

ASSESSING THE INFLUENCE OF NUDGE MARKETING ON CONSUMER DECISION MAKING IN E-COMMERCE: AN EXPLORATORY STUDY IN AHMEDABAD CITY

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ABSTRACT

This study examines the impact of Nudge Marketing on consumer decision-making in the e-commerce industry, specifically in Ahmedabad city, India. Nudge Marketing is a strategy that uses subtle suggestions and reinforcements to influence consumer behaviour, and it has become increasingly popular in e-commerce. The study aims to explore the effectiveness of Nudge Marketing strategies, their potential implications, and their association with consumer behaviour and decision-making. The research employs an exploratory research design and collects data through the use of a questionnaire and personal interviews with 193 respondents selected through convenience sampling. The findings indicate that Nudge Marketing techniques have an association with consumer behaviour and decision-making, but their perception significantly impacts purchasing decisions. It is crucial to balance the use of Nudging with ethical considerations to avoid adverse effects. The study highlights the importance of a consumer-centric approach in Nudging and provides valuable insights for retailers looking to enhance their marketing efforts. Additionally, the research contributes to the ongoing discussion around the effectiveness of Nudge Marketing in the e-commerce industry and provides information for regulators and policymakers on how to formulate guidelines for companies to follow when using Nudging as a marketing tool.

Keywords: Nudge Marketing, Consumer decision making, Consumer Behaviour, E-commerce

1) INTRODUCTION

From The e-commerce industry has witnessed a remarkable surge in recent years, and Nudge Marketing has emerged as a powerful tool for companies to influence consumer decision-making. Nudging is a technique used to subtly suggest and reinforce consumer behaviour to influence their decision-making process. This has become an integral part of e-commerce companies' strategies to attract customers since the longer a customer takes to think, the less likely it is for a company to sell its products. However, while Nudging has proven to be effective in increasing conversion rates, its negative aspects have not been given adequate attention. Nudging must be implemented carefully since it can backfire and lead to adverse effects that could damage the company's image in consumers' minds.

One of the significant issues with Nudging is that it relies on a one-dimensional mental model of consumer behaviour, which downplays consumers' ambitions and skills. Furthermore, Nudging is non-consumer centric, meaning it only influences behaviour until the consumer has made a purchase. After that, it does nothing to promote healthy behaviour or help consumers achieve their long-term goals. Achieving such outcomes requires a mesh of healthy behaviours that is enforced over a long-time frame. Additionally, Nudging is challenging to get right and can result in dissatisfied customers if implemented too strongly or weakly.

Moreover, the expansion of the internet and increased media coverage have made consumers resistant to the effects of Nudging. Therefore, companies need to take these issues into account to ensure that Nudging does not negatively impact consumer decision-making capability and overall consumer behaviour. This research aims to assess the influence of Nudge Marketing on consumer decision-making in e-commerce through an exploratory study in Ahmedabad City. The study will explore the effects of Nudging on consumer behaviour and decision-making, the potential risks and benefits of using Nudging in e-commerce, and how companies can effectively implement Nudging to influence consumer behaviour.

