

A Study on Customer Perception Towards Impact of Technologies on Enhancement of Design, Branding and Advertising in Sustainable Jeweleries

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Abstract: This study considers the impact of technologies such as Augmented Reality (AR), Virtual Reality (VR), and Mixed Reality (MR) on customer perception of design, branding, and advertising in the sustainable jewelry industry. The research aims to analyze how demographic factors influence the adoption of these technologies and develop a model for understanding customer perception. A descriptive and exploratory research approach was used, collecting primary data through structured questionnaires from 440 jewelry consumers. Statistical tools such as Reliability Analysis, Regression, ANOVA, Mann Whitney Test, and SEM Model building were employed for data analysis. The study addresses a research gap in understanding the specific effects of AR, VR, and MR on the jewelry industry, considering the unique demands and behaviors of jewelry consumers. The findings will provide insights into how demographic characteristics influence technology adoption and customer perception, ultimately contributing to the development of a model for predicting consumer behavior in this specialized industry.

Keywords: consumer perception, technology, jewelry, augmented reality, virtual reality, mixed reality, design, branding, advertising, and sustainable.

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1. Introduction

Augmented reality (AR) with other technologies like Virtual Reality (VR) and Mixed Reality (MR) has developed as an important interactive sensory-enabling technology within retail environments which makes AR, VR and MR more interactive elements create an immersive shopping experience, giving consumers new ways to virtually interact with items [15]. Augmented reality (AR) refers to the combination of the actual world with digital information which is in the form of virtual created world with customisation. Actual objects and people cast an information shadow which is quality of data which is when captured and processed intelligently, can offer extraordinary value to consumers and Virtual reality (VR) refers to thorough, 3-D virtual representations of the actual world or of objects, so most discussions of new realities only focus on AR or VR, not disbursing attention to what is likely the most interesting type of virtual reality for most organizations which takes mixed reality (MR) in picture. Mixed reality (MR) refers to the merging of real world virtual constructs with computer-generated ideas that are either real or possible [29].

The theory of "luxury brands" pertains to a certain type of branding and is a relatively recent creation that has a global impact on the lifestyle of luxurious consumption. Other factors contributing to the exponential upturn in demand for luxury goods include intensifying opportunities for wealth creation, exposure to the world market, technical breakthroughs, and economic integration [1]. From a sociological perspective, context is crucial to understanding luxury. In actuality, it has served a variety of socially

significant purposes throughout history, including fostering social stratification, identifying what is necessary and unnecessary, and promoting economic prosperity [32].

One of the item which fall under the bracket of Luxury is gold, and that too Gold ornaments hold a special place in the cultural and economic landscape of India. These ornaments are not only cherished for their aesthetic appeal but also for their cultural, religious, and economic value and they symbolize wealth, status, and beauty and are integral to various ceremonies and rituals [27]. The Indian economy is tending more globalized, which has boosted growth across the board, including the jewelry business. Additionally, it has raised consumer attentiveness and spending capacity [25]. The Indian retail market has evolved as a result of these causes. Aforementioned to 1990, only authorized dealers and goldsmiths could enter the country with ease into the retail sales of jewelry [27]. However, when the Gold Control Act was repealed in 1990, even non-trading Goldsmiths contributed to this venture. In addition, the jewelry industry seemed to be quite money-spinning, therefore many families without any prior expertise were urged to start their own jewelry stores [25].

2. Literature Review

2.1 Examining Demographics on Consumers Adoption of Technology

An inclusive knowledge of consumer behaviour in many situations and market categories is possible place to the mutual insights gathered from these surveys. Study emphasizes the importance of brand image and product look as well as the necessity of taking cultural and demographic considerations into account [11]. Highlighting how lower

socioeconomic groups encouraged luxury buying is motivated by a desire for social mobility [12]. Concentrate on the critical roles of social media, brand reputation, and apparent value in the luxury market [22], while [10] show the ground-breaking influence of live streaming commerce on customer contribution and purchase behaviour. These studies mutually underscore the complexity of consumer administrative and the various factors that influence it. Marketers directing to target specific consumer segments must consider these diverse guidance to develop effective strategies [23]. For instance, thoughtful the role of social praise and brand image can help in crafting targeted marketing movements for urban young adults in India [11]. Similarly, acknowledging the aspirational drives of lower socioeconomic groups can aid luxury brands in locating their products more effectively [12].

