

A Study of the Relationship Between Digital Marketing and Consumer Behaviour in the Software-As-A-Service (SaaS) Industry

Salman Afridi S.M¹, Prof Y. Nagaraju²

¹Research Scholar Canara Bank School of Management Studies (CBSMS), Department of Management, Bangalore University, Bangalore. 560056

²Director & Dean Canara Bank School of Management Studies (CBSMS), Department of Management, Bangalore University, Bangalore. 560056

Abstract

The rapid evolution of the Software-as-a-Service (SaaS) industry has amplified the significance of digital marketing in shaping consumer behaviour. This study investigates the relationship between **digital marketing and its dimensions** such as awareness, engagement, personalization, trust, and credibility on one hand and **consumer behaviour** in the SaaS industry on the other. Survey research design was used in this study. A stratified Random Sample of 549 were Selected giving representation to Gender, age, Income levels, Educational qualifications and Level of Technology Proficiency. The researcher developed and Standardized two Attitude Scales to measure the independent and dependent Variables. The research study utilised **Pearson Coefficient of Correlation Analysis** to examine the strength and direction of relationships between independent and dependent variables, and **t-test** to identify any significant differences in the Consumer behaviour across selected categorical groups. The results revealed **significant positive correlations** between digital marketing dimensions and consumer behaviour, highlighting the critical role of awareness, engagement, personalization, trust, and credibility in influencing purchasing decisions and fostering customer loyalty. Furthermore, the study highlights the importance of strategic digital marketing approaches tailored to these dimensions to enhance consumer engagement and satisfaction. The findings provide actionable insights for SaaS marketers to optimize their digital strategies, driving sustainable customer relationships and business growth.

Keywords: Digital Marketing, Consumer Behaviour, SaaS Industry

1. Introduction

Background

The **Software-as-a-Service (SaaS)** industry has revolutionised the software delivery model, enabling businesses and consumers to access applications over the Internet with unprecedented ease and scalability. Digital marketing plays a pivotal role in driving growth within the SaaS sector, offering tools and strategies to enhance brand visibility, foster customer engagement, and influence purchasing behaviour. With the increasing reliance on **social media campaigns, email marketing, personalized advertisements, and content marketing**, SaaS companies are leveraging digital marketing to address the highly competitive and dynamic market landscape. However, despite substantial investments in digital strategies, the exact

relationship between digital marketing dimensions and **consumer behaviour** remains inadequately explored, particularly in the context of the SaaS sector.

2. Problem Statement

While digital marketing has become integral to SaaS business growth, there is limited empirical evidence on how specific digital marketing dimensions—such as **awareness, engagement, personalization, trust, and credibility**—influence **consumer behaviour, purchasing decisions, and long-term loyalty**. The fragmented understanding of these relationships prevents SaaS companies from fully optimising their marketing efforts. Therefore, this study seeks to address this gap by examining the statistical relationships between **digital marketing strategies and consumer behaviour** in the SaaS industry.

3. Research Objectives

- **Primary Objective:** To explore the relationship between **digital marketing** and **consumer behaviour** in the SaaS industry
- **Subsidiary Objectives:**
 1. To investigate the relationship between **awareness, engagement, personalization, trust, and credibility** and **consumer behaviour**.
 2. To identify the extent to which demographic variables and **digital marketing along with its dimensions** affect **consumer behaviour**.
 3. To offer actionable Strategies and insights for SaaS marketers to enhance **consumer behaviour by enhancing Consumer engagement and loyalty**.

4. Research Question

1. Does **digital marketing and its dimensions (awareness, engagement, personalization, trust, and credibility)** influence **consumer purchasing decisions** in the SaaS industry

4.1 Theoretical Background

The intersection of **digital marketing** and **consumer behaviour** in the SaaS industry is underpinned by several key theories:

1. **Technology Acceptance Model (TAM):** Proposed by Davis (1989), TAM suggests that perceived usefulness and ease of use influence user acceptance of technology. In SaaS, digital marketing efforts that highlight these aspects can significantly impact adoption rates.
2. **Consumer Decision-Making Process:** This model outlines stages consumers undergo before making a purchase: problem recognition, information search, evaluation of alternatives, purchase decision, and post-purchase behaviour. Digital marketing strategies can influence each stage, guiding consumers toward adopting SaaS solutions.
3. **Elaboration Likelihood Model (ELM):** Developed by Petty and Cacioppo (1986), ELM posits two routes to persuasion: central (focused on argument quality) and peripheral (focused on superficial cues). Digital marketing can utilize both routes to effectively influence consumer attitudes toward SaaS products.

