

Determinants of Consumer Satisfaction and Behavior in Online Shopping: A Case Study of North Karnataka, India

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Abstract:

This study investigates the determinants of consumer satisfaction and behavior in online shopping, specifically within the North Karnataka region of India. In the rapidly growing e-commerce industry, understanding these determinants is critical for businesses to enhance customer satisfaction and loyalty. The research focuses on website usability, trust, convenience, monetary benefits, and payment security, which influence consumer purchase decisions. Additionally, the study explores shopping cart abandonment and the effectiveness of return and replacement policies. The findings provide insights into the unique characteristics of online shoppers in North Karnataka, highlighting the significance of tailored e-commerce strategies for semi-urban and rural areas. The study concludes that secure transactions, user-friendly interfaces, and effective loyalty programs are pivotal in driving consumer satisfaction and online shopping behavior in this region.

Keywords: Consumer satisfaction, online shopping, e-commerce, North Karnataka, website usability, trust, convenience, monetary benefits, shopping cart abandonment, payment security, rural e-commerce.

INTRODUCTION

Online shopping has completely changed the retail sector in the digital age and is now a crucial aspect of consumer behavior worldwide. The convenience, variety, and accessibility offered by e-commerce platforms have significantly transformed how consumers interact with products and services. Understanding the factors that influence customer happiness and behavior when purchasing online proves essential for companies attempting to improve their competitive advantage and foster brand loyalty. Due to factors including rising internet penetration, smartphone usage, and shifting consumer habits, online shopping has grown substantially in India (Shankar & Jebarajakirthy, 2019). North Karnataka, with its unique demographic and economic landscape, presents an interesting context for studying online consumer behavior. Despite its growing urbanization, the region maintains a mix of rural and semi-urban characteristics, providing a diverse consumer base for e-commerce businesses. This study's main goal is to investigate the factors that influence online buying behavior and customer satisfaction in the Indian state of North Karnataka. While previous research has extensively examined online consumer behavior in urban and metropolitan areas, there is limited understanding of how these factors influence consumers in semi-urban and rural settings. By identifying critical variables that affect online shopping behavior and customer satisfaction in North Karnataka, this research aims to bridge this gap.

Objectives:

1. To analyze the factors influencing consumer satisfaction in online shopping within the North Karnataka region.
2. To identify the demographic and behavioral characteristics of online shoppers in North Karnataka.
3. To evaluate the impact of website usability, trust, and convenience on consumer purchase decisions.
4. To assess the role of monetary benefits, such as discounts and loyalty programs, in shaping online shopping behavior.
5. To investigate the reasons behind shopping cart abandonment and the effectiveness of return and replacement policies.
6. To explore the preferred payment methods and the significance of secure transactions in online shopping.

This research has substantial consequences for both academic as well as practical objectives. From an academic perspective, this research project enhances the current body of literature by offering valuable insights into consumer behavior in an underexplored region of India, thereby broadening the understanding of e-commerce dynamics in diverse contexts. Practically, the findings can guide e-commerce businesses in tailoring their strategies to meet the specific needs and preferences of consumers in North Karnataka. This can lead to improved customer satisfaction, enhanced loyalty, and increased market share. The scope of this study is confined to the North Karnataka region, focusing on semi-urban and rural consumers' online shopping behaviors. While this provides valuable insights into a specific demographic, the findings may not be generalizable to other regions with different socio-economic characteristics. Additionally, the study is limited by the availability of data and the potential for self-reported biases in consumer surveys.

ID)LITERATURE REVIEW:

1)Customer satisfaction factors: The analysis of factors that impact consumer satisfaction in online shopping in the North Karnataka region might utilize a diverse range of determinants found in the broader body of literature. Several studies highlight the multifaceted nature of consumer satisfaction, each pointing to different attributes that affect satisfaction levels in the context of online shopping. Service quality attributes such as advertising, word of mouth, and e-commerce service quality have been identified as key influencers of consumer satisfaction in online shopping, especially during global challenges such as the COVID-19 pandemic (Cynthia et al., 2022). Furthermore, aspects like self-congruence, impulse buying, price sensitivity (Mittal et al., 2023), and the quality of reverse logistics services (Du & Zhang, 2023) also significantly impact online shopping satisfaction. The pandemic has shifted consumer priorities, accentuating factors such as crowd avoidance, traffic jams, and the convenience of avoiding traditional shopping hassles (Carolina et al.). Manandhar and Chalise (2023) emphasize that college-level students prioritize product quality, information availability, and shipping prices as the main factors influencing their happiness. This highlights the significance of providing clear and easily accessible information. Technological advancements, such as AI chatbots, play a crucial role in enhancing user experience and, consequently, satisfaction in online shopping by predicting positive outcomes (Butt & Ahmad, 2023). Additionally, consumer satisfaction is significantly influenced by trust and promotional activities, which also affect the intention to repurchase (Munte et al., 2022). Other studies emphasize the importance of security, product quality, e-service quality, and competitive pricing in ensuring consumer satisfaction (Zang, 2022). Moreover, risk perception and trust have been highlighted as critical determinants of satisfaction in specific markets, like the sneaker market in Pekanbaru (Abbas et al., 2022). In the context of North Karnataka, it's essential to contextualize these findings, considering regional consumer behavior trends, e-commerce infrastructure, and specific cultural and economic conditions. For instance, a study focusing on Mangalore City, Karnataka, identified perceived value, service quality, and system quality as influencers of consumer satisfaction in online shopping (Dsouza, 2022). Such localized insights are crucial for understanding the dynamics of consumer satisfaction within the North Karnataka region.

2)Website usability, trust, and convenience: In evaluating the impact of website usability, trust, and convenience on consumer purchase decisions, several studies have provided insights into how these factors contribute distinctly and significantly to the buying behaviors of online consumers. Prastowo and Nur (2023) explored the influence of trust, convenience, and electronic word-of-mouth (e-WOM) on the purchase decisions of Shopee consumers, identifying consumer behavior as a crucial intermediary. The study, involving 494 respondents, demonstrated that trust and convenience directly and significantly impact consumer behavior and, subsequently, purchase decisions. In particular, trust and convenience were underscored as having a direct and sizeable effect on making purchase decisions, mediated through consumer behavior, using Smart PLS 3.0 software for analysis (Prastowo & Nur, 2023). In their research, Djuuna, Sayidah, and Ady (2024) examined how website quality, sales promotions, along pricing influence shopping decisions by affecting consumer trust on jagoujian.com. With a sample of 75 respondents analyzed via Partial Least Squares Structural Equation Modeling (PLS-SEM), the study found that website quality and pricing significantly influence jagoujian.com users' purchasing decisions, with consumer trust acting as a significant mediator. Interestingly, despite the anticipated impact, sales promotions did not show a significant influence on purchasing decisions, highlighting the dominating role of website usability and trust over promotional tactics (Djuuna et al., 2024). In their research, Widya Septi and Bangsawan (2023) examined the impact of brand ambassadors as well as brand trust on consumer buying behavior on the Blibli e-commerce platform. The research, conducted with 160 participants who were predominantly fans of NCT 127 in Bandar Lampung, revealed that both brand ambassadors and brand trust exert a positive and significant influence on consumers' purchase choices. According to Widya Septi and Bangsawan (2023), brand ambassadors had the greatest impact on the power aspect, while brand trust mainly influenced the trust aspect. This indicates the interconnected roles of perceived trustworthiness and the influence of brand representatives on consumer purchasing behavior. Eriyanti and Ardhiansyah (2023) conducted a study on how the Sukabumi community's purchasing decisions on Shopee Marketplace are influenced by their faith in the