The status of leveraging new technologies and platforms, such as live coursing commerce, is unique from the work of [10], who show that these innovations can significantly enhance consumer commitment and satisfaction. Findings further highlight the critical role of social media and observed value in manipulating online luxury shopping performance, suggesting that luxury brands should rank these aspects to appeal and retain customers [22].

2.2 Perception Towards Technology (AR/VR/MR) in Jewelry Design, Branding, and Advertising

It has shown that ability to provide customers with a more active and captivating way to view things, augmented reality (AR) has become a potent tool for civilising online shopping experiences and mesmerizing advertising. Through improved sensitive involvement and cognitive processing, AR visual buying and can dramatically enhance consumers buying intentions which is associated with designs [8]. The present research employed a consumer neuroscience methodology to investigate the effect of augmented reality (AR) on brain activity. The findings indicate that AR has the potential to enhance product purchase intent by stimulating emotional attachment to the product with highlighting it with a face which is brand [8]. With its capability to arrange for real-time communication between businesses and customers, live gushing has quickly become popular as a forceful marketing advertising tool [3]. Investigation on the impact of live flowing on consumer purchase aims to focus on the value of interactive features such product demos and Q&A sessions. Rendering to the study, live streaming may have a big inspiration on consumer's connation and purchase decisions by nurturing a feeling of community and social company of people [3].

Looking at how AI affected customers' feelings about restaurant quality and loyalty which would have also linked with jewelries as it includes service. According to the findings indicate that consumers' discernments of artificial intelligence (AI) in restaurants are not unbroken which can be implemented in retail jewelry as well [21]. While some consider it to be creative and handy, others see it as measured and devoid of human touch. Stressing on how important it is for cafes to strike a weighing scale between the advantages of artificial intelligence and the constraint to treat patrons as

individuals. Influence the connation and purchase decisions of consumers [21]. The results of the study showed that by promoting emotional contribution and cognitive processing, augmented reality might substantially raise purchase intentions. These results are dependable with the overall perception of augmented reality's capacity to near the gap between online and offline purchasing by providing customers with a more engaging and dynamic way to explore products [8]. Looking at the moderating impacts of product knowledge, engagement, and shopping orientation on the efficacy of virtual reality retail settings [20]. Despite concentrating on virtual reality, advancing our knowledge of how immersive technology might affect consumer behaviour in general. These studies offer a more comprehensive view of how AR and VR influence purchase intentions by taking into account variables like consumer psychology and product features [20].

Through the provision of distinctive digital knowledges via non-fungible tokens (NFTs), the idea of virtual luxury in the metameres is converting the luxury market which can also help retail jewelry in protecting unique designs [19]. Investigate how NFTs help luxury businesses reimagine value and establish connections with consumers online. Through NFTs, companies may offer special digital assets that can improve their status and escalate consumer loyalty, such virtual fashion items or digital artworks [19]. 3D-printed sensors are attractive a reality because to technological advancements in 3D printing [7]. These radars have several benefits, with low costs, high customisation, and quick prototyping. A systematic analysis of 3D-printed sensors, which also cover the claims of these sensors in the environmental, industrial, and biomedical domains which will be applied in digital jewelry industry [7].

These sensors have the power to fully transform industries by offering focused, cost-effective solutions which give auto generated customisation to customers while using respective technologies. The speed at which adapted sensors may be produced can spur origination and enhance the care and trustworthiness of data collecting diagonally a range of applications [7]. Still, in order to suitably utilize the potential of 3D-printed sensors, issues like scalability and material restrictions must be resolved which makes to build up unique designs of jewelry. Explored the benefits and drawbacks of 3D-printed sensors, highlighting its volume for low-cost, quick prototyping, and customisation which can be advertised in different domains. This location emphasizes how 3D-printed sensors have the power to totally transform a number of sectors including jewelry. When consumers involved with AR-enhanced product displays, there was augmented activity in provinces related to visual processing and expressive involvement [8]. These results shed light on the neurological processes sustaining these benefits. These upshots imply that augmented reality (AR) can produce more outstanding and immersive purchasing experiences, which will rise online businesses' conversion rates [8].

