Digital Marketing, Product Quality, and Marketing Mix Construct: A Structural Equation Model on Customer Engagement among Coffee Shops in the Municipality of Santo Tomas

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ABSTRACT

Customer engagement is an attachment between a business and its customers, reflecting loyalty, satisfaction, and brand interaction. This study explores how digital marketing, product quality, and the marketing mix influence customer engagement. Data were collected from 200 consumers, with descriptive-causal and structural equation modeling (SEM) used for analysis. Descriptive statistics (mean) were applied first, followed by Pearson's correlation, multiple regression, and SEM. Results indicated that digital marketing often influences customer engagement, while product quality and the marketing mix consistently affect it. A positive, significant correlation was found between the exogenous variables (digital marketing, product quality, and marketing mix) and customer engagement. SEM revealed that digital marketing significantly impacts both product quality and the marketing mix, which in turn enhances engagement. Additionally, entertainment and interactivity were identified as key factors in consumer behavior. The study concludes that improving customer engagement requires a strategic focus on digital marketing, high product quality, and an optimized marketing mix. Businesses may integrate these elements to strengthen their emotional connection with customers and boost satisfaction and loyalty.

Keywords: digital marketing, product quality, marketing mix, customer engagement, structural equation modeling

INTRODUCTION

Customer engagement is a focused approach where businesses consistently aim to provide value in each interaction with customers (Miller, 2023). However, Chan (2024) explained that there are problems with customer engagement. Many business owners struggle to provide great customer engagement because they fail to recognize and prioritize opportunities for engagement, use outdated technology, have unclear goals, and lack personalization. These problems can lead to customers leaving and missed business opportunities.

In Padang City, Indonesia, the Kopi Kenangan chain operates seven outlets. However, their Instagram presence is underutilized and outdated, limiting their effectiveness in promoting their products and specials. Although Instagram could serve as a key platform for boosting brand affinity and engaging with customers, the Padang outlets have not fully leveraged this potential. Additionally, Mulyati et. al., (2024) mentioned that these outlets lack differentiated promotional strategies tailored to their individual locations, which hampers their ability to enhance brand loyalty and customer interaction.

In the Philippines, particularly in Nueva Ecija, online stores take major control of all factors of client loyalty in their strategic objectives. On the contrary, for some customers, online purchasing is untrustworthy and unsafe, and internet security is a significant worry for consumers, particularly in terms of theft, privacy, and hacking (Jesus and Ibarra, 2023). Furthermore, Inquiro (2024) stated that Filipino consumers are highly price-sensitive,

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prioritizing the value of money. Engagement strategies must balance brand building and offering attractive deals and promotions.

Although there are existing studies that link customer engagement to different factors, numerous inquiries have been conducted to advance our understanding of customer engagement. However, the researcher has not come across a study that creates a causal model on customer engagement through digital marketing, product quality, and marketing mix construct within the local settings. Hence, the researcher found the urgency to conduct this study to fill the gap in the literature covering these subjects, especially in the local context. Therefore, this study aimed to investigate how digital marketing, product quality, and marketing mix construct affect how customers interact with businesses. The study used a model to identify the key factors that influence customer engagement. It offered practical advice to retailers on improving their digital products and marketing efforts to increase customer satisfaction and loyalty. The findings would contribute to academic knowledge and help retailers create customer-focused strategies that boost sales and make them more competitive.

Statement of the Problem

This study generated a causal model about customer engagement through digital marketing, product quality, and marketing mix construct. Specifically, this answers the following research questions:

1. What is the level of digital marketing in terms of:

    1.1 entertainment;

    1.2 informativeness;

    1.3 interactivity;

    1.4 accessibility; and

    1.5 irritation?

2. What is the level of product quality in terms of:

    2.1 performance;

    2.2 features;

    2.3 reliability;

    2.4 conformance;

    2.5 durability;

    2.6 aesthetics;

    2.7 serviceability; and

    2.8 perceived quality?

3. What is the level of marketing mix construct in terms of:

    3.1 price;

    3.2 distribution intensity;

    3.3 advertising spending; and

3.4 price promotion; and

3.5 non-price promotion?

4. What is the level of customer engagement in terms of:

4.1 cognitive engagement;

4.2 affective engagement;

4.3 behavioral engagement;

4.4 customer experience;

4.5 customer identification; and

4.6 behavioral intention?

5. Is there a significant interrelationship between:

5.1 digital marketing and customer engagement;

5.2 product quality and customer engagement; and

5.3 marketing mix construct and customer engagement?

6. Which among the exogenous variables best influence the customer engagement?

7. What model best fits for customer engagement?

Hypothesis

The following hypotheses were tested at a 0.05 level of significance:

1. There is no significant relationship between: digital marketing and customer engagement; product quality and customer engagement; and marketing mix construct and customer engagement.
2. There is no exogenous variable that best influence the customer engagement.
3. There is no model that best fits customer engagement.

Theoretical Framework

This study was anchored on Keller's Brand Equity Model by Keller (1993), also known as the Customer-Based Brand Equity (CBBE) Model. This model emphasizes the importance of using a diverse range of marketing strategies to create strong brands and discusses how customer perceptions are influenced by digital marketing and product quality, leading to increased customer involvement. Moreover, the proposition of Sattar (2018) elaborated that the marketing mix, which includes distribution, price, and promotion, significantly influences brand equity by making the brand seem better and increasing customer loyalty and that product quality is a crucial factor in building brand equity, as it directly influences consumer confidence and the perceived worth of the brand.

