

Influence Of Personality Traits on Online Consumer Buying Decisions for Mobile Phones: Evidence from a Tier-2 Indian City.

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Abstract: The exponential growth of e-commerce has fundamentally transformed consumer purchasing behaviour, particularly in the mobile phone segment. While technological and economic factors have been widely studied, limited empirical research has examined the role of individual personality traits in shaping online purchase decisions, particularly in emerging urban markets. This study investigates the influence of Big Five personality traits on online consumer buying decisions for mobile phones, using primary data collected from 200 respondents in Davangere city, Karnataka. A structured questionnaire was administered, and data were analysed using Structural Equation Modelling (SEM) with Smart PLS. The results reveal that Openness ($\beta = 0.32$), Conscientiousness ($\beta = 0.29$), and Extraversion ($\beta = 0.23$) significantly and positively influence online buying decisions. Conversely, Neuroticism exhibits a negative but statistically insignificant relationship. The structural model explains 61% of the variance in online buying decisions.

Keywords: practical implications for e-commerce marketers to design personality-driven digital strategies. Personality Traits; Online Buying Behaviour; Mobile Phones; Big Five Model; Structural Equation Modelling (SEM); E-commerce; India.

I. INTRODUCTION

The digitalization of markets has significantly altered consumer decision-making processes, particularly for high-involvement products like mobile phones. In India, the proliferation of smartphones and affordable internet has extended e-commerce adoption beyond metropolitan hubs into Tier-2 cities like Davangere. While factors such as price sensitivity and brand equity are well-documented, psychological determinants—specifically personality traits—remain a critical yet underexplored area in this specific demographic. Personality traits influence how consumers process information, perceive risk, and respond to online stimuli. This study addresses this gap by empirically examining the impact of the Big Five personality traits on online mobile phone buying decisions in the Davangere region.

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II. REVIEW OF LITERATURE

Personality traits are enduring psychological characteristics that influence behavioural patterns across various situations. The most robust framework for studying these traits is the Big Five Model, established by Costa and McCrae (1992) and further validated by Goldberg (1993). This model categorizes personality into five distinct dimensions: Openness to Experience, Conscientiousness, Extraversion, Agreeableness, and Neuroticism. In the context of consumer behaviour, John and

Srivastava (1999) and Mowen (2000) have argued that these traits are significant predictors of preference formation and decision-making styles, providing a theoretical basis for linking personality to consumption.

Specific to the digital environment, research indicates that consumers high in **Openness** possess a curiosity for new technologies and are more willing to experiment with online shopping platforms (Jun et al., 2014; Verplanken & Herabadi, 2001). Similarly, **Conscientiousness**, characterized by organization and prudence, has been linked to systematic information processing. Bosco et al. (2015) and Huseynov & Yildirim (2016) found that conscientious buyers engage in extensive comparison of specifications and prices before making online purchases, reducing post-purchase dissonance.

Social interaction plays a pivotal role for those high in **Extraversion**. Lin (2010) and Pappas et al. (2017) suggest that extraverted individuals are heavily influenced by social validation, online reviews, and peer recommendations, which significantly boost their confidence in online transactions. **Agreeableness**, reflecting a cooperative nature, has been associated with trust in seller information and user-generated content (Marbach et al., 2016). However, findings on Agreeableness in e-commerce have been mixed, with some studies suggesting it plays a secondary role to trust.

Conversely, **Neuroticism** is often associated with anxiety and risk aversion. Gupta and Kim (2010) and Li et al. (2018) noted that neurotic consumers perceive higher risks regarding payment security and product quality, often leading to hesitation in online buying. However, recent studies by Akhtar et al. (2019) suggest that as e-commerce platforms become more secure, the negative impact of neuroticism may be diminishing.

In the Indian context, research by Kumar and Anjaly (2017) and Jain et al. (2021) has highlighted the growing importance of psychological variables in smartphone purchases. Furthermore, Joshi and Reddy (2023) and Bose and Patel (2021) have emphasized the need for region-specific studies, noting that consumers in Tier-2 cities may exhibit different psychological drivers compared to

metropolitan consumers. This study bridges the identified gap by focusing specifically on the Davangere market.

III. OBJECTIVES OF THE STUDY

1. To examine the influence of Big Five personality traits on online buying decisions for mobile phones in Davangere.
2. To analyse the relative impact of each personality trait on the final purchase decision using Structural Equation Modelling.

