
THE ANALYSIS OF TECHNOLOGY ADOPTION PROSPECT IN VIRTUAL TRY-ON EXPERIENCE TOWARDS ACCESSORIES BUSINESS

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Abstract

Augmented reality development has been growing significantly to help commercial industries in engaging with customers, providing new immersive experiences in shopping. With the rise of the global pandemic, more accessories businesses need to shift their activities into digital based. With the challenge in providing the best online shopping experience, augmented reality can be the solution tackling this challenge. This research wants to see the prospects of the adoption of augmented reality in the accessories industry by identifying the supporting factors and opposing factors of the technology adoption, along with recommendations to overcome the issues in augmented reality adoption. Through a qualitative method of in-depth interview research approach, this research collects the data by testing and validating the variables made based on the supporting theories from literature reviews with exploratory interviews with accessories business owners. By means of conducting data saturation and open coding, the findings based on the data analysis result can be confirmed that there are several concerns that affect augmented reality adoption that can be catered. This research has already made recommendations of improvements based on the insights and expects that augmented reality service providers can utilize this recommendation to provide better product development and innovation.

Keyword :

Augmented reality;

Accessories Business;

Technology adoption;

Supporting Factors; Opposing

Factors

1. BACKGROUND

Since the beginning of its development in the early 1990s, Augmented Reality has provided immersive mixed reality experiences, including a combination of real and virtual worlds, real-time interaction, and accurate 3D registration of virtual and real objects. (Schueffel Patrick, 2017). Augmented reality applications have spanned commercial industries such as gaming, education, communications, medicine, and entertainment (Moro, et. al., 2021). Because AR can help consumers understand what they're buying, making it easier to meet customer expectations. It has recently seen a rise in fashion

industries, resulting in the emergence of new ways of obtaining customer's engagement (ABI Research 2022). Amidst the growth in the retail industry, the use of augmented reality has been significantly increased rapidly due to the big scale expansion of Metaverse. By 2030, the metaverse will be a \$13 trillion opportunity (Citi Global Insights 2022) alongside their development of digital media experiences to become more immersive, inclusive, and accessible than today. It brings together a range of next-generation technologies including augmented reality (AR) (Business Wire 2022).

And in these years, both tech and non-tech companies are investing more in metaverse and its technology to engage with customers, expand brand awareness, and identify new revenue streams. This massive movement can't be neglected by the fashion industry itself. The potential and benefit of adopting augmented reality in fashion companies are substantial, which include differentiation, reduce returns, increase revenue, higher potential to go viral, boost customer confidence, and gain valuable customer insights (Pat Johnson, 2021). Studies also show that 47% of consumers are willing to pay extra for a product if they could customize or personalize the immersive experience. (Channel Life 2020). Seeing this huge opportunity for the accessories industry to grow by channeling through augmented reality, this research intends to analyze the augmented reality technology adoption in a form of virtual try-on feature on social media platforms in a scope of business to business (B2B) consumers. This research shows that the barriers of realizing this opportunity in augmented reality can be addressed and overcome by business owners and stakeholders in the industry for the near future.

With the rising problem of the global pandemic, more accessories businesses need to shift their activities into digital and online based. Some businesses are struggling with providing the best shopping experience for their customers, moreover, bad reviews and complaints started to arise due to incompatibility between real products and the products that they see on social media. With that issue, augmented reality can be the solution towards the problem happening in the accessories industry. Therefore, this research is conducted to see the prospects of the adoption of augmented reality in the industry by analyzing the supporting and opposing factors along with recommendations to mend the issues in the technology adoption. Based on the problem statement, this research aims to answer the following research questions:

1. What are the supporting factors of the accessory businesses to adopt augmented reality implementation in the business?
2. What are the opposing factors of the accessory businesses to adopt augmented reality implementation in the business?
3. How to ease the concerns of augmented reality implementation in the accessories business?

2. BUSINESS AND TECHNOLOGY DESCRIPTION

2.1 Company Profile

When the COVID-19 virus started to spread widely, every daily activity was suddenly prohibited to be done. People couldn't feel the freedom to buy their stuff freely and directly hold the items. People need to change their way of living, including how they shop things; online shopping. Unfortunately, there are big problems here where some people don't buy things online due to some considerations, but now they must. Sometimes it is difficult to measure what we want buying groceries online, especially when we buy accessories or fashion things. Therefore, businesses seem to have problems in handling complaints and decreasing sales. That is also supported by the previous survey that was conducted that 8 out of 25 accessories businesses experienced more complaints and decreasing sales due to lack of experience provided during the pandemic. This is why we existed.