2) LITERATURE REVIEWS

- **Muhammad Umar Sultan and MD Nasir Uddin, (2011)** conducted research on "Consumers' Attitude towards Online Shopping" and found that website design and features were the most influential factors for online shoppers in Gotland, Sweden, followed by convenience and time-saving. The study also highlighted the significant concern for online security among the consumers.
- **Yashar Saghai, (2012)** investigated "Salvaging the concept of nudge" and concluded that some health-affecting choices are fundamental for leading a self-determining life and ought to be non-controlled by others. The author argues that the principle of the least restrictive alternative is invalid when public authorities interfere with liberties that have no presumptive weight. The article explores whether and why nudges should be preferred to equally non-controlling incentives and disincentives. The research aims to rethink the scope of application of the principle of the least restrictive alternative in the ethics of nudging.
- **Skarzauskiene, Aelita & Glaveckaitė, Živilė & Gulevičiūtė, Gintarė. (2015)** examined "E-commerce factors influencing consumers' online shopping decision" and found convenience, simplicity, and price to be the major motivators for online shopping. The research, which surveyed 183 Lithuanian online shoppers, revealed that men were more likely to shop online for lower prices, while younger respondents chose online shopping for product variety. The study concluded that effective e-marketing strategies should focus on these factors.
- **Janette Hanekom & Rachel Barker, (2016)** proposed new theoretical criteria for understanding online consumer behaviour through determinants, decision-making, information processing, and the foundations of online consumer behaviour. Their approach promotes a better understanding of consumer behaviour in the online environment through web-based communication exposure and internal psychological behavioural processes. The authors concluded that the proposed criteria provide a new perspective on online consumer behaviour and improve its theoretical underpinnings.
- **Djordje Djurica and Kathrin Figl, (2017)** researched the impact of digital nudging techniques on customers' attitudes towards e-commerce sites and product choice processes. They found that product ratings had a positive influence on users' attitudes and product choices, while purchase pressure cues had a negative impact on customers' assessment of e-commerce sites. Their study revealed that digital nudging techniques can significantly affect customers' decision-making processes, with different techniques having varying degrees of impact. The use of product ratings was identified as a critical factor in influencing consumers' purchase decisions.
- **Hanna Willman-livarinen, (2017)** conducted research on "The Future of Consumer Decision Making," which found that social media's increasing power affects consumer choices. The study concluded that consumers' decisions are driven by identity play, self-branding, and gaining social currency. Additionally, decision-making context changes such as time pressure and endless options influence decision-making strategies, which vary depending on the social potential of the product.
- **Sandra Bammert, Ulrich Matthias König, Maximilian Roeglinger, and Tabitha Wruck, (2020)** explored the potential of digital nudging for business processes. They found that traditional process improvement methods are not suitable for today's rapidly changing business environments and digital nudging can serve as an agile alternative. The study suggests that digital nudging can influence the decision-making process of participants, thereby improving how things are done and opening up process improvement opportunities.
- **Gal and Simonson, (2020)** conducted a study on predicting consumer choices in the digital age, analysing the capabilities of traditional and modern tools for prediction. They concluded that while advanced machine learning methods and big data can improve predictions in certain contexts, predicting consumer choices, particularly for new and non-habitual decisions, remains challenging. The study found that in some cases, prediction has become harder due to the influence of just-in-time information at the point of decision that cannot be anticipated.
- **Riaz, Muhammad, Guang, Luo, Zafar, Maria, Shahzad, Fakhar, Shahbaz, Muhammad, and Lateef, Majid(2020)** studied the factors influencing consumers' purchase intention and decision-making process through social networking sites in Pakistan. They proposed a theoretical model based on social learning theory and found that social commerce constructs, emotional and informational support were significant predictors of social support constructs. The authors suggested that social commerce constructs and social support should be a priority for managers of social commerce sites to increase consumers' purchase intention.

- **Ben Reuven Tochner, (2021)** studied the efficacy of chatbots in lead generation for B2B companies and found that chatbots are more effective in obtaining high-quality and less costly lead information than traditional lead forms. The study also found that business salient avatars improve the quality of leads acquired, although their impact on marketing performance was mixed. Tochner concluded that using chatbots with avatars can address common challenges in lead generation campaigns and improve customer acquisition strategies.

- **Verma, Suraj & Rojhe, Kuldeep & Horska, Elena & Sharma, Somesh & Šedík, Peter, (2023)** conducted a study on Consumer Decision-Making Rules for FMCG Products—Study of Rural in North India. The study concludes that rural consumers' decision-making rules are influenced by their educational backgrounds and the number of family members under the age of 18 years. The findings suggest that marketers should design their marketing strategies for FMCG products, considering the needs and demands of rural residents.

3) RESEARCH METHODOLOGY

- **Research Design:** This is a Quantitative Research and Descriptive in Nature.
- **Data Collection Sources: Primary Data** is collected through a survey among the consumers from Ahmedabad city of Gujarat State using a Questionnaire method with close-ended questions framed according to the objectives of this study and personal interviews method as well. **Secondary Data** is collected from different books, journals, research papers and websites over internet.
- **Data Tools & Techniques:** Various Non-Parametric tests are applied using SPSS software.
- **Sampling Technique:** The Convenience Sampling Method is used for this research.
- **Sampling Area:** The research is based on the respondents of Ahmedabad city, Gujarat.
- **Sample Size:** The sample size is 193 respondents

