



The Role of AI Personalisation, Digital Trust and Perceived Fit Risk in Women's Online Garment Buying Behaviour in India

Smt. Kaushal Soni Verma¹, Dr. Ritu Marwah²

¹Research Scholar, Department of Commerce, Govt. D. B. Girls' P. G. (Auto.) College, Raipur (C.G.)

Email ID:-kaushalsoniks.ks@gmail.com

²Assistant Prof., Department of Commerce, Govt. D. B. Girls' P. G. (Auto.) College, Raipur (C.G.)

Email ID:-rimarwahtu82@gmail.com

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ABSTRACT

India's e-commerce growth has changed the buying habits of women for ready-to-wear clothes. Online fashion platforms provide ease, a wide range of products, competitive pricing and are becoming more and more personalised. When buying clothes without checking them out, though, there is uncertainty about the size, fit, fabric quality, colour and authenticity of the product. Meanwhile, artificial intelligence (AI) is proving to be a valuable piece of technology in the fashion retail landscape, enabling customisation, automating product discovery, virtual try-on, and intelligent sizing assistance. More than just recommending related products, such technologies are effective if consumers trust digital platforms and feel that there is no risk of the garment being a misfit. The paper formulates a conceptual model of women's online shopping behaviour for ready-made garments based on the technology acceptance theory, online consumer trust theory, perceived risk theory, and AI research theory in the field of retail. The analysis indicates that AI personalisation can improve purchase decisions in the following ways: by providing relevant recommendations, by reducing the time spent searching, and by helping to evaluate the product. Whether consumers trust the recommendations, and even if they can purchase a convenient digital service, digital trust will affect their willingness to do so, as will perceived fit risk. The discussion also explores the dilemma of customisation versus privacy and the importance of a range of product images, precise size information, and return policies. This paper aims to provide a comprehensive understanding of how technology, psychology, and product factors influence women's online shopping habits and how these insights can be applied to Indian fashion retailers.

Keywords: Artificial intelligence (AI), Digital trust, E-commerce, Garments, Perceived risk, women

1. INTRODUCTION

Digital commerce has dramatically changed the way consumers interact with fashion retailers. Web platforms let consumers browse products, compare options, read what others say, and make purchases without going to a brick-and-mortar shop. These benefits are especially applicable to ready-made clothes, which include an array of clothes like ethnic garments, casual garments, formal garments, western wear and garments for special events. Online fashion retail lets women in India access a wide variety of brands, designs, price points, and styles that aren't always available locally. Mobile apps and payment systems have further streamlined the buying process, making online garment retailing a more significant part of today's consumers' behaviour.

Despite these benefits, garment shopping is not like many other standardised digital or household products. Physical and experiential properties of clothing can't be conveyed through product photographs or written descriptions alone. Fabric texture/construction/colour/drape/fit are typically determined by consumers through touch, trial and visual inspection. Accessing these evaluation opportunities is not as convenient in an online environment, raising doubts about what will actually be received. This lack of confidence can impact a purchase decision, brand preference, satisfaction, and product return.

Research in India supports the importance of trust and perceived risk in online clothing purchases. Chaturvedi et al. (2016) studied the online apparel consumer in the state of Rajasthan and found that three factors are important in the consumer buying decision namely information-seeking behaviour, perceived risk and trust. Likewise, Jawalkar and Yende (2024) investigated trust and risk perception of young women in Nagpur and also discussed about the customer reviews and return policies, garment size and product non-matches, and payment security. While these studies focus on specific consumer groups and geographic locations, they highlight the need to consider online garment purchasing transactions beyond the convenience and price element

AI is one of the new factors in this scenario. AI fashion retail systems can leverage their knowledge to recommend products, sort search results,.

provide personalised clothing suggestions, and support virtual fitting and sizing. These functions may simplify shopping and help consumers navigate ever-expanding online catalogues. But technology's success in purchasing is by no means guaranteed

The suggestion might not match the size, shape, price, or appearance of an appealing consumer. In this context, three intertwined factors

(AI personalisation, digital trust and perceived fit risk) should be considered when understanding women's online purchasing behaviour. This paper argues that personalisation creates consumer value, consumers trust digital platforms, and product information reduces fit uncertainty in the physical world, all of which are pivotal to the business success of AI-enabled fashion retail. These relationships are particularly significant for the Indian market, which is diverse in shopping experience, purchasing power, clothing preferences, and access to digital technology (Zaman & Jasim, 2025; Zhang et al., 2025).

