

## A Comparative Study on Online Grocery Buying Behaviour: Working vs Non-Working Women in Urban India

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### ABSTRACT

This empirical comparative study investigates online grocery buying behavior between working and non-working women in urban India. Using mixed-method design with 600 survey respondents (300 per group) across Tamil Nadu districts (Erode, Coimbatore, Tiruvallur) and 40 supplementary interviews, the study reveals significant behavioral differences. Working women prioritize convenience ( $\beta=0.48$ ,  $p<0.001$ ) and trust ( $\beta=0.41$ ,  $p<0.001$ ), while non-working women prioritize product variety ( $\beta=0.40$ ,  $p<0.001$ ). Employment status moderates time-saving effects, with working women purchasing 4.1 times weekly compared to 2.8 times for non-working women. Demographic analysis via ANOVA and Chi-square tests confirms significant differences in platform adoption and decision-making factors. The findings provide actionable insights for e-grocer segmentation strategies and targeted marketing in emerging market contexts.

**Keywords:** Online grocery shopping, working women, non-working women, consumer behavior, e-commerce, India.

### 1. INTRODUCTION:

India's e-grocery market, valued at approximately ₹5,000 crores annually, has experienced significant growth post-2020. Major platforms including Big Basket, Blinkit, Grofers, and Amazon Fresh have transformed grocery procurement, with women constituting 58% of online grocery users as of 2025. However, the market remains segmented by employment status—a demographic dimension understudied in existing research.

Working women, balancing professional responsibilities and household chores, represent a distinct consumer segment with unique time constraints and channel preferences. Non-working women, with more flexible schedules, may prioritize different attributes such as product variety and price exploration. Understanding these behavioral differences is crucial for e-retailers seeking to optimize market penetration and tailor digital experiences.

Prior regional studies have focused on single-group analyses. Comprehensive comparative frameworks examining employment-based segmentation remain sparse in academic literature. This study addresses this gap by employing multi-method comparative design with quantitative (Structural Equation Modeling, multi-group analysis) and qualitative components (semi-structured interviews).

#### 1.1 Research Context and Significance

The Indian grocery retail landscape reflects two distinct trends: traditional retail dominance (approximately 85%

of the ₹25,00,000 crore grocery market) with fragmented channels, and rapid digital disruption, with organized retail projected to capture 20% by 2030. Working women's participation in online grocery directly influences platform growth, supply chain logistics, and marketing strategies.

Employment status serves as a proxy for multiple constructs: time poverty, income autonomy and purchasing power, psychological stress and convenience orientation, social capital patterns, and technology adoption propensity. Segmenting by employment reveals heterogeneous consumer needs otherwise masked in aggregated analyses.

Tamil Nadu offers a suitable research context: urban agglomerations (Erode, Coimbatore, Tiruvallur) exhibit high working women participation (45-55%), moderate e-grocery adoption (18-22%), and platform diversity, enabling robust comparative insights applicable to tier-2 urban centers nationally.

#### 1.2 Research Objectives and

##### Questions Primary Objectives:

Compare key drivers (convenience, trust, variety, social influence) of online grocery intention between working and non-working women

Assess employment status as a moderator of time-saving effects, frequency, and satisfaction

Identify demographic determinants (age, income, education) differentiating the two groups

Develop segment-specific e-grocer strategies and policy recommendations

### Research Questions:

RQ1: How do convenience and time-saving perceptions differ between working and non-working women?

RQ2: Does employment status moderate the relationship between convenience and buying intention?

RQ3: Which platforms and categories dominate each segment's purchases?

RQ4: What barriers deter non-working women from online grocery adoption?

## 2. Literature Review

### 2.1 Online Grocery Shopping: Context and Growth

Online grocery—the purchase of food and household items through digital platforms with home delivery—represents a rapidly growing e-commerce sub-segment. Global adoption varies significantly: USA (22% penetration), UK (15%), and India (3-5% but growing at 150% annually). In India, online grocery remains concentrated in metro and tier-1 cities, with tier-2 cities emerging as growth frontiers.

Market drivers in India include smartphone affordability, digital payment proliferation (65% of online transactions via UPI), improved logistics infrastructure, sustained adoption post-COVID-19, and direct-to-consumer fresh produce models. Women's participation has surged from 35% (2019) to 58% (2025), driven by career advancement, time constraints, and increasing digital literacy.

### 2.2 Theoretical Framework: Technology Acceptance Model

The Technology Acceptance Model (TAM) establishes that perceived usefulness and perceived ease of use determine behavioral intention and technology adoption. For online grocery contexts, this framework encompasses:

**Perceived Convenience:** Reduced shopping time, 24/7 access, home delivery

**Perceived Trust:** Confidence in platform security, product authenticity, and delivery reliability

**Perceived Variety:** Product assortment and availability

**Social Influence:** Peer recommendations and family encouragement

**Perceived Behavioral Control:** Ease of app navigation and digital literacy

Employment status significantly moderates these factors. Working women, with limited time for shopping and household tasks, demonstrate heightened convenience sensitivity. Non-working women, with schedule flexibility, pursue deliberative, sensory-driven shopping experiences.

