

A SOCIAL IDENTITY THEORY APPROACH TO CUSTOMER ENGAGEMENT: THE INFLUENCE OF AUGMENTED REALITY FACE-FILTER APPLICATIONS USAGE

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Abstract

Social media apps are increasingly being used for boosting customer engagement, yet researches that identify the effect of AR face filter apps usage on customer engagement are scarce. Our study aims to analyse identity dimensions of Social Identity Theory (SIT) as motivators for AR face filter apps usage and their relation with Influence Value Customer Engagement (IVCE). Using the snowballing strategy, data was collected online from 406 respondents from the northern region of India. The collected data was used to develop an empirical model for testing the proposed relationships. Findings of analysis on the data indicated that affective identity has the maximum influence on customers' current and future usage of AR face-filter apps which consequently has a positive association with IVCE. The study is novel in its methodological approach depicting IVCE as a consequent rather than antecedent of customer usage behaviour and unearthing the influence of different identity dimensions of SIT on customers' AR face-filter apps usage behaviour. Usage of trendiness as a mediating variable further adds to the originality of the paper.

Keywords: Influence Value Customer Engagement (IVCE), Social Identity Theory (SIT), Augmented Reality (AR), AR face-filter apps, Trendiness

1. INTRODUCTION

Customer engagement is key to long term company-customer relationships as it helps organisations to improve connections with their customers and consequently increases customer loyalty (Molinillo et al., 2020). Customer engagement differentiates firms and enhances sales, competitive advantage, and profitability by fostering customer trust, attachment, and loyalty (Brodie et al., 2013). Customer-company connection boosts customer engagement (Kumar et al., 2019). Social media has revolutionised the landscape of company-customer contact. It has facilitated conversation, connection, and engagement with customers, leading to better and longer company-customer relationships (Cheung et al., 2020). Using Augmented Reality (AR) technology to connect with clients and boost their engagement is an emerging trend in visual social media (McLean & Wilson, 2019). Rapid proliferation of smartphones and mobile apps has enhanced AR use in social media (Ho & Chung, 2020). Many organisations are integrating AR into their mobile apps to increase client engagement

by incorporating utilitarian and hedonic benefits in their usage experience (Cowan et al., 2021). AR combines virtual and real-world information to engage consumers. Social media has enhanced customer involvement with companies by letting them share information, reviews, images, etc. (Grover & Kar, 2020). Though the value of social media in boosting consumer involvement is widely understood, gaps remain in marketing literature regarding the antecedents of social media customer interaction with studies on digital media's impact on customer involvement being scarce (Bianchi & Andrews, 2015). Our study aims to fill this vacuum by examining the impact of customers' continuous intention to use AR face filter apps on customer engagement, specifically influence value engagement, in which they influence others to adopt the apps. In recent years, AR face filter apps have become popular on social media (Hilken et al., 2020). With the spread of smartphones and high-speed internet, Asia Pacific is expected to be the fastest-growing market for AR (Grand View Research, 2022). One popular use of AR is related to the use of AR face filter apps which boost real-time consumer interfaces and customer interaction in social media and companies (Cowan et al., 2021; Dodoo & Youn, 2021). AR face filter apps allow users to broadcast self-promotional content online, decreasing the gap between actual and ideal self-perception (Javornik et al., 2021). To understand the function of AR face filter apps in enhancing customer engagement, especially influence value engagement, where customers influence others to embrace a product or service, it is necessary to examine the drivers of AR face filter applications use. Previous research has cited subjective norms, vanity, and popularity as factors for selfie-editing (J. W. Kim & Chock, 2017). Despite optimistic indicators of improvement, managers still don't grasp how to target and engage customers with AR face filter apps (Hilken et al., 2017). Our study identifies new motivations for selfie-editing behaviour and its association with influence value customer engagement. In this study, we used Social Identity Theory (SIT) to identify customers' motivations for using AR face filter apps. The effect of customers' intention to use these applications on their engagement with companies and their apps was further analysed. We then tested consumers' future intent and company engagement. Based on the same, the following RQs were sought to be answered by our study:

RQ1: What are the antecedents of customers' AR face filter apps current and future usage?

RQ2: What is the role of trendiness in the association between customers' AR face filter apps usage and their intention to continue using AR face filter apps?