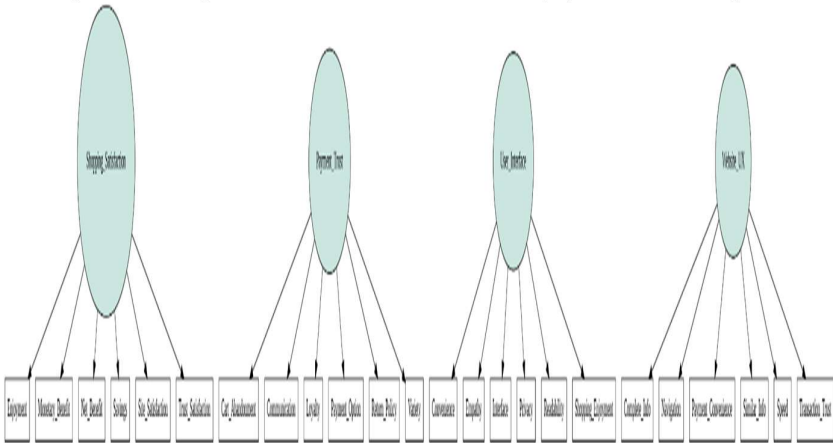
platform, the convenience it offers, and the quality of information available. The study, conducted with a sample size of 55 respondents, validated that trust, convenience, and the quality of information have a significant and beneficial impact on purchasing decisions. This insight underscores the critical importance of ensuring that websites are not only trustworthy and user-friendly but also provide high-quality, relevant information to aid consumers in their decision-making process (Eriyanti & Ardhiyansyah, 2023).

3)Monetary Benefits: Monetary benefits such as discounts and loyalty programs play a significant role in shaping online shopping behavior, serving as crucial motivators for consumer engagement and purchase decisions. Several studies have explored the multifaceted influence of these monetary benefits on consumer attitudes and behaviors in the digital marketplace. Natalia, Fortuna, and Leonita (2020) segmented mobile application users based on their e-loyalty behavior on online shopping platforms, identifying monetary benefits as a key determinant in the segmentation. Their findings suggest that monetary incentives like discounts and loyalty programs are vital in fostering e-loyalty among consumers (Natalia et al., 2020). Elbeck, DeLong, and Wilburn explored how pre- and post-purchase service mixes, including monetary benefits such as loyalty discounts and programs, influence millennial shopping behavior in boutique stores. The study highlights the pivotal role of monetary benefits in attracting and retaining female millennial shoppers (Elbeck et al.). However, Bauer et al. (2020) delved into the gamification of the digital shopping experience, revealing that while monetary benefits used as incentives for game participation can enhance customer satisfaction and loyalty, in certain instances, they may reduce the beneficial impacts of gamification on consumer engagement & word-of-mouth intentions (Bauer et al., 2020). In their research, Kang and Lee (2022) examined how monetary bonuses offered in hotel loyalty programs during the pandemic affect attitudinal loyalty. They observed that the beneficial impact of these monetary perks on loyalty may be reduced by negative switching barriers. This underscores the complexity of applying monetary benefits under varying market conditions and consumer perceptions (Kang & Lee, 2022). Further underscoring this complexity, a study on consumers' online book purchasing behavior in China pointed to a preference for delayed monetary rewards as part of loyalty programs, suggesting diverse consumer expectations and responses to monetary incentives (张立言 et al., 2015). Cho's study (2020) with 256 respondents on online fashion and apparel buying behavior identified flash sales, loyalty programs, cashback offers, and discounts as motivators for impulsive fashion and apparel purchasing, highlighting the efficacy of monetary benefits in driving impulsive purchases in specific sectors (Cho, 2020). Furthermore, Rummo et al. (2023) demonstrated that monetary benefits significantly influence fruit and vegetable purchases among adults with low income in online grocery settings, providing insight into how monetary incentives can affect healthier food choices in socioeconomically diverse populations (Rummo et al., 2023). These studies collectively illustrate the nuanced and multi-dimensional influence of monetary benefits, including discounts and loyalty programs, on various aspects of online shopping behavior. Whether through directly affecting purchase decisions, altering the value perception of a brand, or influencing consumer loyalty and engagement, monetary benefits remain a cornerstone in the online retail strategy.