In the study of Jhantasana (2023), Keller's Brand Equity Model highlighted that strong brand equity and well-planned marketing strategies can positively influence purchasing decisions. Furthermore, Chen et al. (2023) also emphasized that digital marketing, particularly through social media, could help build a strong relationship between customers and a brand, which in turn positively impacts the brand's overall value. In addition, Cerna & Schneider (2023) stated that successful marketing strategies could lead to greater customer engagement, which improves brand recognition and customer loyalty.

Conceptual Framework

Presented in Figure 1 is the hypothesized model, which is composed of two latent contracts, the endogenous and exogenous variables. The endogenous variable is customer engagement, while the digital marketing, product quality, and marketing mix construct are the exogenous variables. Latent variables are not directly visible. This implies that it cannot be measured directly. Thus, regression routes extend from the latent to the observed variables.

Digital marketing is the first exogenous variable. This variable is composed of five (5) indicators which are entertainment, informativeness, interactivity, accessibility, and irritation.

Product quality is the second exogenous variable. This latent variable constructs eight (8) indicators, which are performance, features, reliability, conformance, durability, aesthetics, serviceability, and perceived quality.

The third exogenous variable is the marketing mix construct. This variable construct consists of five (5) indicators, which are price, distribution intensity, advertising spending, price promotion, and non-price promotion.

Lastly, the endogenous latent variable is customer engagement. This latent construct is composed of six (6) indicators which are cognitive engagement, affective engagement, behavioral engagement, customer experience, customer identification, and behavioral intention.

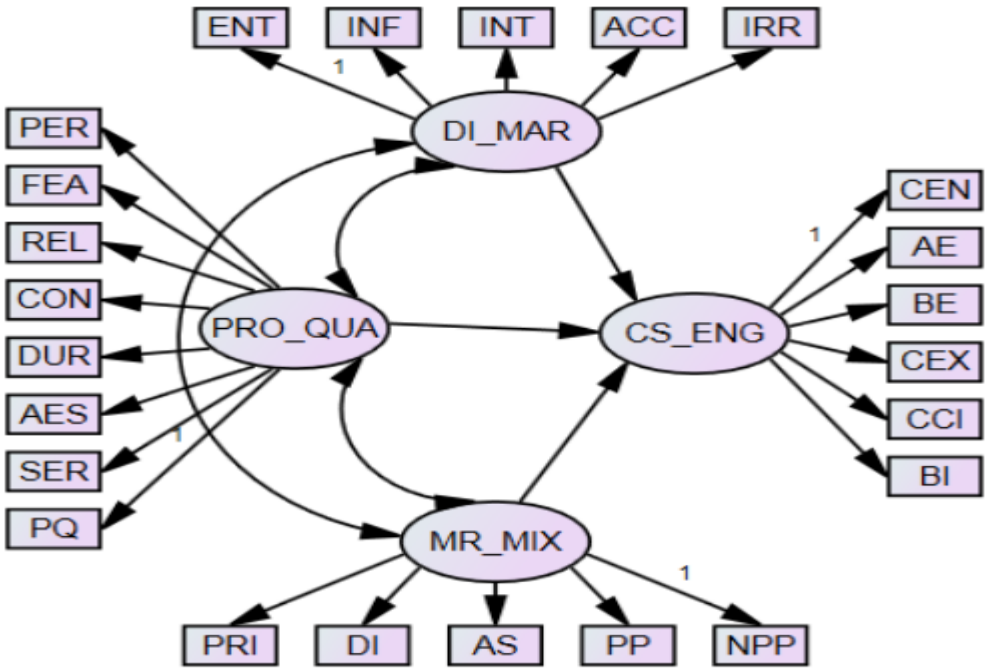

Figure 1. Conceptual Framework of the Study

Legend:

DI_MAR- Digital Marketing Construct
ENT - Entertainment
INF - Informativeness
INT - Interactivity
ACC - Accessibility
IRR- Irritation

PR_QUA- Product Quality
PER- Performance
FEA - Features
REL - Reliability
CON- Conformance
DUR- Durability
AES- Aesthetics
SER- Serviceability
PQ- Perceived Quality

MR_MIX – Marketing Mix
PRI - Price
DI- Distribution Intensity
AS- Advertising Spending
PP- Price Promotion
NPP- Non-Price Promotion

CS_ENG – Customer Engagement
CEN - Cognitive Engagement
AE - Affective Engagement
BE - Behavioral Engagement
CCI - Customer Identification
BI - Behavioral Intention

METHODOLOGY

This chapter discussed the study's several methodologies, such as the research design, research subject, instruments, data gathering procedures, and statistical tools.

Research Design

The quantitative non-experimental research design was fundamentally used by the researcher. The structural equation model (SEM) was used to develop the model that best suited the endogenous variable. The process was divided into two stages, with the first stage using the descriptive-causal research methodology. This technique measures the interrelationships between variables to varied degrees. Descriptive-causal research was used to determine the magnitude and type of cause and effect between different variables (Zikmund et. al., 2013).