Interaxe.ID is a digital marketing agency that works as a complementary business for business accessories in Indonesia. Interaxe.ID helps the digitization process of those businesses by providing a virtual try-on technology using Augmented Reality (AR) technology which will be implemented in their Instagram account to be accessed publicly by their audiences. Interaxe.ID will help our partners in increasing their sales and marketing activities for a long-term period.

2.2 Service and Technology Description

Delivered through our social media (Instagram and LinkedIn), currently we provide augmented reality service in a form of virtual try-on feature through accessories' brand social media. The finished designs are implemented into AR filters that can be tried by consumers by only downloading Instagram applications. AR Filters are computer-generated effects designed to add a layer of layers to real-life images. Making AR filters on Instagram usually uses SparkAR where this platform will make it easier for everyone to become an AR creator. SparkAR provides many preview options for face types, be it gender, ethnicity, black canvas, or yourself through the options on the camera icon and selecting the face options in the pop-up menu. After you're done trying and doing the final iteration, the filter can be tried directly on Instagram.

To provide AR filters that can be precise between product size and face scale, AR filter manufacture must be equipped with product details that include

length, width, height, thickness, texture, color, material, pattern, and others. Then the 3D design is made in SparkAR and goes through the iteration process.

2.3. Technology Readiness Level



Technology Readiness Levels ranking (TRLs) is a method for understanding and assessing the maturity of a technology during its development phase that was originally developed by NASA and the US Department of Defense. This framework is based on 1 to 9 scale with 9 defined as the most mature technology. In the case of Interaxe.ID, our business model is highly dependent on the use of augmented reality as our services, and as of now has been deployed to Interaxe.ID’s real clients. However, the virtual try-on feature has not been qualified for the official licenses and legal permits to be classified as TRL 8. Thus, Interaxe.ID is currently still at level 7.

2.4 Business Scope and Environment

Currently Interaxe.ID focuses on its operation and partner acquisition strategy on Indonesia especially on Java island. For market segmentation itself, we divided our target market into 2 different segments that are business to business (B2B) and business to customer (B2C) segments. For the business to business segment, Interaxe.ID is targeting accessories businesses that are based online located in Indonesia, mainly Java island. For business to customers, Interaxe.ID is targeting individuals that shop accessories online.

Interaxe.ID has a huge potential for business development as a stimulus of several things. Here are the details:

- The COVID-19 pandemic has shifted us to a more digitized and online-based

environment in shopping, especially the fashion and accessories industry.

- The rapid growth of audiences interest in augmented reality in conjunction with the flourishing of Metaverse worldwide.
- Growing number of local accessories business that are online based in correspondence with the development of e-commerce and social media in Indonesia
- Indonesian people are very adaptive and reactive towards the newest trends and features on their social media.

3. THEORETICAL FOUNDATION

3.1 Augmented Reality

Augmented reality (AR) is an enhanced version of the real physical world that is achieved through the use of digital visual elements, sound, or other sensory stimuli delivered via technology (Adam Hayes, 2020). Augmented reality based on its applications are divided into 4 categories which are marker based augmented reality, markerless augmented reality, projection based augmented reality, and superimposition based augmented reality (Disha Sinha, 2021). With the rising number of augmented reality applications worldwide to more industries including gaming, broadcast, medical, social media (Dicoding, 2020), military (Kevin Bonsor & Nathan Chandler, 2021), automotive, education (Softtek, 2021) and fashion (ABI Research, 2022), augmented reality is transforming the whole movement of the market and industries that leads to the adoption of this immersive technology. This is also supported by the increasing number of awareness from the users throughout the recent years