2.3 Perceptual Process Model

Constructing a mental picture of the world from bodily data is the process of perception, one of the basic cognitive functions. Perceptual cycle model offers a framework for

comprehending how customers grip information about products and make decisions [11]. According to this paradigm, awareness is a dynamic and iterative process that is stuck by a number of variables, such as the price, the look of the object, and the psychosomatic traits of the individual [30]. Advances this knowledge by highlighting how dynamic perceptual illustrations into consideration. According to the paradigm, perception is a dynamic process that implicates updating and improving mental representations in response to sensory input, rather than being a static picture. This dynamic viewpoint accentuates how perception is iterative in consumer decision-making and is consistent with the perceptual cycle model [30].

By presenting the idea of perceptual learning, enhance this talk even more. They contend that as one gains experience, their ability to see the world improves, empowering them to process information more exactly and efficiently [31]. This suggests that common exposure and educational occasions can shape consumers' perceptions of items over time [31]. The complexity of perception in consumer behaviour is put emphasis on by the perceptual cycle model, which pulls from research. It things to see the dynamic and iterative character of perception processes, the impact of unlike elements on perception, and the significance of learning in moulding the opinions and choices of consumers [11].

2.4 Application of AR/VR/MR in Jewelry Retail Industry

A proposal methodology for mass customization made conceivable by digital manufacturing is put forth by [4] which can create many jewelry designs. Challenging that faster and less expensive manufacture of customized goods is made potential by digital manufacturing technologies like 3D printing and CNC machining. This effect is in line with earlier studies findings, which exhibit that digital manufacturing can lower production costs and increase product customization [4]. The production method has undergone a change with the overview of digital manufacturing technologies like 3D printing and CNC machining. Mass personalization is the concept of generating customized items at scale, made possible by these technologies. A design technique that incorporates customer preferences into the design process, which makes it cooler to produce customized products. Businesses can fulfil the increasing need for tailored offerings with this strategy, which presents extensive prospects [4]. Even while digital manufacturing has a lot of promise, its belongings on the environment must be taken into account. In her survey of the use of smart jewelry, raises the possibility of incorporating sustainability into the process of plan and manufacture [14]. However, an all-inclusive analysis of the environmental inferences of digital manufacturing is crucial to ensure that mass personalization is not achieved at the overhead of the planet [14].

With an increasing focus on ethical and sustainable corporate operations, consumer expectations have changed. [13]In his investigation of the relationship between CSR and customer loyalty in the Vietnamese jewelry market, CSR actions show how raise shopper happiness and brand can trust. This research highlights how crucial it is to incorporate CSR into business plans in command to create enduring relationships with clients [13]. The jewelry sector, which is occasionally connected to overindulgence and luxury, offers a fascinating case study for exploratory on how consumer

behaviour and shared social responsibility overlap. In their check of the design components that foster a friendly environment in jewelry stores, [28] emphasize the significance of the shopping experience for customers. Jewelers may improve their CSR profile and enticement in eco-aware customers by participating sustainable methods and ethical sourcing into the layout and functioning of their stores [28].

To expand productivity and consumer practice, artificial intelligence (AI) is being fused into a number of industries, comprising supply chains and jewelry retail examine how customers react to artificial intelligence in high-end and low-end dining establishments, discovering differing opinions [21]. While approximately some customers value AI's creativity and efficiency, others trust it lacks the human element that makes dining assemblies special. This means that in order to keep clients glad and loyal, firms need to strike a stability between using AI and providing individualized service to customers linked to jewelry [21]. In this assessment of the role of AI in greening global jewelry, although AI can increase efficiency and lessen its negative effects on the environment, it frequently makes pre-existing environmental issues worse [18]. AI adoption in jewelry is often motivated more by adeptness and profit than by a sincere guarantee to the environment, which results in expressed environmental costs that are paid by bionetworks and vulnerable groups. This analysis stresses the need for a more just and comprehensive approach to sustainability that puts social justice and the situation ahead of business interests [18].