Moreover, this study used structural equation modeling (SEM). This method was employed to examine and deal with complex structural relationships. Further, it examined the structural link between measured variables and latent variables (Rashid, 2020). These methods were used to create a best-fit model on customer engagement in research, seeing marketing mix construct, product quality, and digital marketing as exogenous variables.

Research Subject

The respondents of this research were the customers of coffee shops in the Municipality of Sto. Tomas, Davao del Norte. In the study of Wolf, Harrington, Clark, and Miller (2013), it was revealed that the range of sample size requirements in SEM is from 30 to 460 cases. Moreover, according to Sideridis, Simos, Papanicolaou, and Fletcher (2014), a sample size of 70-80 for SEM would be adequate to create a model with four (4) latent variables. Given the previous literature, the researcher uses a sample size of 200, which is the number of customers in Sto. Tomas, Davao del Norte.

The respondents of this study were determined by convenience sampling technique. Convenience sampling involves selecting readily available individuals, which leads to a sample that may not accurately reflect the entire population (Andrade,2021); in this technique, the samples were taken from the customers of coffee shops from the Municipality of Sto. Tomas. Participation of the responders is voluntary. They had the option to decline, and the respondents were not entitled to any payment or benefit. Additionally, respondents were free to stop participating at any time and may do so without incurring the appropriate consequences. They were denied legal rights, procedures, or rights because they took part in this scientific investigation.

Research Instrument

The researcher modified four instruments from internationally disseminated articles to achieve the goals of this research. The instrument for digital marketing is adopted from Impact of Internet Advertisement on Consumer Buying Behavior in Kathmandu by Sapkota (2019). This instrument is composed of eight indicators namely: informativeness with three (3) items, interactivity with three (3) items, entertainment with three (3) items, accessibility with four (4) items, and irritation with four (3) items. In measuring the degree of this variable, this five-point Likert type scale was used:

Range of means	Descriptive Equivalent	Interpretation
4.20–5.00	Very high	This means that digital marketing is always observed.
3.40-4.19	High	This means that digital marketing is oftentimes observed.
2.60-3.39	Moderate	This means that digital marketing is sometimes observed.
1.80-2.59	Low	This means that digital marketing is seldom observed.
1.0-1.79	Very low	This means that digital marketing is least observed.

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The instrument for product quality was adopted from The Effect of Product Quality on Customer Satisfaction and Loyalty; Evidence from Malaysian Engineering Industry by Hoe & Mansori (2018). This instrument is composed of eight indicators namely: performance with three (3) items, features with three (3) items, reliability with three (3) items, conformance with three (3) items, durability with three (3) items, aesthetics with three (3) items, serviceability with three (3) items, and perceived quality with three (3) items. In measuring the degree of this variable, this five-point Likert-type scale was used:

Range of means	Descriptive Equivalent	Interpretation
4.20–5.00	Very high	This means that product quality is always observed.
3.40-4.19	High	This means that product quality is oftentimes observed.
2.60-3.39	Moderate	This means that product quality is sometimes observed.
1.80-2.59	Low	This means that product quality is seldom observed.
1.0-1.79	Very low	This means that product quality is least observed.

The instrument for marketing mix construct was adopted from A Study of Brand Equity and Marketing Mix Constructs Scale Invariance in UAE by Shariq (2018).

Range of means	Descriptive Equivalent	Interpretation
4.20–5.00	Very high	This means that marketing mix construct is always observed.
3.40-4.19	High	This means that marketing mix construct is oftentimes observed.
2.60-3.39	Moderate	This means that marketing mix construct is sometimes observed.
1.80-2.59	Low	This means that marketing mix construct is seldom observed.
1.0-1.79	Very low	This means that marketing mix construct is least observed.

This instrument is composed of five indicators namely: price with three (3), distribution intensity with three (3) items, advertising spending with three (3) items, price promotion with three (3) items, and non-price promotion with three (3) items.

The instrument for customer engagement was adopted from The Impact of Customer Experience and Customer Engagement on Behavioral Intentions: Does Competitive Choices Matter? by Ahmed et al. (2022). This instrument is composed of eight indicators namely: cognitice engagement with three (3) items, affective engagement with four (4) items, behavioral engagement with three (3) items, customer experience with twelve (12) items, customer identification with four (4) items, and behavioral intention with three (3) items. In measuring the degree of this variable, this five-point Likert type scale was used:

Range of means	Descriptive Equivalent	Interpretation
4.20–5.00	Very high	This means that customer engagement is always observed.
3.40-4.19	High	This means that customer engagement is oftentimes observed.
2.60-3.39	Moderate	This means that customer engagement is sometimes observed.
1.80-2.59	Low	This means that customer engagement is seldom observed.
1.0-1.79	Very low	This means that customer engagement is least observed.

Statistical Treatment of Data

The following statistical tools were used in the computation of data and testing the hypothesis at the alpha 0.05 level of significance.

Mean. It adds up all numbers in a data set and then divides the total by the number of data points (Rouse, 2021). This was used to determine the level of impact of digital marketing, product quality, marketing mix construct, and customer engagement.