4) SCOPE OF THE STUDY

- The e-commerce industry in India has experienced tremendous growth in recent years, primarily due to the rise in internet penetration, smartphone usage, and disposable incomes.
- The COVID-19 pandemic has further accelerated the adoption of e-commerce. However, with increased competition, it has become challenging for e-commerce firms to attract and retain customers. To this end, nudge marketing has gained prominence as a strategy to influence consumer decision-making.
- This study aims to explore the potential of nudge marketing in the Indian e-commerce industry to improve conversion rates. It will provide valuable insights into the effectiveness of nudge marketing strategies and help companies tailor their marketing efforts.
- The study is expected to contribute to the ongoing discussion and provide insights for retailers to enhance their marketing efforts.

5) OBJECTIVES OF THE STUDY

- To determine the influence nudge marketing techniques, have on consumer purchasing decisions.
- To investigate the relationship between consumer age and the level of influence nudge marketing techniques have while shopping online.
- To examine the relationship between consumer gender and the level of influence nudge marketing techniques have while shopping online.
- To examine the relationship between the frequency of consumer shopping online and their level of influence by nudge marketing techniques.
- To identify the impact of different nudge marketing techniques on the consumer decision making.
- To explore the impact of consumer's perception about the Nudge marketing technique, whether it is helpfulness or manipulative on consumers decision making.

6) LIMITATIONS OF THE STUDY

- The lack of awareness about Nudge Marketing technique among people was a major limitation. To overcome this, a small briefing about the technique and supporting examples was given to participants before conducting the survey.
- Another limitation was the reluctance of people to participate in the survey, as they perceived it as a waste of time.
- The study may have been influenced by the social desirability bias, which occurs when respondents provide answers that they believe are socially acceptable, rather than their true opinions.
- The study may have influenced by the Hawthorne effect, where participants may have modified their behaviour due to the knowledge that they are being observed, could have affected the results of the study as well.
- Lastly, it is important to note that the study's scope was limited to the short-term impact of Nudging on consumer decision-making, and the long-term effects were not examined.

7) DATA ANALYSIS – INFERENCE STATISTICS

1. To determine the influence nudge marketing techniques, have on consumer purchasing decisions in the e-commerce industry of Ahmedabad City.

H0: There is no significant association between the Nudge Marketing techniques and the consumer purchasing decisions in the e-commerce industry of Ahmedabad City.

H1: There is a significant association between the Nudge Marketing techniques and the consumer purchasing decisions in the e-commerce industry of Ahmedabad City.

(Table showing Chi-Square Test)

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	149.225 ^a	12	.000
Likelihood Ratio	103.040	12	.000
Linear-by-Linear Association	67.465	1	.000
N of Valid Cases	193		

(Sources: Research Output)

INTERPRETATION: The **Chi-Square test** is applied on the two variables to check the association between them. The Chi-Square p-values is 0.000 which is less than the significance level (0.05), hence, we can say that there is statistically significant relationship between both the variables. So, the Null Hypothesis is **Null Hypothesis is failed to be accepted.**

Hence, it can be concluded that there is significant relationship between the Nudge Marketing techniques and the consumer purchasing decisions in the e-commerce industry of Ahmedabad City.

2. To investigate the relationship between consumer age and the level of influence nudge marketing techniques have while shopping online in e-commerce industry of Ahmedabad city.

H0: There is no significant association between the consumers age and the level of influence nudge marketing techniques have while shopping online in e-commerce industry of Ahmedabad city.

H1: There is a significant association between the consumers age and the level of influence nudge marketing techniques have while shopping online in e-commerce industry of Ahmedabad city.

(Table showing Chi-Square Test)

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)

Pearson Chi-Square	2.421 ^a	5	.788
Likelihood Ratio	2.200	5	.821
Linear-by-Linear Association	.681	1	.409
N of Valid Cases	193		

(Sources: Research Output)

INTERPRETATION: The **Chi-Square test** is applied on the two variables to check the association between them. The Chi-Square p-values is 0.788 which is more than the significance level (0.05), hence, we can say that there is no statistically significant relationship between both the variables. So, the **Null Hypothesis is Accepted**.

Hence, it can be concluded that there is no significant relationship between the consumers age and the level of influence nudge marketing techniques have while shopping online in e-commerce industry of Ahmedabad city.

