



DISSERTATION PROPOSAL

MODULE: LCMB7035 – DISSERTATION

Exploring the Effect of Augmented Reality–Based Shopping Experiences on Online Purchase Intention: Evidence from the Fashion Retail Industry of Bangladesh

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SUBMISSION DATE: 06 NOVEMBER 2026

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1. Introduction

1.1 Background of the Study

Digital innovation has changed the way people interact with brands and products. Augmented Reality (AR) is one of these new technologies that has become popular since it changes online purchasing into an interactive and immersive experience. AR puts digital information on top of the real world, so people can see how items might look in real life before they buy them (Hoffmann and Mai, 2022). This technology has been widely used by fashion, beauty, and furnishing stores throughout the world to make virtual try-on and product visualisation tools that increase engagement and confidence (Hilken et al., 2018; Hoffmann and Mai, 2022).

Online fashion retail industry is growing rapidly in Bangladesh with major players like Aarong, Sailor, which have made fashion items available all over the country. But most of them still use traditional product photographs and descriptions, with little to no sensory interaction that make consumer unsure about product fit, colour, and quality. With my background in textile engineering, I've always been interested in how new technologies can change fashion retail, both in terms of manufacturing and the way customers perceive it. In line with global interest in AR, this study endeavours to investigate how AR-based shopping experiences may enhance consumer trust, pleasure and intention to purchase in the online fashion industry in Bangladesh.

1.2 Problem Statement

Although AR has demonstrated its efficacy in augmenting purchase intention and consumer happiness in developed markets, empirical evidence remains limited in emerging economies, particularly in South Asia and Bangladesh. Research has illuminated that with AR, risk perception decreases and usefulness, enjoyment, trust increase all of which strongly impact OPI (Hoffmann et al., 2022; Yitong et al., 2024). But Bangladeshi fashion retailers have been lagging behind in utilising this technology and customer perception about AR based shopping is not resolved yet (Saha et al., 2025). This absence of local evidence constrains comprehension regarding the potential responses of Bangladeshi consumers to augmented reality experiences and the applicability of global findings within this setting.

1.3 Research Aim

To examine the impact of AR based shopping experience factors on OPI in the fashion retail industry of Bangladesh.

1.4 Research Objectives

- To investigate the impact of perceived usefulness of AR applications on consumers' OPI.
- To examine how perceived ease of use of AR features influences OPI.
- To evaluate the effect of interactivity and enjoyment in AR shopping experiences on OPI.
- To analyse the influence of perceived trust and risk reduction of AR technology on OPI.
- To provide recommendations for fashion retailers on how to effectively implement AR-based marketing strategies to enhance online consumer engagement and sales performance.

1.5 Research Questions

- How does perceived usefulness of AR influence OPI?
- How does perceived ease of use of AR features affect consumers' OPI?
- How do interactivity and enjoyment in AR experiences shape OPI?
- How does AR technology build trust and reduce perceived risk in online fashion retail?

2. Literature Review

2.1 Augmented Reality: an Overview

AR superimposes digital content onto the physical environment in real time, creating an enhanced, interactive experience for users (Kazmi et al., 2021; Hanna 2023). In retail, AR is increasingly embedded into e-commerce and m-commerce platforms to support virtual try-on, product visualization and in-home placement tools, especially for apparel, beauty and furniture products (Hilken et al., 2018; Hoffmann and Mai, 2022). A recent systematic review of 56 empirical studies shows that AR improves product visualization, decision confidence and customer satisfaction, while reducing perceived risk and return rates, particularly in fashion and beauty retail contexts (Hoffmann and Mai, 2022). Similarly, a broader review of 83 AR–online shopping articles confirms that AR features such as vividness, interactivity and novelty enhance user engagement and flow, ultimately strengthening purchase intention and brand loyalty (Yitong et al., 2024). Although AR adoption is growing rapidly in developed markets, diffusion in emerging economies remains uneven, with implementation constrained by technological readiness and retailer capabilities (Hoffmann et al., 2022; Yitong et al., 2024).

2.2 Online Purchase Intention

OPI is generally defined as a consumer's willingness or planned likelihood to buy products through digital channels, and it is a strong predictor of subsequent online buying behaviour (Whang et al., 2021, Hanna 2023). In e-commerce contexts, intention is shaped by attitudes toward the website or application, perceived usefulness, ease of use, enjoyment and trust in both the platform and the seller (Liu and Napitupulu, 2020; Hanna, 2023). Empirical work shows that when consumers perceive online shopping interfaces as user-friendly, informative and enjoyable, their purchase intentions and conversion rates increase, while uncertainty and perceived risk decrease (Hanna 2023; Yitong et al., 2024). In experiential technologies AR in particular, intention does not only refers to functional assessment (e.g. accuracy of product representation) but also emotional reactions deriving from the pleasure, involvement and perceived playfulness that are able to induce both conscious and impulse purchase intentions (Do et al., 2020; Voicu et al., 2023).