IV. HYPOTHESES

Based on the literature review, the following hypotheses are proposed:

- **H1:** Openness to experience has a significant positive influence on online buying decisions.
- **H2:** Conscientiousness has a significant positive influence on online buying decisions.
- **H3:** Extraversion has a significant positive influence on online buying decisions.
- **H4:** Agreeableness has a significant positive influence on online buying decisions.
- **H5:** Neuroticism has a significant negative influence on online buying decisions.

V. RESEARCH METHODOLOGY

5.1 Research Design and Sample

This study employs a descriptive and causal research design. The study was conducted in Davangere City, Karnataka, a representative Tier-2 city in India witnessing rapid digital adoption. A sample of 200 respondents was selected using convenience sampling. The inclusion criteria required respondents to have purchased a mobile phone online at least once in the past year.

5.2 Data Collection and Instrument

Primary data were collected using a structured questionnaire administered via both online forms and offline intercepts. The instrument was adapted from validated scales in existing literature (Costa & McCrae, 1992; Gefen, 2000).

It comprised two sections: (1) Demographic details and (2) Psychometric constructs measured on a 5-point Likert Scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree).

5.3 Tools for Data Analysis

The collected data were analyzed using SPSS for descriptive statistics and SmartPLS (v.4) for Structural Equation Modeling (SEM). Bootstrapping with 5,000 resamples was performed to test the significance of the path coefficients, ensuring robust hypothesis testing appropriate for the sample size.

VI. DATA ANALYSIS AND RESULTS

6.1 Demographic Profile

Table 1 presents the demographic characteristics of the respondents. The sample is fairly balanced in terms of gender, with a predominance of younger consumers (18-35 years), reflecting the typical demographic of online shoppers.

Table 1
 Demographic Profile of Respondents (n=200)

Variable	Category	Frequency	Percentage
Gender	Male	112	56%
	Female	88	44%
Age	18–25 years	74	37%
	26–35 years	86	43%
	Above 35 years	40	20%
Education	Undergraduate	45	22.50%
	Graduate/PG	155	77.50%

6.2 Measurement Model Assessment

The measurement model was evaluated for reliability and validity (Table 2). All constructs exhibited Cronbach's Alpha and Composite Reliability (CR) values above the recommended threshold of 0.70. Average Variance Extracted (AVE) for all constructs exceeded 0.50, establishing convergent validity.

Table 2
 Reliability and Validity

Construct	Cronbach's Alpha	Composite Reliability (CR)	AVE
Openness	0.82	0.87	0.56
Conscientiousness	0.8	0.85	0.58
Extraversion	0.81	0.86	0.55
Agreeableness	0.78	0.83	0.54
Neuroticism	0.76	0.82	0.52
Buying Decision	0.84	0.88	0.6

6.3 Structural Model Results

The structural model was assessed to test the proposed hypotheses (Table 3). The R² value for Online Buying Decision was **0.61**, indicating that the five personality traits explain 61% of the variance in the buying decision.

Table 3
 Structural Path Coefficients & Hypothesis Testing

Hypothesis	Path	Beta (β)	t-value	p-value	Result
H1	Openness → Buying Decision	0.32	5.81	0	Supported
H2	Conscientiousness → Buying Decision	0.29	5.12	0	Supported
H3	Extraversion → Buying Decision	0.23	4.09	0	Supported
H4	Agreeableness → Buying Decision	0.11	2.01	0.046	Supported
H5	Neuroticism → Buying Decision	-0.07	1.21	0.226	Not Supported

VII. DISCUSSION AND FINDINGS

The study's findings reveal distinct patterns in how personality shapes online mobile phone purchases in Davangere. **Openness to Experience** ($\beta=0.32$) emerged as the strongest predictor, suggesting that consumers who are naturally curious and innovative are the primary adopters of online channels for high-tech products. **Conscientiousness** ($\beta=0.29$) was the second strongest driver; these buyers appreciate the structured information, comparison tools, and specifications available on e-commerce sites. **Extraversion** ($\beta=0.23$) also showed a significant positive impact, highlighting the role of social influence and reviews. While **Agreeableness** had a marginal positive effect, **Neuroticism** did not significantly hinder online purchasing, possibly due to increased trust in digital payment ecosystems in India.

VIII. CONCLUSION AND IMPLICATIONS

This study confirms that personality traits are vital predictors of online mobile phone buying decisions in Tier-2 Indian cities. The results validate the applicability of the Big Five model in this context. Managerially, e-commerce platforms should move beyond demographic segmentation. For instance, marketing messages for "Open" users should highlight novelty, while "Conscientious" users should be targeted with detailed comparison charts and warranty information. To leverage "Extraversion," platforms should incentivize user-generated content and video reviews.

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