2. REVIEW OF LITERATURE

The study of online apparel purchase has taken three related paths: consumer trust and risk, technology acceptance and, more recently, artificial intelligence in fashion retail. Initial studies in e-commerce showed that people are ready to purchase goods over the Internet if they also trust the seller, and not only because of the functional aspects of the e-commerce site. Gefen et al. (2003) introduced a model including the concepts of trust and the technology acceptance model and found that trust in the e-vendor had a significant impact on purchase intentions together with ease of use and usefulness, and Pavlou (2003) proved that trust reduces perceived risk, thus facilitating the acceptance of e-commerce.

Chaturvedi et al. (2016) found perceived risk, trust, and information-seeking behaviour to be antecedents of online apparel buying in Rajasthan, and Jawalkar and Yende (2024) reported that young women in Nagpur were still worried about size mismatch, product quality, payment security, and return policy. There is also an area of study that has focused on fit uncertainty specifically.

Gallino and Moreno (2018) demonstrated that virtual fit information could enhance conversion and decrease fit-related returns, while Zhang et al. (2025) demonstrated that size-inclusive model photos could reduce perceived fit risk. Research on the use of AI in fashion services has taken an additional layer.

Zaman and Jasim (2025) identified transaction utility, trust concerns and privacy concerns as links to consumers' intentions to use AI services; Jasim et al. (2026) explored the effects of AI personalisation on consumer perceived risk and intention to purchase, and Magano and Rebelo (2026) noted transparency, data control, and perceived surveillance. Combined, the above studies highlight the close relationship between personalisation, trust and fit in the context of readymade garments purchase by women in India, which is a gap to be addressed by this paper.

3. THEORETICAL FRAMEWORK

The conceptual model developed in this paper is based on three well-known theories and recent research into AI in retail. The first is Davis's (1989) Technology Acceptance Model (TAM), which suggests that technology use is driven by perceived usefulness and perceived ease of use. In the context of online fashion retail, TAM implies that women are more inclined to trust AI-driven suggestions and size advisers or virtual try-on features that can assist them in picking the right garments and are easy to use.

The second one is the theory of online consumer trust. Gefen et al. (2003) have suggested that the acceptance of technology is not sufficient to explain online purchasing, because consumers also need to consider the competency and honesty of the vendor to be reliable. Digital trust is the state in which the consumer agrees to personalised suggestions and product information as credible in this framework.

The third point of view is perceived risk theory, in which consumers consider the chances of adverse events before purchasing. Pavlou (2003) combined trust and risk and demonstrated that trust mediated the relationship between perceived risk and purchase intention, making an indirect effect. In the context of ready-made clothing, the most specific risk is perceived fit risk that the garment may not fit the user's body, size and expectations (Zhang et al., 2025).

Combining these viewpoints, AI personalisation serves as an antecedent to perceived usefulness, digital trust acts as an enabling condition influencing recommendation acceptance, and perceived fit risk acts as a barrier that could affect purchase intention. The model's outcome is women's online buying behaviour, represented by purchase intention, actual purchase, and repurchase (see Table 1).