RQ3: Does customers' continuous use of AR face filter apps affect customer engagement in terms of their influencing others?

Our work answers the research questions and provides key theoretical and managerial insights related to the effect of AR face filter app in boosting customer engagement in terms of influencing other consumers to use the applications. Using SIT, we studied the link between a customer's cognitive, affective, and social identity and their AR face filter app usage which can help enhance company's awareness of drivers and effects of customer usage behaviour. Trendiness was found to positively mediate the association between customers' current use of AR face filter apps and their intention to use them in the future. This is an important finding of our study as the same has not been studied earlier. The major focus of our study was to identify how current and future use of AR face filter apps influence behavioural customer engagement in terms of their influencing others which was found to be positive. This is a unique conclusion of our study as customer involvement has previously been studied as an antecedent rather than a result of continual use (McLean & Wilson, 2019).

2. THEORETICAL BACKGROUND

2.1. Customer Engagement

Customer engagement has evolved as a concept with companies shifting their marketing orientation from selling their products to building long-term associations with their consumers (Islam et al., 2019; Shawky et al., 2020). Marketers define customer engagement as active participation on the part of customers manifested through their behaviour that transcends purchase and transaction to encompass activities involving co-creation and other types of active contribution (Harrigan et al., 2017). Customer engagement is an important marketing element as the effectiveness of the same can affect customer purchase behavior in favour of the company,

increasing customer loyalty towards the company and consequently the operating performance of the company giving it a long-term sustainable competitive advantage (Pansari & Kumar, 2017; So et al., 2016). Different authors have proposed different theoretical perspectives of customer engagement with some believing it to comprise both in-role and extra-role customer emotions, behaviours, thoughts, etc. (Kumar et al., 2019). On the other hand, some authors have limited customer engagement to extra-role expressions such as influencing or helping others, etc. (Van Doorn et al., 2010). In the current study, we focus more on the extra-role of customer engagement taking into consideration how an individual is engaged as a result of the benefits he/she perceives to be getting out of his/her interaction with the company and thereafter, indulges in influencing others to use a product or service (Zhang et al., 2017). Customer engagement can include different offline and online activities which can have an effect on customers' behaviour (Ho & Chung, 2020). With advances in technology, how companies are engaging with their customers has changed over the years (Arora et al., 2017; Shawky et al., 2020). The choice of channels available to companies for engaging customers has increased with social media being one of the biggest facilitators of this engagement (Dinsmore et al., 2017; Li et al., 2017).

Companies now prioritize long-term relationships over mere transactions (Thaichon et al., 2019). Technological advancements, particularly in social media, have reshaped client engagement strategies (Li et al., 2017). While some authors see consumer engagement broadly, encompassing emotions and behaviors (Kumar et al., 2019), this study specifically explores the extra-role aspect, focusing on how individuals engage due to relationship benefits and subsequently influence others to use a product or service (Zhang et al., 2017).

2.2. Role of Social Media, Mobile Apps, and AR in Influence Value Customer Engagement

Interactions between companies and customers have undergone a sea change with the use of social media platforms (Jaakkola & Alexander, 2014; Mishra et al., 2021). Social media encompasses all the tools that facilitate social interaction with the use of exceedingly reachable and accessible communication methods for instance web/mobile-based technologies which can transform simple communication into collaborative conversation (Coulson, 2013). The very nature of social media has changed the character of customer engagement leading to more and more companies getting interested in using social media for enhancing customer interactions and engagement (Brodie et al., 2013; de Amorim et al., 2022; Li et al., 2017). Social media has made it possible for customers to become providers of information, reviews, etc. which increasingly impacts the preferences and purchase behaviour of other customers whereas earlier sharing of messages was only one-sided, that is, only from the side of the company (Gómez et al., 2019). In the realm of social media, mobile apps are a prominent tool being utilized for increased customer engagement (Alalwan et al., 2020; Algharabat et al., 2020; Liu et al., 2021). Mobile apps via different social media platforms have led to a dramatic shift in customer engagement strategies of companies by providing them with a myriad set of channels to communicate and interact effectively with customers (Ho & Chung, 2020) which in turn enhances the behavioural engagement of customers especially in the form of influencing others. Companies are increasingly recognizing the importance of mobile apps as effective marketing instruments for behaviourally engaging customers (Alalwan et al., 2020). Augmented Reality provides further leverage to these mobile apps to increase behavioural customer engagement by increasing the creativity and enjoyability of customer experiences which they then share with others (Chylinski et al., 2020; Ibáñez-Sánchez et al., 2022). AR-enabled mobile apps are increasingly being used by marketers to interact with customers in creative activities which increases their overall experience with the app leading to a higher level of customer satisfaction and behavioural engagement (Flavián et al., 2019; Scholz & Duffy, 2018). However, there still exists a gap in research enhancing marketers' insights about how AR-based mobile apps can be used via social media platforms to increase influence value customer engagement (Jessen et al., 2020; H. Lee et al., 2022). The objective of our study thus, is to identify the antecedents of behavioural customer engagement particularly in terms of influencing others while using AR-enabled mobile apps on different social media platforms. In particular, behavioural customer engagement in terms of customers influencing others to adopt the AR face filter apps as a result of continued usage of these apps has been studied by us.