3.2 Theories of Innovation Adoption

Adoption is defined as the action or fact of choosing to take up, follow, or use something. Meanwhile, the definition of innovation is a new method, idea, product, etc according to the Oxford Dictionary. Around the world, new innovations are created daily. Some achieve success on a national and worldwide level, becoming ingrained in society. Some technologies gain importance within certain user groups but remain obscure to the general public. Many more innovations are never widely adopted outside of their small developer community. Research and study have been conducted to determine what makes one innovation affect how society operates while another gets pushed aside into oblivion. Experts have developed overlapping ideas

and diverse models to describe the factors that contribute to the successful spread of innovations (Marcia Ham, 2020). These models of innovation diffusion theories are Innovation Diffusion Theory (Rogers, Everett M., 1983), Concerns-based Adoption Model (Hall, 1979), Technology Acceptance Model (Davis, 1985), and The Chocolate Model (Dormant, 2011).

Among all the innovation diffusion theories, it is concluded these are the key factors that influence the decision whether an innovation is adopted or rejected:

- Socio-political and external factors (e.g. environment, policies and regulations, social networks)
- Organizational characteristics (e.g. leadership, social climate, organizational structure)
- Innovation characteristics (e.g. complexity, compatibility, trialability)
- Staff/Individual characteristics (e.g. attitudes, knowledge, motivation)
- Client characteristics (e.g. readiness, capacity to adopt) (Straub, 2009)

3.3 Market penetration method

Market penetration is defined as the extent to which a product is recognized and bought by customers in a particular market (Oxford Dictionary). It is measured by the amount of sales volume of an existing good or service compared to the total target market for that product or service (Valencia Higuera, 2016). There are four growth alternatives for growing an organization in existing or new markets, with existing or new products with different levels of risks for each strategy. The growth strategies are market penetration, market development, product development, and diversification.

In market penetration strategy, the innovation tries to increase the market share in an emerging market (Yan Dong, Martin Dresner and Chaodong Han, 2013). This can be achieved by selling more products to established customers or by finding new customers within existing markets. The strategies to achieve market penetration are as follows:

- Price adjustments
- Increased promotions
- More distribution channels
- Product improvement
- Market development

This strategy will help this research to reach the minimum viable product (MVP) and bought by customers in the augmented reality market.

3.4 Innovation Resistance Theory

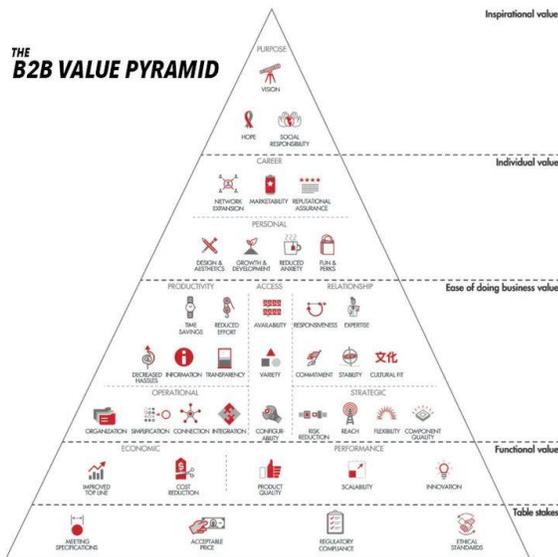
The term "resistance to innovation" (IRT) was first used by Ram (1987) and then amended by Ram and Sheth (1989). IRT explains customer resistance to changes in products, services, and technology by using five obstacles that are divided into two groups: functional and psychological. IRT is a good idea for comprehending a user's resistance to innovation because it was the first explanation of resistance to innovation in terms of innovation and user characteristics, initially presented in 1987. (Ma and Lee, 2019). IRT is a term used to describe a variety of consumer resistance that includes both psychological (image and tradition) and functional (value, usage, risk) barriers. Interest in the study of resistance has recently increased, especially in respect to information systems (Nel and Boshoff, 2019 ; Chen and Kuo, 2017). Despite the increased interest, there has been no prior research on consumer usage resistance to augmented reality services in the accessories industry.

Types of Barrier	Definition
Usage Barrier	The innovation's incompatibility with the customer's routines or habits . An invention will encounter resistance without a strong performance-to-price ratio, and replacements will be preferred (Ram & Sheth, 1989).
Value Barrier	The reluctance to utilizing goods or services that don't match the user's perception of performance-to-price value in comparison to alternatives (N. Rammile, 2012)
Risk Barrier	The uncertainty adjoining the potential negative effects of adopting a product or service (Marett et al., 2015)
Tradition Barrier	The resistance from an innovation that shift the user's established culture and as a results of conflict with the user's established culture (Lian and Yen, 2013)
Image Barrier	The negative impression that is created by the product's perceived complexity of usage (Laukkanen et al., 2007).

