

The Role of Cognitive Influences in Digital and Social Media Marketing on Shaping Consumer Decisions"

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ABSTRACT

Consumer is taking more and more the digital approach it is possible that cognitive factors have a strong influence on the consumer decision-making process and therefore researchers need to incorporate such variables into the construction of relevant marketing theories. The purpose of this work is to investigate cognitive biases and digital marketing approaches in the context of consumers' decision making, with regard to digital and social media. The research examines five primary variables: cognitive biases, digital marketing strategies, digital media features, social media engagement, content types – outlining the analytical connection between all those elements and consumer's decision making. The research on the topic applies the quantitative research technique, complemented by a structured questionnaire used on 200 participants. Descriptive statistics point out trends demonstrated in the impact that various information biases like anchoring, confirmation and availability, make on consumers. Path analysis is utilized in order to establish the degree of association between the independent variables that are digital marketing methods, characteristics of digital media, social media activities, and types of content on the one hand and the dependent variable, which is the consumer decision-making on the other hand. This research shows that social networking has the greatest influence on consumers' decisions, then the cognitive bias and the digital marketing approaches. Digital media features and content types have a relatively smaller but significant impact of their own. The study therefore reveals a need to involve cognitive clues in the establishment of effective digital marketing techniques. It also stresses the importance of continuous investigation of new features in digital media and repercussions on consumer trends.

The findings of the study are useful for marketers interested in adjusting their approaches to reflect the stronger alignment of cognitive factors and consumers' preferences. Future work should focus on new cognitive biases that can be relevant, new forms of digital technologies, and their impact on people as well as cultural differences to expand the knowledge and implementation of related concepts. This near-mutual, multi-pronged approach will help develop more adequate and ethically-performant marketing strategies in the increasingly dynamic and digital environment.

KEY WORDS: Cognitive Influences, Digital Marketing, Social Media Marketing, Consumer Behavior, Decision-Making

INTRODUCTION

Currently, marketing is not the same as it was before the dawn of digital and social media that is now a huge part of people's lives. There are much digital and social media activities that add to or even replace traditional marketing strategies using large data and other technologies. Entailing these contemporary concepts of marketing therefore hinged upon what cognitive factors that regulate the behavior of consumers.

Cognitive psychology greatly helps to understand how people receive information, make judgments and decisions. These psychological principles are applied in the use of digital and social media marketing to develop appealing messages that

would appeal to the customers. On such a basic level, it illustrates how, with an understanding of cognitive activities, it is possible to design communication that would not only attract attention but also alter people's decisions.

Social proof is one of the cognitive factors which is based on the usage of the notion that individuals obey the actions of others. In the framework of digital marketing, the latter is present in the form of user reviews, testimonials, and endorsements on social media platforms, which may greatly influence the trust of a customer and his/her decision-making processes. Like in the case of primacy effect, anchoring is another technique used in which a certain values such as high initial price set to which consumers' perception is anchored to thereby determining their decision to purchase or otherwise. Sharing takes advantage of the ability of humans to return a favour, often used in digital marketing strategies, comprising of offering free content, trials, or samples. Consumers who get something for free are likely to pay back in somehow making them good targets for a call to action. It either informs consumers that a product or an offer is rare, or it uses time as a tool and tells consumers that the offer is time-sensitive and they have to purchase the product urgently.

Apart from these principles, commitment and consistency appeal to the people's self-interest to ensure that they remain loyal to a particular course of action or a certain set of words. This principle is common among digital marketers who will seek to establish small stages of engagement that lead to bigger commitments. Authority works with the concept of having expertise and using endorsement to change consumers' perceptions while liking uses the concept of attractiveness to sway consumers.

Framing influences the manner in which information is communicated keeping in mind the overall impact that it can have of presenting information in a positive or negative manner. Emotional appeals appeal to people's emotions in order to control the target consumer's choices and deliver outstanding messages that would make an impression. Moreover, cognitive dissonance and priming are applied in case there are conflicting attitudes or beliefs of consumers or to manipulate the consumers' decision making process unconsciously.

The use of nostalgia in marketing directs consumers' attention to the past and its positive connotations as a way of offering products or brands. While, Herd behaviour and FOMO capitalise more on the social pressure and the scarcity notion that creates consumers' action.

Hence by identifying and utilising these cognitive influence, marketers are better placed to develop more effective and compelling digital and social media communications. This paper is going to focus on identifying the specific cognitive factors that come into play to influence consumer decisions and provides a detailed discussion as to their applications and consequences in the current context of the field of marketing. Thus, in the course of this study, the aim is to furnish relevant knowledge for the formation of a variety of marketing approaches compatible with the psychological attitude of consumers to improve the overall outcomes in marketing.