4. METHODOLOGY

This study uses a conceptual research design, conducted through an integrative literature review rather than primary data collection. A conceptual approach is appropriate because the paper synthesises findings from individual research streams and proposes a framework that can be tested empirically. The relevant studies were retrieved by searching Google Scholar, Web of Science, and Scopus using keywords such as online apparel buying, women consumers, AI personalisation, fashion e-commerce, digital trust, perceived risk, and fit risk. We prioritised peer-reviewed journal articles, foundational theoretical papers, and more recent empirical research on online fashion buying, technology acceptance, consumer trust, and garment fit. We included international studies when available to provide practical explanations of recommendation mechanisms, such as AI-based recommendations and fit information, which Indian studies had not addressed adequately; we also

included studies conducted in India to keep the analysis grounded in the Indian context. We analysed the selected literature thematically and clustered the results into three key constructs: AI personalisation, digital trust, and perceived fit risk. The relationships among these constructs were then interpreted in the light of the Technology Acceptance Model, online trust theory and perceived risk theory to develop the conceptual model presented in this paper. The main points highlighted from the review were summarised in Table 1. As a secondary study, interpretation is part of it, and the findings are intended to inform future empirical studies using survey, experimental, or longitudinal designs to investigate women's purchase of readymade garments in India.

5. AI PERSONALISATION IN ONLINE FASHION RETAIL

AI personalisation is the process of applying computational techniques to customise product suggestions, search results and shopping experiences for individual users. For fashion e-commerce, they can use data such as browsing history, previous purchases, size preferences, saved products, search queries, and preferences to recommend fashion products. The more advanced applications can include the dimension of the garment, customer feedback on how the garment fits, or virtual tries on technologies that can help with the product assessment. The main advantage of personalisation from a consumer point of view is lower search costs. If a shopping website can pinpoint items that fit a shopper's preference, price range, or type of garment, it may help him or her save time sifting through the irrelevant choices. The ability to make personalised recommendations can also help discovery, as products could be recommended that users wouldn't have discovered through the traditional search path. In this respect, AI can enhance the utility of online shopping by rendering it more pertinent and manageable. These benefits can be explained by the theoretical model of the Technology Acceptance Model (Davis, 1989). The model indicates that perceived usefulness and perceived ease of use are factors that influence technology acceptance. Personalisation can be used in fashion retail to increase perceived usefulness, where it aids consumers in finding the garments they want or makes more informed purchases. When recommendations and sizing features are easy to use, their ease of use is significant.

Recently, consumer trust, perceived utility, and privacy have also become relevant in AI-powered fashion services, as recent research shows. In Zaman and Jasim (2025), they explore consumer intentions to use AI-powered services throughout the fashion shopping process, emphasising the role of transaction utility, trust, product uniqueness, and privacy concerns. Jasim et al. (2026) explore the link between the perceived benefits and trade-offs for personalisation using AI and the shopping experience and purchase intention. They highlight the potential for perceived complexity and issues of trust to impact the value of personalisation. The results have shown that the concept of personalisation should not only be judged by the complexity and sophistication of the technology, in and of itself. Even if a recommendation engine is highly sophisticated, if its suggestions aren't relevant to the consumer or the consumer doesn't understand why the system is recommending them, the system isn't commercially valuable. Likewise, if similar products are recommended repeatedly, shoppers are likely to consider fewer options than they would if they were offered a more diverse selection of options. There is a further differentiation between preference personalisation and fit-oriented personalisation. Preference personalisation tries to find products that are consistent with a consumer's style, interests, or buying history. Fit-oriented personalisation tries to enable the consumer to judge whether a given garment will fit well. The former helps to make product discovery more relevant, the latter to deal with a particular source of uncertainty when buying garments (Magano & Rebelo, 2026; Pavlou, 2003).

6. DIGITAL TRUST AS A BASE FOR ONLINE SHOPPING BEHAVIOUR

Digital trust is defined as the consumer's trust in an online platform or retailer that the online platform or retailer is reliable, accurate, protective, and will keep them informed during transactions. Trust plays a special role in e-commerce, where consumers have to make a purchase without any physical interaction with the seller or the product. Gefen et al. (2003) proved that trust, together with technology acceptance, is important in order to understand the intentions to buy online. They found that trust in an e-vendor is a factor in purchase intentions in addition to ease-of-use and usefulness.

