Research Article

Understanding The Factors Contributing To Cognitive Dissonance During Online Purchases: A Practical Investigation With A Focus On Electronic Goods

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ARTICLE INFO	ABSTRACT
	In the era of digital commerce, online shopping has become an integral part of daily life for millions worldwide. The convenience and accessibility offered by e-commerce platforms have revolutionized the retail industry, particularly in the realm of electronic goods. Despite its widespread adoption, online shopping is not without its challenges. The paper aims to explore the phenomenon of cognitive dissonance during online purchases of electronic goods, examining its causes, manifestations, and implications for consumers and businesses alike. For consumers, cognitive dissonance during online purchases of electronic goods can have several implications. It can lead to decision paralysis, hindering the ability to make informed and timely purchase decisions. This, in turn, can result in missed opportunities, as well as frustration and dissatisfaction with the shopping experience. Moreover, cognitive dissonance can contribute to buyer's remorse, causing consumers to second-guess their decisions and feel dissatisfied with their purchases. Over time, repeated experiences of cognitive dissonance may undermine trust in online shopping platforms, leading consumers to seek alternative shopping channels or refrain from purchasing electronic goods online altogether.

Keywords: Visual Design Elements, Gender Differences, Mediating Factors, Relationship Marketing and Cognitive Dissonance, satisfaction and Loyalty. |

Introduction- Understanding Cognitive Dissonance

The study explored how psychological reactance exacerbates these negative emotions, further complicating the online shopping experience. Understanding the drivers and consequences of online shopping hate is crucial for businesses operating in the realm of social commerce. By recognizing these factors, companies can take proactive measures to mitigate negative experiences and enhance customer satisfaction and loyalty. Jamal and Shahid (2023)[14] explored the phenomenon of online shopping hate within the context of social commerce. The term "online shopping hate" refers to the negative emotions associated with online shopping experiences. The authors delve into the antecedents of this hate and its consequences, particularly focusing on psychological reactance, which is the adverse reaction individuals experience when they perceive their freedom of choice is threatened or restricted. These may include issues related to privacy concerns, trust deficits, interface complexity, and other aspects of the online shopping environment. The study contributes valuable insights into the dynamics of online shopping hate and psychological reactance within the context of social commerce, offering implications for both theory and practice in e-commerce and consumer behavior research.

Causes of Cognitive Dissonance in Online Purchases of Electronic Goods:
The vast array of brands, models, features, and prices can overwhelm shoppers, leading to uncertainty and indecision. Additionally, the lack of physical interaction with products in an online environment can exacerbate cognitive dissonance, as consumers may struggle to assess the quality, functionality, and suitability of electronic goods based solely on digital representations and descriptions. Several factors contribute to the occurrence of cognitive dissonance during online purchases of electronic goods. One primary factor is the abundance of choices available to consumers. Moreover, factors such as conflicting reviews, price discrepancies, and fear of making the wrong decision can further fuel cognitive dissonance among online shoppers.

Manifestations of Cognitive Dissonance in Online Shopping:
The manifestations of cognitive dissonance during online shopping for electronic goods can vary widely among consumers. Some individuals may experience heightened anxiety and stress as they grapple with conflicting information and choices, while others may exhibit avoidance behaviors, delaying or avoiding the purchase altogether. Moreover, cognitive dissonance can manifest in post-purchase regret and dissatisfaction, especially if the chosen product fails to meet expectations or if buyers encounter issues such as defects, delays in delivery, or poor customer service. These negative experiences can intensify cognitive dissonance and erode trust in online retailers, impacting future purchasing decisions.

Consumer Dissonance of Online Consumer Behavior:
The complexities of emotional influences on consumer behavior, the authors underscore the significance of emotions in shaping attitudes, preferences, and purchasing decisions. They explore how emotions permeate various stages of the consumer decision-making process, from initial product evaluations to post-purchase experiences. Hirschman and Stern (1999)[8] illuminated the pivotal roles of emotion in consumer research. Moreover, Hirschman and Stern shed light on the nuanced interplay between cognitive processes and affective responses, revealing the intricate ways in which emotions inform consumer choices. Through insightful discussions on emotion regulation, emotional branding, and methodological approaches for studying emotions, the authors provide a comprehensive framework for understanding the profound impact of emotions on consumer behavior. This seminal work serves as a cornerstone in the field of consumer research, emphasizing the imperative of incorporating emotional dynamics into theoretical models and empirical investigations. Gautam (2015)[6] focusing on dissonant buying behavior towards cell phones. In the context of consumer behavior, it often arises after a purchase decision, when consumers encounter discrepancies between their expectations and the actual performance or features of a product. Gautam [6] explored the factors contributing to cognitive dissonance among consumers in the context of cell phone purchases. This could include factors such as information overload, the abundance of choices in the market, or discrepancies between advertising claims and actual product performance. The presentation likely discusses how consumers cope with cognitive dissonance following a cell phone purchase. Strategies for reducing dissonance may include seeking reassurance through positive reviews or seeking out additional information to justify their decision. By shedding light on the phenomenon of cognitive dissonance and its impact on consumer behavior in the cell phone market, Gautam's [6] presentation offers valuable insights for marketers and practitioners seeking to understand and address consumer concerns and improve overall satisfaction and loyalty.