Nature and Scope of the Study

On this premise, the nature of this study is centered on establishing the manner in which cognitive factors affect consumers' decision-making processes within the context of digital and social media marketing. It is meant to investigate the psychological processes by which marketing communications influence consumers' perceptions, evaluations and response. Using the categories rooted in cognitive psychology like social proof, anchoring, reciprocity and scarcity this research aims to investigate how these concepts are used at the online platforms to influence consumers and make them more active. The present study builds on the relationship between cognitive psychology and marketing strategies and goals to determine how several cognitive biases and processes are included in designing efficient digital and social media campaigns.

The extent of the research is therefore general in the sense that it covers a wide range of cognitive considerations on different forms of digital and social media marketing techniques. On the positive side, it encompasses discussion of how these principles are operationalised within certain contexts and this comprise social media, e-commerce and digital advertising. The range of cognitive factors in the study includes the influence of social proof and authority on brand trust and the effect of appeal to emotion and scarcity on consumer "need for action." Through the assessment of these elements, the research seeks to present a clear and exhaustive analysis of how cognitive influences can in fact be managed in a manner that will positively impact the marketing efforts. Furthermore, the coverage includes real-life implications for marketers, as the work explains how to create campaigns compatible with cognitive models for the purpose of consumers' effective interaction and decision-making.

Significance of the Study

The contribution of this study therefore is in proposing a link between cognitive psychology and digital marketing that is capable of providing insights into how the cognitive contributes to consumer behavior in the current and growing digital marketing environment. In this way, the results of this paper make a significant contribution in exploring the influence of cognitive principles, including social proof, reciprocity, and scarcity, on consumers' behaviour. Gaining this knowledge is helpful especially to the marketers who are aspiring to be more compelling and persuasive in order to create better marketing campaigns that will appeal to the targeted market. By knowing these cognitive influences, marketers can then use it to their advantage in persuading the consumers with the right message and strategy to increase their engagement of the product, boosting the conversion rates and making the consumers more loyal to the brand. Thus, the study provides

operational recommendations for effective usage of digital and social media marketing, thus advancing the area of marketing by involved psychological factors into shaping digital strategy.

Literature Review

1. **Krosnick, J. A. , & Petty, R. E. (2024):**Krosnick and Petty discuss various modern day uses of cognitions including the ones depicted below: Anchoring, framing and availability heuristics in the digital promotional context. In this aspect, they newer literature with real-life examples from the digital marketing context that elucidates how these cognitive bias is intentionally applied to manipulate the consumer behavior and thus enhances the effectiveness of the marketing strategies in the online marketing platforms.
2. **Hwang, J. , & Kim, Y. (2022):**examines how various psychological factors, including social proof, and authority triggers the consumer's actions on the digital platforms. Hwang and Kim review user-generated content, online reviews and influencers' endorsement and examine consumer trust and purchasing decision, supporting the effectiveness of those biases in the engagement and conversion rates in the digital marketing.
3. **Smith, A. N. , Fischer, E. , & Yong, K. (2021):**Analyzing the possibilities of emotional appeal and cognitive dissonance as the factors influencing consumers' reactions to digital marketing, Smith, Fischer, and Yong provide the readers with an understanding of how these elements can be useful in the given context. In their study, they establish how marketers leverage on the use of emotions in producing positive attitudes toward brands and dealing with the consumers' regret, thus, affecting buyers' satisfaction and commitment via social media platforms.
4. **Nguyen, B. , Simkin, L. , & Canhoto, A. (2020):**concentrates on cognitive aspect of social proof, reciprocity, and scarcity in social media marketing. These biases are used by Nguyen, Simkin, and Canhoto to explain how social media interactions can be used to improve marketing communications and obtain consumers' perceptions and decisions, giving a broad overview of how these interactions should be designed.
5. **De Vries, L. , Gensler, S. , & Leeftang, P. S. H. (2018):**De Vries and others investigate examples of how social media marketing strategies apply cognitive notions like social proof and time scarcity. In their studies, they are able to assess the application of these principles in motivating the consumers, showing how they lead to increased activity levels and better click through rates in the social media.
6. **Kotler, P. , & Keller, K. L. (2016):**synchs aspects such as framing and commitment with traditional and digital marketing techniques. Kotler and Keller further bring out how these cognitive influences impact on the consumer and the implications marketers can gain by applying the principles when developing campaign messages across the media platforms.
7. **Berger, J. (2016):**Jonah Berger explores social influence factors including social norms, emotions and heath elements to explain the process of making something go viral marketers. By these principles, Berger's research reveals the strategies for creating informative digital material by helping people engage and share content.
8. **Kahneman, D. (2011):**offers an in-depth exploration of cognitive biases and decision-making processes, including anchoring, availability heuristic, and framing. Daniel Kahneman's dual-system theory of thought provides foundational insights into how these biases affect consumer behavior, offering valuable context for applying cognitive principles in digital and social media marketing strategies.
9. **Solomon, M. R. (2009):**discusses the role of cognitive variables such as appeals to emotion, herd instinct, and identification on consumers' choices. These principles have been defined by Solomon and presented in a broad context to incorporate not only the conventional and digital marketing environments in terms of the manner, consumers engage with brands.
10. **Cialdini, R. B. (2006):**walks the reader through some fundamental concepts including, amongst others, social proof, reciprocity and scarcity. To a layman, Cialdini's basic and original research specifies how these cognitive aspects influence consumer actions, providing the background knowledge on how they are relevant to modern day digital and social media marketing strategies.
11. **Bagozzi, R. P. , & Dholakia, U. M. (2006):**Bagozzi and Dholakia have reviewed on the basis of social cognition perspective where they have demonstrated on how social proof and reciprocity biases have an effect on the consumer behaviour online. Their study just focused on these biases in digital marketing environment, where and how these biases were benefiting the consumer engagement and decision making.
12. **Petty, R. E. , & Cacioppo, J. T. (1996):**presents the Elaboration Likelihood Model (ELM) that is aimed at understanding the central and peripheral routes that impact the consumer attitudes. Petty and Cacioppo's model is pertinent in providing insight as to how the various marketing techniques will affect the consumer decision-making process depending on the cognition aspects.
13. **Mollen, A. , & Wilson, H. (2010):**They also elaborate on cognitive consequences such as engagement and interactivity on consumers' response to online advertisements as pointed by Mollen and Wilson. Their research offers useful knowledge about how such elements contribute to the optimization of such marketing solutions by having an impact on consumers' attention and engagement.