4)Shopping cart abandonment and reverse supply chain: Shopping cart abandonment is a significant issue for online retailers, representing lost sales and wasted marketing efforts. Understanding the reasons behind this behavior and exploring the effectiveness of return and replacement policies are crucial for improving conversion rates and customer satisfaction. Perceived danger and ownership are significant factors contributing to shopping cart abandonment. Financial risk plays a major role; when customers perceive high financial risk, they are more likely to abandon their carts, even if they feel a sense of ownership over the items (Joseph, 2012). Furthermore, the annoyance experienced during transactions, which includes characteristics such as perceived inconvenience, waiting time, and complex checkout processes, is a strong indicator of customers abandoning their shopping carts (Rajamma et al., 2009). Moreover, many consumers use online shopping carts as organizational tools for entertainment or research purposes rather than intending to make an immediate purchase. This conduct frequently leads to customers leaving their shopping carts without completing their purchase (Kukar-Kinney & Close, 2010). Emotional ambivalence and hesitation also contribute significantly to cart abandonment, especially in mobile shopping. When consumers feel conflicted about their choices, they are more likely to abandon their carts (Huang et al., 2018). High perceived costs, complex checkout processes, and information overload about products are additional factors leading to cart abandonment, with entertainment motivation being particularly influential (Yusuf et al., 2021). The presence of promotional code fields and cross-channel price disparities can prompt customers to abandon their carts due to perceptions of price unfairness and limited self-determination (Lipowska, 2023). The effectiveness of return and replacement policies can also influence shopping cart abandonment. Simplified return processes can significantly reduce abandonment by alleviating customers' concerns about making wrong purchase decisions. Clear and hassle-free return policies enhance trust and encourage purchases (Reniou et al., 2017). Effective return and replacement policies improve overall customer satisfaction and can lead to higher conversion rates, as customers are more likely to complete their purchases if they know they can easily return or replace items (Kapoor & Vij, 2021). Furthermore, return policies that mitigate financial risks associated with purchases can reduce cart abandonment. By offering guarantees or free returns, retailers can

decrease perceived financial risks (Joseph, 2012).

5)Payment Methods and Transaction Security: The increase in e-commerce has made it imperative to create and employ safe payment systems in order to maintain customer trust and transaction security. This review synthesizes current research on the various payment methods and security protocols used in e-commerce, highlighting their functionalities, advantages, and challenges. Digital signatures within a Public Key Infrastructure (PKI) are widely accepted for secure electronic payment transactions, addressing major drawbacks in functionality, usability, costs, or security of current payment methods (Halonen & Virtanen, 2002). A secure mobile commerce system must ensure confidentiality, authentication, integrity, authorization, availability, and non-repudiation. Standards for mobile payments often include processes such as registration, payment submission, and confirmation (Lee, Kou, & Hu, 2008). The Secure Socket Layer (SSL) and Secure Electronic Transaction (SET) protocols are crucial for securing online payments. While SSL is commonly used, SET provides a higher level of security through more rigorous encryption methods (Xiao-yan, 2004). Visual cryptography is used to prevent phishing and identity theft by applying cryptographic techniques to CAPTCHA images, text files containing credit card information, and QR codes with one-time passwords. This method enhances authentication, authorization, and confidentiality (Yuniati & A., 2020). Combining telephone banking and online banking for live cardholder authentication can significantly reduce card fraud. This protocol involves the card issuing bank calling the customer's phone number for PIN and payment confirmation (Xiao, Christianson, & Zhang, 2008). A study on millennials in South Africa revealed preferences for various digital payment methods such as credit cards, digital wallets, and Bitcoin. However, security, privacy, and trust issues were significant concerns (Zitha & Penceliah, 2022). A novel peer-to-peer payment protocol using electronic cash enables secure and anonymous transactions without requiring users to provide credit card numbers or personal data, suitable for both micro and macro payments (Palaka et al., 2003). The SET/A system allows secure transactions without continuous internet connectivity by sending a mobile agent with the necessary data to the merchant's server, providing a secure alternative for mobile environments (Romão, Silva, & Silva, 2000). The 3D Secure protocol enhances e-commerce transaction security by adding an additional authentication layer, requiring customers to enter a password verified by the card issuer directly, without involving third parties (Ismaili et al., 2014). For small transactions, invoices are the most cost-efficient payment method, while prepayments are preferable for larger transactions. Credit cards and PayPal incur higher costs and lack scale efficiency (Grüschow, Kemper, & Brettel, 2016).



