Evaluating The Effectiveness Of Digital Marketing Tools On Consumer Purchase Decisions In The Indian Online Travel Industry: A Sustainable Development Goals (SDG) Perspective

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ABSTRACT

Purpose: The rapid evolution of digital marketing has significantly transformed the landscape of the travel industry, particularly in the context of Indian online travel portals. This study aims to analyse the effectiveness of various digital marketing tools, such as social media, email marketing, and search engine optimization, and to assess their impact on consumer purchase decisions. Additionally, the research aligns with the Sustainable Development Goals (SDGs) by exploring how digital marketing can contribute to sustainable economic growth (SDG 8) and responsible consumption (SDG 12) within the travel industry. The study seeks to provide a comprehensive understanding of how these tools influence consumer behaviour, drive sales, and promote sustainability in online travel services in India.

Design/Methodology/Approach: The study employed a structured questionnaire to collect primary data from a sample size of 236 respondents. The questionnaire was designed to gather insights into consumer perceptions and experiences with digital marketing campaigns executed by Indian online travel portals. The collected data were subjected to graphical analysis, ANOVA, and regression analysis to identify trends and relationships between variables, with a focus on their alignment with SDGs.

Findings: Preliminary findings suggest that social media and email marketing are perceived as the most effective digital marketing tools, significantly influencing consumer awareness and engagement. The study concludes that digital marketing tools play a crucial role in shaping consumer behaviour and decision-making processes in the Indian online travel industry. Furthermore, these tools can be leveraged to promote sustainable travel practices, thus contributing to the achievement of SDG 8 and SDG 12. The implications of these findings suggest that travel portals should invest in robust digital marketing strategies, focusing on personalized and engaging content to enhance consumer engagement, conversion rates, and sustainability.

Research Limitations/Implications: This research contributes to the existing body of knowledge by providing empirical evidence on the effectiveness of digital marketing tools in the travel sector and their potential to advance SDGs. It offers valuable insights for marketers and strategists in the travel industry to optimize their digital marketing efforts, leading to increased consumer satisfaction, business growth, and sustainability. Future research could expand on these findings by exploring the long-term effects of digital marketing on consumer loyalty, brand perception, and sustainable travel behaviour.

Originality/Value: The study offers a novel examination of the specific impacts of various digital marketing tools on consumer purchase decisions within the Indian online travel industry, while also highlighting the potential of these tools to support the achievement of Sustainable Development Goals. The findings provide practical recommendations for enhancing digital marketing strategies in this sector, with a focus on sustainability.

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1. INTRODUCTION

In today's digital age, the tourism industry has undergone a profound transformation, driven by rapid technological advancements and the increasing ubiquity of the internet. This evolution is particularly evident in the realm of online travel portals, which have revolutionized how consumers plan and book their travel arrangements, especially accommodation bookings (Kaur et al., 2023). As competition within the online travel market intensifies, the importance of effective digital marketing strategies has become paramount (Pencarelli, 2020). This research aims to analyse the effectiveness of various digital marketing tools used by Indian online travel portals and assess their impact on consumer purchase decisions, specifically focusing on accommodation bookings. Furthermore, this study aligns with the Sustainable Development Goals (SDGs) by examining how these marketing strategies can contribute to sustainable economic growth (SDG 8) and responsible consumption and production (SDG 12) in the travel industry.

Digital marketing encompasses a broad array of tools and strategies designed to promote products and services through digital channels (Kingsnorth, 2022). Among these tools, social media, email marketing, search engine optimization (SEO), pay-per-click (PPC) advertising, and content marketing have emerged as the most influential in shaping consumer behaviour and driving bookings on online travel portals (Angeloni & Rossi, 2021). Social media platforms such as Facebook, Instagram, and Twitter provide travel companies with opportunities to engage users through visually appealing content, targeted advertisements, and interactive campaigns (Singh et al., 2023). These platforms enable companies to build brand awareness, foster customer relationships, and generate user-generated content, significantly influencing consumers' accommodation choices while promoting responsible consumption by encouraging the selection of eco-friendly travel options.

Email marketing remains a powerful tool for online travel portals, offering a direct and personalized way to reach potential customers (Kumar, 2024). Through targeted email campaigns, travel companies can provide tailored offers, promotions, and recommendations based on consumers' past behaviors and preferences (Kaur & Singh, 2022). This personalized approach enhances customer engagement and increases the likelihood of conversion, as consumers are more likely to respond to relevant and timely offers (Honora et al., 2024). Additionally, email marketing allows companies to maintain ongoing communication with customers, encouraging repeat bookings and fostering brand loyalty, contributing to sustainable business practices in the tourism industry.

Search engine optimization (SEO) and pay-per-click (PPC) advertising are essential components of digital marketing strategies for online travel portals (Şahin & Dirsehan, 2023). SEO involves optimizing website content to rank higher in search engine results, thereby increasing organic traffic and visibility (Jusuf, 2023). By leveraging SEO techniques, travel companies can ensure that their websites appear prominently when consumers search for accommodation options (Kaur et al., 2024a). This visibility not only drives business growth but also promotes sustainable travel practices by directing consumers to responsible and eco-friendly accommodation options. On the other hand, PPC advertising involves paying for ads to appear at the top of search engine results, providing immediate visibility and driving targeted traffic to the website (Bhalla et al., 2024). Both SEO and PPC are crucial for capturing consumers' attention during the research phase of their booking journey, promoting sustainable choices aligned with SDG 12.