Social media has revolutionized company-customer interactions, transforming communication into collaborative dialogue through easily accessible channels like web and mobile technologies (Coulson, 2013). Mobile apps on social platforms have reshaped customer engagement strategies, offering diverse

communication channels (Ho & Chung, 2020). Augmented reality (AR) in mobile apps enhances consumer experiences, fostering creativity (Ibáñez-Sánchez et al., 2022). Marketers use AR-enabled smartphone apps for creative engagement, yet there is limited research on their impact on social media (H. Lee et al., 2022). Our study investigates the factors influencing customer engagement with AR-enabled mobile apps on social media, focusing on how users' continued use influences others.

2.3. Social Identity Theory (SIT)

As suggested by the Social Identity Theory (SIT) proposed by Tajfel and Turner (1986), personal and social aspects are involved in how people describe themselves. Social identity is considered to be an addition to the self-concept involving a change in the level of self-representation to bring greater congruency between the perceived individual self and desired collective self (Brewer, 2003). For some people, the two aspects of identity that are personal and social are more closely related, than for others (Schmitt & Branscombe, 2002). Thus, for some anything that might be considered to be a risk to their personal or social personality such as a reduction in self-esteem, stigma consciousness, or probability of being rejected makes them adopt certain behaviours or strategies that will enable them to overcome the perceived threats (Berjot et al., 2012).

Social Identity Theory (SIT) by Tajfel and Turner (1986) emphasizes the significance of personal and social components in self-characterization. Social identity is an extension of self-concept, aligning perceived individual self with intended collective self (Brewer, 2003). The intertwining of personal and social identities varies among individuals (Schmitt & Branscombe, 2002). Consequently, those with closely linked identities may adopt specific behaviors or techniques to counter perceived threats, such as a decline in self-esteem, stigma consciousness, or rejection (Berjot et al., 2012).

2.4. AR Face Filter Apps

Customers frequently use augmented reality (AR) in the form of face filter apps, which provide an avenue for companies to increase customer engagement with social media and brands (Dodoo & Youn, 2021). AR face filter apps help customers indulge in real-time facial augmentation so that users can visually modify themselves by superimposing AR face filters on their faces (Javornik et al., 2021; Yim & Park, 2019). With the use of these AR face filter apps, customers are entertained while experimenting with their appearance and interacting creatively with other users on the social media platform (Cowan et al., 2021). With increasing popularity of these apps, companies have introduced AR face filters on several social media platforms (Dodoo & Youn, 2021). The augmented self-images are considered to be integral forms of online self-presentation used by customers to manage the impression and the image they create in front of other users (de Vaate et al., 2018). Thus, users are inclined to upload only those self-images wherein, they feel that they are looking their best or doing something noteworthy (Tiggemann et al., 2020). According to research on customers' motives behind the use of AR face filter apps conducted to date, its motivations include narcissism, the desire for popularity, subjective norms, and public self-consciousness (J. W. Kim & Chock, 2017; Lowe-Calverley & Grieve, 2018). However, further research is required to identify factors that influence AR face filter app usage. Identification of these factors can be useful to managers in attracting customers to use these apps which in turn can increase behavioural customer engagement in terms of their influencing others to use a particular social network, company, or brand.