These key barriers and each of its implications will be made as the variables that will be transformed into interview points as a method of data collection to conduct this research.

3.5 Business-to-business values

Bain Research (2018) has identified 40 elements of value for business-to-business buyers which are sorted into five categories from the bottom of the pyramid which are the most objective judgments and table stakes until the top of the pyramid which are the most subjective and personal judgments. The model derives its conceptual inspiration from Abraham Maslow (1943) “The Hierarchy of Needs”, which stated that human activities are driven by an underlying need to satisfy wants that range from the most fundamental (security, warmth, food, and rest) to the most complicated (self-esteem and altruism). Then, it extended into insights of people in corporate roles and their motivations for buying and using business products and services, which fall into five categories: table stakes, functional, ease of doing business, individual, and inspirational.

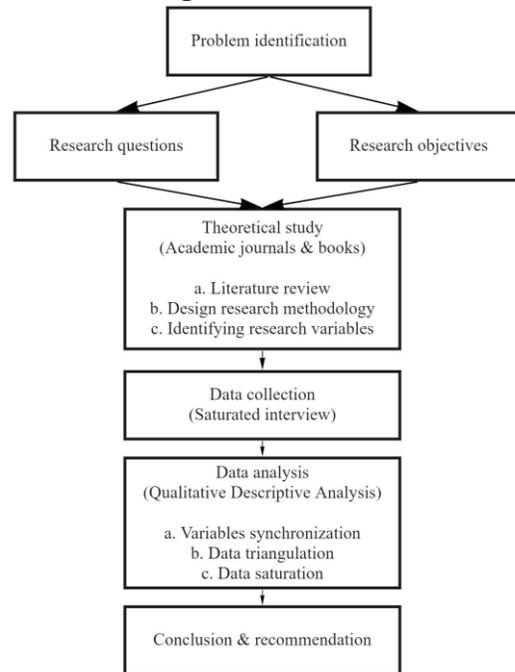


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This framework helps to define and assess the importance of the key factors of accessories brands in adapting augmented reality services compared to the elements within the business to business value pyramid in order to designate and boost the key elements that matter to customers.

4. RESEARCH METHODOLOGY

4.1 Research Design



4.2 Research Method

This research will use a qualitative saturated in-depth interview research approach. Research variables will be made based on the supporting theories that will be tested and validated through exploratory interviews with 7 digital based accessories business owners that have established their business for a minimum of one year. The output of this research itself will be to identify the supporting factors and opposing factors of augmented reality technology adoption towards consumers, accessories brands. After collecting the data through interviews, this research will use data saturation and manual coding to make sure the data results confirm the emerging conclusions and recommendations in accordance with the research purposes. Later, this research will enclose how, when, and to what degree they achieved data saturation.

Variables	Indicators
Customer scope	This service helps the customer to decide whether to buy or not buy the product.
	Customers will be more influenced to purchase my product with the adoption of augmented reality.
	More of my customers and myself begin to use augmented reality filters more in their daily life.
Product /	Augmented reality adoption eases the effort

Variables	Indicators
Innovation scope	of marketing my product to bigger audiences.
	Augmented reality helps me to visualize my product better to my customers.
	The adoption subsequently increases the quality and innovation of my product compared to others.
	Augmented reality adoption is compatible with the type of the product that my business produces.
Individual (personal benefit) scope	This service helps me to accentuate my vision, aesthetics and designs in my business to the audiences.
	Augmented reality helps me to grow in terms of my reputation, personal branding, and networking.
	Adopting augmented reality reduces my anxiety of being left behind from my competitors.
Business scope	Adopting augmented reality increases productivity in terms of time, effort, and accessibility of my business to customers.
	Augmented reality adoption strengthens my relationship (responsiveness, satisfaction, stability) with my customers.
	This service helps my business to integrate, simplify, connect, and organize the varieties of my products into one
	This service enables my business to give more variety and availability of experiences to customers
	This service complements my business strategy to get more reach and reduce risks.
Industry scope	This service helps my industry to be more known and that leads to generating more customers or followers.
	The competitor or partner brands have started to adopt augmented reality in their development.
	I think that the accessories industry in the future requires my business to adopt augmented reality.
Usage Barrier	People who influence me do not use augmented reality services.