Proliferation of e-commerce
Shaouf, Lü, and Li (2016) [13] delve into the influence of web advertising visual design on online purchase intention, with a particular focus on gender differences. The research investigates how various visual design elements of web advertisements impact consumers' intention to make purchases online and whether these effects differ between male and female consumers. The importance of online advertising make understanding the factors influencing consumers' purchase intentions crucial for businesses operating in the digital sphere. One such factor is the visual design of web advertisements, which encompasses elements such as colors, images, layout, and typography. The researchers may have presented participants with various web advertisements featuring different visual designs and measured their responses, including perceived attractiveness, trustworthiness.
The findings of the study reveal several insights into the impact of web advertising visual design on online purchase intention, taking into account gender differences:
1. Visual Design Elements: The research identifies specific visual design elements that significantly influence consumers' purchase intention. These may include factors such as color scheme, imagery style, font choice, and overall layout. Understanding which design elements are most effective in driving purchase intention can inform advertising strategies tailored to different target audiences.
2. Gender Differences: The study explores how the effects of web advertising visual design vary between male and female consumers. It examines whether certain design elements are more persuasive or appealing to one gender over the other. Recognizing these differences allows marketers to customize their advertising content to better resonate with the preferences and behaviors of each gender group.

3. Mediating Factors: The research likely investigates potential mediating variables of web advertising visual design and online purchase intention. These could include factors such as perceived trustworthiness, perceived attractiveness, and emotional responses elicited by the advertisements. Understanding the underlying mechanisms through which visual design influences purchase intention provides deeper insights into consumer decision-making processes.
4. Relationship Marketing and Cognitive Dissonance: The research examines the impact of relationship marketing strategies on reducing cognitive dissonance among customers. By emphasizing personalized communication, attentive service, and consistent interactions, relationship marketing aims to mitigate cognitive dissonance and enhance customers' confidence in their purchase decisions.
5. Trust as a Mediator: Trust serves as a foundation for successful long-term relationships between customers and businesses. Relationship marketing practices, such as transparency, reliability, and responsiveness, contribute to building trust among customers, which in turn influences their satisfaction and loyalty.
6. Satisfaction and Loyalty: Cultivating positive interactions, addressing customer needs, and fostering emotional connections, relationship marketing strategies aim to enhance customer satisfaction and encourage repeat purchases and brand loyalty.

Effects of relationship marketing on cognitive dissonance
Sharifi and Esfidani (2014)[13] explored relationship marketing emphasizes the importance of building long-term, mutually beneficial relationships with customers. It involves strategies aimed at fostering trust, satisfaction, and loyalty among customers through personalized communication, engagement, and service delivery.. The researchers likely measure variables such as customers' perceptions of relationship marketing practices, levels of trust and loyalty.

Cognitive dissonance in post-adoption
Lee and Song (2010)[10] investigated on the relationship between smart phone consumption and product regret. Smart phone have become ubiquitous in contemporary society, influencing various aspects of daily life. However, the rapid evolution of smart phone technology and the plethora of available options may lead to post-purchase regret among consumers. Lee and Song (2010) [10] explored the factors contributing to post-adoption regret among smart phone users, with cognitive dissonance being a central focus. Participants may be asked to rate their level of regret regarding their smart phone purchase and to indicate factors contributing to this regret, such as features, price, or brand reputation. The relationship between smart phone consumption and post-adoption regret, highlighting the role of cognitive dissonance in shaping consumers' perceptions and attitudes. Understanding the factors underlying post-adoption regret can inform marketing strategies aimed at reducing consumer dissatisfaction and enhancing overall satisfaction and loyalty in the smart phone market. Overall, Lee and Song's research contributes valuable insights into the complex dynamics of consumer behavior and decision-making processes in the context of smart phone consumption, emphasizing the importance of addressing cognitive dissonance to mitigate post-adoption regret and improve consumer satisfaction.