Customers widely use AR face filter apps, presenting an opportunity for companies to boost engagement on social media and with brands (Dodoo & Youn, 2021). These apps offer real-time face augmentation, fostering creative communication (Cowan et al., 2021; Javornik et al., 2021). As AR apps gain popularity, social media platforms integrate face filters, allowing users to curate augmented self-images online (Dodoo & Youn, 2021). Motivations for use include narcissism, popularity, subjective norms, and public self-consciousness (J. W. Kim & Chock, 2017). Further research is crucial to understand usage patterns, aiding managers in encouraging adoption and enhancing customer engagement to influence others toward specific social networks, companies, or brands.

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Our research incorporated Tajfel and Turner's (1986) Social Identity Theory to analyse and expand understanding of the drivers of AR face filter app adoption. When members gain pleasant emotions from belonging to a group or having a positive identity, their relationship with the product, company, or brand improves, leading to improved consumer engagement, loyalty, and impact (Fujita et al., 2018). Our study conceptualises behavioural consumer engagement in terms of motivating others to use the applications based on customers' continuing use of AR face filter apps related to their cognitive, affective, and social identity.

3. RESEARCH MODEL AND HYPOTHESES DEVELOPMENT

Founded on the above discussion, our study postulates that the different dimensions of SIT influence customers' usage of AR face filter apps which in turn will affect their intention to continue using the same. Ultimately the effect of continuous usage of these apps on behavioural customer engagement in terms of their influence value is analysed. Figure 1 depicts the proposed model for our research. The hypotheses underscoring the relationship between the different variables in the model are developed in the following section.