Pearson r. It represents the relationship between two variables that are measured on the same interval or ratio scale. The Pearson coefficient is a measure of the strength of the association between two continuous variables (Kenton, 2024). This was used to determine the significant relationship between digital marketing, product quality, marketing mix construct, and customer engagement.

Multiple Regression Analysis. It was used to estimate the relationship between two or more independent variables and one dependent variable (Bevans, 2020). This was used to determine the significant influence of digital marketing, product quality, marketing mix construct, and customer engagement.

Structural Equation Modeling (SEM). It is a multivariate data analysis method for analyzing complex relationships among constructs and indicators (Hair, et al., 2021). This was used to explore the good fit model through the Alternative Model through Analysis of Moment Structure (AMOS). Additionally, values of the following indices should match each criterion in order to identify the best fit model.

RESULTS AND DISCUSSIONS

Presented in this chapter are the structural equation model results and discussions on digital marketing, product quality, and marketing mix construct as exogenous variables.

Level of Digital Marketing Towards Customer Engagement

The results for the digital marketing were presented, examined, and interpreted below. The outcome for the digital marketing level is presented in Table 1. The mean ranged from 4.16 to 4.38, with an equivalent overall

mean of 4.28 and a standard deviation of 0.40. This was described as very high, which means that the level of digital marketing towards customer engagement is always observed.

Table 1
Level of digital marketing towards customer engagement

Indicator	Mean	SD	Descriptive Level
Entertainment	4.37	0.53	Very High
Informativeness	4.38	0.54	Very High
Interactivity	4.23	0.55	Very High
Accessibility	4.28	0.49	Very High
Irritation	4.16	0.60	High
Overall	**4.28**	**0.40**	**Very High**

The general conclusion indicates that businesses ought to integrate digital marketing into their operations to reach a broader audience, achieve precise targeting, and enhance customer engagement. This finding aligned with Omar et. al., (2023) who asserted that digital marketing is a highly effective tool that significantly influences the commercial success of coffee shop owners.

Level of Product Quality towards Customers

The outcome for product quality level is presented in Table 2. The mean ranged from 4.17 to 4.36, with an equivalent overall mean of 4.27 and a standard deviation of 0.41. This was described as very high which means that the level of product quality towards customer engagement is always observed.

Table 2
Level of product quality towards customer engagement

Indicator	Mean	SD	Descriptive Level
Performance	4.28	0.53	Very Hig
Features	4.36	0.53	Very High
Reliability	4.26	0.54	Very High
Conformance	4.18	0.58	High
Durability	4.17	0.60	High
Aesthetics	4.36	0.61	Very High
Serviceability	4.31	0.62	Very High
Perceived Quality	4.25	0.60	Very High
Overall	**4.27**	**0.41**	**Very High**

The overall findings suggest that incorporating product quality in doing business could create a strong brand awareness among consumers, increase sales, and create a long-term consumer relationship with the proper product offering. These findings were supported by Bhowmick & Seetharaman (2023) who stated that customers are satisfied when their expectations are met; they are delighted when their expectations are surpassed. Furthermore, Dhasan & Aryupong (2020) stated that positive perceptions of product quality are a foundational element for building brand judgment, which is a precursor to attitudinal attachment needed for customer engagement. In addition, enhancing product quality and customer-perceived value leads to increased customer satisfaction, fostering positive brand perceptions, repeat purchases, and word-of-mouth referrals. These factors collectively contribute to higher customer engagement and loyalty (Kaewkhav et. al., 2023). Product quality is one of the most important factors in determining consumer satisfaction, which ultimately leads to the goal of repurchase.

Level of Marketing Mix Construct

The result for the marketing mix construct level is presented in Table 3. The mean ranged from 4.10 to 4.39, with an equivalent overall mean of 4.23 and a standard deviation of 0.49. This was qualitatively described as very high which means that the level of marketing mix construct towards customer engagement is always observed.

Table 3

Indicator	Mean	SD	Descriptive Level
Price	4.39	0.48	Very High
Distribution Intensity	4.39	0.53	Very High
Advertising Spending	4.14	0.69	High
Price Promotion	4.10	0.76	High
Non-Price Promotion	4.11	0.79	High
Overall	**4.23**	**0.49**	**Very High**

Table 4

Indicator	Mean	SD	Descriptive Level
Cognitive Engagement	4.38	0.56	Very High
Affective Engagement	4.33	0.57	Very High
Behavioral Engagement	4.31	0.52	Very High
Customer Experience	4.32	0.49	Very High
Customer Identification	4.24	0.61	Very High
Behavioral Intention	4.26	0.54	Very High
Overall	**4.31**	**0.43**	**Very High**

These findings suggest that coffee shops should increase the product, pricing strategies, accessibility, and promotional efforts to satisfy the customers. They are more likely to engage with the brand in the long term, offering increased loyalty, advocacy, and deeper emotional connections with the brand. As stated by Hecht et al. (2020), the marketing strategies results largely indicated that the price, promotions, and product quality are more impactful than other types of marketing strategies. Specifically, the study found that price, promotion, and product quality were a stronger driver of stockpiling purchases than feature and display. Also, Ongsiriporn & Maleewat (2024) cited that the marketing mix elements, along with customer satisfaction and brand trust, significantly contribute to enhancing customer loyalty. However, Malelak et. al., (2021) added that the product, price, and promotion directly influenced customer satisfaction and loyalty, emphasizing the role of marketing strategies in building customer engagement.