3. To examine the relationship between consumer gender and the level of influence nudge marketing techniques have while shopping online in e-commerce industry of Ahmedabad city.

H0: There is no significant association between the consumers gender and the level of influence nudge marketing techniques have while shopping online in e-commerce industry of Ahmedabad city.

H1: There is a significant association between the consumers gender and the level of influence nudge marketing techniques have while shopping online in e-commerce industry of Ahmedabad city.

(Table showing Chi-Square Test)

Chi-Square Tests							
	Value	df	Asymp. Sig. (2-sided)	Exact sided)	Sig. (2-	Exact sided)	Sig. (1-
Pearson Chi-Square	2.925 ^a	1	.087				
Continuity Correction ^b	2.331	1	.127				
Likelihood Ratio	3.061	1	.080				
Fisher's Exact Test				.100		.061	
Linear-by-Linear Association	2.910	1	.088				
N of Valid Cases	193						

(Sources: Research Output)

INTERPRETATION: The **Chi-Square test** is applied on the two variables to check the association between them. The Chi-Square p-values is 0.087 which is more than the significance level (0.05), hence, we can say that there is no statistically significant relationship between both the variables. So, the **Null Hypothesis is Accepted**.

Hence, it can be concluded that there is no significant relationship between the consumers gender and the level of influence nudge marketing techniques have while shopping online in e-commerce industry of Ahmedabad city.

4. To examine the relationship between the frequency of consumer shopping online and their level of influence by nudge marketing techniques in e-commerce.

H0: There is no significant correlation between the frequency of consumer shopping online and their level of influence by nudge marketing techniques in e-commerce.

H1: There is a significant correlation between the frequency of consumer shopping online and their level of influence by nudge marketing techniques in e-commerce.

(Table showing Pearson Correlation Test)

Correlations			
		Frequency Of the consumer shopping online	Consumers getting Influenced by certain Marketing strategies while shopping online
Frequency consumer online	Of the shopping	Pearson Correlation	1
		Sig. (2-tailed)	.092
		N	193
Consumers getting Influenced by certain Marketing strategies while shopping online		Pearson Correlation	-.122
		Sig. (2-tailed)	.092
		N	193

(Sources: Research Output)

INTERPRETATION: Here the **Pearson correlation test** is applied to check the relationship between frequency of consumer shopping online and their level of influence by nudge marketing techniques. The correlation p-values is

0.092 for both the variables, which is more than the significance level (0.05), hence, we can say that there is no statistically significant relationship between both the variables. So, the **Null Hypothesis is Accepted**.

Hence, it can be concluded that there is no significant relationship between the frequency of consumer shopping online and the level of influence by nudge marketing techniques.

5. To identify the impact of different nudge marketing techniques on the consumer decision making in the context of Ahmedabad City.

H0: There is no significant impact of different nudge marketing techniques on the consumer decision making in the context of Ahmedabad City.

H1: There is a significant impact of different nudge marketing techniques on the consumer decision making in the context of Ahmedabad City.

(Table showing Regression Analysis from ANOVA)

ANOVA^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	17.106	8	2.138	2.615	.010 ^b
	Residual	150.459	184	.818		
	Total	167.565	192			

a. Dependent Variable: Likeliness of the consumer making a purchase when they see a nudge marketing technique being used

b. Predictors: (Constant), Default option, Product recommendations based on previous purchases, Free shipping above a certain amount, Framing, Authority, Limited time offer, Social proof, Scarcity

(Sources: Research Output)

INTERPRETATION: To check the impact of different Nudge Marketing techniques on the consumers on the consumer decision making, **Linear Regression analysis** is used. The dependent variable, Likeliness of the consumer making a purchase when they see a nudge marketing technique being used is regressed on the independent variable which is different Nudge Marketing techniques i.e., Default option, Product recommendations based on previous purchases, Free shipping above a certain amount, Framing, Authority, Limited time offer, social proof, Scarcity. The **ANOVA table** analysis shows that regression significance or p-value is 0.10 which is more than the significance level (0.05). There is sufficient statistical evidence to conclude that there is no significant relationship between both variables. So, the **Null Hypothesis is Accepted**.

Hence, it can be concluded that there is no significant impact of different nudge marketing techniques on the consumer decision making.

