# Evaluating the Association between Size and Fit Uncertainty and Online Apparel Repurchase Intention among Female Consumers in Ulhasnagar

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***Abstract*—Online apparel shopping has become a convenient option for consumers seeking variety, competitive prices and easy access to fashion products. However, the inability to try garments before purchase creates uncertainty about whether the selected size will provide a satisfactory fit. Such experiences may influence consumers' willingness to purchase apparel online again. This study examines the association between size-and-fit uncertainty, confidence in selecting apparel sizes online and repurchase intention among female consumers in Ulhasnagar. The study is based on primary data collected from 100 female consumers who purchase apparel online. Descriptive statistics and Pearson's chi-square test of independence are used to analyse the data at the 5% level of significance. The findings indicate that 58% of respondents reported experiencing a size-or-fit problem, while 45% expressed high confidence in selecting apparel sizes, 35% reported medium confidence and 20% reported low confidence. Overall, 70% expressed an intention to purchase apparel online again. Repurchase intention was reported by 56.9% of respondents who experienced size-and-fit problems, compared with 88.1% of those who did not have any issue. This association was statistically significant, $\chi^2$ (1, N = 100) = 11.291, p = .001. A statistically significant association was also observed between size-selection confidence and repurchase intention, $\chi^2$ (2, N = 100) = 16.020, p < .001. The findings highlight the relevance of reliable sizing information and clear fit guidance in online apparel retailing. Since the study uses a cross-sectional sample and self-reported measures, the results indicate associations rather than causal relationships.**

***Index Terms*— Online apparel shopping, size uncertainty, fit uncertainty, repurchase intention, female consumers, Ulhasnagar, chi-square test**

## I. INTRODUCTION

The growth of e-commerce has changed the way consumers search for, compare and purchase apparel. Online shopping platforms provide access to a wide range of clothing styles, brands and price options without requiring consumers to visit physical stores. Product photographs, descriptions, customer reviews and digital payment facilities have made the purchasing process more convenient. Despite these advantages, online apparel shopping presents a particular challenge: consumers generally cannot try on a garment before placing an order.

Size and fit are important considerations when purchasing clothing. A garment may look attractive in a photograph but may not fit the consumer as expected after delivery. Differences in sizing standards, garment construction, fabric characteristics and individual body measurements can make it difficult to select the appropriate size. Even when sellers provide size charts, consumers may find it challenging to interpret measurements or determine how a garment will fit their bodies.

An unsuitable fit can create inconvenience for consumers. They may need to exchange or return the garment, contact the seller, wait for a replacement or accept clothing that does not meet their expectations. These experiences may affect their evaluation of online shopping and their willingness to make future purchases through the same channel.

Repurchase intention is an important concept in consumer behaviour because it reflects a consumer's stated willingness to buy a product or use a purchasing channel again. Although intention does not necessarily translate into actual future behaviour, it provides

useful information about consumers' future purchasing preferences.

Hong and Pavlou (2014) examined product-fit uncertainty in online markets and highlighted its relevance to consumer evaluation and product returns. Similarly, Oliver's (1980) expectation-disconfirmation model explains how consumers evaluate experiences against their prior expectations and how satisfaction may influence subsequent purchase intentions. These perspectives provide a useful foundation for investigating the relationship between size-and-fit experiences and repurchase intention.

The present study focuses on female consumers in Ulhasnagar who purchase apparel online. It examines two aspects of the online shopping experience: whether consumers have encountered a size-or-fit problem and how confident they feel when selecting apparel sizes online. These variables represent different dimensions of the consumer experience. A respondent may have experienced a fitting problem but remain confident when purchasing from a familiar brand, whereas another may feel uncertain even without a recent problem.

By examining these variables in relation to repurchase intention, the study seeks to understand how sizing experiences and perceived confidence are associated with consumers' willingness to continue purchasing apparel online.

## II. REVIEW OF LITERATURE

Hong and Pavlou (2014) examined product-fit uncertainty as a distinct challenge in online markets. Product-fit uncertainty arises when consumers are unable to determine whether a product's characteristics will meet their needs or preferences before purchase. This issue is particularly relevant to apparel because the suitability of clothing depends on several factors, including body measurements, garment dimensions, fabric properties and individual preferences. A garment can be of acceptable quality but still be unsuitable for a particular consumer because of its size or fit. Online shoppers must often make their decisions using photographs, descriptions, size charts and reviews rather than direct physical evaluation. This makes accurate product information particularly important in online apparel retailing.