III) DISCUSSION

Contents	N	mean	std
Reach Store After First Visit	221	2.552036	1.276806
Time Before Purchase Decision	221	3.895928	1.195838
Preferred Payment Option	221	1.809955	1.116036
Abandon Cart Frequency	221	2.886878	1.053505
Reason for Abandoning Cart	221	2.678733	1.345346
Content Readability	221	4.38914	1.028092
Similar Product Information	221	4.113122	0.909975
Complete Seller/Product Info	221	3.868778	1.051394
Clear Product Information	221	4.117647	1.068008
Navigation Ease	221	4.289593	1.038938
Speed	221	4.076923	1.094807
User-friendly Interface	221	4.384615	1.168347

Payment Convenience	221	4.361991	0.9701
Trust in Transaction	221	4.217195	0.989891
Customer Empathy	221	4.479638	1.059928
Privacy Guarantee	221	4.588235	0.652023
Responsiveness & Communication Channels	221	4.384615	0.879844
Monetary Benefits	221	3.932127	1.148085
Shopping Enjoyment	221	3.547511	1.329305
Convenience & Flexibility	221	4.298643	0.895163
Return/Replacement Policy	221	4.556561	0.859553
Loyalty Programs	221	3.941176	1.128626
Quality Information Display	221	4.257919	0.804246
Satisfaction from Quality Site/App	221	4.597285	0.636605
Net Benefit & Satisfaction	221	4.348416	0.894864
Satisfaction Needs Trust	221	4.190045	1.05748
Wide Product Variety	221	4.122172	0.852007
Relevant Product Info	221	4.334842	0.760448
Monetary Savings	221	4.280543	1.019372
Convenience of Patronage	221	3.895928	0.702613
Adventure in Shopping	221	3.565611	1.053778
Social Status Enhancement	221	3.257919	1.236378
Shopping Gratification	221	3.556561	1.141257
Role Fulfillment	221	3.285068	1.181372
Value for Money	221	4.18552	0.644535

1) Rotated component matrix:

Factor	Question	Factor 1	Factor 2	Factor 3	Factor 4
Factor 1: Website/UX Quality	Similar Product Information	0.8548			
	Complete Seller/Product Info	0.8235			
	Navigation Ease	0.8861			
	Speed	0.9559			
	Payment Convenience	0.8637			
Factor 2: User-friendly Interface	Trust in Transaction	0.7275			
	User-friendly Interface	0.6847			
	Shopping Enjoyment		0.572		
	Convenience & Flexibility		0.4794		
	Content Readability		0.6282		
Factor 3: Payment Convenience and Trust	Customer Empathy		0.764		
	Privacy Guarantee		0.8342		
	Preferred Payment Option			0.6401	
	Reason for Abandoning Cart			0.6396	
	Return/Replacement Policy			0.8624	
Factor 4: Shopping Satisfaction	Loyalty Programs			0.8691	
	Responsiveness & Communication Channels			0.7968	
	Wide Product Variety			0.775	
	Shopping Enjoyment				0.4923
	Satisfaction Needs Trust				0.4841
	Net Benefit & Satisfaction				0.7084
	Satisfaction from Quality Site/App				0.7978
	Monetary Savings				0.7833

The analysis of the factors impacting online shopping satisfaction revealed distinct groupings that shaped user experiences. Factor 1, labeled "Website/UX Quality," was characterized by high loadings on attributes such as similar product information (0.8548), complete seller/product information (0.8235), navigation ease (0.8861), speed (0.9559), payment convenience (0.8637), and trust in transaction (0.7275). This factor underscored the importance of a well-structured, fast, and reliable website that offers comprehensive product information and secure transactions. A seamless and efficient user experience was pivotal in influencing customers' satisfaction and trust.

Factor 2, "User-friendly Interface," encompassed elements like user-friendly interface (0.6847), shopping enjoyment (0.572), convenience and flexibility (0.4794), content readability (0.6282), customer empathy (0.764), and privacy guarantee (0.8342). This factor highlighted the necessity for an intuitive and empathetic interface that

caters to the needs of users, ensuring their privacy and providing a pleasant shopping environment. The emphasis on empathy and privacy suggested that users valued personal attention and data security as part of their overall shopping experience.

Factor 3, termed "Payment Convenience and Trust," included preferred payment option (0.6401), reason for abandoning cart (0.6396), return/replacement policy (0.8624), loyalty programs (0.8691), responsiveness and communication channels (0.7968), and wide product variety (0.775). This factor pointed out the critical role of flexible payment options, clear return policies, loyalty incentives, effective communication, and diverse product offerings in fostering trust and reducing cart abandonment rates. A retailer's ability to provide these conveniences directly influences customer loyalty and satisfaction.