In order to explore the body of research on the sustainability of Fused Deposition modelling (FDM), a form of additive manufacturing in jewelry which performs a bibliometric study. The outcomes demonstrate that FDM is a sustainable technology that may boost resource efficiency and lessen its negative effects on the environment [14]. This result is in line with other lessons that shown additive manufacturing may lessen its negative effects on the environment and increase sustainability [17]. Social media's significance in the market for luxury goods, since luxury firms use it to market their jewelry, cooperate with consumers, and raise brand acknowledgement which builds strong brand [17]. This result is in line with other studies that have verified how social media may raise consumer contribution and brand recognition in the luxury goods industry.

2.5 Usage of Different Technologies in Jewelry Industry

The impact of celebrity endorsements and social media influencers on consumer has brand choosing behaviour [2]. According to this report, social media influencers have a big impact later they are seen as relatable and real, specifically by younger customers. On the other hand, celebrity ratifications in jewelry have a more limited effect on purchase intentions, even if they capacity increase brand acknowledgement and legitimacy. These results acme the increasing significance of influencer marketing in the present day. With customer's dependent more and more on user-generated content and approvals from their peers, companies need to carefully slog with influencers that are in line with their target demographic which are more leaning towards jewelry [2]. The impact of celebrity authorizations and social media impacts on consumer brand picking behaviour. The other findings direct that brand decision behaviour is suggestively influenced by social media influencers, mainly for younger customers by following his model person. This result is in line with other

studies that have validated the power of social media influencers to affect patron's decisions to action [16]. Influencer countersignatures on social media and celebrity endorsements are effective strategies for manipulating customer brand preference. Exploring the effects of these variables, it is open that social media influencers have a big impact on consumers brand choosing behaviour, principally for younger customers. Associated to social media influencers, celebrity endorsements can increase brand acknowledgement and legitimacy but have less of an effect on customer behaviour. This implies that in order to occupy customers and foster brand loyalty, marketers should carefully use social media influencers to promote their designed jewelry products which makes digital influencers more feasible [2].

Examining on how narratives and storytelling help premium fashion businesses maintain their social media cachet [5]. According to the author, luxury fashion firms have difficulty protective their exclusivity and prestige on social media, as peer recommendations and user-generated material have a greater effect on customers. This research underscores how crucial it is to develop a story that appeals to the specific market and is in line with the brand's values and design. Luxury businesses may stand out from the opposition and develop a devoted following by telling charming stories that appeal to their target market. Social media platforms bargain an optimum platform for narratives, enabling companies to communicate their background, principles, and artistry to an all-inclusive viewership [5]. Probing the connection between buying purposes, jealousy, and social media. This instigates purchasing intentions may rise in cases of benign envy, which is defined as a craving to better oneself, and fall in cases of menacing envy, which is defined as a wish to damage others which has the chance of multiplying purchase [6]. This research emphasizes how central it is to comprehend envy's function in social media marketing and offers ideas on how marketers may utilize social media to effectively sway customer behaviour. These results establish the intricate psychological developments behind social media use. By showing aspirational lives and attractive things, jewelry luxury marketers may capitalize on benign envy and inspire people to aspire to a better social standing [6].

In the luxury market visiting the impact of brand identity determined by customer perceived value. The findings demonstrate that brand identity is significantly influenced by customer perception of value, with consumers viewing luxury goods as a form of social status and self-expression [33]. This research emphasizes how crucial it is for luxury firms to comprehend how consumers perceive value and adjust their marketing tactics to appeal to their needs and goals. The significance of matching customer values with brand identity is emphasized by this study. To preserve their exclusive image and justify their premium price tags, luxury brands need to provide great products and experiences [33].

Analysing the idea of premium brand e-service quality. In order to investigate the aspects of e-service quality in the market for luxury products, the writers create a conceptual framework. This research emphasizes how critical it is to comprehend e-service quality in the market for luxury items, since consumers have high standards for service quality. A conceptual framework for evaluating the quality of e-services in the luxury goods industry [16]. The report emphasizes how crucial customization, responsiveness, and dependability are to providing outstanding online consumer experiences.