Oliver (1980) developed a cognitive model explaining the relationship between expectations, satisfaction and subsequent consumer responses. Consumers compare their actual experiences with their prior expectations, and the outcome of this comparison can influence their attitudes and future purchasing intentions. In online apparel shopping, consumers may evaluate a purchase partly on whether the delivered garment matches the expected size and fit. A satisfactory experience may encourage future purchases, whereas an unsuitable garment may reduce willingness to buy again. The present study examines repurchase intention in relation to reported sizing experiences; it does not directly measure satisfaction or expectation disconfirmation.

Akerlof (1970) explained how differences in information between buyers and sellers can affect market transactions. Although his analysis focused on quality uncertainty, the broader concept of information asymmetry is relevant to online apparel shopping. Sellers may possess detailed information about garment dimensions, construction and sizing, while consumers must often judge suitability using the information displayed online. When product descriptions or size charts are incomplete or difficult to interpret, consumers may face greater uncertainty. Providing clear measurements, consistent sizing information and accessible exchange policies may help consumers make better-informed purchasing decisions.

Albert Bandura (1997) explains that size-selection confidence refers to the extent to which consumers feel capable of choosing a suitable apparel size when shopping online. This confidence may be associated with previous purchasing experience, familiarity with a brand's sizing system, knowledge of personal measurements and the availability of useful product information. However, perceived confidence does not necessarily guarantee an accurate size choice. A consumer may feel confident and still receive an unsuitable garment. Similarly, a consumer who feels uncertain may nevertheless select the correct size.

Examining confidence alongside reported size-and-fit problems therefore provides a broader understanding of the online apparel purchasing experience. The present study classifies confidence into high, medium and low categories and examines its association with repurchase intention.

## III. RESEARCH GAP

Existing literature provides a conceptual basis for understanding product-fit uncertainty and the relationship between consumer experiences and future purchasing intentions. However, there is value in examining these issues in specific local markets, where consumers' online shopping experiences may differ according to their purchasing habits and exposure to online apparel retailers.

The present study contributes local evidence from a sample of 100 female consumers in Ulhasnagar. It examines whether size-and-fit problems and self-rated confidence in selecting apparel sizes are associated with online apparel repurchase intention. The analysis is limited to these measured variables and does not attempt to establish causal relationships.

## IV. OBJECTIVES OF THE STUDY

1. To examine the association between size-and-fit problems and online apparel repurchase intention among female consumers in Ulhasnagar.
2. To examine the association between confidence in selecting apparel sizes online and online apparel repurchase intention among female consumers in Ulhasnagar.

## V. HYPOTHESIS

Hypothesis 1:
HO: There is no statistically significant association between size-and-fit problems and online apparel repurchase intention.
H1: There is a statistically significant association between size-and-fit problems and online apparel repurchase intention.

Hypothesis 2:
H0: There is no statistically significant association between confidence in selecting apparel sizes online and online apparel repurchase intention.
H1: There is a statistically significant association between confidence in selecting apparel sizes online and online apparel repurchase intention.

## VI. RESEARCH METHODOLOGY

Research design: The study adopts a quantitative, cross-sectional descriptive and analytical research design. It examines size-and-fit problems, confidence in size selection and repurchase intention at a particular point in time.
Sampling method: Convenience sampling method is used to collect data from female consumers who buy apparel online
Data collected: Primary data were collected from 100 female consumers through a printed questionnaire. The responses were classified into categories suitable for descriptive analysis and tests of association.
Study area: The study was conducted in Ulhasnagar, a city in Thane district, Maharashtra. The study focuses on female consumers in this locality who have experience purchasing apparel through online channels.
Sample size: The sample size consists of 100 female online apparel consumers.

Variables and operational definitions

| Variable | Operational definition | Categories |
|---|---|---|
| Age group | Respondent's age category | 18–24; 25–34; 35–44; 45 and above |
| Online apparel purchase frequency | Reported frequency of online apparel purchases | Occasionally; Monthly; 2–3 times a month; Frequently |
| Size-and-fit problem | Whether the respondent has experienced a size-or-fit problem with apparel purchased online | Yes; No |
| Size-selection confidence | Self-reported confidence when choosing an apparel size online | High; Medium; Low |
| Repurchase intention | Whether the respondent intends to purchase apparel online again | Yes; No |

Repurchase intention is the dependent variable for both hypothesis tests. Size-and-fit problems and size-selection confidence are the respective explanatory variables.
Statistical techniques
The study employed:
1. Frequency analysis;
2. Percentage analysis;
3. Cross-tabulation; and
4. Pearson's Chi-Square Test of Independence.