Content marketing, including the creation and distribution of valuable and relevant content, is another vital tool for online travel portals (Jami Pour & Karimi, 2023). By producing high-quality content such as blogs, articles, videos, and guides, travel companies can position themselves as industry experts and provide useful information that assists consumers in making informed decisions (Nazneen et al., 2024). Engaging content not only attracts and retains potential customers but also enhances the overall user experience, leading to increased trust and credibility. Moreover, content that highlights sustainable travel practices and eco-friendly accommodation options can significantly influence consumers' decisions, contributing to SDG 12 by promoting responsible consumption.

The impact of digital marketing campaigns on consumer purchase decisions is profound (Al-Azzam & Al-Mizeed, 2021). Effective digital marketing strategies can significantly influence consumers' perceptions, preferences, and ultimately, their booking decisions (Goyal et al., 2023). For instance, positive reviews and testimonials on social media can build trust and persuade potential customers to choose a particular accommodation (Kapoor et al., 2022). Personalized email offers can create a sense of exclusivity and urgency, prompting consumers to book quickly (Kaur & Madaan, 2023). High search engine rankings achieved through SEO can enhance credibility and drive organic traffic, while targeted PPC ads can capture the attention of consumers at critical moments in their decision-making process (Nguyen, 2022; Kaur, 2019). By

integrating sustainability messaging into these campaigns, companies can further align with SDG 8 and SDG 12, promoting sustainable economic growth and responsible tourism.

In the context of Indian online travel portals, understanding the effectiveness of these digital marketing tools is crucial for optimizing marketing efforts and maximizing conversions. This research aims to provide insights into which tools are most effective in driving accommodation bookings and how digital marketing campaigns influence consumer behaviour. By analyzing data from various Indian online travel portals, this study seeks to offer actionable recommendations for enhancing digital marketing strategies and improving overall business performance in the highly competitive travel industry, while also contributing to the achievement of the Sustainable Development Goals.

2. REVIEW OF LITERATURE

The digital marketing landscape has significantly transformed how businesses operate, particularly in the travel and tourism industry. Indian online travel portals such as MakeMyTrip, Ixigo, EaseMyTrip, Yatra, and Clear trip have strategically leveraged various digital marketing tools to enhance their visibility, engage with customers, and drive bookings. These tools are not only critical for business growth but also have the potential to contribute to the achievement of the Sustainable Development Goals (SDGs), particularly SDG 8 (Decent Work and Economic Growth) and SDG 12 (Responsible Consumption and Production).

Digital Marketing Tools in Online Travel Portals

Social Media Marketing

Social media platforms have emerged as powerful tools for online travel portals to reach a wide audience and engage with potential customers. According to (Kaur et al., 2024b), social media marketing allows companies to create content that users will share with their social network, thereby increasing exposure and customer reach. MakeMyTrip, for example, uses platforms like Facebook, Instagram, and Twitter to share travel tips, destination highlights, and customer testimonials. This user-generated content builds trust and authenticity, which are crucial for influencing purchase decisions (Nagina et al., 2024).

Research by (Madaan et al., 2024) suggests that social media marketing enhances customer engagement and brand loyalty. For online travel portals, engaging content and interactive campaigns can lead to higher customer retention and repeat bookings. The visual nature of social media, particularly on platforms like Instagram, allows travel portals to showcase accommodations through appealing images and videos, thereby attracting potential customers (Bhalla et al., 2024).

Email Marketing

Email marketing remains a cornerstone of digital marketing strategies for online travel portals. According to (Kaur et al., 2024c), email marketing offers a direct and personalized communication channel with consumers. Travel portals such as EaseMyTrip and Cleartrip use email campaigns to send tailored offers, booking confirmations, and travel itineraries. Personalized emails that cater to the specific interests and preferences of consumers have been shown to significantly increase the likelihood of conversion (Daoud et al., 2023).

A study by (Keshkar & Mohammadi, 2022) highlights the importance of segmentation and targeting in email marketing. By analyzing customer data and segmenting the audience based on their preferences and behaviors, online travel portals can deliver more relevant and engaging content. This approach not only enhances customer experience but also drives higher engagement rates and boosts booking conversions.

Search Engine Optimization (SEO) and Pay-Per-Click (PPC) Advertising

SEO and PPC advertising are critical for increasing the visibility of online travel portals in search engine results. (Garcia et al., 2022) emphasize the importance of SEO in driving organic traffic to websites. By optimizing their websites for relevant keywords and improving site structure, portals like MakeMyTrip and Yatra can rank higher in search results, thereby attracting more potential customers.

PPC advertising, as discussed by (Sahin & Dirsehan, 2023), allows travel portals to bid for ad placements in search engine results. This ensures that their ads appear at the top of search results for specific queries, increasing the likelihood of clicks and conversions. For accommodation bookings, targeted PPC campaigns can highlight special deals and offers, making them more attractive to potential customers.

A study by (Bhandari & Sin, 2023) found that both SEO and PPC are essential for capturing the attention of consumers during the research phase of their booking journey. By appearing prominently in search results, online travel portals can influence consumer perceptions and drive higher booking rates.