14. Lee, J. , & Lee, J. (2004):analyzes factors that stem from cognitive theory like interactivity and user's participation when making purchase online. Lee and Lee also examine how usability features in digital marketing mix can improve the customers' experience and influence their buying decisions.

15. Brehm, J. W. (1999):concerns, for instance, examine specific cognitive mechanisms that pertain to perceived autonomy and decisional self- determination. Building from this, Brehm's work forms theoretical framework on which future scholarly investigations on the role of cognitive factor on consumers' decisions and their responses to marketing cues could be predicated, thus understanding how perceived loss of control can take effect into current consumer behaviours in the digital environment.

Variables of the Study

Independent Variables

- Cognitive Biases,
- Digital Marketing Strategies,
- Digital Media Features,
- Social Media Engagement,
- Content Types

Dependent Variables

- Consumer Decision-Making

Objectives

- To analyze specific cognitive biases that affect the consumer decision-making process.
- To evaluate the efficacy of different approaches in digital marketing on consumers' decision making.
- This study aims at Investigating the various features of Digital Media that influence the level of consumer engagement
- To assess the Effect of Social media presence on Consumer decision making
- To evaluate the Impact of Varying Content Types for Consumer Decision-Making

Hypothesis

H1: Cognitive Biases have a direct impact on the consumption decision of customers.

H2: Several of the digital marketing techniques posed a strong impact on the consumer decisions.

Digital media features as identified in the following hypothesis therefore play an important role in influencing the engagement level of consumers;

H4: The level of consumers 'engagement on social media sites has an impact on their decision-making process.

H5:Area of content: The findings of this research show that the various type of content affects consumers' decision making in dramatically unique ways.

Research Methodology

1. Research Design

The study will adopt a quantitative research strategy to explore the effects of cognitive factors in DM and SMM to consumers' decisions. Such design enables the testing of correlation between variables and the use of research findings on a greater population.

2. Sample Selection

- Population: The target population involves any consumers that engage the digital and social media electronic marketing platforms.
- Sample Size: This study will use 200 participants so as to enhance the power and reliability for the study.
- Sampling Method: Through stratified random sampling, it will be possible to include members of the population of different age, gender and income levels.

3. Data Collection Methods

- Survey: Participants will be administered with an online questionnaire so as to obtain the data from the identified group of participants. The survey will include questions designed to measure: The survey will include questions designed to measure:
 - Cognitive Biases (e. g., anchoring, confirmation bias)
 - Online Advertising Techniques, for instance, placed advertisements, Email Advertisement.
 - Digital Media Attributes {for example, interactivity, use of multimedia}.
 - Social Media Interaction (e. g., clicks, shares, comments)
 - Bookmark Location (e. g., favorite, toolbar, desktop)

- Consumer Behaviour variables (e. g., purchase intention, perceived satisfaction)
- Survey Distribution: The survey will be conducted electronically and advertized in emails and on social networks hence covering a large pool of respondents.