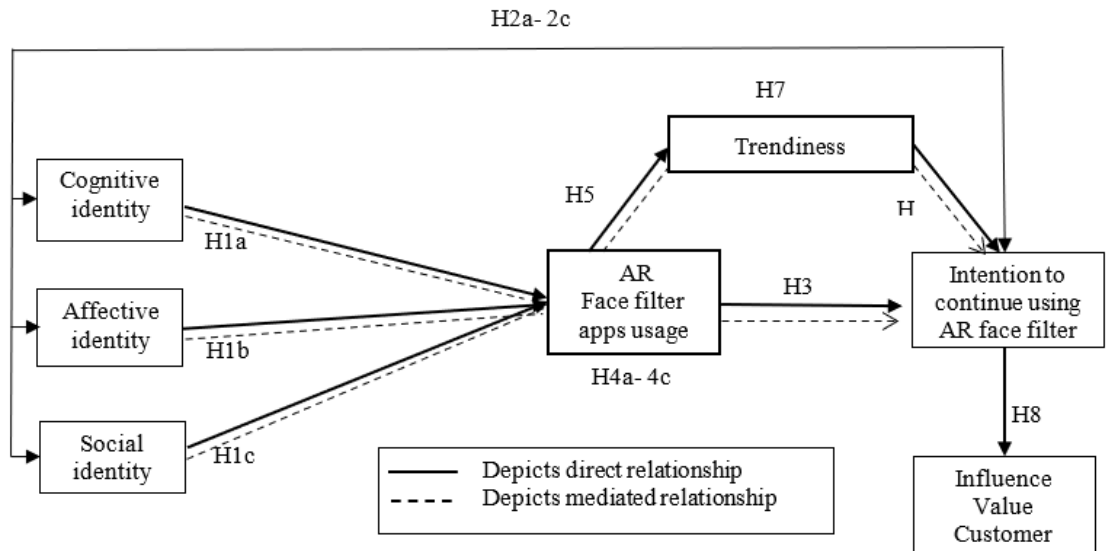


FIGURE 1 - CONCEPTUAL MODEL OF THE STUDY

3.1. Social Identity Theory Dimensions as Antecedents

SIT has been used to explain virtual group behaviour on social networking platforms (Shih et al., 2017), virtual groups (Guo & Li, 2016), project teams (Tansley et al., 2013), microblogging (Jiang et al., 2016), online gaming sites (Setterstrom & Pearson, 2019), etc. Cognitive, affective, and evaluative components of social identity (Wang, 2017) may influence users' use of AR face filter apps. Our study further analyses the effect of SIT's three dimensions on AR face filter app usage. Cognitive identity is a person's self-awareness in which he considers his categorization and acceptability in the group he belongs to or would like to belong to (Bergami & Bagozzi, 2000), especially in terms of his self-image and social media photos. How much people think their personal identity doesn't match the social group they wish to join affects their behaviour (Ellemers et al., 1999). Affective identification is the attachment or commitment people have to the group they belong to (Bagozzi & Dholakia, 2002). In the context of the current study, the affective component is employed to illustrate the hedonic benefits buyers connect with uploading an upgraded self-image on social media. SIT's evaluative identity shows the value of a social identity to customers (Ellemers et al., 1999; Wang, 2017). We used social identity improvement as the value AR face filter apps provide to the users. SIT's three dimensions are unique and may have behavioural implications (Lam et al., 2010). Based on prior research in this area, social identity aspects should have an association with customer participating behaviour through their current and future usage of AR face filter apps (D. Lee et al., 2011). Consequently, we hypothesize:

H1: There is a positive association between (a) cognitive identity (b) affective identity (c) social identity and customers' AR Face Filter Apps Usage

H2: There is a positive association between (a) cognitive identity (b) affective identity (c) social identity and customers' intention to continue using AR Face Filter Apps

3.2. Current and Future Usage in Respect of AR Face Filter Apps

Customers' current and future use of AR apps has become a key instrument for customer engagement, growth, and profitability (Dodoo & Youn, 2021). Thus, in our study, the influence of SIT dimensions was used to describe consumer usage behaviour and their intention to continue using AR face filter apps (H1 and H2). It was also necessary to determine if existing AR face filter app usage affects customers' intent to keep using them. Taking the same into consideration, we hypothesise:

H3: There is a positive association between customers' AR Face Filter Apps usage and customers' intention to continue using AR Face Filter Apps.

3.3. The Mediating Role of AR Face Filter Apps Current Usage

Current customer usage of a product or service leads to a subjective appraisal of its performance, which may impact future usage (Wu et al., 2016). Though the direct influence of the three SIT dimensions on present and future AR face filter app usage by consumers has been explored, it was important to understand if the effect on future usage alters with current usage mediating the relationship. Hence, we propose:

H4: Customers' AR Face Filter Apps usage will act as a mediator between (a) cognitive identity (b) affective identity (c) social identity and customers' intention to continue using AR Face Filter Apps

3.4. The Mediating Role of Trendiness

Previous research shows that app users' personal satisfaction affects their experience and perceived trendiness is a key factor of personal enjoyment from usage (Ibáñez-Sánchez et al., 2022). Perceived trendiness is users' view that their social circle considers a certain technology use to be fashionable and modern. This aspect is related to social image or technological use (Cho et al., 2020) and when a technology is trendy and stylish, consumers' satisfaction level increases (Ameen et al., 2021), which may affect their future desire to utilise it. Therefore, we suggest:

H5: There is a positive association between customers' AR Face Filter Apps usage and trendiness.

H6: There is a positive association between trendiness and customers' intention to continue using AR Face Filter Apps.

H7: Trendiness acts as a mediator between customers' AR Face Filter Apps usage and customers' intention to continue using AR Face Filter Apps

3.5. AR Face Filter Apps Current Usage and Influence Value Customer Engagement

Previous research has proven customer engagement (CE) to be a component of customers' total brand experience (Lemon & Verhoef, 2016). Though CE's effect has been explored in online brand experience (Khan et al., 2016), as far as we know, there is no study on the relationship between consumers' continuous product use and engagement. Customer pleasure, commitment, trust, identification, etc. are antecedents of customer engagement (Van Doorn et al., 2010). We hypothesise that continuous use of AR face filter apps can affect customer engagement due to self-augmentation and enhanced social acceptance which will improve his/her behavioural engagement level with the app and his/her likelihood to influence others to use the apps. Hence, it is proposed that:

H8: There is a positive association between customers' intention to continue using AR Face Filter Apps and Influence Value Customer Engagement

4. METHODOLOGY

4.1. Research Context and Data Collection

Our study aimed to determine how continued use of AR face filter apps affects user engagement by examining the effect of SIT factors on customers' use of AR face filter apps and their intention to continue using them. This study used a survey to understand suggested links. A google form and WhatsApp messages were used to collect data. Five academic experts reviewed the form's original draft for clarity. Their comments helped improve the questionnaire. Before sharing the form with others, 25 respondents' pilot-tested it to confirm its clarity. Using the snowballing strategy of data gathering, the form was distributed to WhatsApp groups and emails. In July 2022, 417 people completed our survey. After removal of the incomplete questionnaires, 406 questionnaires with valid responses were finalised. The sample consisted of 292 men and 114 women with an average age of 31 years.