Content Marketing

Content marketing involves creating and distributing valuable and relevant content to attract and engage a target audience. According to (Terho et al., 2022), effective content marketing positions a company as a thought leader and provides useful information that assists consumers in their decision-making process. Online travel portals like ixigo use blogs, articles, videos, and travel guides to provide valuable insights and tips for travellers.

High-quality content that addresses the needs and concerns of consumers can significantly impact their purchase decisions. A study by (Touni et al., 2022) found that content marketing enhances customer trust and credibility, which are crucial for driving bookings. For accommodation bookings, detailed reviews, virtual tours, and destination guides can provide the information consumers need to make informed choices.

Impact of Digital Marketing Campaigns on Consumer Purchase Decisions

The effectiveness of digital marketing campaigns in influencing consumer purchase decisions is well-documented. A study by (Yadav et al., 2024) examined the impact of digital marketing on consumer behaviour in the Indian travel industry. The study found that social media engagement, personalized email offers, and high search engine visibility significantly influenced consumers' accommodation booking decisions.

Social Media Influence

Social media platforms not only serve as marketing channels but also as sources of information and inspiration for travellers. (Gulati et al., 2024) highlight that social media influences all stages of the consumer decision-making process, from inspiration and research to booking and post-travel sharing. Positive reviews and testimonials on social media can build trust and persuade potential customers to book accommodations through specific travel portals.

Personalized Email Campaigns

The personalization of email campaigns plays a crucial role in driving conversions. A study by (Hayes et al., 2021) found that personalized marketing messages are more likely to be opened and acted upon by consumers. For online travel portals, this means tailoring email content to individual preferences and past booking behaviors, thereby increasing the chances of conversion.

Search Engine Visibility

High search engine rankings are associated with greater trust and credibility among consumers. A study by (Hill et al., 2020) found that websites appearing on the first page of search results are perceived as more reliable and trustworthy. For online travel portals, achieving high rankings through SEO and PPC campaigns can significantly impact consumer purchase decisions, as consumers are more likely to book accommodations through portals they perceive as credible.

Content Marketing Impact

Effective content marketing not only attracts potential customers but also helps them in their decision-making process. According to (Suwelack et al., 2022), well-crafted content that addresses consumer pain points and provides valuable insights can guide consumers towards making informed booking decisions. For accommodation bookings, content such as detailed property descriptions, high-quality images, and virtual tours can enhance the perceived value and desirability of the offerings.

The literature reviewed highlights the significant impact of digital marketing tools on consumer purchase decisions within the online travel industry. Social media marketing, email marketing, SEO, PPC advertising, and content marketing each play a vital role in enhancing the visibility, engagement, and conversion rates of Indian online travel portals. Understanding the effectiveness of these tools and their influence on consumer behaviour is crucial for optimizing digital

marketing strategies and driving accommodation bookings. As the digital landscape continues to evolve, online travel portals must continuously adapt and innovate their marketing approaches to stay competitive and meet the changing needs of consumers.

Research Gap

Despite the extensive research on digital marketing tools and their impact on consumer behaviour, there is a notable gap in the literature regarding the specific effectiveness of these tools for Indian online travel portals, particularly in the context of accommodation bookings. Most existing studies focus broadly on digital marketing in the travel industry without delving into how distinct tools like social media, email marketing, SEO, PPC, and content marketing uniquely influence consumer decisions in the Indian market. Additionally, while the impact of digital marketing on general purchase decisions has been explored, there is limited insight into how these campaigns specifically affect accommodation booking behaviors. This study aims to fill this gap by providing a detailed analysis of the effectiveness of various digital marketing tools used by leading Indian travel portals — MakeMyTrip, ixigo, EaseMyTrip, Yatra, and Cleartrip — and assessing their influence on consumers' accommodation booking decisions. In order to fill the above mentioned gap, following objectives have been framed -

- To analyse the effectiveness of various digital marketing tools (e.g., social media, email marketing, etc.) used by Indian online travel portals.
- To assess the impact of digital marketing campaigns on consumer purchase decision with Indian online travel portals."

3. RESEARCH METHODOLOGY

Using previous literature reviews as a guide, a questionnaire was created considering several measures as stated in table 1. It underwent expert evaluations for content validity, which led to a few small changes in the questionnaire items' phrasing. "Respondents are asked to rate their thoughts on various aspects of accommodation services provided by Indian online travel portals using a 5-point Likert scale, with the options being "strongly agree" to "strongly disagree."

Table 1. Measures Used for the Study

Effectiveness of Digital Marketing Tools			
Social Media Marketing	DMT1	The social media presence of online travel portals influences my decision to book accommodations.	Yadav & Rahman, 2017
	DMT2	Promotional offers on social media encourage me to book accommodations.	
	DMT3	User reviews and testimonials on social media impact my accommodation booking decisions.	
	DMT4	The visual content (images, videos) shared by travel portals on social media is appealing and informative.	
Email Marketing	DMT5	I find email promotions from online travel portals helpful in making accommodation booking decisions.	Thomas et al., 2022
	DMT6	Personalized email offers from travel portals encourage me to book accommodations.	