The decision rule was:
$p < 0.05$: Reject $H_0$
$p \geq 0.05$: Fail to reject $H_0$
The analysis was conducted at $\alpha = 0.05$

## VII. ANALYSIS OF DATA

### Demographic profile of respondents

Table 1.
Distribution of female respondents by age group

| Age group | Frequency | Percentage |
|---|---|---|
| 18–24 years | 28 | 28% |
| 25–34 years | 41 | 41% |
| 35–44 years | 21 | 21% |
| 45 years and above | 10 | 10% |
| Total | 100 | 100% |

The distribution provides an overview of the age composition of the respondents. The table given above shows that the largest proportion of respondents belongs to the 25–34 age group, accounting for 41% of the sample. Respondents aged 18–24 constitute 28%, while 21% belong to the 35–44 age group. The remaining 10% are aged 45 years and above.

Table 2.
Online apparel purchasing frequency of female consumers

| Purchase frequency | Frequency | Percentage |
|---|---|---|
| Occasionally | 12 | 12% |
| Monthly | 38 | 38% |
| 2–3 times a month | 38 | 38% |
| Frequently | 12 | 12% |
| Total | 100 | 100% |

The results show in the table that monthly purchases and purchases made two to three times a month each account for 38% of the respondents. Occasional purchases and frequent purchases each account for 12%. Together, the monthly and two-to-three-times-per-month categories represent 76% of the sample. This indicates that a substantial proportion of respondent's report purchasing apparel online at least monthly, according to the data in table above.

Table 3.
Size-and-fit problems faced by female shoppers

| Response | Frequency | Percentage |
|---|---|---|
| Yes | 58 | 58% |
| No | 42 | 42% |
| Total | 100 | 100% |

The above table indicates that 58 respondents (58%) experiencing a size-or-fit problem with apparel purchased online. The remaining 42 respondents (42%) reported no such problem.

Table 4.
Size-selection confidence level of female consumers

| Confidence category | Frequency | Percentage |
|---|---|---|
| High | 45 | 45% |
| Medium | 35 | 35% |
| Low | 20 | 20% |
| Total | 100 | 100% |

The table shows that 45% of respondents reported high confidence in selecting apparel sizes online. Medium confidence was reported by 35%, while 20% reported low confidence. Although the largest category consists of respondents reporting high confidence, one-fifth of the sample indicated low confidence. This suggests that consumers differ in how assured they feel when making sizing decisions without trying on a garment beforehand.

Table 5.
Repurchase intention of female buyers who buy online

| Response | Frequency | Percentage |
|---|---|---|
| Yes | 70 | 70% |
| No | 30 | 30% |
| Total | 100 | 100% |

A total of 70 respondents (70%) expressed an intention to purchase apparel online again, whereas 30 respondents (30%) did not report such an intention. This result indicates that most respondents in the sample expressed willingness to continue purchasing apparel online. However, stated intention should be distinguished from actual repeat purchases, which may also depend on future prices, product availability, shopping experiences and other considerations.

Table 6.
Cross-Tabulation of Size-and-fit problems and online apparel repurchase intention

| Size-and-fit problem | Repurchase: Yes | Repurchase: No | Total | Yes, within row |
|---|---|---|---|---|
| No | 37 | 5 | 42 | 88.1% |
| Yes | 33 | 25 | 58 | 56.9% |
| Total | 70 | 30 | 100 | — |

Among the 42 respondents who reported no size-and-fit problem, 37 (88.1%) expressed an intention to purchase apparel online again. In comparison, 33 of the 58 respondents who reported a problem (56.9%) expressed repurchase intention. The difference between these two proportions is 31.2 percentage points. The proportion not intending to repurchase was 11.9% among respondents without a reported problem and 43.1% among those who reported a problem.

Pearson's chi-square test indicates a statistically significant association between size-and-fit problems and repurchase intention, $\chi^2$ (1, N = 100) = 11.291, p = .001.

Since the p-value is below .05, the null hypothesis is rejected. The results indicate that size-and-fit problems and online apparel repurchase intention are associated in the study sample. Respondents who reported a problem had a lower observed repurchase-intention proportion than those who did not.

The analysis does not establish that the experience of a size-and-fit problem directly causes a reduction in repurchase intention.

Table 7.
Cross-Tabulation of Size-Selection Confidence and Online Apparel Repurchase

| Confidence category | Repurchase: Yes | Repurchase: No | Total | Yes, within row |
|---|---|---|---|---|
| High | 33 | 12 | 45 | 73.3% |
| Medium | 30 | 5 | 35 | 85.7% |
| Low | 7 | 13 | 20 | 35.0% |
| Total | 70 | 30 | 100 | — |

Repurchase intention differs across the three confidence categories. Among respondents reporting high confidence, 33 of 45 (73.3%) expressed an intention to purchase apparel online again. In the medium-confidence category, 30 of 35 (85.7%) expressed such an intention. Among respondents with low confidence, only 7 of 20 (35.0%) indicated repurchase intention. The low-confidence category has the lowest observed repurchase-intention proportion. However, the medium-confidence category has a higher proportion than the high-confidence category. The pattern therefore does not indicate a uniform increase in repurchase intention with every increase in reported confidence.