Levels of Customer Engagement

The results for the customer engagement were presented, examined, and interpreted below. The outcome for customer engagement level is presented in Table 4. The mean ranged from 4.24 to 4.38, with an equivalent overall mean of 4.31 and a standard deviation of 0.43. This was qualitatively described as very high which means always observed.

These findings suggest that having coffee shops should consider factors that could affect the engagement of the customers. These were supported by the words of Thakur & John (2024) stated that cognitive trust was significantly more influential in overcoming skepticism for better engagement.

Correlation between Digital Marketing and Customer Engagement

Showed in Table 5 are the findings about the significance of the association between digital marketing and customer engagement with an overall calculated r-value of .582 and a p-value of .000, lower than the .05, which is the set level of significance of the study.

Table 5

Significance on the Relationship between Digital Marketing, Product Quality, Marketing Mix Construct, and Customer Engagement

Digital Marketing	Customer Engagement						
	Cognitive Engagement	Affective Engagement	Behavioral Engagement	Customer Experience	Customer Identification	Behavioral Intention	Overall
Entertainment	.253** .000	.310** .000	.313** .000	.216** .002	.245** .000	.160* .024	**.320** .000**
Informativeness	.313** .000	.385** .000	.384** .000	.328** .000	.354** .000	.256** .000	**.431** .000**
Interactivity	.249** .000	.341** .000	.393** .000	.347** .000	.264** .000	.208** .003	**.381** .000**
Accessibility	.288** .000	.422** .000	.382** .000	.356** .000	.314** .000	.261** .000	**.431** .000**
Irritation	.315** .000	.420** .000	.401** .000	.534** .000	.578** .000	.501** .000	**.586** .000**
Overall	**.382** .000**	**.505** .000**	**.504** .000**	**.484** .000**	**.479** .000**	**.380** .000**	**.582** .000**

This implies that the association of the variables has a positive, strong, and significant correlation. This aligns with Shang et. al.'s (2022) research indicating digital marketing has taken center stage, resulting in an environment that is very engaging for customers, particularly on social media. Moreover, informative brand messages drive valuable customer engagement. Additionally, according to Bismo et al. (2022), using digital marketing tools provides several benefits for a company, such as easy access to promote products, build relationships with customers, suppress expenditure, and increase sales volume.

Correlation between Product Quality and Customer Engagement Showed in Table 6 are the findings about the significance of the association between product quality and customer engagement with an overall calculated r-value of .674 and a p-value of .000, lower than the .05, which is the set level of significance of the study.

Table 6

Product Quality	Customer Engagement						
	Cognitive Engagement	Affective Engagement	Behavioral Engagement	Customer Experience	Customer Identification	Behavioral Intention	Overall
Performance	.197** .005	.272** .000	.448** .000	.473** .000	.404** .000	.345** .000	**.451** .000**
Features	.386** .000	.394** .000	.419** .000	.444** .000	.458** .000	.388** .000	**.530** .000**
Reliability	.360** .000	.327** .000	.404** .000	.475** .000	.450** .000	.368** .000	**.506** .000**
Conformance	.314** .000	.388** .000	.456** .000	.462** .000	.503** .000	.292** .000	**.515** .000**
Durability	.264** .000	.359** .000	.355** .000	.518** .000	.471** .000	.327** .000	**.487** .000**
Aesthetics	.317** .000	.372** .000	.408** .000	.373** .000	.389** .000	.341** .000	**.469** .000**
Serviceability	.180* .011	.328** .000	.390** .000	.369** .000	.314** .000	.418** .000	**.424** .000**
Perceived Quality	.348** .000	.438** .000	.373** .000	.408** .000	.306** .000	.348** .000	**.471** .000**
Overall	**.413** .000**	**.506** .000**	**.569** .000**	**.615** .000**	**.574** .000**	**.494** .000**	**.674** .000**

This implies that the association of the variables has a positive, high, and significant correlation. Also, this shows that the product quality of coffee shops is associated with customer engagement. Thus, the null hypothesis was rejected. This is consistent with Merdiaty & Aldrin (2021) that how high-quality products influence perceived value, leading to enhanced customer engagement. It emphasized that delivering superior

products helps build brand loyalty, affective commitment, and positive customer relationships. This is also in line with the idea of Ebrahim & Alhudiri (2024) that high-quality products enhance customer satisfaction, which leads to increased customer loyalty and recommendations

Correlation between Marketing Mix Construct and Customer Engagement

Findings show the correlation of marketing mix construct and customer engagement with a calculated r-value of .630 and a p-value of .000, lower than the .05 which is the set level of significance of the study. This implies that the association of the variables has a positive, high, and significant correlation.