	DMT7	I trust the accommodation recommendations provided in email campaigns by travel portals.	
	DMT8	Regular email updates from travel portals keep me informed about the latest deals and offers.	
Search Engine Optimization (SEO)	DMT9	I usually book accommodations from travel portals that appear at the top of search engine results.	Bhandari & Bansal, 2018
	DMT10	High search engine rankings make me trust a travel portal more for accommodation bookings.	
	DMT11	The ease of finding travel portals through search engines influences my booking decisions.	
	DMT12	SEO provide better accommodation options.	
Content Marketing	DMT13	Informative blogs and articles on travel portals help me make informed accommodation choices.	Pektas & Hassan, 2020
	DMT14	Detailed descriptions and virtual tours of accommodations on travel portals influence my booking decisions.	
	DMT15	Travel guides and tips on travel portals enhance my overall booking experience.	
	DMT16	High-quality content on travel portals builds my trust in their accommodation services.	
General Effectiveness	DMT17	Interactive features on travel portals (e.g., chatbots, interactive maps) enhance my booking experience.	Schaefer & Hetman, 2019
	DMT18	The integration of user-generated content (e.g., travel stories, photos) on travel portals influences my accommodation choices.	
	DMT19	Online advertisements (e.g., banners, PPC ads) from travel portals catch my attention and influence my booking decisions.	
	DMT20	Travel portals' use of influencers and bloggers to promote accommodations impacts my booking decisions.	
	DMT21	The clarity and transparency of pricing and policies presented through digital marketing tools affect my trust in the travel portal.	
Impact of Digital Marketing Campaigns on Consumer Purchase Decision			

General Impact	CPD1	Digital marketing campaigns make it easier for me to discover new accommodation options.	. Al-Azzam & Al-Mizeed, 2021	
	CPD2	I see positive digital marketing campaigns.		
	CPD3	The promotions and discounts offered through digital marketing campaigns influence my booking decisions.		
	CPD4	Digital marketing campaigns make me feel more confident about my accommodation choices.		
Trust and Credibility	CPD5	I trust the information provided in digital marketing campaigns by online travel portals.	Kurdi et al., 2022	
	CPD6	Positive digital marketing campaigns improve my perception of the travel portal's reliability.		
	CPD7	I believe that travel portals with strong digital marketing campaigns offer better customer service.		
	CPD8	Digital marketing campaigns by travel portals enhance their credibility in my eyes.		
Decision-Making Process	CPD9	Digital marketing campaigns help me compare different accommodation options effectively.	Narayan, 2024	
	CPD10	The information provided in digital marketing campaigns helps me make quicker booking decisions.		
	CPD11	I rely on digital marketing campaigns to find the best deals on accommodations.		
	CPD12	Digital marketing campaigns play a significant role in my final decision to book accommodations.		
Customer Engagement	CPD13	I feel more engaged with travel portals that have active digital marketing campaigns.	Do et al., 2020	
	CPD14	Interactive digital marketing campaigns (e.g., contests, polls) make me more likely to book accommodations.		
	CPD15	I am more likely to recommend travel portals with effective digital marketing campaigns to others.		
	CPD16	My overall satisfaction with accommodation bookings is higher when influenced by digital marketing campaigns.		
Overall Satisfaction	CPD17	I book through online travel portals influenced by digital marketing campaigns.	Akter & Sultana, 2020	

	CPD18	Digital marketing campaigns enhance my overall travel booking experience.	
	CPD19	I will continue to use online travel portals for accommodation bookings due to effective digital marketing campaigns.	
	CPD20	Effective digital marketing campaigns increase my loyalty to specific travel portals for accommodation bookings.	

Fig 1. Proposed Research Framework
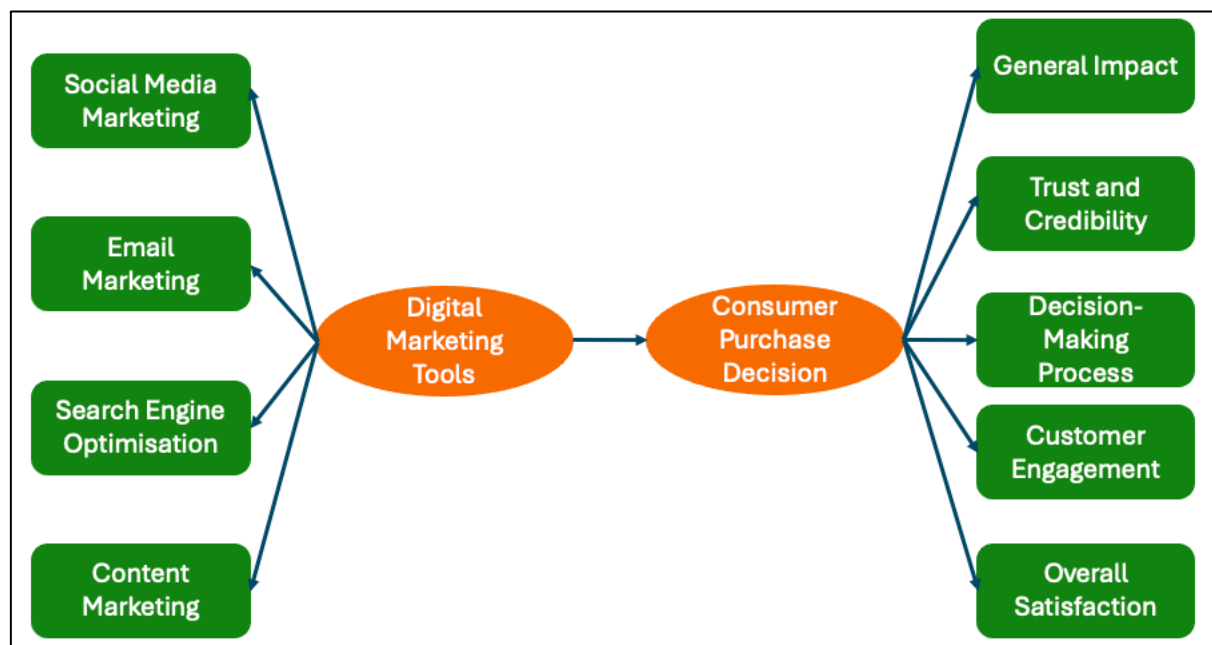
This study collected data from 350 individuals who had utilized online accommodation services from prominent Indian online travel portals. The data was gathered using the convenience sampling method. Before distributing the questionnaire, the study's purpose was clearly explained to each participant. Participants were advised to stop the survey immediately or switch to an online survey if they felt the content and responses were too intrusive, as the survey required them to share their awareness and perceptions of the subject matter. Most participants completed paper questionnaires, while 46 opted for online surveys due to concerns about personal information and response content exposure. After screening the responses for reliability, 114 questionnaires were excluded, resulting in data from only 236 individuals being used for analysis. Following the list-by-list deletion method recommended by DeSimone and Harms (2018), questionnaires with omitted responses or with more than nine consecutive identical responses were excluded from the data collection. Notably, the majority of excluded questionnaires contained nine or more identical consecutive responses."