Pavlou (2003) also included trust and perceived risk in a model of explaining acceptance of electronic commerce. These views indicate that a simple website or app may generate confidence for purchase when consumers are not confident in the retailer's reliability. When making an online purchase of clothing, a number of factors can influence trust. Good photographs and descriptions enable consumers to have reasonable expectations of the product. Reviews are customer feedback about past buying experiences. Secure transactions help to alleviate worries about financial information, and clear return and refund policies can help ease the pain of customers who receive inappropriate clothing. Reliable service and good customer service can help reinforce trust. AI personalisation adds yet another layer to this dynamic. The information consumers can see in relevant recommendations may be viewed as proof of an understanding of their needs. Personalisation can enhance the perceived competence of the retailer when there are explanations and good product info with recommendations. But what looks like a recommendation outside of the consumer's interest, or one based on vague data gathering, can backfire. This tension between relevance and surveillance has been progressively recognised in research on fashion e-commerce.

Magano and Rebelo (2026) investigate the interactions between personalisation, transparency, data control, concerns about privacy, trust, and buying intentions. Their research shows the importance of understanding where and how consumers' data is collected and processed and how it is used (Gefen et al., 2003; Jasim et al., 2026; Jawalkar & Yende, 2024).

7. Perceived Fit Risk and the Uncertainty of Online Garment Purchases

Perceived fit risk is defined as a consumer's expectation that when they order a product online, it may not fit their body as they expected. Uncertainty also involves measurements, proportions, comfort, length, tightness, looseness, and the relationship between the product shown and the product as worn. This risk is separate from financial risk, but can interact with financial risk when inappropriate apparel generates return costs and/or inconvenience. Sizing uncertainty is especially significant because clothing sizes vary by brand, product, and manufacturing system. The size a consumer is accustomed to may not always be a good indication when shopping at a new store.

Clothing that is identified by the same size numbers can vary in size, fit and type of fabric. Delicate stretch, desired shape, and personal style choices can also make things more complicated. People's perception of the fit of the product is also influenced by online product imagery. People often assess clothes by the photos of models with body types that aren't necessarily like theirs. If the visual information is not enough to make an informed judgment about how the garment will look on a different body, the consumer's judgment becomes less certain.

Zhang et al. (2025) discussed the impact of 'sizability' model photos on online fashion retail. They discovered that the more similar the size of the consumer's body is to the body size of the models in which they are wearing apparel, the lower the perceived fit risk, and the better the purchase decision. This discovery suggests that fit information is not solely based on numerical size charts or technology, but also on the product's visual representation, which can impact the consumer's perception of fit. More reliable garment measurements and sizing recommendations are one possible response to fit risk.

Gallino and Moreno (2018) conducted randomised field experiments on an online retail website and found that implementing virtual fit information boosted conversion rates and order value while reducing product return costs and size testing. Their work shows that providing consumers with information that deals with physical characteristics they can't easily assess online is truly useful.