Table 7

Marketing Mix Construct	Customer Engagement						
	Cognitive Engagement	Affective Engagement	Behavioral Engagement	Customer Experience	Customer Identification	Behavioral Intention	**Overall**
Price	.234** .001	.299** .000	.431** .000	.348** .000	.242** .001	.362** .000	**.404** .000**
Distribution Intensity	.336** .000	.353** .000	.522** .000	.378** .000	.313** .000	.344** .000	**.476** .000**
Advertising Spending	.274** .000	.293** .000	.347** .000	.459** .000	.424** .000	.349** .000	**.455** .000**
Price Promotion	.275** .000	.246** .000	.323** .000	.491** .000	.524** .000	.399** .000	**.480** .000**
Non-Price Promotion	.392** .000	.340** .000	.397** .000	.519** .000	.553** .000	.372** .000	**.548** .000**
Overall	**.405** .000**	**.400** .000**	**.518** .000**	**.593** .000**	**.570** .000**	**.482** .000**	**.630** .000**

This aligned with the research of Baig et al. (2020), indicating marketing mix, including product, price, place, and promotion, significantly influences customer engagement.

Influence of Exogenous Variables on Customer Engagement Showed in Table 6 is the collective influence of the exogenous variables via digital marketing, product quality, and marketing mix construct towards customer engagement with a calculated 70.039 f-value, .719 r-value, .517 r-squared value, and p-value of .001 lower than the set .05 level of significance, the overall outcomes recommended the rejection of the null hypothesis set in this study. Thus, exogenous variables significantly influence customer engagement, which is the endogenous variable.

Exogenous variables produced a probability value that was lower than the necessary value established in this investigation, as seen in the results. Customer experience is influenced by digital marketing with a p-value of .001, marketing mix construct with a p-value of .001, and product quality with a p-value of .001. This indicates that the exogenous variables are significantly influencing the endogenous variable.

Moreover, examining the unstandardized beta coefficients is necessary to identify which among the exogenous variables significantly influence customer engagement. The digital marketing toward customer engagement computed a beta of .251. This implies that every unit of increase in digital marketing will entice a .251 advancement in customer engagement.

Table 8

Influence of Exogenous Variables on Customer Engagement

Exogenous Variables	Consumer Purchase Decision-Making			
	B	β	*T*	*Sig.*
Digital Marketing	.215	.248	3.266	.001
Product Quality	.358	.354	4.180	.001
Marketing Mix Construct	.234	.221	3.362	.001
R =	.719			
R^2 =	.517			
F =	70.039			
P =	.001			

Establishing the Best Structural Model

On the other hand, the product quality towards customer engagement generated a beta of .358. This means that there is a probability of a .358 increase in customer engagement for every unit increase in product quality. Furthermore, the marketing mix construct to customer engagement exposed a beta of .234. It is suggested that a unit growth in the marketing mix construct of the customers will entice a .234 rise in their customer engagement. Therefore, product quality is the best influencer of customer engagement.

Establishing the Best Structural Model

To find the model that best fits customer engagement, five alternative models were investigated. The exogenous includes digital marketing, product quality, and marketing mix construct, while the endogenous is customer engagement. Five models were constructed and evaluated in this study, with their utility assessed based on strong theoretical justifications.

Table 9

Summary of Goodness of Fit Measures of the Six Generated Models

Model	P-value (>0.05)	CMIN / DF (<2)	NFI (>0.95)	TLI (>0.95)	CFI (>0.95)	RMSEA (<0.05)	P-close (>0.05)
1	.000	3.525	.670	.708	.736	.113	.000
2	.000	2.449	.774	.832	.851	.085	.000
3	.000	2.869	.817	.847	.871	.097	.000
4	.000	2.425	.813	.862	.880	.085	.000
5	.000	2.721	.805	.845	.865	.093	.000
6	**.168**	**1.205**	**.951**	**.986**	**.991**	**.032**	**.832**

The five hypothesized models were be adjusted to meet the criteria for goodness of fit measures. Table 7 summarizes all the hypothesized models presented in this paper.

All the indices included in the evaluation of the best fit model should routinely fall within the permitted ranges. The Chi-square/degrees of freedom (CMIN/DF) value must be less than two with a probability value greater than or equal to 0.05. The Root Mean Square of Error Approximation (RMSEA) value ought to be less than

0.05, while the p-close value ought to be greater than 0.05. The Tucker-Lewis Index (TLI), Comparative Fit Index (CFI), and Normed Fit Index (NFI), should all be higher than 0.95 for the other indices.

The modified Model 6, which is the model that satisfies all the allowed ranges of the indices, illustrates the relationship between digital marketing and product quality and their direct impact on customer engagement. Model 6 was found to have indices that display a very good fit as indicated by p-value = .168, CMIN/DF = 1.250, p-close = .832, and RMSEA = .032, while the indices of the following generated NFI .951, TLI .986, and CFI .991. As can be seen, all of the indices had values more than 0.95, which satisfied the criteria for the goodness of fit measures. Thus, the rejection of the null hypothesis is concluded.

Presented in Figure 3 is the generated structural Model 6 or the best fit model for customer engagement. It can be observed that there are two remaining latent variable constructs on the customer engagement best fit model.