2.3 Empirical Investigation

Recent empirical studies directly examine how AR-based shopping experiences influence OPI. Hanna (2023) finds that in online furniture retail, perceived ease of use, perceived usefulness, enjoyment and perceived augmentation quality significantly enhance purchase intention by improving the realism and diagnostic of product information. Guo and Zhang (2024) develop and test a TAM-based model in an AR e-commerce context, showing that different AR experience dimensions positively affect perceived usefulness and perceived ease of use, which in turn significantly increase purchase intention.

Systematic reviews similarly report that AR's technological features—vividness, interactivity and novelty—induce flow, perceived enjoyment and decision comfort, which are consistently linked to stronger purchase intentions and revisit intentions (Yitong et al., 2024; Hoffmann and Mai, 2022). Voicu et al. (2023) use an S–O–R perspective in AR makeup apps and show that interactivity and informativeness (stimuli) enhance satisfaction and enjoyment (organism), which then drive loyalty and purchase-related behaviours.

Trust and risk reduction also emerge as critical constructs. Basari and Dewanti (2024) report that AR and perceived risk jointly influence online shopping behaviour, with perceived enjoyment mediating these effects. An Indian e-commerce study integrating TAM, UTAUT2 and Technology Readiness finds that perceived usefulness, perceived ease of use, hedonic motivation and trust all significantly predict AR adoption intentions, with perceived usefulness

being the strongest driver (Mohanty et al., 2025; Jain and Kaur, 2024). Collectively, these findings suggest that perceived usefulness, ease of use, interactivity, enjoyment, trust and risk reduction are robust determinants of consumers' responses to AR-enabled shopping and their subsequent OPIs across multiple product categories, particularly in fashion, beauty and furniture.

2.4 Research Gap and Justification

Although prior studies demonstrate that AR can increase OPI by enhancing usefulness, ease of use, enjoyment, trust and risk reduction, most empirical evidence originates from Europe, China, the Middle East and, to a lesser extent, India and Indonesia (Hoffmann and Mai, 2022; Yitong et al., 2024; Hanna 2023).

There is little empirical work focusing on AR-based fashion shopping in South Asian markets, and virtually none on Bangladeshi online fashion retailers. Given the rapid growth of Bangladeshi e-fashion platforms but their reliance on static images, investigating how AR experience factors shape local consumers' OPI is both theoretically and managerially important.

2.5 Theoretical and Conceptual Framework

The Technology Acceptance Model (TAM) posits that technology usage intention is primarily driven by perceived usefulness and perceived ease of use (Davis, 1989). In AR retail research, TAM has been extended with hedonic and trust-related constructs to explain adoption of AR apps and their effect on purchase intention (Guo and Zhang, 2024; Jain and Kaur, 2024).

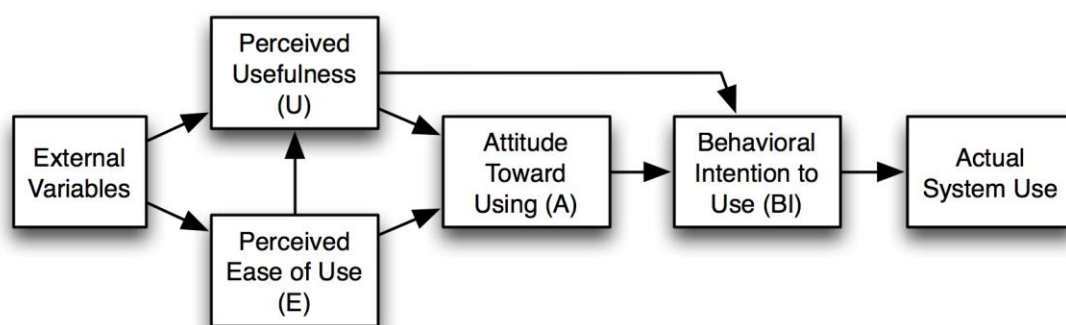


FIGURE 1: TECHNOLOGY ACCEPTANCE MODEL
(SOURCE: DAVIS, 1989)

The Stimulus-Organism-Response (S–O–R) model complements TAM by framing AR features (e.g. vividness, interactivity, risk-reducing information) as external stimuli that trigger

cognitive-affective states such as perceived enjoyment, trust and reduced risk (organism), which then lead to behavioural responses such as purchase intention and loyalty (Do et al., 2020; Voicu et al., 2023).