Providing smooth and customized digital experiences is essential as more and more luxury brand interactions take place online. Luxury companies need to make investments in reliable e-commerce systems and client [16]. A conversational chatbot is suggested [9] for a jewelry store. The writers create a chatbot that can help clients locate jewelry items, respond to their questions, and provide tailored suggestions. This research shows how chatbots may boost sales and improve customer experience in the jewelry sector [9]. Even though chatbots have many advantages, it's crucial to make sure they complement the brand's premium positioning. The goal of conversational AI design should be to deliver a high-end user experience while showcasing the principles and style of the company [9].

2.6 Research Gap

Despite a percentage of study has been done on how technology affects different companies, but not much focus has been given on how augmented reality (AR), virtual reality (VR), and mixed reality (MR) explicitly affect the jewelry industry. Maximum studies have focused on more broad trends in technology adoption, overlooking the unique demands and behaviours of jewelry consumers. Also, while the general adoption of technology has been studied in connection with demographic traits, little study has been done to determine the specific ways in which these qualities affect the acceptance and use of AR, VR, and MR in jewelry design, branding, and advertising. Additionally, the bulk of earlier research has rigorous on how customers view technology in sophisticated tech and often updated sectors like electronics and fashion, ignoring a knowledge vacuum in the more straight and craftsmanship-focused jewelry industry. While studies in other industries have shown how AR, VR, and MR may improve customer experiences and marketing campaigns, the complex needs and tastes of jewelry buyers have not been taken into account.

To address to fill up these gaps, this study attempts to offer a thorough examination of the ways in which jewelry customers adoption of AR, VR, and MR technologies is influenced by demographic characteristics. It will also explore how buyers specifically see these technologies in relation to jewelry design, branding, and advertising, with the ultimate goal of creating a model to more accurately comprehend and forecast consumer behaviour in this specialized industry.

3. Methods and Materials

3.1 Research Methodology

In this study we have used descriptive research as it would make us understand the pattern or sequence of target population understanding which is based on demographics and exploratory research as to better understand the unreached market gap in order to work on with our objectives and problem of study as into the technological effect retail jewelries.

3.2 Data Collection Methods

In order to collect data, structured questionnaires in the form of five-scale Likert scale were prepared and collected from jewelry consumers which was based on their views on AR, VR and MR combination in retail jewelry and the sample collection was monitored electronically. Which makes the study to fix with primary data for analysis.

3.3 Sampling

Non probability sampling was used in order to collect data. The population for the study is jewelry consumers and retailers. As the population is not traceable, by making use of Cochran's formula which requires minimum sample size is of 384 and final reach of consumer respondents was 440. Appropriate statistical tools was used for data analysis which include Reliability Analysis, Regression, AVONA, Man Whitney Test and SEM Model building with analysis.

3.4 Hypothesis

H_0 : There is no effect of Selecting Stimuli, Observation, Interpreting and Organising on Response towards technologies on enhancement of design, branding and advertising in sustainable jewelries.

4. Data Analysis and Results

1. TABLE 1: RELIABILITY TEST

Sl.No	Construct	Reliability (Chronbach Alpha)
1	Observation	0.828
2	Selecting Stimuli	0.864
3	Organising	0.658
4	Interpreting	0.789
5	Response	0.709

Cronbach's Alpha was used to estimate the constructs in the study's dependability. Acceptable reliability scores, stretching from .658 to .864, were obtained for all construct. Selecting Stimuli ($\alpha = .864$) was the most reliable construct, followed by Observation ($\alpha = .828$). Organizing had the lowest dependability ($\alpha = .658$) of all the constructs. The constructs appear to be valid and useful for measuring the underlying concepts, based on the Cronbach's Alpha ratings.

The table above shows how consistent five different constructs which are stately using Cronbach's Alpha. At all constructs having more than 0.600 of value in alpha is reflected as more reliable.