4. RESULTS AND DISCUSSIONS

Reliability Analysis

Table 2. Reliability Statistics

Cronbach's Alpha	N of Items
.977	41

The provided Reliability Statistics table shows a Cronbach's Alpha value of 0.977 for 41 items. Cronbach's Alpha is a measure of internal consistency, indicating how closely related a set of items are as a group. A value of 0.977 is extremely high, suggesting that the items in the questionnaire have excellent reliability and consistency. This means that the responses to the items are highly correlated and the scale is very reliable for measuring the effectiveness of various digital marketing tools used by Indian online travel portals. High reliability ensures that the results are dependable and can be used confidently for further analysis.

Objective 1: To analyse the effectiveness of various digital marketing tools (e.g., social media, email marketing, etc.) used by Indian online travel portals.

For analysis of the above objective, one-way ANOVA is used. ANOVA was used to analyse the effectiveness of various digital marketing tools because it allows for the comparison of means across multiple groups. In this study, we aimed to determine if there are significant differences in consumer responses to different marketing strategies (social media marketing, email marketing, SEO, content marketing). ANOVA is ideal for this purpose as it tests for significant differences between group means while controlling for within-group variability, providing a comprehensive understanding of which tools significantly influence consumer behaviour and decision-making in the Indian online travel industry.

Table 3. ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
SSM	Between Groups	71.073	20	3.554	4.016	.000
	Within Groups	190.227	215	.885		
	Total	261.300	235			
EM	Between Groups	79.809	20	3.990	5.023	.000
	Within Groups	170.819	215	.795		
	Total	250.628	235			
SEO	Between Groups	90.807	20	4.540	5.393	.000
	Within Groups	181.020	215	.842		
	Total	271.827	235			
CM	Between Groups	97.347	20	4.867	5.572	.000
	Within Groups	187.818	215	.874		
	Total	285.165	235			

For Social Media Marketing, The F-value of 4.016 with a p-value of 0.000 indicates that there are significant differences between groups for social media marketing. This suggests that social media marketing has a statistically significant impact on consumer behaviour and decision-making. For Email Marketing, The F-value of 5.023 with a p-value of 0.000 indicates

significant differences between groups for email marketing. This suggests that email marketing significantly influences consumer decisions and behaviour. For Search engine optimisation, The F-value of 5.393 with a p-value of 0.000 indicates significant differences between groups for SEO. This suggests that SEO significantly affects consumer booking decisions. For content marketing, The F-value of 5.572 with a p-value of 0.000 indicates significant differences between groups for content marketing. This suggests that content marketing has a statistically significant impact on consumer behaviour and booking decisions. All four digital marketing tools (Social Media Marketing, Email Marketing, Search Engine Optimization, and Content Marketing) show statistically significant differences between groups. The significant F-values and p-values (less than 0.05) for all tools indicate that these marketing strategies effectively influence consumer behaviour and decision-making in the Indian online travel industry. Travel portals should continue to invest in these digital marketing strategies to enhance consumer engagement and increase booking conversions.

Objective 2: To assess the impact of digital marketing campaigns on consumer purchase decision with Indian online travel portals.

For analysis of the above objective, Regression analysis was used to assess the impact of digital marketing campaigns on consumer purchase decisions with Indian online travel portals because it allows for the determination of the strength and nature of the relationship between independent variables (digital marketing tools) and the dependent variable (consumer purchase decision). By quantifying how each marketing tool influences purchase decisions, regression analysis helps identify the most impactful strategies. This statistical method also allows for controlling other influencing factors, providing a clear, quantifiable measure of each tool's effectiveness in driving consumer behaviour, making it an ideal choice for achieving the study's objective.