Theory of Cognitive Dissonance
Novak, Hoffman, and Yung (2000) [11] develop a conceptual framework that identifies key components of the online customer experience and their interrelationships. These components may include website design, usability, interactivity, service quality, trust, and satisfaction. By employing structural equation modeling (SEM), they aim to quantitatively assess the impact of these factors on overall customer experience and satisfaction. The study likely involves data collection through surveys or questionnaires administered to online shoppers. Participants may be asked to rate their perceptions of various aspects of the online shopping experience, such as website design, ease of navigation, responsiveness of customer service, and overall satisfaction with their purchase. Through their structural modeling approach, Novak, Hoffman, and Yung aim to uncover the underlying relationships between different elements of the online customer experience.. By identifying the factors that contribute most significantly to customer satisfaction and loyalty, companies can prioritize investments in website design, customer service, and other aspects of the online shopping experience to maximize customer value and retention. Novak and Yung's (2000) [11] consumer behavior, offering a rigorous methodological approach to understanding and measuring the customer experience in online environments.

Analysis, Presentation and Results
Relationships between the nature of the respondents and attitude towards Online Purchases
Age group plays a significant role in determining the level of attitude towards online shopping for electronic goods. Gen Z, often exhibit a higher level of comfort and acceptance towards online shopping due to their digital upbringing and tech-savvy nature. They are more inclined to explore various online platforms, compare prices, read reviews, and make purchases without hesitation. In contrast, older age groups, particularly baby boomers and the elderly may harbor more skepticism and resistance towards online

shopping, especially when it comes to electronic goods. They may prefer traditional brick-and-mortar stores, valuing the tactile experience and face-to-face interactions. However, as technology continues to advance and online security measures improve, even older demographics are gradually warming up to the idea of purchasing electronic goods online. Overall, while age influences attitudes towards online shopping, factors such as individual experiences, convenience, and perceived risks also contribute to shaping consumer behavior in this digital era.
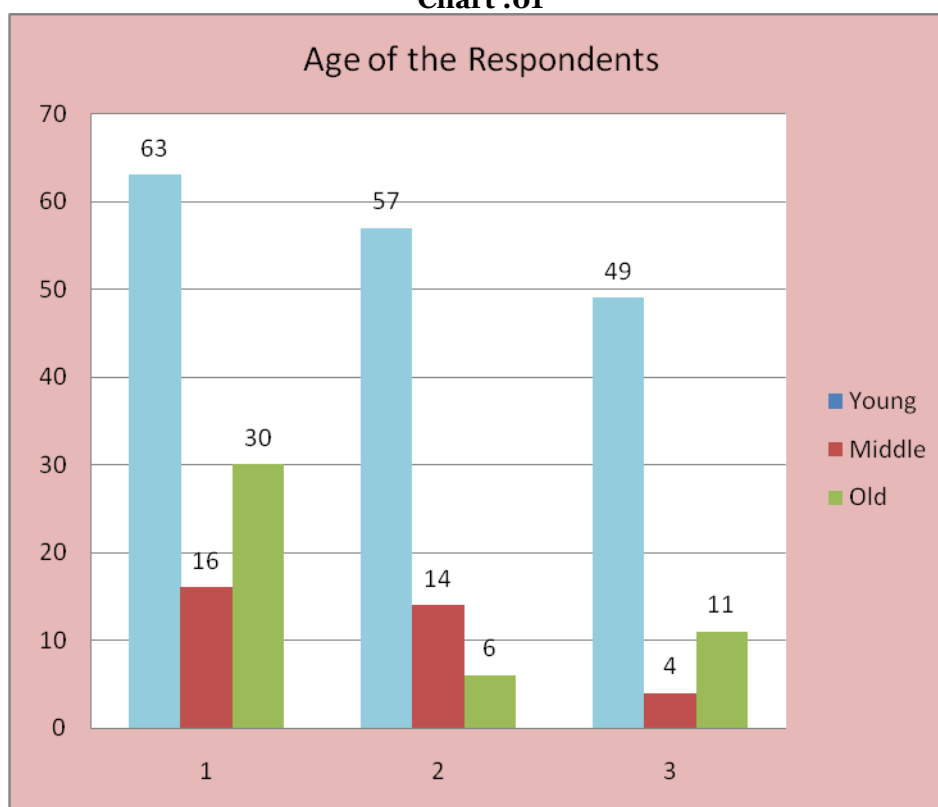
Table 1 Distribution of the respondents according to the Age and Level of Attitude: Chi-Square Test

Age group	Level of attitude			Total
	Low	Average	High	
Young	63 (37.3%)	57 (33.7%)	49 (29.0%)	169 (100.0)
Middle	16 (47.1%)	14 (41.2%)	04 (11.8%)	34 (100.0)
Old	30 (63.8%)	6 (34.5%)	11 (36.3%)	47 (100.0)
Total	109 (43.6%)	77 (30.8%)	64 (25.6%)	250 (100.0)

Figures in the parentheses denote percentage; χ2-14.265; CC-0.162; df-4; Sig-0.001

The Table 1 reveals that most of the young respondents (37.3%) are having high attitude and less percentage (29.0%) of the young respondents are in the low attitude group. Majority (47.1%) of the middle age respondents are having better attitude towards the online shopping and only (11.8%) of the middle age respondents are in the less attitude group. It is found that low level of attitude and age of the respondents are increasing and vice versa.