Overall, 'Selecting Stimuli' and 'Observation' are highly reliable, 'Interpreting' is good, and 'Organising' and 'Response' are moderately reliable, with the latter two potentially needing refinement to enhance their reliability. (Table 1)

Here the significant of each matrix (It is demographic factors for the above ANOVA table) should be less than 0.05

Gender: Gender did not significantly predict the dependent variable $F(110,329) = 0.878, p = 0.787$ $F(110, 329) = 0.878, p = 0.787$ $F(110,329) = 0.878, p = 0.787$. Constructed on gender, there is no apparent difference in the Response ($p = .787$).

Age: Age significantly predicted the dependent variable $F(110,329) = 1.426, p = 0.009$ $F(110, 329) = 1.426, p = 0.009$ $F(110,329) = 1.426, p = 0.009$. The fallouts change significantly depending on age, ($p = .009$). This denotes that the results vary throughout persons in various age groups which has no effect on response.

2. TABLE 2: MODEL SUMMARY

M	R	R ²	A R ²	Std.Er .E	Change Statistics					D- W
					R ² C	F.C	df 1	df 2	Sig. F. C	
1	.72 6 ^a	.52 7	.52 6	2.683 71	.52 7	487.2 01	1	43 8	.00 0	2.0 52
2	.74 2 ^b	.55 1	.54 9	2.617 05	.02 4	23.59 4	1	43 7	.00 0	
3	.78 4 ^c	.61 5	.61 3	2.424 52	.06 5	73.16 1	1	43 6	.00 0	
4	.79 1 ^d	.62 6	.62 3	2.392 90	.01 1	12.59 8	1	43 5	.00 0	

Predictors: (Constant), SELECTINGSTIMULI

Predictors: (Constant), SELECTINGSTIMULI, OBSERVATION

Predictors: (Constant), SELECTINGSTIMULI, OBSERVATION, INTERPRETING

Predictors: (Constant), SELECTINGSTIMULI, OBSERVATION, INTERPRETING, ORGANISING
Dependent Variable: RESPONSE

With an F-change of 487.201, the first model ($p < .001$), which employs Selecting Stimuli as the predictor, explains 52.7% of the variation in Response ($R^2 = .527$). With the presence of Observation to the predictors, the second model raises the overall variance interpreted by this model to 55.1% ($R^2 = .551$), accounting for an extra 2.4% of the variation in Response ($\Delta R^2 = .024$), with an F-change of 23.594 that is also statistically significant ($p < .001$). A total of 61.5% of the variation ($R^2 = .615$) is described by the third model, which consists of the selection of stimuli, observation, and interpretation. It accounts for an extra 6.5% of the variance ($\Delta R^2 = .065$) and has an F-change of 73.161, which is statistically significant ($p < .001$). With an F-change of 12.598, which is statistically significant ($p < .001$), the final model accounts for all four variables, including organizing, and explains 1.1% more of the variance in response ($\Delta R^2 = .011$). This makes the total variance explained 62.6% ($R^2 = .626$). The Durbin-Watson score of 2.052 for the final model suggests that the residuals do not appear to be auto correlated. It is likely to conclude that each additional predictor offers substantial explanation to the variation in Response as all model developments are statistically significant. (Table 2)

With a substantial $F(1, 438) = 487.20, p < .001$, Model 1 (which utilizes Selecting Stimuli as the predictor) accounts for a spacious amount of the variance in Response. In comparison to Model 1, Model 2, which take account of Observation as a predictor, fits better and is similarly significant ($F(2, 437) = 267.96, p < .001$). Model 3 exhibits a ample expansion in fit over Model 2, with $F(3, 436) = 232.53, p < .001$, with predictors including Observation, Interpreting, and Selection of Stimuli. The model with the paramount fit among all of them is Model 4, which contains the predictors Choosing Stimuli, Observing, Interpreting, and Organizing. It is significant, with an $F(4, 435) = 182.19$ and a $p < .001$. All the variables are significant because $\text{Sig.} < 0.05$ (Table 3)