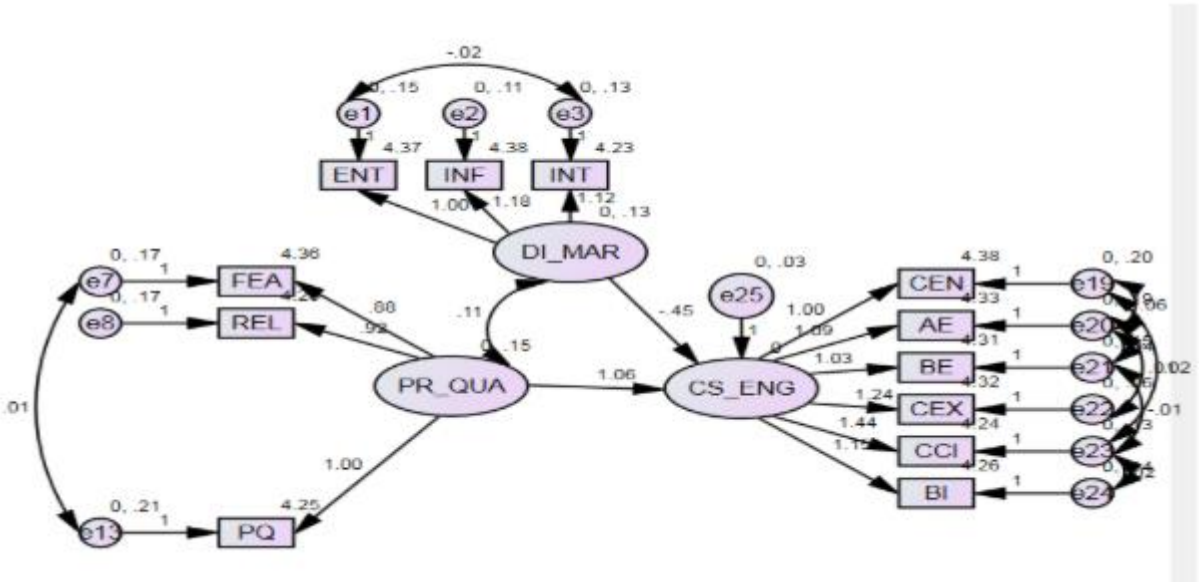

Figure 3. Generated Structural Model Six or the Best Fit Model for Consumer Engagement

The modified Model 6, which is the model that satisfies all the allowed ranges of the indices, illustrates that product quality and digital marketing should incorporate with each other and both of the exogenous variables, which are digital marketing and product quality, had a direct impact on customer engagement.

Table 10

Direct and Indirect Effects of the Exogenous Variables on Endogenous Variable

Variables	Direct Effect	Indirect Effect	Total Effect
Digital Marketing	-.450	-	-.450
Product Quality	1.062	-	1.062
		-	

Further, it could be gleaned from Table 10 that the latent variable of digital marketing must be associated with product quality. With this combined association, there will be a substantial direct effect on the engagement of the customers (Beta = .612).

Table 11

Estimates of Variable Regression Weights in Generated Model 6

			Estimate	S.E.	Beta	C.R.	P-Value
CS_ENG	<---	DI_MAR	-.450	.300	-.483	-1.498	.134
CS_ENG	<---	PR_QUA	1.062	.334	1.220	3.179	.001
ENT	<---	DI_MAR	1.000		.679		
INF	<---	DI_MAR	1.177	.152	.781	7.735	***
INT	<---	DI_MAR	1.122	.143	.744	7.859	***
PQ	<---	PR_QUA	1.000		.642		
REL	<---	PR_QUA	.922	.122	.655	7.578	***
FEA	<---	PR_QUA	.884	.114	.643	7.771	***
CEN	<---	CS_ENG	1.000		.602		
AE	<---	CS_ENG	1.088	.130	.642	8.396	***
BE	<---	CS_ENG	1.029	.139	.666	7.386	***
CEX	<---	CS_ENG	1.244	.144	.859	8.637	***
CCI	<---	CS_ENG	1.441	.163	.801	8.863	***

Table 12

Goodness of Fit Measures of Generated Model 6

Index	Criterion	Model Fit Value
CMIN/DF	0 < value < 2	1.205
P-value	>0.05	.168
NFI	>0.95	.951
TLI	>0.95	.986
CFI	>0.95	.991
RMSEA	<0.05	.032
P-close	>0.05	.832

To carefully examine the interactions between latent and measurable variables, regression weights were measured. Table 11 discloses the best fit model's estimates of variable regression weights. As revealed in the result, digital marketing and product quality significantly predict customer engagement. Specifically, digital marketing got a beta estimate of -.450 with a p-value of -.134, and commitment got a beta estimate of 1.062 with a p-value of .001, considered to be significant for the endogenous variable.

Showed in Table 12 is the structural best fit model's goodness of fit measures. The calculated model fit is highly acceptable. The chi-square divided by the degrees of freedom or CMIN/DF is 1.205, with a probability value of .168. This directs a suitable fit of the model of the data. Also, this is strongly supported by the RMSEA index .032, which is less than 0.05, with its equivalent p-close .832 >0.05. Similarly, the other indices namely: NFI .951>.95, TLI .986>.95, and CFI .993>.95. Thus, this model is the best fit for customer engagement.

Legend: CMIN/DF – Chi Square/Degrees of Freedom NFI – Normed Fit Index
TLI – Tucker-Lewis Index CFI – Comparative Fit Index
RMSEA – Root Mean Square of Error Approximation

In examining the attributes of the best fit model for customer engagement, it is observed that there were only two latent variables that remained exogenous. The latent digital marketing is still comprised of the indicators: entertainment, informativeness, and interactivity.