4.2 Empirical Studies

1. Impact of Digital Marketing on Consumer Behaviour (2024):

- **Authors:** Oana Duralia
- **Findings:** The study emphasizes that digital communication tools significantly influence consumer

○ purchase decisions. Tailoring communication strategies to consumer preferences enhances engagement and loyalty. [Sciendo](#)

2. An Empirical Analysis on Effect of Digital Marketing on Consumer Buying Behaviour (2019):

○ **Authors:** Unenabasi Godwin Ekeruke

○ **Findings:** The research indicates that digital marketing platforms, including social media and email marketing, substantially affect consumer purchasing decisions. The study highlights the importance of understanding consumer behaviour in the digital era.

[Academia](#)

3. The Impact of Digital Influencers on Consumer Behavior: Towards a Conceptual Framework of Purchase Intention (2022):

○ **Authors:** Shehrazed Dada and Salima Jazi

○ **Findings:** This study explores how digital influencers affect consumer attitudes and purchase intentions, providing insights into the mechanisms of influence in digital marketing.

[SpringerLink](#)

4. Design and Evaluation of Personalized Free Trials (2020):

○ **Authors:** Hema Yoganarasimhan, Ebrahim Barzegary, Abhishek Pani

○ **Findings:** This research examines how personalized free trial lengths in the SaaS industry can influence user conversion rates, highlighting the importance of tailored digital marketing strategies.

[arXiv](#)

4.3 Research Gaps

While these studies provide valuable insights, several gaps remain:

- **SaaS-Specific Insights:** Limited researches have focused exclusively on the SaaS industry, necessitating studies that address its unique consumer behaviour dynamics.
- **Quantitative Analyses:** There's a need for more studies employing statistical Techniques like correlation and t-tests to establish concrete relationships between digital marketing strategies and consumer behaviour.
- **Comprehensive Examination of Digital Marketing Dimensions:** Only a few studies analyze specific aspects such as personalization, trust, and engagement in depth within the SaaS context.

5. Research Methodology

5.1 Research Design

This study used survey **research design**, aimed at investigating the **relationship between digital marketing along with its dimensions and consumer behaviour** in the **Software-as-a-Service (SaaS) industry**. The quantitative approach used in this study focuses on numerical data, statistical analysis, and objective measurements to understand patterns and relationships within the collected data.

5.2 Data Collection

- **Tools:** Two Standardized Attitude Scales (Behavioral terms) were used to gather primary data from respondents who are active users of SaaS products.
- **Sample Size and Sampling technique:** A representative sample of **549 respondents** were selected using stratified Random sampling technique to ensure sufficient statistical power and reliability in the results.

The survey focused on capturing insights related to **awareness, engagement, personalization, trust, and credibility**, along with **consumer behaviour** outcomes.

5.3 Variables

- **Independent Variables (IV):** Digital marketing along with its dimensions categorized into three groups:
 - **Awareness, Attitude, Perception, and Understanding**
 - **Engagement & Personalisation**
 - **Trust, Credibility, and Purchase Behaviour**
- **Dependent Variable (DV):**
 - **Consumer Behaviour** (a single aggregated variable derived from multiple factors):
 - Trust in Digital Marketing Initiatives
 - Satisfaction with SaaS Products
 - Engagement with Marketing Strategies
 - Initial and Repeat Purchasing Behaviour
 - Post-Purchase Communication Satisfaction

The dependent variable is treated as an aggregate measure representing the overall consumer behaviour.

5.4 Statistical Techniques

To analyse the collected data, the following statistical techniques were employed:

1. **Pearson Co-efficient of Correlation Analysis:**

- Used to measure the **strength and direction of relationships** between **independent Variable digital marketing along with its dimensions** and **consumer behaviour**.
- Helps identify the degree to which digital marketing and its dimensions such as **awareness, engagement, personalization, trust, and credibility** **Correlate with consumer behaviour**.

2. **Independent Samples t -Test:**

- Used to compare **consumer behaviour scores** across selected demographic variables.
- Explores whether factors such as **gender, age, income, education, and technology proficiency** significantly influence **consumer behaviour**.

Both statistical techniques were applied using **SPSS software** to ensure precision and accuracy in analysis.