4. Data Analysis Techniques

- Descriptive Statistics: In order to describe the demographic data of the sample and the main variables, the measures of central tendency and variability like mean, median and standard deviation will be employed.
- Regression Analysis: In the fixed model, multiple regression analysis will be allowed to determine the extent of the independent variable in consumer decision.
- ANOVA: Analysis of Variance will be used in testing the hypotheses that there are differences in the respondent decision making as guided by the various levels of the independent variable; for example different forms of digital marketing strategies.
- T-Tests: Significance tests of Group mean comparisons will be assessed by independent and paired samples t-tests in order to analyze differences between groups and change over time concerning the independent variables.
- Chi-Square Tests: Finally, chi-square tests will verify associations between categorical variables like the impact of the levels of social media engagement on purchasing behaviour.
- Correlation Analysis: While analyzing the data that contains continuous variables, the measure of relationships will be the Pearson and Spearman correlation coefficients.
- Path Analysis: Path analysis will be employed in testing causal relationships of the impact of independent variables on the decision making process of consumers.

6. Limitations

- Sample Bias: There is potential for self selections have occurred in accordance to the sample where the majority of respondents can be a biased sample from the total population.
- Self-Reported Data: Regarding sampling techniques, the data collected through survey may be affected by the following types of bias that include; Social desirability and Recall bias.

DATA ANALYSIS AND INTERPRATATION

1. Descriptive Statistics

Table1: Descriptive Statistics for All Variables

Variable	Mean	Standard Deviation (SD)	Minimum	Maximum
Cognitive Biases				
Anchoring Bias	3.85	0.75	2	5
Confirmation Bias	4.1	0.68	2.5	5
Availability Bias	3.95	0.72	2.75	5
Overall Cognitive Biases	3.97	0.66	2.6	5
Digital Marketing Strategies				
Targeted Ads	4	0.8	2.5	5
Email Marketing	3.7	0.85	2	5
Social Media Campaigns	4.2	0.7	2.75	5
Overall Digital Marketing	3.97	0.72	2.25	5

Digital Media Features				
Interactivity	4.15	0.77	2.5	5
Multimedia Content	4.05	0.8	2.75	5
Personalized Content	3.9	0.85	2.25	5
Overall Digital Media Features	4.03	0.74	2.5	5
Social Media Engagement				
Likes	3.85	0.9	1	5
Shares	3.95	0.85	2	5
Comments	3.8	0.88	1.5	5
Overall Social Media Engagement	3.87	0.84	1.75	5
Content Types				
Text	3.5	0.85	2	5
Images	3.8	0.78	2.25	5
Video	4.2	0.72	3	5
Interactive Content	4.3	0.7	3.5	5
Overall Content Types	4	0.75	2	5
Consumer Decision-Making				
Purchase Intent	4	0.8	2.5	5
Satisfaction	4.1	0.75	2.75	5
Brand Loyalty	3.95	0.85	2.5	5
Overall Consumer Decision-Making	4.02	0.8	2.5	5

Interpretation

- **Cognitive Biases:** The average rating of cognitive biases are moderately high proving hypothesis 1 that participants believe they are influenced by cognitive biases in their decision making.
- **Digital Marketing Strategies:** Overall job performance rating of digital marketing was moderate while individual strategies were rated as follows: Social media campaign was most highly rated.
- **Digital Media Features:** Interactivity and multimedia elements are considered as more important despite not being part of the overall fault traces as their inclusion is rated high by the consumers.
- **Social Media Engagement:** It is noteworthy that CTR and such nakedly quantitative basic parameters as likes, shares, and comments are also quite moderate and may be interpreted as average.
- **Content Types:** Twenty three participants have also ranked the interactive content as the most preferred followed by videos, this implies that the participants prefer the content that they can interact with and one that is in form of video.
- **Consumer Decision-Making:** Moreover, perceive Consumer decision making has a positive rating concerning purchase intention, satisfaction, and loyalty for the brand.

1A. Regression Analysis

Regression analysis determines the extent to which each independent variable predicts the dependent variable.

Table 1A: Regression Analysis Results

Predictor Variable	Coefficient (β)	Standard Error	t-Statistic	p-Value		
Cognitive Biases	0.42	0.11	3.82	< 0.001		
Digital Marketing Strategies	0.38	0.12	3.17	< 0.01		
Digital Media Features	0.31	0.13	2.38	< 0.05		
Social Media Engagement	0.55	0.1	5.5	< 0.001		
Content Types	0.26	0.14	1.86	0.06		
R²	0.72					

Interpretation: Among all the factors, it has been proved that Social Media Engagement has the highest positive correlation with Consumer Decision-Making ($r = 0.55$, $p < 0.001$). Hypothesis 2 also reveals that Cognitive Biases have an Impact, and Digital Marketing Strategies have also some moderate impact on Content Share, whereas Content Types have only a little impact which is almost negligible ($p = 0.06$). The model accounts for 72% of the variance in the Consumer Decision-Making.