4.2. Measures

Our study used a seven-point Likert scale ranging from 1 ('completely disagree') to 7 ('absolutely agree') to measure responses to components from well-established scales. Adapted from Tajfel and Turner's SIT (1986), cognitive identity, affective identity, and social identity each had 3 statements. 3 phrases were adapted from the study of Cabrera-Sánchez et al. (2021) to capture users' AR face filter app usage. Customers' intention to continue using AR face filter apps was measured using 3 items from Hollebeek et al. (2014). For the mediating variable of trendiness, we used 2 items derived from Ibáñez-Sánchez et al. (2022). Customer engagement was measured based on two factors taken from the study of Prentice et al. (2019).

5. RESULTS AND ANALYSIS

Data for our study were evaluated with the use of AMOS and PROCESS (J. R. Hayes, 2013). In order to overcome the issue of common method bias which normally occurs because of self-reported actions by the identical set of participants, we utilised Harman's one-factor test in addition to arbitrarily positioning the items before the survey. Since the first factor had a factor loading of 31.23%, which was below the recommended value of 50% (Podsakoff et al., 2003), the chance of CMB was ruled out. We also utilised Heterotrait - Monotrait (HTMT) ratio of correlations to further strengthen our claim of our study being free of CMB. The highest value of HTMT was found to be .820 which was lower than the acceptable cut-off of 0.85 (Henseler et al., 2015), thus, eradicating the probability of CMB in the present study.

5.1. Reliability and Validity Analysis

The fit indices of the measurement model and structural model were found to be inside the usually adequate limits denoting reliability and validity of the model. The inter-item consistency was assessed through composite reliability which was found to be above the suggested value of 0.70. The item loading of all the constructs was above 0.70 which explained variance of one-half of the item (Fornell & Larcker, 1981), thus, instituting construct validity. Similarly, as the average variance mined (AVE) for each construct was larger than the correlation values, discriminant validity was also established.

Table 2 depicts the association between the study constructs. A positive association is found between cognitive identity, affective identity and social identity with AR face filter apps usage ($\beta=.132$, $t=3.01$; $\beta=.649$, $t=14.93$; $\beta=.072$, $t=2.00$), thereby, supporting H1a, H1b and H1c. A positive and substantial association is also established amongst cognitive identity, affective identity and social identity with customers' intention to continue using AR face filter apps ($\beta=.154$, $t=4.45$; $\beta=.303$, $t=5.92$; $\beta=.062$, $t=2.11$), thereby, supporting H2a, H2b and H2c of the study. The H3 of the study is supported when a positive association is found between customers'

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current usage of AR face filter apps usage and their intention to continue using these apps ($\beta=.238, t=4.50$). A positive association is found between usage and trendiness ($\beta=.750, t=26.74$) thus, supporting H5 of the study. H6 and H8 of the study are reinforced when a positive relationship is found between trendiness and continued intention ($\beta=.262, t=4.70$) and between continued intention and influence value customer engagement ($\beta=.293, t=5.88$).

TABLE 1 - FORNELL-LARCKER CRITERION AND DISCRIMINANT VALIDITY

S#	Constructs	1	2	3	4	5	6	7
1	Affective Identity	(0.865)						
2	Cognitive Identity	0.555	(0.893)					
3	Continued Intention	0.575	0.573	(0.878)				
4	Influence Value Customer Engagement	0.324	0.384	0.293	(0.971)			
5	Social Identity	0.204	0.185	0.267	0.258	(0.901)		
6	Trendiness	0.756	0.455	0.754	0.304	0.229	(0.932)	
7	Usage	0.737	0.506	0.75	0.293	0.229	0.75	(0.931)
Heterotrait-Monotrait (HTMT) Ratio								
1	Affective Identity							
2	Cognitive Identity	0.624						
3	Continued Intention	0.679	0.667					
4	Influence Value Customer Engagement	0.348	0.428	0.324				
5	Social Identity	0.218	0.206	0.297	0.276			
6	Trendiness	0.82	0.509	0.704	0.326	0.246		
7	Usage	0.801	0.566	0.701	0.313	0.247	0.712	