5.5 Hypotheses

The hypotheses tested in this study are the following

H1: There is no significant correlation between **Awareness, Perception & Understanding** and **Consumer Behaviour** in the SaaS industry.

1. **H2:** There is a no significant correlation between **Engagement & Personalisation** and **Consumer Behaviour** in the SaaS industry.
2. **H3:** There is a no significant correlation between **Trust, Credibility, and Purchase Behaviour** and **Consumer Behaviour** in the SaaS industry.
3. **H4:** There is a no statistically significant difference in **Consumer Behaviour scores** based on **Gender**
4. **H5:** There is a no statistically significant difference in **Consumer Behaviour scores** based on **Age**.
5. **H6:** There is a no statistically significant difference in **Consumer Behaviour scores** based on **Income Levels**.
6. **H7:** There is a no statistically significant difference in **Consumer Behaviour scores** based on **Education Levels**.
7. **H8:** There is a no statistically significant difference in **Consumer Behaviour scores** based on level

of Technology Proficiency.

6. Results & Discussion

This section presents the findings derived from the **Pearson Correlation Analysis** and **Independent Samples t-Test**. Results are displayed in two consolidated tables to ensure clarity and conciseness, followed by a brief discussion of key insights.

6.1 Correlation Analysis Results

The **Pearson Coefficient of Correlation Analysis** was performed to measure the **strength and direction of relationships** between **Digital Marketing along with its Dimensions (Independent Variables)** and **Consumer Behaviour (Dependent Variable)**.

Table 1: Pearson Correlation Analysis Results

Independent Variables	df(N-2)	Dependent Variable (Consumer Behaviour)	Pearson Correlation (r)	Significance (p-value)	Interpretation
Awareness, Perception, and Understanding	547	Consumer Behaviour	0.755	P<0.001	Highly Significant Positive Correlation
Engagement & Personalisation	547	Consumer Behaviour	0.737	P< 0.001	Highly Significant Positive Correlation
Trust, Credibility & Purchase decision	547	Consumer Behaviour	0.689	P<0.001	Highly Significant Positive Correlation
Combined Impact of Awareness, Engagement, and Trust (Aggregate-Digital Marketing)	547	Consumer Behaviour	0.836	P<0.001	Highly Significant Positive Correlation

Key Insights:

- All three **Digital Marketing Dimensions** show a high **positive correlation** Statistically with the **Consumer Behaviour**.
- The **aggregate correlation (0.836)** indicates a **very high positive correlation** Statistically , emphasizing the Combined impact of awareness, engagement, and trust dimensions on the consumer

behaviour.

- These relationships are statistically significant ($p < 0.01$), confirming the robustness of the observed correlations. Therefore, it can be inferred that, higher the digital marketing Awareness, perception, Engagemen t , trust and Credibility, higher will be the Consumer behaviour and Vice versa.

6.2 t-Test Results

The **Independent Samples t-test** was conducted to determine if there are **significant differences in Consumer Behaviour scores** based on **demographic factors** such as Gender, Age, Income, Education, and Technology Proficiency.

Table 2: Independent Samples t-Test Result

Sl. No.	Variable	Group	N	Mean (M)	SD	SE	t	Level of Significance	p-Value
1	Gender	Male	390	319.39	61.303	3.104	4.815	0.01	P<0.01
		Female	159	299.01	69.598	5.519			
2	Age	Below 40	243	319.3	63.658	4.084	0.814	NS	0.06
		Above 40	306	308.87	64.75	3.701			
3	Income	Below ₹50,000	366	316.57	61.06	3.192	3.828	0.01**	P<01
		Above ₹50,000	183	307.33	70.432	5.207			
4	Education	Bachelor's Degree & Below	182	317.25	58.611	4.345	5.182	0.01**	P<0.01
		Master's Degree & Above	367	311.62	67.112	3.503			
5	Technology	Low (Beginner & Intermediate)	384	310.01	63.574	3.244	0.001	NS	0.054
		High (Advanced & Expert)	165	321.57	65.83	5.125			

NS: Not Significant

**** : Significant at 0.01 level**

Key Insights:

- **Gender, Income level and Educational Qualifications** emerged as the **statistically significant**

variables ($p = 0.01$), with males scoring higher on **Consumer Behaviour** than females.

- Other demographic variables such as **Age, and Technology Proficiency** did not show statistically significant differences in Consumer Behaviour scores although minor differences in mean scores were observed, they were not large enough to be considered statistically significant.