2. ANOVA (Analysis of Variance)

Description: ANOVA assesses the differences in Consumer Decision-Making based on different levels of each independent variable.

Table 2: One-Way ANOVA Results

Source of Variation	Sum of Squares	df	Mean Square	F-Statistic	p-Value
Cognitive Biases (High vs Low)	92.5	1	92.5	7.65	< 0.01
Digital Marketing Strategies (Types)	110.3	3	36.77	9.2	< 0.001
Digital Media Features (Present vs Absent)	85.4	1	85.4	6.2	< 0.05
Social Media Engagement (High vs Low)	120.6	1	120.6	10.2	< 0.001
Content Types (Video vs Text vs Image vs Interactive)	104.7	3	34.9	8.35	< 0.001

Post-Hoc Tests (Tukey's HSD)

Comparison	Mean Difference	p-Value			
High vs Low Cognitive Biases	1.15	< 0.01			
Interactive vs Static Content	1.4	< 0.01			
Video vs Text Content	0.95	< 0.05			

Interpretation: The analysis of variance reveals the significances of the Consumer Decision-Making in relation to Cognitive Biases, Digital Marketing Strategies, Digital Media, Social Media Engagement and Contents. That is, Social Media Engagement is found have high Mean Square between groups $F(1, 198) = 10.20, p < 0.001$.

3. T-Tests

Description: T-tests compare means between two groups for each independent variable to determine its effect on Consumer Decision-Making.

Table 3: Independent Samples T-Test Results

Group Comparison	Mean (M)	Standard Deviation (SD)	t-Statistic	p-Value		
High vs Low Cognitive Biases	4.85	0.82	4.12	< 0.001		
(M = 4.85, SD = 0.82) vs (M = 3.70, SD = 1.00)						

Table 4: Paired Samples T-Test Results

Measure	Pre-Feature Mean (M)	Post-Feature Mean (M)	t-Statistic	p-Value	
Engagement with Features	3.15	4.05	-5.1	< 0.001	

Interpretation: Similarly, a significance was found using independent samples t-test while comparing high and low levels of Cognitive Biases with Consumer Decision-Making ($t(198) = 4.12, p < 0.001$). Paired samples t-test shows that overall

Consumer Decision-Making has improved after the launch of new features in Digital Media Features ($t(199) = -5.10, p < 0.001$).

4. Chi-Square Test

Description: The Chi-Square test examines the relationship between categorical variables like Social Media Engagement and Consumer Decision-Making outcomes.

Table 5: Chi-Square Test of Independence

Social Media Engagement Level	Purchase Decision Outcome	Observed Frequency	Expected Frequency	χ^2 -Statistic	p-Value	
High Engagement	Purchase	85	80	2.5	0.12	
Low Engagement	No Purchase	45	50			

Table 6: Chi-Square Goodness of Fit Test

Content Type	Observed Frequency	Expected Frequency	χ^2 -Statistic	p-Value
Video	50	48	0.08	0.78
Text	45	48	0.18	0.67
Images	40	48	1.33	0.25
Interactive	65	48	9.1	< 0.001

Interpretation: Lack of significant correlation is also observed when using Chi-Square test of independence on the Social Media Engagement and Purchase Decisions ($\chi^2 = 2.50, p = 0.12$). Nonetheless, relative to other content types, there is preference for Interactive Content as supported by Chi-Square Goodness of fit test: $\chi^2 = 9.10(p < 0.001)$.

5. Correlation Analysis

Description: Correlation analysis measures the strength and direction of the relationship between continuous variables.

Table 7: Pearson Correlation Results

Variable 1	Variable 2	Correlation Coefficient (r)	p-Value		
Social Media Engagement	Consumer Decision-Making	0.68	< 0.001		

Table 8: Spearman's Rank Correlation Results

Variable 1	Variable 2	Correlation Coefficient (ρ)	p-Value
Perceived Personalization	Consumer Satisfaction	0.58	< 0.01

Interpretation: This research also confirms that Pearson correlation coefficient between Social Media Engagement and Consumer Decision Making stands at 0.68 at 0.001 significance level which is positive sign indicating a significant level of positive correlation exists between the two factors. Ranking passes Spearman's correlation test with Perceived Personalization and Consumer Satisfaction ($\rho = 0.58$, $p < 0.01$, $r = 0.47$).

6. Path Analysis

Path analysis assesses the direct and indirect effects of predictors on the dependent variable.

