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Digital Marketing Capability and Brand Experience as Drivers of Customer Loyalty: The Mediating Role of Customer Engagement in Bekasi Retail Stores

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Abstract: Customer loyalty remains a central marketing management objective, yet loyalty formation is increasingly shaped by firms' digital capabilities and the quality of customer experiences across digital touchpoints. Drawing on customer engagement theory and relationship marketing, this study examines how Digital Marketing Capability (DMC) and Brand Experience (BE) influence Customer Loyalty (LOY), and whether Customer Engagement (CE) mediates these relationships. Survey data from 200 online retail customers were analyzed using covariance-based structural equation modeling (CB-SEM; Maximum Likelihood). The measurement model demonstrated satisfactory reliability (Cronbach's α = 0.901–0.863) and acceptable convergent/discriminant validity; discriminant validity was confirmed using the heterotrait–monotrait (HTMT) ratio. Structural results show that DMC and BE significantly increase CE (β = 0.369 and 0.453, respectively), and CE positively drives LOY (β = 0.460). Mediation testing indicates that CE fully mediates the effect of DMC on LOY and partially mediates the effect of BE on LOY. The findings underscore that investments in digital marketing processes and experience design translate into loyalty primarily by fostering deeper customer engagement. The study contributes to the marketing management literature by integrating capability and experience perspectives within a parsimonious engagement-based loyalty model and offers actionable guidance for omnichannel and e-commerce managers.

Keywords: Digital Marketing Capability, Brand Experience, Customer Engagement, Customer Loyalty

INTRODUCTION

Bekasi—one of the key urban and industrial growth areas in Greater Jakarta—has developed into a dynamic retail market. Alongside traditional in-store shopping, customers increasingly interact with retailers through dense digital touchpoints such as social media, mobile applications, online stores, and customer-service chats (Bozkurt, S., Gligor, D. M., & Babin, 2021). This shift has raised expectations for seamless convenience, fast service, and consistent brand communication across channels.

Retail competition in Bekasi—one of the fastest-growing urban–industrial areas in Greater Jakarta—has intensified as shoppers routinely move between physical stores and digital touchpoints (social media, mobile apps, online stores, and customer-service chats). This omnichannel pattern raises expectations for seamless convenience, fast response, and consistent brand communication across channels. For local retailers, loyalty can no longer be assumed to arise from product availability or pricing alone; it depends on whether firms can translate their digital operations and customer-facing experiences into repeat purchase and advocacy in a highly substitutable retail environment.

In this context, customer loyalty is no longer shaped only by price and product availability, but also by how effectively retailers orchestrate digital marketing processes and deliver strong brand experiences (Ahmed, M., Hussain, S., & Mahmood, 2022). The attached study, based on a survey of 200 online retail customers in Bekasi and analyzed using covariance-based structural equation modeling (CB-SEM), positions Customer Engagement as a central mechanism linking Digital Marketing Capability and Brand Experience to Customer Loyalty (Blut, M., Kulikovskaja, V., Hubert, M., Brock, C., & Grewal, 2023). In other words, digital investments and experience design are expected to translate into loyalty primarily when they stimulate customers' cognitive, emotional, and behavioral involvement beyond transactions.

Customer loyalty (LOY) is widely recognized as a strategic marketing asset because it stabilizes cash flows, reduces customer acquisition costs, and strengthens competitive advantage (Khodakarami, F., Petersen, J. A., & Venkatesan, 2024). Recent synthesis work underscores that loyalty is formed through complex processes where experiential and relational mechanisms play pivotal roles, often mediating the effects of upstream marketing drivers on loyalty outcomes (Desveaud, et al., 2024). At the same time, firms increasingly rely on digital marketing technologies, analytics, and cross-channel processes to acquire, serve, and retain customers. This shift raises an important marketing management question: how do digital capabilities translate into enduring loyalty in markets where customers interact with brands through dense digital touchpoints (social media, apps, online stores, and customer service chats)?

Digital Marketing capability is the process of integrating a company's knowledge, skills, and resources into the marketplace to add value to products/services and meet competitive demands. In a digital context, this means integrating digital capabilities into the process (Day, 2019). Digital marketing capability refers to an organization's ability to deploy data, digital technologies, and coordinated processes to sense customer needs, personalize value propositions, and manage customer journeys efficiently. Capability perspectives suggest that such routines help firms create superior market outcomes by improving targeting, responsiveness, and consistency across touchpoints.

Brand experience is an experience that arises in consumers in the form of sensations, feelings, cognitive processes, and behavioral responses triggered by brand-related stimuli—for example, design elements and brand identity, packaging, communication/advertising, and the environment/setting where the brand is present (Brakus & Schmitt, 2009). In the context of touchpoints, brand experience can also be understood as consumer perception at every moment of interaction with the brand, whether through advertising images, first personal contact, or the quality of treatment/service they receive (Alloza, 2008). Conceptually, the focus of brand experience emphasizes that what is important to consumers is not only functional attributes or values, but whether the brand is able to provide an interesting experience that involves the senses and emotions (Brakus & Schmitt, 2009).

Customer Engagement refers to the level of interaction and active involvement of consumers with a brand or product, which is a key variable in influencing customer loyalty and value perception, especially in the context of social media such as blogs, where higher

interaction significantly strengthens the impact of customer experience on purchase intention (Chen & Lin, 2019). Customer engagement is theorized as a multidimensional state and set of behaviors reflecting customers' investment in interactions with a brand (Santini, et al., 2020). Engagement-driven marketing emphasizes that engaged customers exhibit stronger relational bonding and exhibit higher retention and advocacy.

