statistical package for social sciences). It is widely used to analyze data and make predictions based on specific collections of data. The method used to analyze the research model was first a descriptive analysis, then factorial analysis tested the validity of the research and Cronbach's Alpha tested the reliability of the model. Finally, Multiple regressions were used to test the hypotheses. All these analyses were made with the SPSS software.

3.8 Population and sampling technique:

The target population for the study will be online buyers who are aware of AR technology and willing to use it . to be specific our population is the younger generations that is, millennials and generation Z (Gen Z) – who have become the main target groups for AR. Rhe sampling technique chosen is the non-probability sampling technique due to inaccessibility of

sample frame and convenience sampling will be use as it is in the right place at the right time.

4. Statistical Analysis and Hypotheses Testing:

4.1 The descriptive analysis:

The descriptive data was collected using the SPSS program which includes the gender characteristics, age, marital status, education level and monthly income of the questionnaire respondents. The study participants were divided into two categories based on their level of familiarity with online purchasing of furniture. There was a total of 399 participants, of which 55.4 % were female and 44.6% were male. Furthermore , for the age the majority is between 20 to 30 years old has a frequency of 272 and a percentage of 68.2 % of the population, as the youth are more willing to try 'Augmented Reality Technology" as they are tech-savvy and frequently shop more, as well as, the mean age is found to be 33. As for the marital status, the majority of respondents, approximately 58.9%, are single, while 40.9% are married. Moreover, the majority of the respondents were bachelor's degree and postgraduates (95.5%).

In regards to the monthly income, the highest percentage goes to two categories from 5,000 EGP to less than 10,000 EGP with a percentage of 37.1 and to More than 15,000 EGP with a percentage of 32.6. as well as, the mean income is found to be 10,260 EGP.

Table (4.1) shows a sample of Perceived Ease of Use statements reveals Statement with the Highest Mean and the Lowest Mean while the remaining statements fall within this range of means, reflecting varied perceptions of ease of use. As the mean rating , is above 4, indicates an overall positive sentiment among users and high level of agreement on these statements. This suggests that, on average, users find augmented reality technology relatively easy to use, reflecting a favorable perception of its user-friendliness. Also, as the standard deviation (S.D) for all statements is less than 2 indicates that users have a high level of consistency and agreement in their positive opinions of augmented reality's ease of use. Users, on overall, agree that AR technology is simple to use.

Table (4.2) shows how respondents felt towards the given statements measuring purchase intention of furniture using AR technology , As the mean rating, is above 4, reflect a favorable purchase intention among users when considering augmented reality technology for furniture purchases. As shown in the table above that is, the standard deviation is less than 2, This means that there is a high level of a consistency and agreement among users.

As shown in table (4.3), the mean ratings above 4 for all statements which indicate that respondents find augmented reality to be highly useful for furniture-related tasks. This suggests that users perceive augmented reality technology as a valuable and effective tool for activities such as saving time,

effort, furniture selection itself, placement, or design. As for the standard deviation is less than 2 for all statements, this means that there is a high consistency in perceptions suggests a shared understanding of the AR technology's value.

As shown in table (4.4), The mean ratings above 4 for all statements which indicate that respondents find using augmented reality for furniture-related activities to be enjoyable and interesting. As for the standard deviation is less than 2 for all statements it means that there is a consistency in opinions and perceptions.

As shown in table (4.5), that mean for all statements is above 4, the mean ratings above 4 indicate that respondents perceive augmented reality as a tool that enhances their imagination of furniture pieces they were inserted into the place where they belong. As for the standard deviation, which is less than 2, indicates a high level of consistency among users regarding the augmentation and visual clarity aspects of augmented reality for furniture respondents consistently perceive augmented reality as a tool for enhancing their imagination and providing clear visual products.