Note: N=406; \sqrt of AVE is depicted in parentheses and italics; all values are significant at .05 level

TABLE 2 - DIRECT EFFECTS

Hypotheses	Direct effect	estimate	t	p	Outcome
H1a	CI → Usage	0.132	3.01	0.003	supported
H1b	AI → Usage	0.649	14.93	0.000	supported
H1c	SI → Usage	0.072	2.00	0.046	supported
H2a	CI → C. Int	0.154	4.45	0.000	supported
H2b	AI → C. Int	0.303	5.92	0.000	supported
H2c	SI → C. Int	0.062	2.11	0.035	supported
H3	Usage → C. Int	0.238	4.50	0.000	supported
H5	Usage → Trendiness	0.750	26.74	0.000	supported
H6	Trendiness → C. Int	0.262	4.70	0.000	supported
H8	Cont. Int → Engagement	0.293	5.88	0.000	supported

CI - Cognitive identity, SI - Social identity, AI - Affective identity, C. Int - Continued intention

5.2. Mediation analysis

PROCESS Model 4 was utilized for testing the mediation effect of customers' AR face filter apps usage on relationships between cognitive identity, social identity, affective identity and customers' intention to continue using these apps. Bootstrap samples of 2000 were used at a 95% bias-corrected confidence interval (CI) to ascertain if the indirect effects were statistically significant (A. F. Hayes, 2017). As presented in Table 3, usage acted as a significant mediator for cognitive identity and continued intention (indirect effect=0.324, SE=.03), social identity and continued intention (indirect effect=0.174, SE=.04) and affective identity and continued intention (indirect effect =0.320, SE=.04), supporting H4a, H4b, and H4c. H7 of the study was also supported when trendiness was established to meaningfully mediate the relationship amid usage and continued intention (indirect effect=0.282, SE=.04). Since both direct and indirect effects were significant and pointing likewise, a case of complementary mediation was present for all the mediating associations (Zhao et al., 2010).

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TABLE 3 - MEDIATION EFFECTS

Hypothesis	Mediation	Total	Direct	Indirect	BootSE	Boot LLCI	Boot ULCI
H4a	AI-Usage-C. Int	0.8344	0.5142	0.3202	0.0447	0.2328	0.4100
H4b	CI-Usage-C. Int	0.5762	0.2524	0.324	0.0336	0.2591	0.3922
H4c	SI-Usage-C. Int	0.2784	0.1042	0.1742	0.039	0.0976	0.2521
H7	Usage-Trendiness-C. Int	0.6502	0.3674	0.2828	0.0416	0.1993	0.3656

Notes: CI - Cognitive identity, SI - Social identity, AI - Affective identity, C. Int - Continued intention