6.3 Discussion

1. Correlation Analysis Findings:

- All **digital marketing dimensions** (Awareness, Engagement, Personalization, Trust, and Credibility) demonstrated **strong positive correlations** with **Consumer Behaviour**.
- The **aggregate correlation score (0.836)** underscores the significant combined impact of digital marketing strategies on driving consumer behaviour.
- These findings are consistent with studies by **Chaffey & Ellis-Chadwick (2020)** and **Kumar & Singh (2023)**, highlighting the critical role of **trust, engagement, and personalisation** in shaping consumer behaviour in SaaS platforms.

2. t-Test Findings:

- **Gender, Income and Educational qualifications** were a significant moderators of consumer behaviour, aligning with findings from **Kotler et al. (2021)**, which suggested gender-based differences in response to digital marketing campaigns.
- Variables such as **Age, Education, and Technology Proficiency** did not show statistically significant differences, suggesting that SaaS consumers respond relatively uniformly across these demographic segments.

3. Implications for SaaS Marketers:

- Prioritise **trust-building mechanisms** and **personalized engagement strategies** to foster deeper relationships with consumers.
- Develop **gender-specific campaigns** to better align with behavioural differences observed in male and female respondents.
- Avoid over-segmentation by demographic factors such as **age, income, or education**, as these variables showed limited impact on consumer behaviour outcomes.

7. Conclusion & Implications

This section evaluates whether the **research objectives, research questions, and problem statements** presented at the start of the study have been addressed through the findings derived from the **Pearson Correlation Analysis** and **Independent Samples t-test**.

7.1 Addressing the Problem Statement

The problem identified in this study highlighted a **lack of empirical evidence** on how **specific digital marketing dimensions (awareness, engagement, personalization, trust, and credibility)** influence **consumer behaviour, purchasing decisions, and long-term loyalty** in the SaaS industry.

Resolution:

- The findings demonstrate **statistically significant relationships** between **awareness, engagement, personalization, trust, and credibility** and **consumer behaviour**.
- The study validated the importance of **awareness, personalization, and trust** as critical drivers of **consumer purchasing decisions and satisfaction**.

- The **significant positive correlation values** and actionable insights bridge the empirical gap, addressing the fragmented understanding noted in the problem statement.

The problem statement has been addressed.

7.2 Addressing Research Objectives

Primary Objective:

- **To explore the relationship between digital marketing strategies and consumer behaviour in the SaaS industry using correlation analysis and t-tests.**
 - The correlation analysis revealed **significant positive relationships** between **digital marketing dimensions** and **consumer behaviour**.
 - The t-tests examined demographic variations in consumer behaviour across **gender, age, income, education, and technology proficiency**.

Subsidiary Objectives:

1. **To investigate the relationship between awareness, engagement, personalization, trust, credibility, purchase decisions and consumer behaviour.**
 - The study found statistically significant high **positive correlations** between each of the dimensions and **consumer behaviour**.
2. **To identify the extent to which digital marketing dimensions influence consumer decision-making and satisfaction.**
 - Engagement, personalization, and trust were identified as key influencers in driving **consumer satisfaction and loyalty**.
3. **To offer actionable insights for SaaS marketers to enhance consumer engagement and loyalty.**
 - Recommendations were provided, emphasizing the importance of **awareness campaigns, personalization strategies, and trust-building mechanisms** for improving engagement and loyalty.

7.3 Addressing Research Questions

Research Question: Does digital marketing dimensions (awareness, engagement, personalization, trust, and credibility) influence consumer purchasing decisions in the SaaS industry?

Answer:

- **Awareness, Engagement, Personalization, Trust, and Credibility** were found to have high **positive correlations** Statistically with **consumer behaviour** ($r = 0.755$, $r = 0.737$, $r = 0.689$).
- **Personalization and Trust** emerged as critical dimensions for enhancing **consumer engagement and satisfaction**.
- **Gender, Income level and educational qualifications**, were the demographic variables showing a **statistically significant difference** in consumer behaviour scores, indicating gender, income and educational qualification-specific responses to digital marketing strategies.

7.4 Summary of Key Findings

1. Correlation Analysis:

- **Awareness, Engagement, Personalization, Trust, and Credibility** demonstrated **strong positive relationships** with **Consumer Behaviour**.
- Combined dimensions (aggregate) had a **very strong positive correlation** ($r = 0.836$) with consumer behaviour.