Table 4.1 Statements measuring AR's Ease of Use (Independent Variable)

Statements	Strongly Disagree (1)	Disgree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)	Mean	Standard Deviation	Total
Perceived Ease of use								
1. Using augmented reality on the furniture website is easy and straightforward	0	4	50	161	184	4.32	0.727	399
2. Learning to use this augmented reality technology is easy for me.	1	4	51	199	144	4.21	.714	399
3. Using the augmented reality feature on the website would make it easier to shop	0	7	41	154	197	4.36	0.736	399
4. Using augmented reality on the furniture website doesn't require a lot of effort.	2	8	60	166	163	4.20	0.803	399

Table 4.2 Statements Measuring Purchase Intentions (Dependent)

Statements	Strongly Disagree (1)	Disgree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)	Mean	Standard Deviation	Total
Consumers' Purchase Intention								
1. I believe that augmented reality technology would aid in the purchase decision of a product.	2	7	22	138	230	4.47	0.725	399
2. I would like to purchase the items I have virtually tried on that augmented reality website	0	6	38	184	171	4.30	0.702	399
3. I am willing to buy furniture via an augmented reality website.	0	8	45	149	197	4.34	0.756	399
4. I will repurchase in the e-commerce websites that use augmented reality	1	6	39	165	188	4.34	0.735	399
5. I would recommend this AR website to friends and relatives.	0	5	28	143	223	4.46	0.682	399

Table 4.3 Statements Measuring AR's Perceived Usefulness (Independent Variable)

Statements	Strongly Disagree (1)	Disgree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)	Mean	Standard Deviation	Total
Perceived Usefulness								
1. I find the Augmented reality feature on the website to be useful.	1	1	29	137	231	4.49	0.664	399
2. Augmented reality technology can save my shopping time shopping energy and physical strength.	0	3	29	162	205	4.43	0.660	399
3. Online shopping using augmented reality gives you more options to view products in the real world	1	9	40	157	192	4.33	0.767	399
4. I feel augmented reality in online shopping provides more information	2	13	45	147	181	4.23	0.847	399
5. Using of this Augmented reality technology enables me to accomplish shopping tasks more quickly.	2	5	36	121	235	4.46	0.752	399

Table 4.4: Statements Measuring AR's Perceived Enjoyment (Independent Variable)

Statements	Strongly Disagree (1)	Disgree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)	Mean	Standard Deviation	Total
Perceived Enjoyment								
1. I enjoy buying products online with this augmented reality interactive technology.	3	11	53	143	189	4.26	0.847	399
2. Online shopping stores that use augmented reality features is more impressive and special	1	7	41	158	192	4.34	0.752	399
3. I find the buying process through augmented reality applications pleasant.	1	5	48	193	152	4.23	0.723	399
4. Augmented reality technology makes the furniture shopping experience more interactive and engaging	0	10	34	158	197	4.36	0.743	399

Table 4.5: Statements Measuring AR's Perceived Augmentation (Independent Variable)

Statements	Strongly Disagree (1)	Disgree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)	Mean	Standard Deviation	Total
Perceived Augmentation								
1. After using the augmented reality tec, I could still imagine the pieces of furniture.	0	8	41	139	211	4.39	0.751	399
2. This augmented reality website would let me visualize what the actual product is like	2	13	46	150	188	4.28	0.829	399
3. The visual display of products\ objects through this AR mobile application is clear	2	14	54	167	162	4.19	0.833	399
4. While using the AR app I felt like I was actually seeing or touching the product	0	23	63	150	163	4.14	0.884	399
5. It seemed as if the furniture had transitioned from the device into the room.	0	11	51	163	174	4.25	0.782	399