On the other hand, the latent product quality still has two indicators, namely: features and reliability. Furthermore, the endogenous variable of customer engagement remains to have six indicators: cognitive engagement, affective engagement, customer experience, customer identification, and behavioral intention. Hence, as observed in the best fit model, it demonstrates a significant association between digital marketing and product quality and its direct effect on academic performance. This implies that improving customer engagement should be accompanied by digital marketing and product quality.

SUMMARY OF FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

Summary of Findings

1. The level of digital marketing raged from 4.16 to 4.38 with an equivalent overall mean of 4.28 with a descriptive equivalent of very high. It obtained an overall standard deviation of 0.40. The highest-rated dimension was informativeness with a mean of 4.38, while irritation had the lowest mean at 4.16. This indicates that customers find digital marketing to be most engaging when it provides useful and relevant information.
2. The level of product quality ranged from 4.17 to 4.36 with an overall mean of 4.27 with a descriptive equivalent of very high. It obtained an overall standard deviation of 0.41. The highest-rated dimension was features and aesthetics with a mean of 4.36, while durability had the lowest mean at 4.17. This means that customers value the features offered and the aesthetic appeal of the product highly when it comes to engagement.
3. The level of marketing mix construct ranged from 4.10 to 4.39 with an overall mean of 4.31 with a descriptive equivalent of very high. It obtained an overall standard deviation of 0.49. The highest-rated dimension was price and distribution intensity with a mean of 4.39, while promotion had the lowest mean at 4.10. This indicates that customers highly value fair pricing and wide availability of the product.
4. The level of customer engagement ranged from 4.24 to 4.38 with an overall mean of 4.17 with a descriptive equivalent of high. It obtained an overall standard deviation of 0.43. The highest mean is 4.38, which corresponds to cognitive engagement, while the lowest mean is 4.24, which corresponds to customer identification. This indicates that customers are actively involved in understanding and thinking about the brand and its offerings.
5. The interrelationship of digital marketing, product quality, and marketing mix construct on customer engagement showed a positive correlation ($p<0.05$). The p-values are at a 0.05 level of significance. These results lead to the rejection of the null hypotheses.
6. The exogenous variables that best influence customer engagement have an unstandardized beta coefficient of .358 for product quality, followed by marketing mix construct with an unstandardized beta coefficient of .234 and digital marketing with an unstandardized beta coefficient of .215.
7. The Model 6 with a latent variable of digital marketing and product quality best fits for customer engagement in coffee shops in research found to have indices that display a very good fit as indicated by p-value = .168, CMIN/DF = 1.205, p-close = .832 and RMSEA = .032, while the indices of the following generated NFI .951, TLI .986, and CFI .991. As can be seen, all of the indices had values more than 0.95, which satisfied the criteria for the goodness of fit measures.

Conclusions

1. The results of digital marketing revealed a very high level, which was always observed. Therefore, integrating digital marketing into the business is effective for staying competitive in today's market.
2. The results of product quality revealed a very high level, which was always observed. Therefore, providing customers with a product quality that can satisfy their needs could help businesses achieve their goals.
3. The results of the marketing mix construct revealed a very high level, which was always observed. Therefore, coffee shops may develop a comprehensive plan that improves client engagement through customized product offerings, intelligent pricing, ideal positioning, and captivating promotional activities by skillfully utilizing the marketing mix construct.

4. The results of customer engagement revealed a very high level, which is always observed. Consequently, coffee shops are able to engage customers, influencing increased loyalty, enhanced experiences, valuable insights, and a solid community presence.
5. Digital marketing, product quality, and marketing mix construct were all positively correlated with customer engagement. Also, all these exogenous variables are significantly influencing the endogenous variable, which is customer engagement. Hence, any variances in the engagement of customers were influenced by digital marketing, product quality, and marketing mix construct.
6. The result revealed that the exogenous variable that best influences customer engagement is digital marketing. Therefore, the influence of digital platforms has an impact on customer's preferences and behaviors
7. The model that best fit for customer engagement is Model 6, which illustrates the connection between digital marketing and product quality and their direct impact on customer engagement. Therefore, advancing the degree of customer engagement was highly influenced by the linkage between digital marketing and product quality.

Recommendations

1. The coffee shop owners should focus on enhancing product quality as it significantly impacts customer engagement. Ensuring consistency in product reliability, emphasizing unique features, and delivering high perceived quality could create a lasting impression on customers. By using customer feedback to fine-tune offerings and maintain high standards, coffee shops can establish a strong reputation for quality. This encourages repeat visits and increases customer loyalty and positive word-of-mouth.
2. Coffee shop owners should prioritize creating engaging content that entertains, informs, and encourages interaction with their audience. Social media campaigns, personalized promotions, and interactive experiences such as polls or challenges can strengthen the connection with customers. Aligning digital marketing efforts with product-quality messaging ensures consistency across online and offline channels, ultimately fostering emotional bonds and behavioral loyalty among customers.
3. Future researchers may explore additional exogenous variables in modeling customer engagement within different contexts and settings. Customer engagement is considered dynamic and context-dependent, necessitating a comprehensive study for more conclusive findings.

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