Pearson's chi-square test indicates a statistically significant association between size-selection confidence and repurchase intention, $\chi^2$ (2, N = 100) = 16.020, p < .001.

As the p-value is below .05, the null hypothesis is rejected. The results indicate that repurchase intention differs significantly across the confidence categories in the study sample.

The test establishes an association between the categorical variables but does not determine why the medium-confidence group has a higher observed repurchase-intention proportion than the high-confidence group.

Table 8.
Summary of hypothesis-test results

| Hypothesis | Chi-square result | Decision at 5% significance | Interpretation |
|---|---|---|---|
| H1: Size-and-fit problems and repurchase intention | $\chi^2(1) = 11.291$; p = .001 | Reject HO | A statistically significant association was observed. |
| H2: Size-selection confidence and repurchase intention | $\chi^2(2) = 16.020$; p < .001 | Reject HO | A statistically significant association was observed. |

Both null hypotheses are rejected at the 5% significance level. The findings indicate that repurchase intention is associated with reported size-and-fit problems and with size-selection confidence. These are separate associations: the first concerns respondents' reported experiences, whereas the second concerns their self-assessed confidence in selecting sizes.

## VIII. MAJOR FINDINGS

1. Respondents aged 25–34 years constitute the largest age category, representing 41% of the sample.
2. Monthly purchases and purchases made two to three times a month each account for 38% of respondents. Together, these categories represent 76% of the sample.
3. A total of 58% of respondents reported experiencing a size-or-fit problem with apparel purchased online.
4. High confidence in selecting apparel sizes was reported by 45% of respondents, medium confidence by 35% and low confidence by 20%.

5. Overall, 70% of respondents expressed an intention to purchase apparel online again.
6. Repurchase intention was 88.1% among respondents without a reported size-and-fit problem and 56.9% among those reporting a problem.
7. The association between reported size-and-fit problems and repurchase intention was statistically significant, $\chi^2(1, N = 100) = 11.291$, $p = .001$.
8. Repurchase intention was 73.3% in the high-confidence category, 85.7% in the medium-confidence category and 35.0% in the low-confidence category.
9. The association between size-selection confidence and repurchase intention was statistically significant, $\chi^2 (2, N = 100) = 16.020$, $p < .001$.

## IX. SUGGESTIONS AND RECOMMENDATIONS

1. Provide Accurate Size Charts: Include clear, product-specific measurements instead of relying only on S, M, L or XL labels.
2. Explain How to Measure: Use simple diagrams and instructions to help consumers choose the correct size.
3. Describe Garment Fit Clearly: Explain whether garments are slim fit, regular, relaxed, oversized or stretchable.
4. Improve Customer Reviews: Encourage buyers to share whether the garment fits as expected or runs larger or smaller.
5. Simplify Returns and Exchanges: Display clear policies, timelines, charges and procedures.
6. Clarify Brand Sizing Differences: Inform customers when sizing varies across brands or manufacturers.
7. Guide Uncertain Buyers: Offer size-selection assistance, measurement details and responsive customer support.

## X. LIMITATIONS OF THE STUDY

The study has the following limitations:
1. Limited Sample: The study includes only 100 female consumers in Ulhasnagar; therefore, the findings may not represent all online apparel consumers.
2. Cross-Sectional Design: The study examines relationships at one point in time and cannot establish cause and effect.
3. Limited Measurement: Size-and-fit problems are measured using Yes/No responses, while size-selection confidence is classified as high, medium, or low.
4. Stated Repurchase Intention: The study measures respondents' intentions rather than their actual future purchases.
5. Limited Variables: Factors such as satisfaction, trust, price sensitivity, brand familiarity, and return experiences are not included in the analysis.
6. Unexpected Finding: Medium-confidence respondents show a higher repurchase intention than high-confidence respondents because sample size is limited.

Scope of the study: Future studies can use larger samples, include consumers from different locations, examine additional factors, and compare stated repurchase intentions with actual purchasing behaviour. Logistic regression may also be used to examine the relationships while controlling for other relevant factors.

## XI. CONCLUSION

The study of 100 female consumers in Ulhasnagar found that 58% experienced size-and-fit problems, while 70% intended to repurchase apparel online. Size-and-fit problems and size-selection confidence were significantly associated with repurchase intention. Clear size charts, accurate measurements and easy return policies may improve the shopping experience. However, the findings indicate associations, not causation, and further research with larger samples is recommended in future.

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