UNDERSTANDING THE EFFECT OF BRAND TRUST ON PURCHASE INTENT: A JAMOVI STATISTICAL ANALYSIS

1. Background and Research Objective

A mid-sized consumer research agency engaged our service to analyze behavioral data from a structured survey on digital brand perception. Their goal was to test whether **trust in a brand** significantly increases **consumer intent to purchase online**, controlling for demographics and purchase frequency.

The client required statistically validated insights for use in both internal brand audits and strategic positioning recommendations for their retail clients.

Research Questions:

1. Is there a statistically significant association between perceived brand trust and intent to purchase?
2. Does this relationship differ by gender or purchase frequency?
3. Can brand trust significantly predict purchase intent when controlling for consumer demographics?

2. Dataset and Variables

- **Sample Size:** 250 respondents (US-based adults, aged 18–45, recruited via survey panel)
- **Data Format:** Cleaned CSV imported into Jamovi
- **Survey Type:** 5-point Likert scales and categorical demographic questions

Variables:

Variable	Type	Scale	Description
Brand_Trust_Score	Continuous	1–5 (Likert)	Composite of 4 trust items (Cronbach's α = 0.87)
Purchase_Intent	Binary	1 = Yes, 0 = No	"Would you purchase this product online?"
Purchase_Frequency	Ordinal	Rare, Monthly, Weekly	Frequency of online shopping

Gender	Categorical	Nominal	Male, Female, Non-binary
Age	Continuous	Years	Self-reported age
Income_Bracket	Categorical	Ordinal	<\$40k, \$40–80k, \$80k+

3. Jamovi Analysis Workflow

3.1 Reliability and Descriptives

- Used **"Reliability Analysis"** in Jamovi to validate the brand trust composite (Cronbach's $\alpha = 0.87 \rightarrow$ strong internal consistency)
- Descriptive stats:
    - Mean Brand Trust = 3.76 (SD = 0.71)
    - 61.2% reported willingness to purchase

3.2 Chi-Square Test

- **Hypothesis:** There is a significant association between brand trust (low/high, median split) and purchase intent.
- Created dichotomous variable: Low Trust (≤3.5) vs. High Trust (>3.5)

Jamovi Output:

	Will Purchase	Will Not Purchase	Total
High Trust	94	34	128
Low Trust	59	63	122

- $\chi^2(1) = 17.54$, **p < .001 Interpretation:** High trust significantly increases likelihood of purchase.

3.3 Independent Samples t-Test

- **Test:** Brand Trust Score by Purchase Intent group

Group	Mean Trust	SD
Will Purchase	4.01	0.59
Will Not Purchase	3.42	0.72

- $t(248) = 7.53$, **p < .001**, Cohen's $d = 0.88 \rightarrow$ large effect size

3.4 Logistic Regression in Jamovi

Model:

$$\text{Logit(Purchase)} = \beta_0 + \beta_1 \cdot \text{Trust} + \beta_2 \cdot \text{Gender} + \beta_3 \cdot \text{Frequency} + \beta_4 \cdot \text{Income}$$

Predictor	Odds Ratio (Exp B)	Std. Error	p-value
Intercept	0.31	—	0.001
Brand_Trust_Score	**3.87**	0.92	<.001
Purchase_Frequency	1.42	0.26	0.048
Gender (Female)	1.08	0.35	0.745
Income (\$80k+)	1.56	0.29	0.039

- **Model Accuracy:** 74.5% classification rate
- **Nagelkerke R^2:** 0.27 → acceptable explanatory power

Interpretation: A 1-point increase in brand trust multiplies the odds of purchase by **3.87**, even after adjusting for income, gender, and shopping habits.

4. Visualizations (Jamovi Outputs)

- Bar chart: Purchase intent by trust level
- Boxplots: Trust score by intent group
- ROC curve for logistic model (AUC = 0.79)
- Mosaic plot: Purchase intent × Purchase frequency

All graphics were cleaned, labeled, and exported for professional report use.

5. Reporting and Deliverables

- Full statistical report (APA format)
- Executive summary (2-pager for brand strategy team)
- Jamovi .omv file with prebuilt filters
- Annotated STATS sheet (variable transformations and interpretations)
- Editable Google Slides with visuals for presentations

6. Key Insights and Application

- **Strategic Use:** Helped client recommend **trust-building campaigns** (e.g., customer reviews, testimonials) for product pages.
- **Segmentation:** Higher-income and frequent buyers responded more strongly to trust cues.
- **Cross-Functional Relevance:** Findings were shared with UX, marketing, and conversion teams.

Academic and Corporate Relevance

- **Academic:** Ideal for consumer behavior research, brand management theses, or digital marketing courses requiring inferential statistics.
- **Corporate:** Valuable for D2C brands, agencies, and UX researchers seeking to validate content strategies using data.

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