Variables	Indicators
	People who are important to me don't recommend me to use augmented reality services.
	People whose opinion I value don't prefer me using augmented reality services.
Value Barrier	Using augmented reality does not help me in digital marketing the product.
	Using augmented reality is uneconomical and not helping me in increasing the sales
	Using augmented reality does not influence the buying motivation of my customers.
	Using augmented reality does not increase the consumer satisfaction of my business
Risk Barrier	I feel like my design and collection may be copied and end up stolen if I use virtual try-on augmented reality services
	I feel like it is unsafe for my customer to use this augmented reality service in terms of privacy and security.
	Sharing the details of my product design concerns me
Tradition Barrier	Using augmented reality services requires new behaviors.
	I prefer my customers to check and try the product directly (offline) when purchasing accessories.
	I feel that it is impatient for my customers to use augmented reality services for trying on my products before buying them.
Image Barrier	It is very complicated for my customers to move on towards different applications to try on the products.
	I have a negative image of virtual try-on platform.
	The process of adopting augmented reality technology to my business is too complicated to be useful
Price adjustments	I have such an image that augmented reality is difficult to use.
	For the early stage of the business, price needs to be lowered / to be given a discount for customers.
	The pricing method needs to be innovated

Variables	Indicators
	to other available methods.
Product improvement	The technology advancements in options, features, scanning of augmented reality filters need to be improved.
	Augmented reality filters need to be more precise and fitted in the camera and the face of the user.
	Augmented reality needs to visualize a more realistic image (materials, size, colors) of the product.
	Need more human resources to conduct more R&D activities to produce higher technology of augmented reality.
Accessibility	Augmented reality needs to be available on more platforms.
	People need to know that there is a business that can provide augmented reality making services.
Marketing & promotion	The service needs to be available to more types and varieties of product.
	The business needs to have more campaigns and activation on social media.
	The business need to improve on more ways of marketing, promoting and selling the product

5. DATA ANALYSIS

From the in-depth interview results, open coding is conducted with the properties of the research measurement and variables. This research will do variable synchronization that will help in categorizing participants' words from the interview into indicators and properties of the categories regarding the research questions. Below is the open codes:

Research Question 1: What are the supporting factors of the accessory businesses to adopt augmented reality implementation in the business?

Open Codes for Research Question 1:

Open Code	Properties	Participants' words
Customer scope	Help customer's decision making	<i>Help customer whether to buy the product or not / Help customer to choose which product that they</i>

Open Code	Properties	Participants' words
	Stimulate to purchase product Increasing number of usage within customers	<i>want to buy Increases sales / Make customers want to buy / Make customer to satisfied and repurchase Rapid growth in AR usage / large increases in amount of AR users</i>
Product / Innovation scope	Ease in product marketing Visualization of products online Improved innovation and product quality Compatibility with the type of product	<i>Help in engaging more customer / Help in digital marketing / Increasing business' reach / Increase awareness Help visualize the products / Help to imagine the product look / Help to match and styling products Help in business' technology development / Help accentuates the product / increase the attractiveness of a business Suits with the type of product that I sell</i>
Individual (personal benefit) scope	Accentuate vision, design and aesthetics Help growing reputation, personal branding & networking Reduce anxiety of being left behind	<i>Represent my aesthetics / Suitable with my design standard / Corresponding with my vision Helps me growing my reputation / improve my personal branding / help me with networking Reduce afraidness of being left behind / remove the feeling of missing out</i>
Business scope	Increase productivity (time, effort, and accessibility) Strengthen relationship (responsiveness, satisfaction, stability) Integrate, simplify, connect, and organize products Give variety	<i>Helps me reduce time consumption / Reduce effort / Helps me to reach my customer easier Increase my responsiveness with customer / Help my business to reduce question and confusion / Provide consumer satisfaction / Make my company more stable Integrate my collection into one / Connect my business flow better / Simplify shopping flow / Help organize my</i>