### 2.3 Comparative Behavioral Studies

**Time-Saving Motivation:** Empirical research consistently demonstrates employment-based differences.

Studies comparing working and non-working women show that employed individuals prioritize time-saving convenience (average scores 4.2/5.0) compared to non-working counterparts (3.6/5.0). Conversely, non-working women prioritize product quality verification and sensory inspection.

**Platform Adoption Rates:** Working women exhibit higher online adoption rates (72%) versus non-working women (48%), reflecting distinct life circumstances and time availability.

**Decision-Making Factors:** Working women cite lack of time as primary barrier (45%), while non-working women cite product quality concerns (38%).

**Demographic Moderation:** Age, income, and education significantly influence adoption patterns. Women aged 25-35 show highest technology affinity, while income exceeding ₹40,000 monthly increases online adoption likelihood 3.2-fold.

### 2.4 Barriers and Adoption

#### Challenges Working Women Face:

Limited time for product comparison (44%)

Trust gaps regarding freshness without inspection (38%)

Technical barriers and app complexity (22%)

#### Non-Working Women Face:

Digital illiteracy and technology anxiety (35%)

Payment security concerns (42%)

Loss of sensory shopping experience (48%)

Cultural or family restrictions on independent purchasing

### 2.5 Customer Satisfaction and Loyalty

Post-pandemic improvements in delivery reliability, customer service, and transparent tracking have elevated trust significantly. Satisfaction (composite measure of delivery, product quality, and customer service) strongly predicts repurchase loyalty. Personalization through data analytics and AI recommendation engines increases loyalty by 25-30%.

## 3. Research Hypotheses

### Hypothesis Set 1: Convenience Effects

H1a: Convenience significantly affects online buying intention among working women ( $\beta > 0.40$ )

H1b: Convenience shows weaker effects for non-working women ( $\beta < 0.35$ )

H1c: Employment status significantly moderates the convenience-intention relationship

### Hypothesis Set 2: Trust and Confidence

H2a: Trust positively predicts buying behavior in both groups

H2b: Trust effects are comparable between groups (no moderation effect)

### Hypothesis Set 3: Variety and Exploration

H3a: Product variety influences non-working women more strongly

H3b: Variety shows moderate effects for working women

#### Hypothesis Set 4: Social Influence

H4a: Social influence positively affects intention in both groups

H4b: Non-working women show stronger social influence effects

Structural Equation Modeling (SEM) with maximum likelihood estimation

Multi-group SEM to test moderation effects

Qualitative data were coded thematically to identify emergent patterns and illustrative quotations.

## 4. Methodology

### 4.1 Research Design

This study employs mixed-method design combining quantitative survey research with qualitative interviews. The quantitative component uses Structural Equation Modeling (SEM) and multi-group analysis. The qualitative component comprises semi-structured interviews providing contextual depth.

### 4.2 Sample and Data Collection

**Survey Sample:** 600 respondents (300 working women, 300 non-working women) from three Tamil Nadu districts: Erode, Coimbatore, and Tiruvallur. Respondents were 25-60 years old with monthly household income exceeding ₹30,000 and prior online grocery experience.

**Sampling Method:** Stratified random sampling ensured representation across age groups, income levels, and geographic locations. Data collection occurred over six months.

**Interview Sample:** 40 semi-structured interviews (20 per group) were conducted to provide qualitative insights into decision-making processes and behavioral motivations.

### 4.3 Measurement Instruments

Survey items measured six constructs on 5-point Likert scales (1=Strongly Disagree to 5=Strongly Agree):

**Perceived Convenience** (5 items): Time-saving, accessibility, delivery convenience

**Perceived Trust** (5 items): Security, authenticity, reliability

**Perceived Variety** (4 items): Product assortment, choice, availability

**Social Influence** (4 items): Peer recommendations, family encouragement

**Perceived Behavioral Control** (4 items): Navigation ease, digital confidence

**Buying Intention** (3 items): Purchase likelihood, frequency, recommendation

Reliability coefficients (Cronbach's alpha) exceeded 0.70 for all scales, indicating acceptable internal consistency.

### 4.4 Data Analysis

Quantitative analysis included:

Descriptive statistics and frequency distributions  
Independent samples t-tests for group comparisons  
ANOVA for demographic effects

## 5. Results

### 5.1 Demographic Profile

Working women (mean age 38.2 years, SD 9.3) were significantly older than non-working women (mean 40.1 years, SD 11.2). Income distribution differed markedly: working women earned ₹50,000-100,000 monthly (64%), while non-working women relied on spouse/family income (68%). Education levels were comparable; approximately 65% possessed bachelor's degrees or higher in both groups.

### 5.2 Online Grocery Behavior

Working women purchased online 4.1 times weekly (SD 1.8), compared to 2.8 times for non-working women (SD 1.5). This difference was statistically significant ( $t=8.24$ ,  $p<0.001$ ). Primary platforms were Big Basket (46%), Blinkit (32%), and Grofers (18%). Non-working women showed slightly higher variety adoption across platforms.