2. t-Test Results:

- **Gender** had a **statistically significant difference** in consumer behaviour scores, with males scoring higher.
- **Age and Technology Proficiency** showed **no statistically significant differences**.

3. Actionable Insights for SaaS Marketers:

- Prioritise **trust-building mechanisms** and **personalised marketing strategies**.
- Develop **gender, income and Educational level-specific campaigns** to address behavioural differences.

7.5 Theoretical Implications

- Supports the **Technology Acceptance Model (TAM)** by confirming the role of **awareness, engagement, personalization, and trust** in influencing consumer behaviour.
- Validates the **Consumer Decision-Making Process Model**, highlighting the impact of digital marketing across various decision-making stages.

7.6 Practical Implications

1. **Focus on Awareness and Personalization:** SaaS companies should prioritise campaigns highlighting product value and personalised recommendations.
2. **Trust-Building Strategies:** Transparent communication and ethical practices build credibility.
3. **Gender income and educational level Specific Approaches:** Tailor campaigns to address gender-based differences in consumer behaviour.
4. **Holistic Marketing Strategies:** Avoid over-reliance on Certain non-effective demographic segmentation and focus on universal engagement strategies.

References.

4. **Duralia, O. (2024).** Impact of Digital Marketing on Consumer Behaviour. Sciendo. <https://sciendo.com/article/10.2478/sbe-2024-0027>Exploring the Relations...
5. **Ekeruke, U. G. (2019).** An Empirical Analysis on Effect of Digital Marketing on Consumer Buying Behaviour. Academia. https://www.academia.edu/41955170/AN_EMPIRICAL_ANALYSIS_ON_EFFECT_OF_DIGITAL_MARKETING_ON_CONSUMER_BUYING_BEHAVIOUREExploring the Relations...
6. **Dada, S., & Jazi, S. (2022).** The Impact of Digital Influencers on Consumer Behavior: Towards a Conceptual Framework of Purchase Intention. SpringerLink. https://link.springer.com/chapter/10.1007/978-3-030-95809-1_9Exploring the Relations...
7. **Yoganarasimhan, H., Barzegary, E., & Pani, A. (2020).** Design and Evaluation of Personalized Free Trials in SaaS. arXiv. <https://arxiv.org/abs/2006.13420>Exploring the Relations...
8. **Chaffey, D., & Ellis-Chadwick, F. (2020).** Digital Marketing: Strategy, Implementation & Practice. Pearson Education.
9. **Kotler, P., Kartajaya, H., & Setiawan, I. (2021).** Marketing 5.0: Technology for Humanity. John Wiley & Sons.
10. **Srinivasan, S., Anderson, R., & Ponnayolu, K. (2022).** Trust and Credibility in Digital Marketing Campaigns. Journal of Marketing Research.

11. **Kumar, V., & Singh, J. (2023).** The Effectiveness of Email Marketing Campaigns in SaaS Customer Acquisition. *Journal of Interactive Marketing.*
12. **Zhang, Y., & Lee, H. (2023).** The Relationship Between Engagement Strategies and Customer Retention in SaaS Products. *Journal of Business Research.*
13. **Petty, R. E., & Cacioppo, J. T. (1986).** *The Elaboration Likelihood Model of Persuasion.* Academic Press.
14. **Davis, F. D. (1989).** Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. *MIS Quarterly.*
15. **Dwivedi, Y. K., Rana, N. P., & Slade, E. L. (2021).** Digital Marketing and Consumer Behavior in the SaaS Industry. *Annals of Operations Research.*
<https://link.springer.com/article/10.1007/s10479-021-04049-5> Exploring the Relations...
16. **Brill, T. M., Munoz, L., & Miller, R. J. (2019).** Siri, Alexa, and other digital assistants: A study of customer satisfaction with artificial intelligence applications. *Journal of Marketing Management.*
<https://www.tandfonline.com/doi/full/10.1080/0267257X.2019.1687571>
17. **Leeflang, P. S. H., Verhoef, P. C., Dahlström, P., & Freundt, T. (2014).** Challenges and solutions for marketing in a digital era. *European Management Journal*, 32(1), 1-12.
18. **Mariani, M. M., & Matarazzo, M. (2020).** The Impact of Artificial Intelligence on Marketing Analytics. *Journal of Business Research.*
<https://doi.org/10.1016/j.jbusres.2020.07.018>