Chart :01

The Chi-square test is applied to find the relationship between the age group and the level of attitude. The calculated Chi-square value (14.265) is more than the table value for the degree of freedom 4. Hence, the significance value (0.001) is less than 0.01. It rejects the framed null hypothesis at 1% level of significance. It is concluded that there is a significant relationship between age and attitude. The Contingent coefficient value (0.162) shows the relationship between the age and attitude is significantly correlated. Hence, it is concluded that the positive attitude towards online shopping is found with young respondents than the old age respondents. The relationship is also shown the following chart.

H0: There is no significant difference in the opinion of the respondents on the Online Purchases of electronic goods based on their cluster. The hypothesis is tested with the help of ONE WAY Anova.

Table 2 Relationship between the respondents of different clusters and their opinion about the Online Purchases of electronic goods

Clusters	N	Mean	Std. Deviation	F	Sig.
1	109	68.6812	9.57673		
2	77	80.6987	8.53415	3.167	0.015**
3	64	76.6321	9.12517		
Total	250	82.2317	9.92058		

** Significance at 5% level

The Table 2 clearly shows that the respondents in the cluster 2 have high mean (80.6987) than other cluster respondents. Cluster 1 has (68.6812) and Cluster 3 has 76.6321. The Cluster 2 also has lowest standard deviation (8.53415). It shows that the opinions of the Cluster 2 respondents towards impact on online Purchases of electronic goods do not vary much like other cluster respondents.

The difference in the mean score is also found significant with the help of One Way Anova. The F value is 3.167 which are more than the table value. The P value (0.015) shows a significant difference at 5% level (<0.05). Hence, it is concluded that the opinion of the Cluster 2 respondents (as shown in the two step cluster) is higher about the impact on online Purchases of electronic goods

Practical implications

The study offers practical implications for businesses and advertisers seeking to optimize the effectiveness of their online advertising campaigns. By leveraging insights from the research, companies can design web advertisements that are more engaging, persuasive, and conducive to driving consumer behavior. Tailoring advertising strategies to align with gender preferences and utilizing effective visual design elements can enhance the overall impact of online advertising efforts. The study offers practical implications for businesses seeking to implement effective relationship marketing strategies. By understanding the mechanisms through which relationship marketing influences cognitive dissonance, trust, satisfaction, and loyalty, companies can tailor their marketing efforts to build stronger relationships with customers, increase trust and satisfaction levels, and ultimately enhance customer loyalty and retention. From a business perspective, understanding and addressing cognitive dissonance among online shoppers is crucial for maintaining customer satisfaction and loyalty. Businesses that fail to acknowledge the challenges faced by consumers during the online purchasing process risk losing customers to competitors who offer more transparent and supportive shopping experiences. Therefore, companies must invest in strategies to mitigate cognitive dissonance, such as providing detailed product information, offering flexible return policies, and facilitating customer support channels. Moreover, fostering trust and credibility through authentic reviews, testimonials, and transparent pricing can help alleviate consumer uncertainty and reduce cognitive dissonance, ultimately enhancing the overall shopping experience and driving repeat business.

Conclusion

Cognitive dissonance poses significant challenges for consumers and businesses engaged in online purchases of electronic goods. The abundance of choices, lack of physical interaction, and fear of making the wrong decision contribute to the manifestation of cognitive dissonance among online shoppers. Understanding the causes and implications of cognitive dissonance is essential for devising effective strategies to alleviate consumer uncertainty and enhance the online shopping experience. By addressing consumer concerns, fostering trust, and providing transparent and supportive shopping environments, businesses can mitigate cognitive dissonance and cultivate long-term relationships with customers in the ever-evolving landscape of e-commerce. Shaouf, Lü, and Li's (2014) [13] contributed valuable insights in shaping online purchase intention, with a nuanced examination of gender differences. By identifying effective design elements and understanding their differential effects on male and female consumers, the research offers practical guidance for advertisers aiming to maximize the effectiveness of their online advertising efforts in an increasingly competitive digital landscape. Sharifi and Esfidani's (2014) [13] elucidating the mechanisms through which relationship marketing practices influence customer perceptions and behaviors, the research offers guidance for businesses aiming to cultivate long-term customer relationships and drive sustainable growth.

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