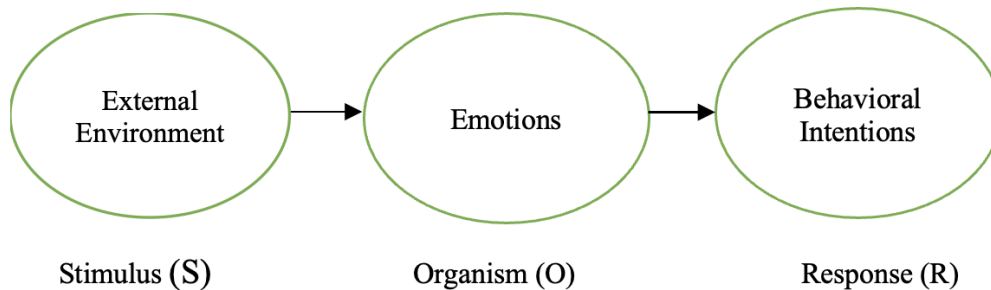


FIGURE 2: S–O–R MODEL
(SOURCE: MEHRABIAN & RUSSELL, 1989)

For the present study, a conceptual framework can therefore position AR experience factors—perceived usefulness (PU), perceived ease of use (PEU), interactivity/enjoyment (IAE) and trust/risk reduction (TRR) as independent variables derived from TAM and S–O–R. These constructs act as stimuli and organism states that jointly influence the dependent variable, OPI, in the context of Bangladeshi online fashion retailing.

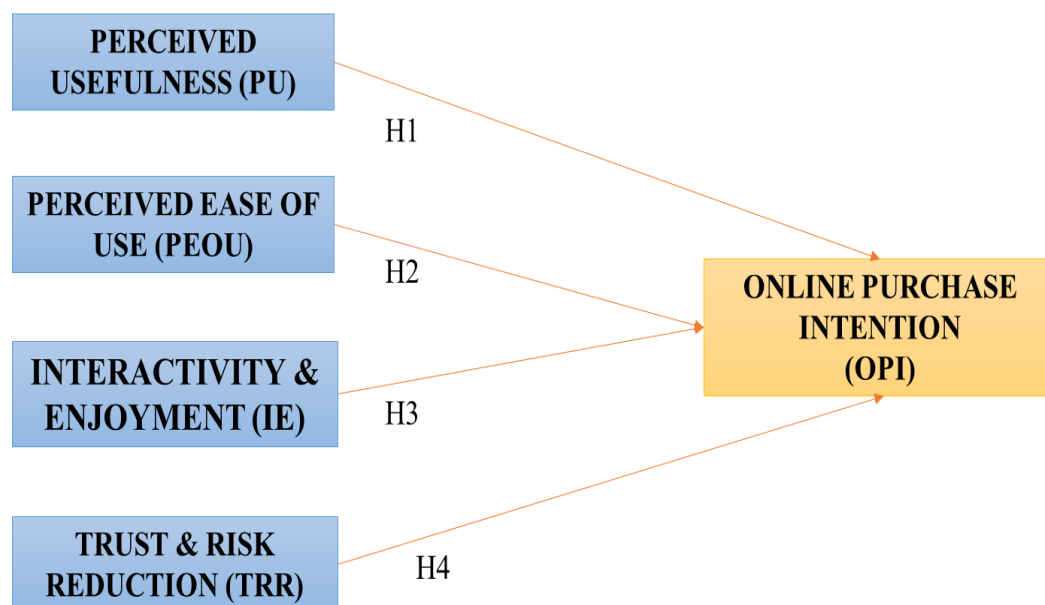


FIGURE 3: CONCEPTUAL FRAMEWORK
(SOURCE: SELF-CREATED)

Based on the framework provided in Figure 3 following hypotheses are proposed for the study;

H1: Perceived usefulness of AR applications has a positive impact on OPI.

H2: Perceived ease of use of AR features positively influences OPI.

H3: Interactivity and enjoyment in AR shopping experiences positively affect OPI.

H4: Perceived trust and risk reduction associated with AR technology positively influence OPI.

3. Methodology

3.1 Research Philosophy

This study adopts a positivist philosophy, which assumes that phenomena such as consumer behaviour can be objectively measured and explained through empirical evidence (Saunders et al., 2019). As the study aims to test cause-and-effect relationships between augmented-reality (AR) experience factors—usefulness, ease of use, enjoyment, and trust—and OPI, positivism provides a structured and value-free foundation consistent with prior technology adoption research based on TAM and S–O–R frameworks (Davis, 1989; Do et al., 2020).