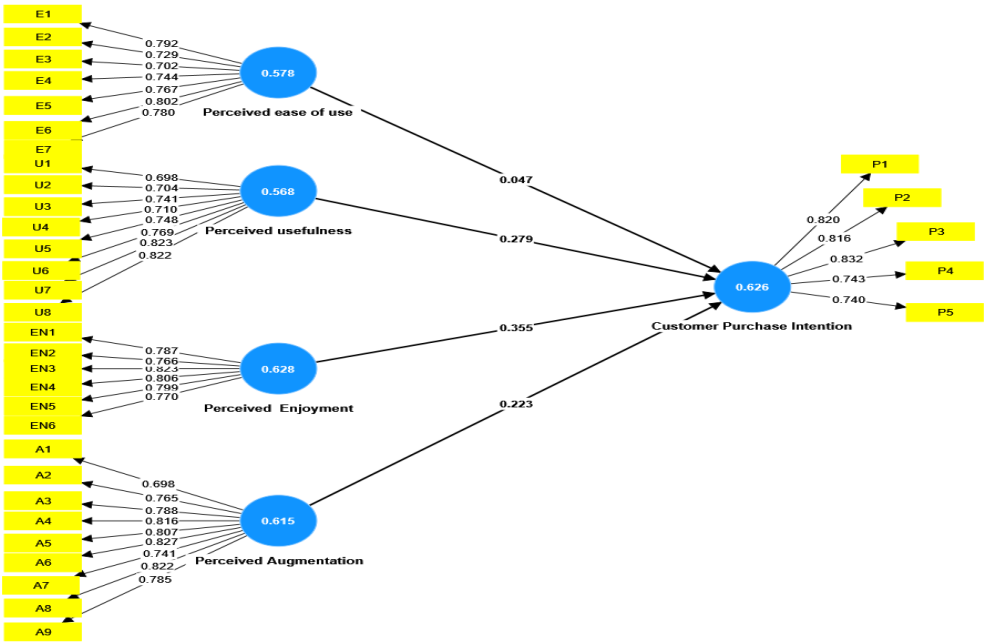
4.2 Reliability and validity Test:

Table (4.6) Reliability Test for all the variables.

Variable	Cronbach's Alpha	Composite reliability (CR)	AVE
Perceived Ease of Use	0.877	0.905	0.578
Perceived Usefulness	0.890	0.913	0.568
Perceived Enjoyment	0.880	0.91	0.628
Perceived Augmentation	0.921	0.935	0.615
Purchase Intention	0.850	0.893	0.626

Table (4.6): In order to determine a research's overall quality, testing for reliability is essential as it is used to measure the degree of consistency of a certain characteristic throughout the research. According to Sürücü and Maslakci (2020), Cronbach's Alpha is a popular method used to measure the degree of internal consistency and overall reliability. Thus, this method is used to assess the consistency and reliability of the questionnaire's statements. Moreover, Cronbach's Alpha's general rule is 0.7 indicates a level of reliability that is acceptable. The results of the analysis indicate that all of the variables are reliable as for each variable the Cronbach's Alpha is > 0.7. This result indicates that the statements measuring perceived ease of use, perceived usefulness, perceived enjoyment, perceived Augmentation, & purchase intention the statements measuring Consumers' purchase intention are correctly chosen due to the high level of reliability.

According to Sürücü and Maslakci (2020), validity refers to the extent that dimension measures what it was designed to measure. The main measures for validity are average variance extracted (AVE) and composite reliability (CR). To get closer to the truthfulness of the statements used to express the factors, the researcher calculated both the composite reliability and the average variance extracted. All of the factors had AVEs more than 0.5 and CRs greater than 0.7. This exemplifies how the statements may be utilized to take into consideration the variables.



4.3 Hypotheses Testing:

4.3.1 Correlation Test:

Table 4.7: The relationship between independent variables and consumers' purchase intention		
Percived ease of use	Correlation Coefficient	0.6.4
	P Value	0.000
Percived Usefulness	Correlation Coefficient	0.682
	P Value	0.000
Percived Enjoyment	Correlation Coefficient	0.643
	P Value	0.000
Percived Augmentation	Correlation Coefficient	0.691
	P Value	0.000

Spearman's correlation coefficient is a statistical measure known as r value. It describes the degree of associative influence of the variables. Since P-value (sig) is 0.000 which is less than 0.05 and the correlation coefficient in the table is above 0.5 indicating there an exist positive moderate association between the independent variables and the customers' purchase.

4.3.2 Regression Analysis:

Table 4.8: Regression analysis

Regression Model	Adjusted R'2	P-value
Model	0.648	0.00

Adjusted R'2 is equal to 0.648 (65%) which means that the independent variables can explain about 65% of the change in the customer purchase intention. Additionally, the model is overall significant as p-value is equal to 0.00.