3. TABLE 3: ANOVA

	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3508.958	1	3508.958	487.201	.000 ^b
	Residual	3154.596	438	7.202		
	Total	6663.555	439			
2	Regression	3670.553	2	1835.276	267.964	.000 ^c
	Residual	2993.002	437	6.849		
	Total	6663.555	439			
3	Regression	4100.615	3	1366.872	232.528	.000 ^d
	Residual	2562.940	436	5.878		
	Total	6663.555	439			
4	Regression	4172.751	4	1043.188	182.185	.000 ^e
	Residual	2490.803	435	5.726		
	Total	6663.555	439			

The table grants the coefficients for four multiple regression models that use some combinations of SELECTING STIMULI, OBSERVATION, INTERPRETING and ORGANIZING predictors to predict the dependent variable RESPONSE.

Response=1.17+0.136(SelectingStimuli)+0.014(Observation)+0.253(Interpreting)+0.212(Organising)

The correlations between each predictor and the RESPONSE are shown by the coefficients. When all predictors are zero, the constant terms specify the expected value of RESPONSE. With the exclusion of OBSERVATION in Model 4, most predictors in the model have sizeable contributions, as indicated by the t-values and p-values. The degree to which each predictor and the RESPONSE are related is shown by the standardized coefficients (Beta). For each one-unit increase in SELECTINGSTIMULI: RESPONSE increases by 0.32 units, for each one-unit increase in OBSERVATION: RESPONSE increases by 0.12 units, for each one-unit increase in INTERPRETING: RESPONSE increases by 0.28 units and for each one-unit increase in ORGANISING: RESPONSE increases by 0.21 units. (Table 6)

This graphic seems to depict a route model, which shows the connections between various psychological concepts that are a part of a process that might be connected to behavioural reactions or decision-making. A blue circle represents each construct, and directional affects are shown by the arrows connecting them. The strength of these associations is shown by the numbers on the arrows, which are probably standardized regression coefficients

The path model illustrates the relationships among the constructs of Observation, Selecting Stimuli, Organising, Interpreting, Response, and Adoption. The path from Observation to Selecting Stimuli is strong and positive ($\beta =$

0.704), but the observed frequency ($\beta^1=0.495$), indicating that lower levels of actual absorption with Observation to Selecting Stimuli. Similarly, Selecting Stimuli positively influences Organising ($\beta = 0.716$), but pooled results is ($\beta^1=0.512$). The Interpreting construct is positively influenced by organising with ($\beta = 0.708$), but observed value is ($\beta^1=0.501$), response positively affects interpreting ($\beta = 0.740$) with actual effect of ($\beta^1=0.547$). Additionally, adoption has a positive influence on Response ($\beta = 0.834$), but the actual absorption is way better than other construct's with ($\beta^1=0.696$). (Fig:1)

4. TABLE 6: COEFFICIENTS

Coefficients ^a					
Model		Unstandardized Coefficients		Standardized Coefficients	Sig.
		B	Std. Error	Beta	
1	(Constant)	3.422	.583		5.873
	SELECTINGSTIMULI	.323	.015	.726	22.073
2	(Constant)	2.557	.595		4.295
	SELECTINGSTIMULI	.254	.020	.571	12.666
	OBSERVATION	.124	.026	.219	4.857
3	(Constant)	1.226	.573		2.139
	SELECTINGSTIMULI	.156	.022	.350	7.130
	OBSERVATION	.051	.025	.090	2.023
	INTERPRETING	.282	.033	.413	8.553
4	(Constant)	1.170	.566		2.068
	SELECTINGSTIMULI	.136	.022	.305	6.077
	OBSERVATION	.014	.027	.025	.532
	INTERPRETING	.253	.034	.369	7.507
	ORGANISING	.212	.060	.173	3.549