3.2 Research Approach

This study is guided by a deductive method. Hypotheses generated from established theories are evaluated through primary quantitative data, facilitating the validation or enhancement of recognised correlations within a novel setting. This method corresponds with the study's aim to investigate whether constructs from TAM and S–O–R forecast Bangladeshi consumers' purchase intentions regarding AR-based online fashion platforms (Guo and Zhang, 2024).

3.3 Research Design

Quantitative cross-sectional design was used to gather numerical data from respondents at one point in time. Quantitative approach allows for constructs such as perceived usefulness, and enjoyment to be measured using standardized Likert scale questionnaires, with a cross-section design it is feasible given the time constraint of 3 months of which this paper has to be finalized.

3.4 Data Collection

Participants will be reached via online social media and fashion-retail communities using an online Google Form to target consumers who are accustomed to AR shopping technologies. A structured questionnaire comprising of three parts—Demographics, AR experience and purchase intention - will include five-point Likert scale items that are adapted from already validated instruments used in past AR and e-commerce research (Voicu et al., 2023). This will allow broad access and highly reliable data gathering for analysis.

3.5 Population and Sampling

The sample consists of Bangladeshi consumers who purchase fashion items online and are familiar with AR tools. We will use convenience sampling to find 150 to 200 people to take part through online channels. This non-probability method is suitable for exploratory research in emerging markets where AR exposure is still restricted.

3.6 Data Analysis

SPSS will be used to analyse the data. Descriptive statistics will describe the profiles of participants while Cronbach's Alpha will be used to determine reliability, correlation and multiple regression analysis techniques will also be implemented to test hypotheses regarding AR experience variables in relation with purchase intention.

3.7 Ethical Considerations

The research will be conducted according to University ethical guidelines. At the beginning of the questionnaire participants will be provided with an opening statement explaining the purpose, voluntary nature and confidentiality of the study. There will be no personal identifiers and the data collected will only be used for academic purposes. Participants will be required to give informed consent before contributing, and data will be stored in a secure manner with protection of integrity.

4. Expected Findings

Prior research and the theoretical frameworks of TAM and S–O–R suggest that the four AR experience factors (PU, PEU, IAE and TRR) will exert a strong positive impact on OPI. Among them, PU and IAE are likely to have the biggest effects because they immediately boost confidence and interest when buying. The study also expects that trust built through accurate visualisation and information that lowers risk will make people more likely to buy fashion items online. Overall, the results should show that shopping experiences based on augmented reality boost both utilitarian and hedonic motives. This will give Bangladeshi fashion retailers useful information on how to get more people to engage with their digital stores and buy things.

5. Limitations

The study recognises certain limitations that could influence generalisability. First, the use of a convenience sampling method and a relatively small sample size (150–200 participants) may not adequately represent the overall population of Bangladeshi online buyers. Second, data

gathered via self-reported online surveys may be influenced by response bias or a restricted understanding of AR technology. Third, the cross-sectional design limits the capacity to detect temporal changes in customer perceptions. The study will endeavour to include participants from a wide range of demographic backgrounds and make sure that the results are accurate and strong by testing for dependability.

6. Timeframe

Task / Activity	Duration	Timeline	Nov-25	Dec-25	Jan-26	Feb-26
Proposal approval and initial feedback	1 week	Nov 7–15	■			
Comprehensive literature review and questionnaire design	3 weeks	Nov 16–Dec 5	■■■■■■■■■■■	■		
Pilot testing and finalization of survey instrument	1 week	Dec 6–12		■■■		
Data collection (online survey distribution)	3 weeks	Dec 13–Jan 2		■■■■■■■■■■■	■	
Data cleaning, coding, and SPSS analysis	3 weeks	Jan 3–23			■■■■■■■■■■■	
Drafting dissertation (findings, discussion, conclusion)	2 weeks	Jan 24–Feb 2			■■■■■	■
Final editing, proofreading, and submission	1 day	Feb-03				■

7. Conclusion

This proposed research is expected to fill a major gap in the literature with providing knowledge of the effect of AR based shopping on experiences on OPI specifically focusing Fashion retail sector of Bangladesh. Integrating TAM and S–O–R models, this study will contribute to our understanding of theory of technology-assisted consumer behaviour in emerging market settings. The anticipated outcomes are beyond demonstrating that usage of AR will increase the engagement, enjoyment and trust from a retailing point of view. Finally, the study will add to the emerging literature on digital transformation and experiential marketing in South Asian fashion retail.

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