Average transaction value was higher for working women (₹850, SD 220) versus non-working women (₹680, SD 190). Product categories differed: working women purchased convenience items (frozen foods, pre-cut vegetables; 48%), while non-working women purchased fresh produce and specialty items (52%).

### 5.3 Structural Equation Modeling Results

SEM analysis of the full sample revealed all hypothesized paths significant at  $p<0.05$ :

Convenience → Intention:  $\beta=0.42$ ,

$p<0.001$  Trust → Intention:  $\beta=0.38$ ,

$p<0.001$  Variety → Intention:  $\beta=0.28$ ,

$p<0.01$

Social Influence → Intention:  $\beta=0.22$ ,  $p<0.05$

Behavioral Control → Intention:  $\beta=0.18$ ,  $p<0.05$

Model fit indices were acceptable ( $\chi^2/df=2.14$ , CFI=0.924, RMSEA=0.058).

### 5.4 Multi-Group Analysis (Employment Moderation)

Multi-group SEM tested employment as a moderator. Significant moderation effects emerged:

#### Working Women Model:

Convenience → Intention:  $\beta=0.48$ ,

$p<0.001$  Trust → Intention:  $\beta=0.41$ ,

$p<0.001$  Variety → Intention:  $\beta=0.22$ ,

$p<0.05$

Social Influence → Intention:  $\beta=0.18$ ,

$p<0.05$  **Non-Working Women Model:**

Convenience → Intention:  $\beta=0.30$ ,  $p<0.05$





Variety → Intention:  $\beta=0.40$ ,  $p<0.001$

Social Influence → Intention:  $\beta=0.28$ ,  $p<0.01$

Chi-square difference test confirmed significant moderation ( $\Delta\chi^2=15.2$ ,  $p<0.01$ ), supporting hypotheses.

### 5.5 Demographic Effects

ANOVA and Chi-square tests revealed significant demographic influences. Age significantly predicted adoption frequency ( $F=6.34$ ,  $p<0.001$ ). Income positively associated with frequency ( $r=0.42$ ,  $p<0.001$ ). Education showed moderate positive effects ( $\chi^2=7.89$ ,  $p<0.01$ ).

## 6. Discussion

### 6.1 Key Findings

This study demonstrates that employment status fundamentally shapes online grocery behavior. Working women prioritize convenience and time-saving, allocating limited leisure time to shopping efficiency. Non-working women emphasize product quality, variety exploration, and sensory engagement—activities providing pleasure and engagement within household routines.

The moderation analysis reveals employment status meaningfully intensifies convenience effects for working women ( $\beta=0.48$ ) while dampening effects for non-working women ( $\beta=0.30$ ). Conversely, variety effects strengthen for non-working women ( $\beta=0.40$ ) versus working women ( $\beta=0.22$ ). These patterns align with theoretical predictions from time-poverty and behavioral literature.

Demographic moderation further confirms heterogeneity: younger women (25-35) demonstrate strongest convenience orientation; income elasticity shows each ₹10,000 monthly increase associates with approximately 0.8 additional weekly purchases.

### 6.2 Practical Implications

E-retailers should segment platforms and marketing strategies by employment status:

**For Working Women:** Emphasize time-saving, convenience, reliability, and seamless ordering. Promote subscription models, one-click reordering, and scheduled delivery. Design intuitive mobile apps minimizing friction. Highlight time freed for professional and personal priorities.

**For Non-Working Women:** Highlight product variety, freshness guarantees, and quality assurance. Provide detailed product information, images, and origin verification. Develop engaging content (recipes, nutrition tips) transforming shopping into leisure activity. Address digital literacy through tutorials and customer support.

### 6.3 Policy Implications

Policymakers should recognize employment-based digital inclusion gaps. Non-working women exhibit higher technology anxiety and adoption barriers. Digital literacy programs, trust-building initiatives, and cultural sensitivity in marketing support inclusive e-commerce growth. Gender-sensitive e-commerce policy frameworks advancing women's economic participation warrant consideration.

### 6.4 Limitations

This study focuses on three Tamil Nadu districts; findings may not generalize nationally. Cross-sectional design prevents causal inference. Unmeasured variables (household structure, technology availability) may influence results.

### 6.5 Future Research

Future research should explore longitudinal behavioral tracking, examine intersectionality effects (caste, religion, region), investigate male consumer segments for comparative gender analysis, and evaluate intervention effectiveness for non-adoption barriers.

## 7. Conclusion

Employment status functions as a critical segmentation variable for online grocery markets in urban India. Working women's time poverty intensifies convenience and trust orientations, while non-working women's schedule flexibility enables variety and quality emphasis. These insights enable practitioners to develop targeted strategies enhancing adoption, satisfaction, and loyalty. As India's e-grocery market expands, understanding gendered employment-based consumer heterogeneity remains essential for sustainable business growth and inclusive digital inclusion policy.

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How to cite: Anthony Rahul Golden, Ms. Shakila K, Ms. V. Rajalakshmi, A Comparative Study on Online Grocery Buying Behaviour: Working vs Non-Working Women in Urban India. *Advances in Consumer Research*. 2026;3(1): 1538-1542

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