6. DISCUSSIONS

Our study's main purpose was to examine the effect of continuous AR face filter app usage on influence value customer engagement. Using SIT, we analysed AR face filter app usage and its impact on customer engagement in a developing market. By first analysing the influence of social identity aspects of SIT on customers' present usage and future use intention of AR face filter apps, the mediating role of trendiness was also analysed. AR face filter apps could be linked to identity motivations of SIT. To investigate this further, we compared cognitive, affective, and social identity with AR face filter app usage and all three dimensions are favourably associated to AR face filter applications usage (H2a-H2c) and customers' intention to keep using them (H1a-H1c). Affective identity has the most influence on current and future AR face filter app adoption, whereas social identity has the least. Previous research has linked AR face filter app usage to narcissism (Wang, 2017), self-objectification (Lamp et al., 2019), body dissatisfaction (Lonergan et al., 2019), and poor body image (Veldhuis et al., 2020). Our study focuses on how AR face filter apps can increase customer engagement and influence behaviour. Given the lack of studies identifying and associating identity dimensions with AR face filters app usage, our study presents a novel viewpoint for examining identity reasons as antecedents of app usage. The analysis shows that many aspects affect users' present and future app usage. The results support earlier studies showing the three elements of customer behaviour (Wang, 2017). Positive correlation was also established between present AR face filter app usage and future intention to use these applications (H3) matching previous research (Dodoo & Youn, 2021) and indicating that if customers currently use AR face filter apps, they are likely to use them in the future. Current usage also mediates the influence of SIT's three dimensions on customers' propensity to continue using AR face filter apps (H4). According to Wu et al. (2016), when customers use these apps, they evaluate their performance in boosting their self-presentations. If their present use is satisfactory, they will continue using these apps. Analysing the role of trendiness in mediating the association between customers' current usage and intention to continue using AR face filter apps in the future, the association was found to be mediated by trendiness, indicating that if customers perceive the use of AR face filter apps to be trendy, they would like to continue using these apps in the future. The finding is consistent with investigations by Lee and Cho (2020) and Ameen et al (2021). Previous research has examined the role of gender in AR face filter app adoption, and studies encourage more investigation (Cowan et al., 2021). Several researches have explored customer engagement as an antecedent of consumer loyalty, repurchase behaviour, and positive e-WOM in social media (Molinillo et al., 2020). To our limited knowledge, no research has examined the impact of AR face filter apps on user engagement. Our research shows that customers' intention to utilise AR face filter apps (H8) increases their influence value involvement with social networks/brands/companies, etc. Our study's theoretical and managerial implications advance research in the area and help managers comprehend AR face filter app usage behaviour.

7. THEORETICAL IMPLICATIONS

Our study contributes theoretical insights to the intersection of customer engagement and augmented reality (AR), particularly in emerging economies where social media research is limited. It advances understanding of behavioral customer involvement in AR apps, building on context-specific analysis (Kumar et al., 2019). We provide a comprehensive model for future research on consumer engagement in AR, emphasizing potential components and their relationships. The study reveals the affective identity's significant influence on users' adoption of AR face filter apps and their ability to influence others. It reinforces the importance of hedonic

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benefits in the competitive apps industry, driving repeated and ongoing app usage, aligning with the conclusion that immersive experiences promote consumer engagement (Scholz & Smith, 2016). Our findings highlight the crucial role of influence value consumer engagement in AR-enabled customer creativity. The study introduces a new academic connection between customer actions (reuse intention via identity dimensions) and mobile apps, emphasizing the affective component of Social Identity Theory (SIT). The research suggests that AR software developers should leverage social media marketing tactics to enhance hedonic rewards, strengthening relationships and involvement with clients (Dinsmore et al., 2017).

8. PRACTICAL IMPLICATIONS

The study's findings carry managerial implications for organizations employing AR-enabled apps for customer engagement. Our research suggests that organizations should leverage app drivers evoking hedonic emotions like joy, excitement, and delight. Utilizing AR apps can provide insights into customers' self-identification and usage patterns, using social media profile mining for identity perceptions. Our findings guide AR filter designers in creating captivating experiences, emphasizing emotional delight, promoting user participation through challenges, and regularly introducing fresh filters aligned with target audiences. Selfies on social media are driven by our identified elements, revealing the importance of looks and positive feedback. AR marketers should deliver interactive, non-intrusive experiences, considering users' body image interpretations for virtual try-ons and segmenting campaigns accordingly. Employing a "playground" strategy, organizations can use AR to boost customer imagination and enjoyment, ensuring both hedonic and utilitarian value for enhanced engagement and customer satisfaction with face filter apps.

9. LIMITATIONS AND FUTURE RESEARCH DIRECTIONS

Despite all our rigorous efforts, the paper is not devoid of limitations. We only analysed web-based AR face filter apps. Future research could apply our findings to branded mobile apps or store kiosks. Second, AR face filter app user experiences and reactions vary with different customer characteristics. More research is needed to understand how personality, age, and self-esteem affect app interaction. Our study relied on customers' self-reported information, which has limitations. We suggest further research to validate our results in a field experiment or determine if they differ in other countries. Future research may also explore other forms of augmented reality face filters, including hedonistically and cognitively engaging filters, and their effect on consumer usage and engagement behaviour.

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