Factor 4, "Shopping Satisfaction," was defined by attributes such as shopping enjoyment (0.4923), monetary benefits (0.415), satisfaction needs trust (0.4841), net benefit and satisfaction (0.7084), satisfaction from quality site/app (0.7978), and monetary savings (0.7833). This factor underscored that overall satisfaction stemmed not only from the enjoyment of shopping but also from perceived benefits like monetary savings and trust in the quality of the site or app. Users found satisfaction in both tangible (monetary savings) and intangible (trust and quality) aspects of their shopping experience.

The analysis illuminated the multifaceted nature of online shopping satisfaction. Each factor played a significant role, with Website/UX Quality and

User-friendly Interface focusing on the technical and experiential aspects of the shopping platform, while Payment Convenience and Trust, along with Shopping Satisfaction, emphasized transactional and perceptual elements. Together, these factors provided a comprehensive understanding of what drives customer satisfaction in the online shopping environment

Research Objectives	Factor 1: Website/UX Quality	Factor 2: User-friendly Interface	Factor 3: Payment Convenience and Trust	Factor 4: Shopping Satisfaction
Analyze the factors influencing consumer satisfaction in online shopping within the North Karnataka region	Attributes like navigation ease and speed contribute to overall satisfaction.	User-friendly design enhances satisfaction by providing a pleasant shopping experience.	Preferred payment options and clear trust signals boost satisfaction levels.	Satisfaction from site/app quality impacts overall satisfaction in online shopping.
Identify the demographic and behavioral characteristics of online shoppers in North Karnataka	Demographic factors might influence preferences for UX features and payment methods.	Behavioral traits like enjoyment and empathy influence interface preferences.	Loyalty programs and return policies vary by demographic, impacting shopping satisfaction.	Monetary benefits and savings influence shopping behavior based on demographics.
Evaluate the impact of website usability, trust, and convenience on consumer purchase decisions	Ease of navigation and comprehensive product information influence purchase decisions positively.	Interface usability impacts trust and decision-making during shopping.	Payment convenience and trust factors directly influence purchase decision-making.	Shopping satisfaction drives repeat purchases and decision-making processes.
Assess the role of monetary benefits, such as discounts and loyalty programs, in shaping online shopping behavior	Speed and usability enhance engagement with monetary benefits and loyalty programs.	Enjoyable shopping experiences and empathy towards consumers influence engagement with benefits.	Responsive communication channels and diverse product variety boost engagement with benefits.	Satisfaction and benefits contribute to behavior shaping in online shopping.
Investigate the reasons behind shopping cart abandonment and the effectiveness of return and replacement policies	Clear navigation and trust in transactions reduce cart abandonment rates.	Privacy guarantees and intuitive design reduce abandonment due to readability and empathy.	Clear policies and preferred payment options impact abandonment rates positively.	Satisfaction with site/app quality reduces abandonment rates.

Explore the preferred payment methods and the significance of secure transactions in online shopping	Payment convenience and secure transactions are crucial for consumer satisfaction.	Interface usability affects preference for payment methods and security during shopping.	Responsive channels and policy clarity influence preferences for payment methods and transactions.	Satisfaction from site/app quality ensures secure and preferred transactions.
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IV)CONCLUSIONS

The study on the determinants of consumer satisfaction and behaviour in online shopping in North Karnataka provides valuable insights into the factors influencing online consumer experiences in this region. The research highlights the critical role of website usability, trust, payment convenience, and the overall user experience in shaping consumer satisfaction. Additionally, it emphasizes the importance of secure transactions, clear return policies, and effective communication channels in fostering trust and encouraging repeat purchases.

Monetary benefits, such as discounts and loyalty programs, were found to significantly motivate consumer engagement and influence shopping behaviour. The study also sheds light on the common issue of shopping cart abandonment, attributing it to factors like transaction inconvenience and perceived risks, while also noting the effectiveness of straightforward return policies in mitigating these concerns.

In conclusion, this research provides practical insights for e-commerce enterprises that seek to serve the varied consumer population in North Karnataka. By addressing these determinants, online retailers can enhance customer satisfaction, build loyalty, and increase their competitive advantage in this emerging market.

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