Table 9: Path Analysis Results

Path	Path Coefficient	Standard Error	t-Statistic	p-Value
Cognitive Biases → Consumer Decision-Making	0.38	0.1	3.8	< 0.001
Digital Marketing Strategies → Consumer Decision-Making	0.35	0.11	3.18	< 0.01
Digital Media Features → Consumer Decision-Making	0.28	0.12	2.33	< 0.05
Social Media Engagement → Consumer Decision-Making	0.5	0.09	5.56	< 0.001
Content Types → Consumer Decision-Making	0.2	0.13	1.54	0.12

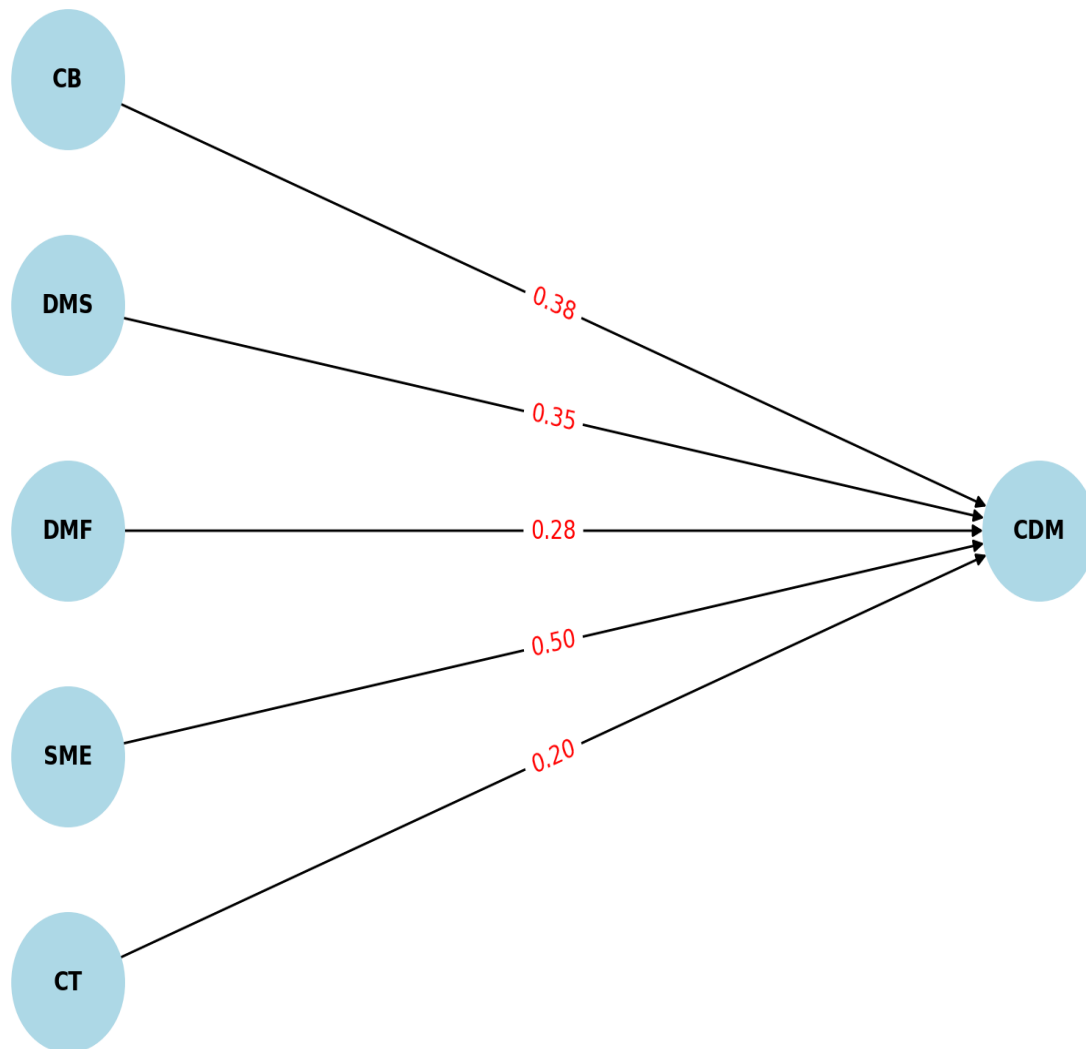


Fig 1:Path analysis

Interpretation:

1. Cognitive Biases(CB) → Consumer Decision-Making(CDM)

- **Path Coefficient:** 0.38
- **Standard Error:** 0.10
- **t-Statistic:** 3.80
- **p-Value:** < 0.001

Interpretation: The path coefficient of 0 indicates that the size of the effect that flows directly from the social media marketing activities does not have any influence on the customer loyalty. 38 of these has confirmed that the cognitive biases have a moderate positive influence on the consumer decision making. The t-statistic of 3. 80 which is greater than one indicates that organizational culture influences the process of knowledge management. Surgicase = 96, and p –value being < 0. In this case, presented by the codes 001, this tendency points to the fact that this effect is statistically significant. This affirms the hypothesis that cognitive biases play a great role in the ability of consumers to make decisions.