Open Code	Properties	Participants' words
	and availability of experiences Complement business strategy and reduce risks	<i>products</i> <i>Give new experiences of shopping / Entertain customer</i> <i>Reduce risks / Goes along with business strategy to tackle problem</i>
Industry scope	Help industry to be more known, generate followers AR adoption of competitor and partner Future AR adoption requirement	<i>Help creative industry in international market / Generate more audiences & followers</i> <i>Triggered when competitors or partners have used the feature</i> <i>We are required to use AR in the future / Customer told us to use AR feature / AR is a trend that needs to be adapted</i>

Research Question 2: What are the opposing factors of the accessory businesses to adopt augmented reality implementation in the business?

Open Codes for Research Question 2:

Open Code	Properties	Participants' words
Usage Barrier	Influencing people don't use AR No recommendation from important people Valued opinion preferred the AR disuse	<i>There is no people in my environment who use AR / People that I know has not use AR before</i> <i>I don't get any recommendation from the people I think that is important (co-founders / customers / role model / investors, etc)</i> <i>People that has the opinion that I value (co-founders / customers / role model, investors etc) prefer not to use AR</i>
Value Barrier	Unhelpful in digital marketing Uneconomical & unhelpful in increasing sales Uninfluential in customer's buying motivation No significant	<i>There is no significant impact in engagement / getting customer to aware</i> <i>It is not helping me a lot in increasing sales / The price / effort being spent is not worth it compared to the impact</i> <i>It doesn't influence / convince my customer with their decision (to buy or not)</i> <i>It doesn't increase</i>

Open Code	Properties	Participants' words
	impact in increasing consumer satisfaction	<i>consumer satisfaction / Customer aren't satisfied with the feature</i>
Risk Barrier	Increase risk in design getting copied or stolen Unsafe privacy and security for customers Concerning product design details sharing	<i>My designs is at risk of being copied / stolen if I use AR</i> <i>I think it is unsafe for my customer to use this feature / Privacy and security of my customers' data are being at risk if they use AR</i> <i>Sharing the details of the design of my product concerns me / grows my anxiety</i>
Tradition Barrier	Requirement of new behaviors Inability to replace offline try-on experience Impatience of customers for try-on process	<i>It needs new behaviors to use AR / It is hard to adapt for us to use AR</i> <i>AR virtual try-on can't replace offline try-on experience / Can't be the alternative of offline experience</i> <i>The try-on process felt too tiring and long</i>
Image Barrier	Complicated usage for customers moving on different apps Negative image of virtual try-on platform Adoption process is too complicated Difficult image of using augmented reality	<i>It is too complicated for my customer to move to another app to try on the product</i> <i>Virtual try on is not good / not useful in my perspective</i> <i>The process to adopt AR in my business is too complicated</i> <i>I think / My customers think that AR is hard to use</i>

Research Question 3: How to ease the concerns of augmented reality implementation in the accessories business?

Open Codes for Research Question 3:

Open Code	Properties	Participants' words
Price adjustment	Need of lowered /	<i>The price of AR services needs to be affordable / It</i>

Open Code	Properties	Participants' words
nts	discounted price Innovation in pricing method	<i>needs to be cheap / Give new business some discount I think you need to change your pricing method</i>
Product improvement	Need improvement in AR options, features, scanning Need to be more precise add fitted to camera and face Need to visualize more realistic image (materials, size, colors) More human resources to conduct R&D	<i>I hope the technology that makes AR evolved / AR can be improved in providing more tools / features / options / functions The precision needs to be improved / The filters need to be more precise / The filter needs to be more natural / more fitting to the user face The filter needs to show a realistic image / The filter needs to visualize in more detailed way / Needs to show clearer / specific materials / exact size / colors I think you need human resources to conduct R&D / Need improvement in your R&D and conduct more</i>
Accessibility	Availability in more platforms More awareness in augmented reality service providers	<i>AR needs to be accessible in more platforms / I hope there is not only 1 platform where we can access AR More people need to know about AR services providers / There is still not many people that know about AR service providers</i>
Marketing & promotion	Availability for more types of products Need more social media campaign and activation Improvement in ways of promotion and selling	<i>I hope AR filters can be available for more types of products / not just in the face area / available for my products AR service providers needs to have more social media campaign or activation / AR service providers still lacks of promotion AR service providers need to think fresh ways of promotion and selling</i>

This open code result has come to data saturation, analyzing the most mentioned properties, which can be seen on chapter 6.