Table 4. Descriptive Statistics

	Mean	Std. Deviation	N
CPD	3.2415	.92101	236
SSM	3.3284	1.05447	236
EM	3.2659	1.03272	236
SEO	3.3104	1.07550	236
CM	3.3178	1.10158	236

The descriptive statistics provide a summary of the central tendency and variability of the data used in the regression analysis. CPD (Consumer Purchase Decision) has a mean of 3.2415 and a standard deviation of 0.92101, indicating moderate agreement with purchase decisions influenced by digital marketing tools.

SSM (Social Media Marketing), EM (Email Marketing), SEO (Search Engine Optimization), and CM (Content Marketing) have means around 3.3 and standard deviations around 1, suggesting moderate to high effectiveness and variability in responses. These statistics indicate that on average, respondents perceive all digital marketing tools as moderately effective, with some variability in their responses, providing a foundation for understanding their impact on consumer purchase decisions in the regression analysis.

Table 5. Correlations

		CPD	SSM	EM	SEO	CM
Pearson Correlation	CPD	1.000	.846	.866	.866	.885
	SSM	.846	1.000	.860	.859	.855

	EM	.866	.860	1.000	.871	.863
	SEO	.866	.859	.871	1.000	.853
	CM	.885	.855	.863	.853	1.000
Sig. (1-tailed)	CPD	.	.000	.000	.000	.000
	SSM	.000	.	.000	.000	.000
	EM	.000	.000	.	.000	.000
	SEO	.000	.000	.000	.	.000
	CM	.000	.000	.000	.000	.
N	CPD	236	236	236	236	236
	SSM	236	236	236	236	236
	EM	236	236	236	236	236
	SEO	236	236	236	236	236
	CM	236	236	236	236	236

The correlation matrix indicates strong positive relationships between Consumer Purchase Decision (CPD) and the various digital marketing tools: Social Media Marketing (SSM), Email Marketing (EM), Search Engine Optimization (SEO), and Content Marketing (CM). All correlations are statistically significant (Sig. = 0.000), showing that higher effectiveness in these digital marketing tools is associated with higher consumer purchase decisions. The high correlations among the marketing tools (0.853 to 0.871) indicate multicollinearity, which should be addressed in the regression analysis to ensure reliable estimates. These strong correlations suggest that improvements in any of these digital marketing strategies can significantly impact consumer purchase decisions, validating their inclusion in the regression model to assess their individual contributions.

Table 6. Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.918[a]	.843	.840	.36812

a. Predictors: (Constant), CM, SEO, SSM, EM

b. Dependent Variable: CPD

The Model Summary provides essential insights into the effectiveness of the regression model used to assess the impact of digital marketing tools on consumer purchase decisions (CPD). The correlation coefficient (R) of 0.918 indicates a very strong positive relationship between the predictors (Content Marketing - CM, Search Engine Optimization - SEO, Social Media Marketing - SSM, and Email Marketing - EM) and the dependent variable (CPD). The R Square value of 0.843 means that 84.3% of the variance in CPD can be explained by these digital marketing tools, demonstrating the model's substantial explanatory power. The Adjusted R Square of 0.840, which accounts for the number of predictors, confirms the model's robustness and reliability. The standard error of the estimate at 0.36812 reflects the average deviation of the observed values from the predicted values, indicating a good fit of the model to the data. Overall, these metrics suggest that the combined influence of CM, SEO, SSM, and EM significantly drives consumer purchase decisions in the Indian online travel industry, with the model effectively capturing this relationship.

Table 7. ANOVAᵃ

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	168.040	4	42.010	310.010	.000ᵇ
	Residual	31.303	231	.136		
	Total	199.343	235			

a. Dependent Variable: CPD

b. Predictors: (Constant), CM, SEO, SSM, EM

In the analysis of variance (ANOVA) table provided, the regression model shows significant results with a high F-value of 310.010 (p < .000), indicating that the predictors (CM, SEO, SSM, EM) collectively explain a substantial amount of variance in the dependent variable (CPD). The regression model accounts for a total of 84.3% of the variance in CPD, as indicated by the R-squared value, suggesting a strong fit.

Specifically, the predictors (CM, SEO, SSM, EM) contribute significantly to predicting CPD. CM (Content Marketing), SEO (Search Engine Optimization), SSM (Social Media Marketing), and EM (Email Marketing) are all statistically significant in influencing CPD. The low residual mean square (.136) indicates that the variance not explained by the model is minimal, supporting the reliability of the model's predictions.

In summary, the ANOVA results confirm that the combination of digital marketing tools (CM, SEO, SSM, EM) effectively predicts CPD, with each predictor making a significant individual contribution to explaining consumer purchase decisions in the context studied.

Table 8. Coefficientsᵃ

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.498	.083		6.029	.000
	SSM	.099	.052	.114	1.901	.059
	EM	.189	.056	.212	3.383	.001
	SEO	.212	.052	.248	4.050	.000
	CM	.329	.050	.393	6.593	.000

a. Dependent Variable: CPD

The coefficients table provides valuable insights into the impact of each digital marketing tool (SSM, EM, SEO, CM) on consumer purchase decisions (CPD). The intercept (Constant) of .498 indicates the baseline level of CPD when all predictors are zero. Each coefficient represents the change in CPD for a one-unit increase in the respective predictor, holding other predictors constant. SSM (Social Media Marketing) has a coefficient of .099, indicating that for every unit increase in SSM, CPD increases by .099 units, although this result is marginally significant (p = .059). EM (Email Marketing) has a coefficient of .189, suggesting that for every unit increase in EM, CPD increases by .189 units, significantly (p = .001). SEO (Search Engine Optimization) has a coefficient of .212, indicating that for every unit increase in SEO, CPD increases by .212 units, highly significantly (p < .001). CM (Content Marketing) shows the highest

coefficient at .329, implying that for every unit increase in CM, CPD increases by .329 units, with a very high level of significance (p < .001).