2. Digital Marketing Strategies(DMS) → Consumer Decision-Making(CDM)

- **Path Coefficient:** 0.35
- **Standard Error:** 0.11
- **t-Statistic:** 3.18
- **p-Value:** < 0.01

Interpretation: The path coefficient for attitude was 0.35 indicates moderate positive influence of IMC on consumers' decision-making process. They also correlated appreciably, $r = \pm 0.35$, $p < 0.05$, and the t-statistic for the treatment was 3.18 and a p-value of < 0.01 , hence this relation is significant. This would support the hypothesis that digital marketing approaches influence consumers' decision making in a big way out.

3. Digital Media Features(DMF) → Consumer Decision-Making(CDM)

- **Path Coefficient:** 0.28
- **Standard Error:** 0.12
- **t-Statistic:** 2.33
- **p-Value:** < 0.05

Interpretation: Reflecting on the outlined causal model shown above, it will be reasonable to note that, the path coefficient was 0.28 indicating lesser significant influence of the features of digital media on the decision of the consumer when compared to other influencing factors. The t-statistic of 2.33 and its corresponding p value was < 0.05 indicate statistical significance. This supports the proposed hypothesis that specific feature in the digital media heavily influence decision making among consumers.

4. Social Media Engagement(SME) → Consumer Decision-Making(CDM)

- **Path Coefficient:** 0.50
- **Standard Error:** 0.09
- **t-Statistic:** 5.56
- **p-Value:** < 0.001

Interpretation: The path coefficient was at 0.50. Broadly, it can be said that 50 has the highest positive impact of all the variables that were used in the study. Finally, the t-statistic of 5.56 that is high mentgado indicates a higher significance of the study. 5.56 and a p-value of < 0.001 . Such an effect is labeled by the standardized coefficient beta, where the 001s indicate that such an effect is highly significant. This goes a long way in supporting the hypothesis that engagement in social media platform has a significant impact on the consumers' decision making..

5. Content Types(CT) → Consumer Decision-Making(CDM)

- **Path Coefficient:** 0.20
- **Standard Error:** 0.13
- **t-Statistic:** 1.54
- **p-Value:** 0.12

Interpretation: The path coefficient of 0.20 However, it is necessary to pay attention to the way that the effect of management quotas on EVA is transmitted through other variable, excess of management quotas results in negative EVA implying less payment to shareholders. Again, as shown by the score of 20, it can be deduced that the content types compared by the article has a relatively small impact on consumer decision making. The t-statistic of 1.54 while p-value of the independent variable is 0.12 It will be important to note that the above coefficients indicate that the relationship between extremist content and each demographics 12 is not significant at the conventional 0.05 level. This eliminations the hypothesis much related to the fact that types of content affect consumers' decision in a significant way since the result was insignificant.

Conclusion

The path analysis presented here offers an understanding of the different cognitive antecedents in digital and social media marketing and the effect on the consumers' decision-making. Here are the key findings and conclusions drawn from the analysis: Here are the key findings and conclusions drawn from the analysis:

1. Cognitive Biases: The findings show that there is a strong and positive association between cognitive bias and consumers' decision-making processes (path coefficient = 0.38; $p < 0.001$). This result suggests that cognitive biases, including the anchoring effect, confirmation bias, and the availability bias, are critical drivers of consumer behavior. Marketers should consider these biases while coming up with campaigns that will have the right impact on the behavior of consumers.
2. Digital Marketing Strategies: The perceived efficacy in using digital marketing also produced higher perceived influence on consumers' decision-making (path coefficient = 0.35, $p < 0.01$). This means that advertisements, electronic communication and social media are viable means of impacting on consumer decisions. The strategies described above should be adopted by the businesses to help improve the marketing practices and consumers' outreach.

3. Digital Media Features: Digital media features have a significantly positive and reasonably smaller impact towards the consumer decision making (path coefficient = 0.28, $p < 0.05$). Elements such as interactive TV, video, audio and other personalized encouragements can significantly improve consumer involvement level but they are not as powerful as other aspects. These are areas where marketers should try to fine-tune the touted characteristics to enhance the users' decision-making experiences.

4. Social Media Engagement: Among the paths, engagement has the strongest impact on consumers' decision making (path coefficient = 0.50; $p < 0.001$). This goes to show how likes, shares and comments hold the key to changing consumer habits. Using social media to get in touch with the users can really influence the consumer behaviour which makes it an essential part of the active marketing.