6. CONCLUSION AND IMPLICATION

6.1 Conclusion

Augmented reality development has significantly grown throughout these past few years. It has proven to have helped commercial businesses in engagement, technology development, and new immersive experiences in shopping. But in reality, there are still some gaps of augmented reality adoption in the accessories industry despite the adaptation to go digital that needs to be conducted due to the pandemic. It has been a challenge for all accessories businesses to keep innovating and always provide the best shopping experience for their customers. Thus, this study believes that augmented reality can be the solution for tackling this challenge. RQ 1: What are the supporting factors of the accessory businesses to adopt augmented reality implementation in the business?

Indicators	Key Supporting Factors
Product / Innovation	<ol style="list-style-type: none"> 1. AR helps businesses to visualize their products better, where they can provide customers an experience to match and style their products with their fashion. 2. AR implementation in accessories products complements and suits the business. 3. AR helps in the business' customer engagement, marketing, market reach, and awareness to more audiences.
Customer	<ol style="list-style-type: none"> 1. AR helps the customer to choose which product that they want to buy, it convinces customers with their decision (to buy or not to buy). 2. There has been a significant growth in AR usage within the accessories and fashion industries where businesses begin to adapt this technology.
Business	<ol style="list-style-type: none"> 1. AR can help increase the responsiveness of a business with their customers, it helps the business to reduce questions and confusions which leads to consumer satisfaction and stability. 2. AR can help in integrating and organizing accessories business' seasonal collection products into one where it simplifies the shopping flow and connects the business flow better.

RQ 2: What are the opposing factors of the accessory businesses to adopt augmented reality implementation in the business?

Indicators	Key Opposing Factors
Usage barrier	AR is still considered new and unfamiliar to the accessories industry, as people in

Indicators	Key Opposing Factors
	the businesses and environment haven't used AR before.
Risk barrier	There is a significant risk of product design getting copied due to social media based features.
Value barrier	The cost (price, effort, risks) of adopting AR still not worth compared to the technology feature and the impact given
Tradition barrier	For some demographic of customers of the accessories business (>40 years old), it is still hard for them to adapt with AR technology.

RQ 3: How to ease the concerns of augmented reality implementation in the accessories business?

This research question will be answered in the next subchapter, business implication.

6.2 Implication

By gaining insights and perspectives from augmented reality service providers' customers, accessories business owners, there are a number of evaluations and recommendations for augmented reality further technological developments and implementation in the industry. The explanation are as follows:

- a. The biggest worry from accessories business owners is about the reliability of the filter itself where the precision of the AR filter is still considered to be raw and not smooth enough as if it was perfectly fitted to the user face. Thus, it needs to be improved in terms of placement and positions of the product.
- b. Also, there are some opinions stating that augmented reality is still incapable of showing the exact visualization of the products. Therefore, on the product development scope, the filter needs more improvement in visualizing the product in a more realistic and detailed results of iterations. The size, materials, colors, and forms need to be more exact and precise.
- c. For further improvement, looking at the growth of the technology and how fast trends move, this solution could be an idea for the improvement that the availability and accessibility of augmented reality can be broaden to other social media like TikTok, Snapchat, etc, also to the business' official websites, and lastly to e-commerce like Shopee, Tokopedia, Lazada, etc.
- d. Augmented reality can be such an interactive way of engaging people to our social media.

However, the feature offered in the current augmented reality filter is still limited. Therefore, for further improvement the tools and options in the AR filters need to be escalated which can give more functions other than visualization like measurement, styling, and others in the future.

Other than that, another finding in this research is that one of the reasons why accessory businesses haven't adopted this service is because of the awareness of the existence of augmented reality service providers. Thus, this study also recommends augmented reality service providers to activate more campaigns and marketing activities like social media approaches, introductory meetings, and user generated content. As one of the emerging augmented reality industry players, Interaxe.ID has prospective potentials to penetrate the accessories business market because there has been no major or dominating business in this industry yet.

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