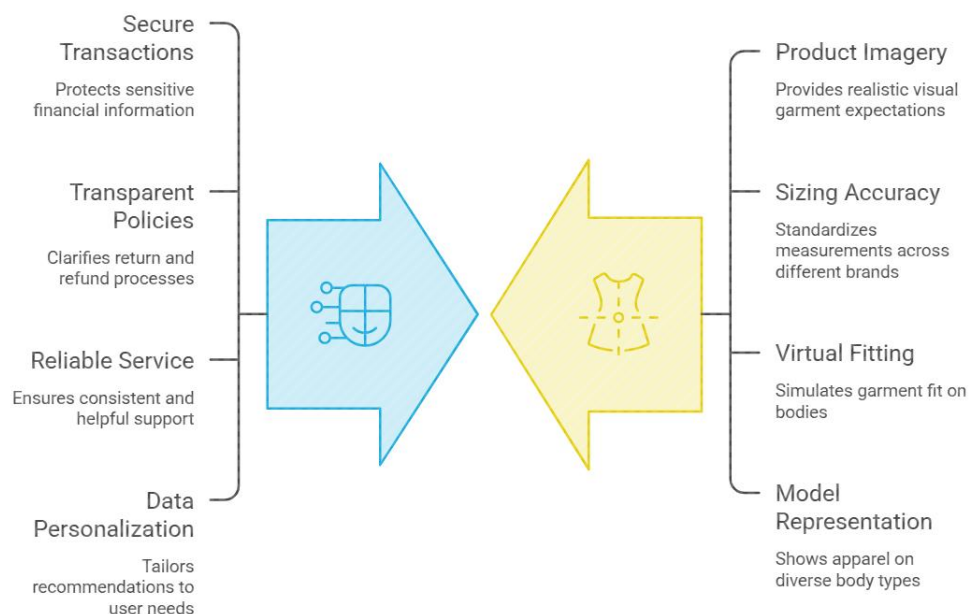


Fig 1: Optimising Online Fashion Conversion

8. THE INTERACTION BETWEEN AI PERSONALISATION, DIGITAL TRUST AND FIT RISK

In online clothing shopping, AI personalisation, digital trust, and perceived fit are not independent. Personalisation can make the shopping experience more relevant to customers, trust reflects how much consumers trust the platform, and fit risk is the uncertainty about how well the product fits a customer's needs. When you consider all these factors, it's easy to see why some personal shopping experiences inspire consumers to buy while others do not. The very first important link is between personalisation and trust. If the recommendations align with their preferences and offer valuable insights, customers might see the website as responsive and proficient. If the suggestions align with customer wants and provide valuable information, customers may see the website as responsive and effective. This experience can boost their readiness to buy on that platform in the future. But when personalisation seems like it's part of a scheme, based on false premises or on sharing information that consumers find too intrusive, it undermines confidence. The quality and transparency of personalisation drive the relationship, not its presence.

The second relationship is between personalisation and fit risk. Browsing histories can be useful when recommending to consumers which products to look for, but are not likely to alleviate confusion over garment sizes. In contrast, systems that include accurate size charts, body-specific measurements, body-size information volunteered by the consumer, and feedback from the consumer on the fit of previous garments may support consumers to make informed selections. This difference suggests that fit-oriented personalisation relates more directly to fit uncertainty than personalisation based on style

preferences.

The third relationship concerns trust and how consumers interpret fit information. If consumers trust the retailer's product information and believe the retailer has a vested interest in keeping them informed, they are more likely to heed sizing recommendations. When consumers have been misled in the past by a description or have experienced inconsistent product quality, they may be sceptical of even helpful suggestions. Trust creates the likelihood that the available information is credible. This general association is seen from the perspective of technology acceptance and online risk perspectives.

The significance of perceived usefulness and ease of use in technology acceptance is presented by Davis (1989), and the importance of trust and perceived risk in electronic commerce is provided by Gefen et al. (2003) and Pavlou (2003). From this point of view, fashion retail requires a technically easy experience that isn't accompanied by trust or confidence in the platform and the product. This link can also be dynamic. When recommendations are relevant, fit information is accurate, and purchases are successful, this can increase consumer trust in the platform and its personalisation system. The wrong kind of outfit can do the same and lead to even more doubt about future recommendations.

9. IMPLICATIONS FOR THE INDIAN ONLINE FASHION RETAIL MARKET

The analysis has several practical implications for the online fashion retailers in India. First, personalisation should focus on valuable benefits for the consumer. Retailers should aim to make relevant recommendations, reduce redundant searches, and help customers compare garments with accurate information. Personalisation that simply displays more products can overload customers, not improve the buying experience.

Second, platforms should view digital trust as a key part of their customer relationships. Clear product descriptions, honest reviews, secure payment systems, transparent return policies, and effective complaint handling can ease uncertainty. Retailers should also describe the main purposes of personal information and offer easily understood options for personal information settings. Consumers should be able to change preferences without disclosing information they don't need to access standard shopping services.

Thirdly, solutions to reduce fit risk must be product-specific. Measurements, presentation, fabric stretch and garment construction information, multiple-angle photographs, and customer reviews of actual fit can help consumers better judge the garment. When feasible, using models with different body types can provide more useful visual cues for a broader customer audience. AI-based size advice and virtual try-on features could also offer extra advantages, but retailers should clearly state their constraints. Retailers should not suggest that a digital fit estimate will provide the same experience as a physical try-on of a garment. To avoid unrealistic expectations, it is crucial to have accurate underlying information and transparent explanations.