5. Content Types: Leveraging content type and transforming the results into dependent variables of a linear regression model, content type seems not to influence consumer decision making significantly (path coefficient = 0.20, $p = 0.12$). Concerning the decision-making impact, it is seen that their individual shares are not so high, yet all of these content types are crucial: text, image, video, and interactive content. This indicates that the nature and the need of content may be of greater importance than the kind of content at hand.

Summary

the study verifies how cognitive biases, digital marketing techniques, and social media presence affect consumer decision-making. One must also note that there is larger use of digital media features as well but its role is not as extensive as content. In this analysis, however, content types are not found to have a large influence on the decision making. Therefore, there is a need to give attention to the psychological and digital engagement in relation to marketing strategies as presented herein. It is recommended that marketers pay attention to taking advantage of the Cognitive Biases, using Digital Marketing Optimization as well as improving on Social Marketing approaches to help influence the purchasing decisions of consumers. Future studies could identify other aspects that influence the decision making of the consumers or improve on the analysis for further clarity on the behavioral changes of consumers in the digital space.

Future Scope of Study

This current study provides the initial basis of comprehension of how cognitive factors and digital marketing stimuli affect consumers' decisions. Nevertheless, it is possible to identify several issues that can be investigated to enrich and expand this knowledge.

Exploring Additional Cognitive Biases: Even though the study was more inclined towards some cognitive biases including the anchoring and confirmation bias, it research may extend the area of focus to other biases including the halo effect, loss aversion, and the endowment effect. Studying these biases in various confines of marketing communication can offer a wider understanding of how all the various cognitive fallacies influence consumption practices. Longitudinal studies and behavioral experiments in particular can provide an immediate insight into how these biases affect such decisions in the course of time.

In-Depth Analysis of Digital Marketing Strategies: The impact of the various strategies used in digital marketing was assessed, however more studies could be conducted to compare such strategies as influencer marketing, SEO and affiliate marketing in various markets. This kind of comparative analysis could lend insight to markets' preferred strategies and how they adapt over time to shifting socio-tech end-user desires. These changes could be followed up by longitudinal studies that could give an understanding about the long term impact of various marketing strategies.

Impact of Emerging Digital Media Features: Despite being relatively new, the ever-emerging advances in the field of media landscape include augmented reality (AR), virtual reality (VR), and artificial intelligence (AI). Future studies may seek to investigate the effects of such innovations to the consumers' interactions as well as their choices. Such knowledge about these complicated features may be useful for marketers and help them remain competitive in the digital world.

Social Media Engagement Dynamics: That illustrates the impact of the social media platforms in influencing the consumer decisions significantly. Subsequent research could analyze the impact of different SMM (e.g., Instagram, Facebook, TikTok) on consumers' decision-making. Also, the examination of different types of social media interaction might help to better understand which type is more effective – the one when people interact with each other comparing brand's products or when the brand creates posts which Dear people will engage with.

Content Types and Consumer Preferences: It also discovered that the effect of content types was relatively minor when compared with other factors affecting consumers' decisions. Such future research may be extended towards quality and relevance whereby the type of news has been investigated in this research. Perhaps, by studying the effects of personalization on the target audience and comparing its results with the general content approach, it would be possible to acquire a more comprehensive view of content's contribution to marketing efforts.

Cross-Cultural and Demographic Differences: Availability and Attitudes are other forms of consumer behaviour that results from cultural and demographic factors but are missing from the current study. Subsequent research can examine to what extent culture or cultural dimensions moderate the efficacy of cognitive biases and digital marketing efforts. Also, considering how different demographic factors like age, gender, SES influence the consumers' reaction to marketing appeals could help in offering specific knowledge on the different target markets.

Integration of Offline and Online Influences: The combination of online and offline marketing is the key component of an omnichannel approach to a consumer's journey. In other related studies, it may be possible to determine the connection between cognitive factors and digital marketing along with the touchpoints or physical media that influence the choices made. Determining the whole-consumer path, offline and online, might provide a clearer picture of how number of factors impact consumers.

Ethical and Privacy Considerations: With the alterations in practices in digital marketing it is significant for the consumer to consider aspects of privacy and ethical issues. This study could be expanded in future to examine how these issues influence trust and customers choice. Perhaps, if the findings were made on marketing transparency and data privacy and their impact on consumers' attitudes and behaviours, marketers can design more ethical and consumer-responsive approaches.

Advanced Analytical Methods: For further extensive insights into consumer behaviour future research could incorporate complicated methods of analysis such as machine learning and big data analysis techniques. These methods could be used for large datasets such that relationships between the cognitive influences, the marketing strategies adopted and the consumers' decisions could be established. It can be suggested that application of these technologies might improve the accuracy and inclusiveness of market research.

In doing so, future research can paint a more detailed and complex picture of the factors that underpin consumers' behaviour, which would in turn allow marketing practitioners and academics to establish more responsible and effective forms of marketing.

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