4.3.2.1. Multiple Regression Analysis:

Table 4.9 Regression Model

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.654	.142		4.594	.000
	Ease of use	.046	.048	.046	.956	.339
	Usefullness	.275	.055	.267	4.986	.000
	Enjoyment	.335	.045	.355	7.467	.000
	Augmentation)	.211	.045	.231	4.718	.000

The results of ANOVA regarding perceived ease of, perceived usefulness, perceived enjoyment and perceived augmentation. The analysis showed that all relationships were significant except the link between perceived ease of use influencing consumer's purchase intention of furniture. The other relationships show a strong significance. Also, this table summarizes the results of the coefficients table of the multiple regression the was conducted. Last but not least, examining the standardized coefficients beta results, it can be highlighted that AR's perceived Enjoyment has the largest influence on consumers' purchase intention ($\beta = 0.355$), followed by Perceived usefulness ($\beta = 0.267$) and perceived augmentation ($\beta = 0.231$), while perceived ease of use having the weakest influence ($\beta = 0.046$).

4.4 Conclusion

Table (4.10) summarizes the results of the hypothesis testing as well as highlights which method was used for the analysis.

Hypothesis	Testing Method	Result
RH1: perceived ease of use of augmented reality has an impact on customers' Purchase intention.	Multiple Regression Model (ANOVA)	Not significant ⇒ H1rejected
RH2: perceived usefulness of augmented reality has an impact on a customers' Purchase intention.	Multiple Regression Model (ANOVA)	Significant ⇒ H2 accepted
RH3: perceived enjoyment of augmented reality has an impact on customers' Purchase intention.	Multiple Regression Model (ANOVA)	Significant ⇒ H3 accepted
RH4: perceived Augmentation has an impact on customers' Purchase intention	Multiple Regression Model (ANOVA)	Significant ⇒ H4 accepted

5. Discussion and Conclusion

5.1 Research Discussion:

The results of the previous studies are consistent with research findings, which indicate that perceived usefulness, perceived enjoyments, and perceived augmentation all have a significant moderate impact on customers' purchase intentions for buying furniture items. As a result, hypotheses 2, 3, and 3 are accepted. While the results contradict the author's claims, the findings found that perceived ease of use has no effect on customers' purchase intentions for furniture items. As a result, hypothesis 1 is rejected.

5.2 Managerial Implications:

First, it is recommended to marketing managers to think about the AR features. AR developers should use all AR characteristics, especially the interactivity feature, when making their app so that customers can move and control the products. Then, focus on the vividness of the goods by showing them in both the real world and the virtual world in a way that is bright and clear. In addition to the Novelty feature by adding unique content on the AR app, which gives each customer a personalized, one-of-a-kind experience based on their wants and preferences.

Also, Foreign, and local businesses in Egypt should use augmented reality technology into their businesses or at least try to implement it into their planning. As Customers' shopping experiences are greatly enhanced by this technology, which enables them to look up any product online and get all the information they need from anywhere. If they have busy lives, this technology even lets them skip visiting a physical store.

Additionally, it is recommended to marketing managers to create marketing campaigns and educational content that highlight the benefits of using augmented reality for furniture shopping. Educate potential clients on how augmented reality may save them time, physical effort, reduce returns, and result in more enjoyable purchases. Moreover, it recommended specifically to Chic Homz to focus on providing more awareness about augmented reality technology to their employees, sales

team, and marketers. This will enable them to better educate customers about the brand and assist them in effectively and successfully utilising this technology. It appears that many people are unaware that Chic Homz is using augmented reality technology, so it is crucial to address this knowledge gap.

5.3 Research Limitations:

The research is limited to only one industry, due to Chic Homz being the only the furniture store that offers AR in Egypt while researching the topic, it was the only store researcher can rely on during the data collection process. Second, the study was conducted in Egypt as developing country in the field of augmented reality. Where some participants were first users for AR app. Which may limit the generalization of results; thereby, future studies should consider conduct the proposed model in different contexts. Third, the research framework looks at some key factors; it doesn't look at a lot of other factors that might be significant.

5.4 Suggestions for further research:

As the research is limited to only industry. Therefore, it is recommended to apply the same research on other industries, such as the cosmetics, tourism, or other retail industry. Also, researchers may investigate other factors, like perception of privacy issues. Moreover, Researcheres could use a different sampling technique such as judgmental sampling for shoppers who previously used AR which would help collect data from a

more representative sample; thus, generate more accurate findings. Further research should use a different area of application such as the cosmetics industry which can give different insights on the topic of the use of Augmented reality technology. Or Future research may need to consider other product categories, such as Cosmetics or Apparel, to further support the findings of this study.