Finally, retailers need to understand the wide variety in the Indian market, including clothing, wallets, language, where and how people shop, and their online experiences. A good personalisation system for one type of customer might not be as effective for another. Platforms should thus focus on flexible recommendations, easily accessible product information, inclusive visual representation and service quality rather than universalisation of the one-size-fits-all that is implied through its use (Chaturvedi et al., 2016; Davis, 1989; Gallino & Moreno, 2018).

Table 1: Key Factors Influencing Women's Online Buying Behaviour Toward Readymade Garments in India

S. No.	Key Factor	Description	Potential Influence on Buying Behaviour
1	AI Personalization	Individualised garment recommendations based on preferences, browsing patterns, and shopping history.	May increase product relevance and purchase intention.
2	Digital Trust	Confidence in platform reliability, payment security, product information, and customer service.	May encourage purchasing and repeat buying.
3	Perceived Fit Risk	Uncertainty about garment size, body compatibility, comfort, and actual appearance.	May reduce purchase intention and increase hesitation.
4	Perceived Usefulness	The extent to which consumers believe online shopping tools help them make better decisions.	May improve acceptance of AI-enabled shopping features.
5	Product Information Quality	Accuracy of size charts, fabric descriptions, product photographs, and customer reviews.	May reduce uncertainty and support informed decisions.
6	Privacy Concerns	Worries about the collection, storage, and use of personal shopping data.	May weaken trust in personalized shopping systems.
7	Return and Refund Policies	Consumer perceptions of the ease and fairness of returning unsuitable garments.	May reduce perceived purchasing risk.
8	Online Buying Behaviour	Consumers' purchase intention, purchase decisions, and willingness to buy garments online again.	Represents the primary behavioural outcome of the study.

10. LIMITATIONS AND FUTURE DIRECTIONS

This paper does not aim to conduct an empirical study based on new data gathered from consumers, but instead it provides a conceptual summary of the literature. While existing research shows the various aspects of online apparel trust, AI-based fashion services, and fit information, results from a specific sample or an international market cannot be extrapolated to all Indian women who buy apparel online. Future research should examine the direct effect of AI personalisation on women's buying behaviour and its potential differential effects based on digital trust and perceived fit risk. This kind of research may also help identify people who rely on personalised recommendations often and those with limited experience with AI shopping capabilities. Longitudinal research could be useful to investigate how the actual purchase experience influences trust, recommendation acceptance, return behaviour, and future purchase intentions. Research could also investigate how AI systems for products can compare the conventional recommendations of product sizes with the AI-driven personal sizing to see if they achieve further gains over and above the benefits of general personalisation when sizing uncertainty is reduced. Regional comparisons might help determine the relationship between income, age, digital literacy, and garment preferences.

11. CONCLUSION

Women's online purchasing behaviour for ready-to-wear clothing in India is a reflection of their convenience, the relevance of the product, their trust in online shopping and their doubt regarding the suitability of the garment in the physical world. While AI personalisation can enhance the online retailing experience by helping customers find more relevant and usable products, their effectiveness is reliant upon the relevance, reliability, and responsible use of the consumer information that they provide. Digital trust and the belief that recommendations and product descriptions are credible, and perceived fit risk continues to deter sales when consumers cannot be confident in the garment's fitness for them. Relevant recommendations, trustworthy platform practices and fit-related information are key to the successful implementation of digital fashion services. Retailers who incorporate such features could have a more competitive advantage in aiding consumers to make informed buying decisions, enhancing customer journeys, and fostering continued online shopping behaviour. It is important to understand that women are not a single market segment; they are a diverse group with different preferences and shopping habits in the Indian context. AI-driven product suggestions can be supported by inclusive imagery, accurate garment sizing, clear privacy policies, and easy return policies. Thus, the effectiveness of AI in fashion retailing must be assessed by its ability to guide users toward informed, confident, and satisfactory purchase decisions, rather than just its product suggestions..

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