a. Dependent Variable: RESPONSE

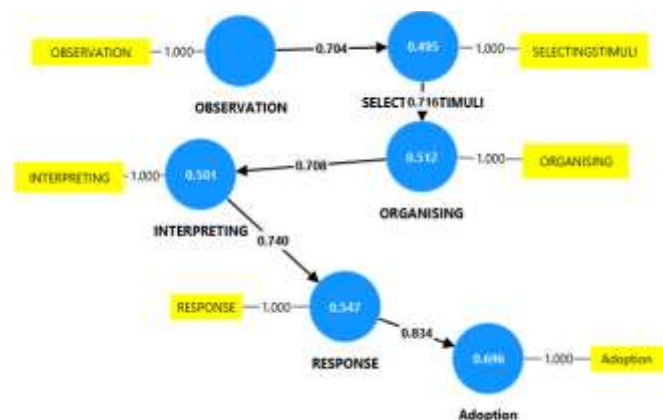


Fig 1: SEM Model

5. Discussion

The study set out to undertake a number of main goals, the first of which was to observe the influence of demographic variables on consumer technology adoption. In order to achieve this area, a thorough analysis of frequent demographic factors and how they affect the adoption of technology was conducted. In particular, the use of augmented reality (AR), virtual reality (VR), and mixed reality (MR) in jewelry design, branding, and advertising was scrutinised. An examination of consumer opinions on these new technologies and their unknown to expand jewelry design, branding, and advertising was the second goal. This comprises using Cronbach's Alpha to appraise the reliability of several constructs. The results showed that different constructs had varying degrees of reliability, with the most reliable construct being "Selecting

Stimuli" this can be explained with study by (30) which lacks in reliability study. Age and educational attainment were publicised to be significant predictors of the dependent variable in the study, which used an ANOVA to assess the prominence of demographic characteristics such as age, gender, occupation, and income which make it difference from (27) which has lesser significance than our study which is more Signiant. The creation of a model for how people perceive AR, VR, and MR technologies was the third goal. Observation, Selecting Stimuli, Organizing, Interpreting, Response, and Adoption are just a few of the constructs that show strong correlations when built using regression and path analysis. The indirect effects provided more evidence for the interdependence of these components, and the route analysis revealed substantial positive correlations between these dimensions. Expressively explained variation was found in constructs including "Adoption" and "Interpreting," according to model fit indices and R-square values, highlighting the established model's resilience and also shows a comfortable model making using SEM simulation with target variables of Observation, Selecting Stimuli, Organising, Interpreting, Response and framed variable Adoption which was absent in (25) which had prepared its own matrix of study with no practical interpretation. With this all-encompassing approach, we want to offer insightful data on how customer perceptions and demographics affect the uptake and efficacy of AR, VR, and MR technologies in the design, branding, and advertising of the jewelry business.

6. Conclusion

Conclusive findings have been acquired from the study conducted to explore consumer attitudes on the influence of new technologies like as Augmented Reality (AR), Virtual Reality (VR), and Mixed Reality (MR) on improving sustainable jewelry design, branding, and advertising. The main goal of the study was to examine how demographic characteristics affect the adoption of technology. The results show that, although gender, wealth, and occupation had little bearing on the outcome, age and educational attainment are important predictors. This highlights the necessity for tailored marketing approaches that appeal to different age groups and levels of education in order to increase the adoption of technology in this industry. Furthermore, the examination of how consumers view AR, VR, and MR technologies brought to light the significance of particular cognitive processes in shaping consumer reactions and, eventually, the uptake of these technologies. The reliability of constructs including "Selecting Stimuli," "Observation," "Organizing," "Interpreting," and "Response" varied, with "Selecting Stimuli" and "Observation" demonstrating the highest levels of reliability, suggesting that these processes are crucial in forming consumer perceptions. Regression models and route analysis also demonstrated the close relationships among these categories, with 'Response', 'Interpreting', and 'Organizing' showing up as the most important predictors of technology adoption.

According to the research, customers' responses may be greatly improved and the possibility of adoption increased by making improvements to the way they choose, arrange, and understand stimuli connected to these technologies. This has real-world ramifications for jewelry companies trying to use AR, VR, and MR to give customers more immersive and interesting experiences. This study offers a thorough framework for comprehending the ways in which cognitive

processes and demographic variables affect the jewelry industry's adoption of new technology. In the fields of sustainable jewelry design, branding, and advertising, businesses may more effectively customize their approaches to improve consumer perceptions and encourage the adoption of these revolutionary technologies by concentrating on the essential components that have been found.

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