References:

Abrar, K. (2018). Impact of augmented reality on consumer purchase intention with the mediating role of customer brand engagement: Moderating role of interactivity in online shopping. *Bahria University Journal of Management & Technology*, *1*(2), 64-80.

Anifa, N., & Sanaji, S. (2022). Augmented Reality Users: The Effect of Perceived Ease of Use, Perceived Usefulness, and Customer Experience on Repurchase Intention. *Journal of Business and Management Review*, *3*(3), 252-274.

Diaa, N. M. (2022). Investigating the effect of augmented reality on customer brand engagement: The mediating role of technology attributes. The business & Management Review, 13(2), 356-375.

Ehab, M., Adel, R., & Abdelmoaty, H. (2020). The Effect of Augmented Reality Applications on Customer's Purchase Intentions. *International Journal of Advanced Scientific Research and Management*, *5*(11), 34-43.

Ghobadi, M., Shirowzhan, S., Ghiai, M. M., Mohammad Ebrahimzadeh, F., & Tahmasebinia, F. (2022). Augmented Reality Applications in Education and Examining Key Factors Affecting the Users' Behaviors. *Education Sciences*, *13*(1), 10.

Kazmi, S. H. A., Ahmed, R. R., Soomro, K. A., Hashem E, A. R., Akhtar, H., & Parmar, V. (2021). Role of Augmented Reality in Changing Consumer Behavior and Decision Making: Case of Pakistan. *Sustainability*, *13*(24), 14064.

Kristi, K. M., & Kusumawati, N. (2021). Technology acceptance and customer perception of augmented reality (AR) in Indonesian beauty industry. In *ICE-BEES 2020: Proceedings of the 3rd International Conference on Economics, Business and Economic Education Science, ICE-BEES 2020, 22-23 July 2020, Semarang, Indonesia* (p. 134). European Alliance for Innovation.

Liu, S. & Napitupulu, T.A. (2020). Analyzing Factors Affecting Satisfaction and Purchase Intention Towards Mobile Augmented Reality E-Commerce Applications in Indonesia. *Journal of Theoretical and Applied Information Technology*, *98*(22).

Poushneh, A., & Vasquez-Parraga, A. Z. (2017). Discernible impact of augmented reality on retail customer's experience, satisfaction and willingness to buy. *Journal of Retailing and Consumer Services*, *34*, 229-234.

Saleem, M., Kamarudin, S., Shoaib, H. M., & Nasar, A. (2022). Retail consumers' behavioral intention to use augmented reality mobile apps in Pakistan. *Journal of Internet Commerce, 21*(4), 497-525.

Shah Alam, S., Masukujjaman, M., Sayeed, M. S., Omar, N. A., Ayob, A. H., & Wan Hussain, W. M. H. (2022). Modeling Consumers' Usage Intention of Augmented Reality in Online Buying Context: Empirical Setting with Measurement Development. *Journal of Global Marketing*, 1-24.

Smink, A. R., Frowijn, S., van Reijmersdal, E. A., van Noort, G., & Neijens, P. C. (2019). Try online before you buy: How does shopping with augmented reality affect brand responses and

personal data disclosure. *Electronic Commerce Research and Applications*, *35*, 100854.

Sünger, I., & Çankaya, S. (2019). Augmented reality: historical development and area of usage. *Journal of Educational Technology and Online Learning*, *2*(3), 118-133.

Vojvodić, K. (2019). Brick-and-mortar retailers: Becoming smarter with innovative technologies. Strategic Management, 24(2), 3-11.

Wang, W., Cao, D., & Ameen, N. (2022). Understanding customer satisfaction of augmented reality in retail: a human value orientation and consumption value perspective. *Information Technology & People*, (ahead-of-print).

Wang, Y., Ko, E., & Wang, H. (2022). Augmented reality (AR) app use in the beauty product industry and consumer purchase intention. *Asia Pacific Journal of Marketing and Logistics*, *34*(1), 110-131.

Whang, J. B., Song, J. H., Choi, B., & Lee, J. H. (2021). The effect of augmented reality on purchase intention of beauty products: The roles of consumers' control. *Journal of Business Research*, *133*, 275-284.