Linear Equation:

The linear equation to predict CPD based on these digital marketing tools is:

CPD = 0.498 + 0.099×SSM + 0.189×EM + 0.212×SEO + 0.329×CM

This equation quantitatively expresses how changes in each digital marketing tool influence consumer purchase decisions. For instance, if Content Marketing (CM) increases by 1 unit and all other predictors remain constant, CPD is expected to increase by 0.329 units. Similarly, adjustments can be made for SSM, EM, and SEO to gauge their individual impacts on CPD in the context of your study.

Graphs of the Study

Fig 2. Graphs of the Study
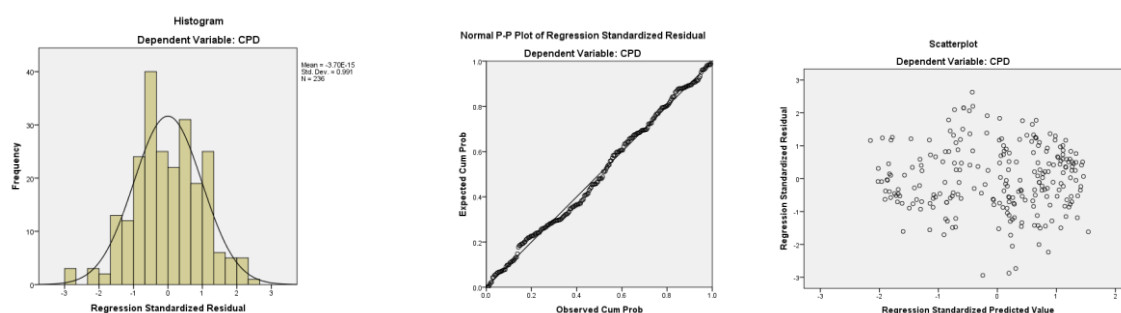
The histogram (left) shows the distribution of residuals, which should ideally be normal, indicating unbiased errors. The Q-Q plot (centre) compares residual quantiles to a normal distribution, with points on the reference line suggesting normality. The scatter plot (right) depicts predicted vs. actual values, where a tight clustering around a 45-degree line indicates a good fit. Together, these graphs assess model accuracy, normality of residuals, and overall fit quality.

5. CONCLUSION

This study provides a comprehensive analysis of the effectiveness of digital marketing tools—Social Media Marketing (SSM), Email Marketing (EM), Search Engine Optimization (SEO), and Content Marketing (CM)—and their significant impact on consumer behaviour and purchase decisions within the Indian online travel industry. The Cronbach's Alpha value of 0.977 demonstrates the high reliability of the questionnaire, reinforcing the robustness of the findings.

The results of the one-way ANOVA and regression analyses reveal that these digital marketing strategies collectively explain 84.3% of the variance in consumer purchase decisions, with Content Marketing having the highest influence. This indicates that strategic investments in digital marketing not only drive consumer engagement and booking conversions but also play a crucial role in shaping responsible consumer behaviour, aligning with SDG 12 (Responsible Consumption and Production)

From an SDG perspective, the significant influence of these digital marketing tools highlights the potential for travel portals to promote SDG 8 (Decent Work and Economic Growth) by fostering sustainable business practices that enhance consumer trust and satisfaction. By effectively leveraging these tools, online travel portals can also contribute to SDG 9 (Industry, Innovation, and Infrastructure) through the adoption of innovative marketing strategies that ensure sustainable growth in the digital economy.

Moreover, the findings support SDG 13 (Climate Action) by emphasizing the role of digital marketing in promoting eco-friendly and responsible travel choices. Through targeted campaigns and content that educate consumers on the importance of sustainable tourism, travel portals can influence behaviour that reduces the environmental impact of travel, thus contributing to global climate action efforts.

In conclusion, the high reliability and strong statistical significance of this study underscore the transformative potential of digital marketing tools in the Indian online travel industry. By aligning these strategies with the Sustainable Development Goals, particularly SDGs 8, 9, 12, and 13, travel portals can drive not only business growth and consumer engagement but also positive social and environmental outcomes.

IMPLICATIONS OF THE STUDY

The study examining the effectiveness of digital marketing tools and their impact on consumer purchase decisions within Indian online travel portals holds significant social and managerial implications, particularly in alignment with the Sustainable Development Goals (SDGs). Understanding how these strategies shape consumer behaviour is crucial for advancing sustainable business practices in the rapidly evolving travel industry.

Social Implications:

From a social perspective, the study underscores the vital role digital marketing plays in influencing consumer choices and behaviors, particularly in promoting responsible and sustainable consumption patterns, in line with SDG 12 (Responsible Consumption and Production). Digital marketing tools such as social media, email marketing, SEO, and content marketing are not only promotional instruments but also key channels for disseminating information and fostering social interaction. As consumers increasingly rely on these digital platforms to make informed travel decisions, the accuracy, transparency, and ethical standards of the information provided by online travel portals become paramount.