6. To explore the impact of consumer's perception about the Nudge marketing technique, whether it is helpfulness or manipulative on consumers decision making in Ahmedabad City.

H0: There is no significant impact of consumer's perception about the Nudge marketing technique on consumers decision making in Ahmedabad City.

H1: There is a significant impact of consumer's perception about the Nudge marketing technique on consumers decision making in Ahmedabad City.

(Table showing Regression Analysis from ANOVA)

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	16.083	1	16.083	20.279	.000 ^b
	Residual	151.482	191	.793		
	Total	167.565	192			
a. Dependent Variable: Likeliness of the consumer making a purchase when they see a nudge marketing technique being used						
b. Predictors: (Constant), Consumer's perspective on whether the Nudge Marketing techniques are helpful or manipulative						

(Sources: Research Output)

INTERPRETATION: To check the impact Consumer's perspective on whether the Nudge Marketing techniques are helpful or manipulative on the Likeliness of the consumer making a purchase when they see a nudge marketing technique being used, **Linear Regression analysis** is used. The dependent variable, Likeliness of the consumer making a purchase when they see a nudge marketing technique being used is regressed on the independent variable which is Consumer's perspective on whether the Nudge Marketing techniques are helpful or manipulative. The **ANOVA table** analysis shows that regression significance or p-value is 0.000 which is less than the significance level (0.05). There is sufficient statistical evidence to conclude that there is significant relationship between both variables. So, the **Null Hypothesis is failed to be accepted**.

Hence, it can be concluded that there is a significant impact of consumer's perception about the Nudge marketing technique on the consumer's decision making.

8) FINDINGS

- This study focuses on the Nudge marketing techniques and its influence on consumer decision making in e-commerce.
- Using Inferential Analysis, Chi-Square test concluded that there is significant relationship between the

Nudge Marketing techniques and the consumer purchasing decisions in the e-commerce industry.

- Chi-Square test concluded that there is no significant association between the consumers age and the level of influence nudge marketing techniques have while shopping online.
- Using Chi-Square test it was concluded that there is no significant relationship between the consumers gender and the level of influence nudge marketing techniques have while shopping online.
- Pearson Correlation concludes that there is no significant relationship between the frequency of consumer shopping online and the level of influence by nudge marketing techniques.
- Regression analysis concludes that there is no significant impact of different nudge marketing techniques on the consumer decision making.
- Regression analysis helped in concluding that there is a significant impact of consumer's perception about the Nudge marketing technique on the consumer's decision making.

9) SUGGESTIONS

- Marketers should be strategic in their use of Nudge Marketing techniques, as they may not be effective for all consumers.
- Since consumers' perception of Nudge Marketing techniques impacts their purchasing decisions significantly, Avoid overusing Nudge Marketing techniques. Marketing heads should focus on developing strategies that are perceived positively by the target audience.

10) CONCLUSION

The data analysis using different Non-parametric tests have concluded that there is no association between the Age & Gender of the consumers and the level of influence that nudge marketing techniques have on their online shopping behaviour. However, there is a significant association between nudge marketing techniques and consumer purchasing decisions in the e-commerce sector. The study also reveals that there is no significant relationship between the frequency of consumers' online shopping and the impact of nudge marketing techniques on their purchasing behaviour. Additionally, the study suggests that the use of nudge marketing techniques does not directly lead to consumers making a purchase when they encounter such techniques. Rather, their perception of the nudge marketing technique plays a crucial role in their decision-making process. It is important to note that while nudge marketing techniques are associated with consumer purchasing decisions in e-commerce, relying solely on such techniques may not have a significant impact on consumer behaviour.

However, Nudge marketing is emerged as a new concept in the field of marketing and it's not much explored so there is immense scope of further research on the topic. The study also acknowledges its limitations, such as the focus on a particular geographic region and the use of a specific methodology. Future research could explore these issues further, and investigate what are the other factors affecting, if taken care of, along with Nudge Marketing, can have significant impact on consumer's purchasing decision.

Overall, this research project sheds new light on the potential of Nudge Marketing as a powerful tool for driving consumer behaviour. By leveraging this technique properly, businesses can significantly improve their marketing efforts and ultimately boost sales. Therefore, these findings offer valuable insights for marketers seeking to enhance their marketing strategies and effectively influence consumer decision-making.

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