

# THE EFFECT OF PRODUCT REVIEWS AND TRUST ON ONLINE PURCHASE DECISIONS: A QUANTITATIVE STATA ANALYSIS

## 1. Introduction and Rationale

In the US e-commerce market, online reviews and perceived trust significantly influence consumer behavior. However, little is known about how these factors interact in shaping purchase decisions. This study investigates whether **consumer trust mediates the relationship between review quality and online purchase likelihood**, using survey data and mediation analysis in STATA.

## 2. Research Objectives and Questions

- To examine how review quality affects consumer trust in a product or seller
- To evaluate whether trust mediates the relationship between product reviews and purchase decisions
- To assess whether trust independently influences the likelihood of purchase

### Research Questions:

1. Does review quality positively influence online purchase intent?
2. Is this relationship mediated by consumer trust?

## 3. Survey Design and Sample

- **Target Group:** US-based online shoppers who purchased products in the past 6 months
- **Sample Size:** 250 valid responses
- **Distribution Method:** Amazon Mechanical Turk and Reddit e-commerce forums
- **Questionnaire Components:**
  - Review Quality (perceived informativeness, credibility; 5-point scale)
  - Consumer Trust (in brand or platform; 5-point scale)
  - Purchase Intention (likelihood of buying; 5-point scale)
  - Demographics (age, gender, online shopping frequency)

## 4. STATA Analysis Plan

### Variables:

- **Independent Variable (X):** Review Quality
- **Mediator (M):** Consumer Trust
- **Dependent Variable (Y):** Purchase Intention
- **Controls:** Age, gender, purchase frequency

### Analytical Steps:

1. Reliability testing (alpha)
2. Correlation matrix (pwcorr)
3. OLS regression for each path:
  - Review Quality → Trust
  - Trust → Purchase Intention
  - Review Quality → Purchase Intention
4. Mediation test using **Baron & Kenny** steps and medeff command in STATA
5. Bootstrapped confidence intervals for indirect effect

## 5. Simulated Results (STATA Output Interpretation)

Path	Coefficient	Std. Error	p-value
Review Quality → Trust	+0.45	0.06	0.000
Trust → Purchase Intention	+0.39	0.05	0.000
Review Quality → Purchase	+0.21	0.07	0.004
Indirect Effect (Mediated)	+0.175	—	p < 0.01 (bootstrap)

- Trust **partially mediates** the effect of review quality on purchase decisions.
- The direct effect remains significant, suggesting that **reviews influence both trust and purchase behavior independently**.

## 6. Conclusion and Interpretation

High-quality reviews boost purchase intention both directly and indirectly via **increased trust**. Trust plays a key mediating role but does not fully explain the review–purchase link, implying that both rational (informational) and emotional (trust-based) paths drive online buying behavior.

## 7. Report Structure

1. Abstract
2. Introduction
3. Literature Review
4. Hypotheses and Conceptual Framework
5. Methodology
6. STATA Analysis and Mediation Results
7. Discussion
8. Managerial Implications
9. Limitations and Future Work
10. References
11. Appendix (Survey questions, STATA outputs)

## 8. Academic and Business Relevance

- **Academic:** Ideal for dissertations in marketing, consumer psychology, or e-commerce behavior with a quantitative focus.
- **Corporate:** Valuable to online platforms and digital marketers aiming to improve review systems and build trust-based purchase funnels.