Ethical marketing practices are essential in ensuring that the information disseminated is trustworthy and promotes responsible travel choices, thereby enhancing consumer confidence and satisfaction. For example, travel portals can use digital marketing to highlight eco-friendly accommodations, responsible tourism practices, and sustainable travel options, thus supporting SDG 13 (Climate Action) by encouraging consumers to reduce their environmental impact.

Furthermore, the study highlights the social dynamics of digital engagement, particularly through social media marketing, which enables a two-way communication channel between consumers and travel portals. This interaction not only fosters a sense of community among travellers but also contributes to SDG 16 (Peace, Justice, and Strong Institutions) by promoting transparency, trust, and accountability in the travel industry. Building and maintaining positive relationships with consumers through responsible digital marketing practices can lead to increased customer loyalty, advocacy, and a ripple effect of positive word-of-mouth, all of which are crucial for long-term business sustainability.

Managerial Implications:

For managers and marketers in the travel industry, the study provides actionable insights into optimizing digital marketing strategies to drive accommodation bookings while contributing to the achievement of the SDGs. A multi-faceted digital marketing approach is essential not only for capturing consumer attention and converting it into bookings but also for promoting sustainable and responsible business practices.

The effectiveness of social media as a tool for engaging consumers suggests that managers should invest in creating content that resonates with their audience and promotes sustainable tourism. By highlighting eco-friendly travel options and encouraging responsible behaviour through interactive campaigns, user-generated content, and responsive customer service, companies can support SDG 12 while also enhancing brand loyalty and trust.

Personalized email campaigns are shown to be effective in driving bookings, underscoring the importance of data-driven and responsible marketing. Managers should focus on segmenting their audience and tailoring content to promote sustainable choices, such as eco-friendly accommodations or off-peak travel periods, which can reduce environmental impact and support SDG 13. Automated email marketing systems that deliver relevant and timely offers can also encourage sustainable travel habits.

The study highlights the critical role of search engine visibility in influencing consumer decisions. Managers should prioritize SEO strategies to ensure their portals are not only visible but also aligned with sustainability goals. This can involve optimizing content to highlight responsible travel practices and using PPC advertising to promote sustainable travel options. By doing so, travel portals can support SDG 12 and SDG 13 by steering consumers toward environmentally and socially responsible choices.

High-quality content that educates consumers on sustainable travel is essential. Managers should develop a robust content marketing strategy that includes blogs, guides, and virtual tours focusing on responsible tourism. This content can address common consumer concerns related to sustainability and provide insights that aid in making informed, responsible

decisions, thereby contributing to SDG 4 (Quality Education) by raising awareness and educating consumers on sustainability issues.

The implications for trust and credibility suggest that travel portals must prioritize customer relationship management (CRM) with a focus on sustainability. Implementing CRM systems that track customer interactions and preferences can help deliver personalized, sustainable travel experiences. Additionally, actively seeking and responding to customer feedback can improve service quality, foster customer satisfaction, and promote long-term relationships, supporting SDG 8 (Decent Work and Economic Growth) by enhancing the sustainability of business practices.

The social and managerial implications of this study highlight the transformative impact of digital marketing on the travel industry, particularly in promoting the SDGs. By leveraging the effectiveness of various digital marketing tools in alignment with sustainable development goals, managers can not only enhance consumer engagement, trust, and satisfaction but also drive higher accommodation bookings and business growth in a manner that is socially and environmentally responsible.

FUTURE SCOPE OF THE STUDY

The findings of this study on the effectiveness of digital marketing tools and their impact on consumer purchase decisions for accommodation bookings via Indian online travel portals provide a foundational understanding, but they also open several avenues for future research. One of the most promising directions for future studies is the exploration of emerging digital marketing technologies and their potential to further influence consumer behaviour. With the rapid advancements in artificial intelligence (AI), machine learning, and big data analytics, future research could investigate how these technologies can be integrated into digital marketing strategies to enhance personalization, customer targeting, and predictive analytics.

Another critical area for future research is the comparative effectiveness of different digital marketing tools across various demographics and psychographics. While this study provides a broad analysis, future studies could delve deeper into how different age groups, income levels, and cultural backgrounds respond to various digital marketing tactics. This granular understanding could help online travel portals tailor their marketing efforts more precisely, ensuring that their strategies are not only effective but also culturally sensitive and inclusive.

Additionally, the impact of mobile marketing deserves further exploration. With the increasing penetration of smartphones and mobile internet usage in India, future studies could focus on how mobile-specific marketing strategies, such as in-app advertisements, push notifications, and mobile-friendly content, influence accommodation booking behaviors. Understanding the nuances of mobile marketing can provide online travel portals with insights to optimize their mobile platforms and enhance user experiences.

The integration of customer feedback mechanisms into digital marketing strategies is another area ripe for investigation. Future research could examine how real-time feedback and reviews, when integrated into digital marketing campaigns, affect consumer trust and decision-making. This could involve studying the role of social proof and user-generated content in shaping perceptions and driving bookings.

In conclusion, the future scope of this study is vast and multifaceted, encompassing technological advancements, demographic-specific research, mobile marketing, customer feedback integration, longitudinal studies, and the impact of external factors. Exploring these areas will not only enrich the academic understanding of digital marketing in the travel industry but also provide practical insights for online travel portals to enhance their marketing strategies and better serve their customers.

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