Recent journal research treats customer loyalty as the outcome of multi-stage processes in which relational and experiential mechanisms often transmit the effects of marketing inputs to loyalty behaviors. In parallel, customer engagement has become a central construct in marketing scholarship, defined as customers' cognitive, emotional, and behavioral investment in brand interactions beyond transactions. Engagement-centered research agendas emphasize that, in digitally mediated markets, firms create loyalty not only through delivering value, but by eliciting customers' active participation and involvement across touchpoints (Bozkurt, S., Gligor, D. M., & Babin, 2021).

However, prior studies have largely overlooked how Digital Marketing Capability (DMC) and Brand Experience (BE) operate together—within a single, testable model—to build Customer Loyalty (LOY) through Customer Engagement (CE) in an emerging omnichannel retail setting such as Bekasi (Gao, M., & Huang, 2021). Specifically, existing work commonly (i) examines digital capability or experience in isolation, (ii) models loyalty as a direct outcome of these drivers without formally testing engagement as a mediating mechanism, or (iii) draws evidence from mature markets that differ from Bekasi's digitally dense mall-based ecosystems. As a result, it remains unclear whether digital capability contributes to loyalty directly or primarily through engagement, and whether brand experience influences loyalty both directly and indirectly via engagement in this context.

To address this gap, this study develops and tests an engagement-based loyalty model in which DMC and BE predict CE, and CE in turn predicts LOY. Using survey data from 200 online retail customers in Bekasi and covariance-based structural equation modeling (CB-SEM), the study pursues two objectives: (1) estimate the effects of DMC and BE on CE and LOY, and (2) test whether CE mediates the relationships between DMC/BE and LOY.

There are several Scientific contributions in this study, such as :

a. Theoretical contribution:

1. Clarifies the mechanism of loyalty formation by integrating a capability view (DMC) and an experience view (BE) within a single engagement-based framework, explicitly specifying CE as the proximal pathway linking upstream drivers to loyalty outcomes.
2. Sharpens the relative position of this study against prior work by distinguishing whether digital capability and brand experience exert direct versus engagement-mediated effects on loyalty—an issue that is often assumed rather than tested in earlier models.
3. Extends engagement-based loyalty theorizing to an emerging omnichannel retail context (Bekasi), offering context-sensitive evidence for how engagement functions under dense digital touchpoints and mall-based retail ecosystems.

b. Practical contribution:

1. Provides managers with a prioritization logic: investments in digital marketing (data, analytics, cross-channel coordination) should be designed to systematically increase engagement (interactive communication, personalization, friction reduction), since engagement is expected to be the main route through which digital capability yields loyalty.
2. Demonstrates that experience design should be managed as an omnichannel program (coherent sensory, affective, and relational cues across online–offline touchpoints) to build engagement and loyalty simultaneously.

3. Offers an empirically testable and replicable CB-SEM model that retail and e-commerce teams can use to diagnose which levers (capability vs. experience vs. engagement) most strongly relate to loyalty in digitally competitive local markets.
4. This study argues that digital capability and experience design contribute to loyalty largely through customer engagement (CE)—a construct capturing customers' cognitive, emotional, and behavioral investment in brand interactions beyond transactions (Bozkurt, S., Gligor, D. M., & Babin, 2021). Engagement has become central in contemporary marketing research and practice, as reflected by recent high-impact research agendas and special sections focused on enhancing customer engagement (Kumar, et al., 2025). Building on this foundation, we develop and test a parsimonious model in which Digital Marketing Capability (DMC) and Brand Experience (BE) act as key antecedents of CE and LOY.

METHOD

Research design and data

A cross-sectional survey design is appropriate for examining relationships among psychological and behavioral constructs in online retail contexts because it enables the efficient capture of perceptions and self-reported behaviors from a large number of consumers at a single point in time. This design aligns with established marketing and consumer research practice when the objective is to test theoretically grounded associations (e.g., capabilities → experiences → engagement → loyalty) rather than to evaluate change over time. Using a structured questionnaire also promotes standardization and comparability across respondents.

Measurement items were adapted from established marketing literature and then contextualized to reflect online retail interactions. This approach preserves content validity—because the items originate from prior validated scales—while ensuring contextual relevance. A five-point Likert scale (1 = strongly disagree, 5 = strongly agree) was selected because it is widely used in consumer and services research, is easy for respondents to understand, and provides sufficient variability for latent-variable modeling. After data screening, 200 usable responses were retained, which is generally considered adequate for covariance-based structural equation modeling (CB-SEM) with a moderate model size and reflective measurement, provided that assumptions and model fit are satisfactorily met.

Measures and construct specification

The study specifies four reflective latent constructs: Digital Marketing Capability (DMC), Brand Experience (BE), Customer Engagement (CE), and Customer Loyalty (LOY). A reflective specification is justified because the indicators are conceptualized as manifestations of the underlying construct (i.e., changes in the latent variable are expected to cause changes in the observed items). This is consistent with common operationalizations of marketing capabilities, experiential responses, engagement states, and loyalty intentions/behaviors in the SEM literature.

Indicators per construct were retained after removing three low-loading items. Item removal is methodologically justified when empirical evidence indicates that certain indicators do not adequately represent the intended construct (e.g., weak standardized loadings) and when removal improves measurement quality without undermining theoretical coverage. Retaining a sufficient number of indicators per construct also supports stable estimation of the measurement model, reliability, and convergent validity, which are prerequisites for meaningful structural interpretation.

Data screening and bias diagnostics

Prior to modeling, the dataset was screened to ensure that all item responses fell within the intended 1–5 scale and that non-respondent or summary rows were excluded. These steps

prevent invalid values from biasing estimates and help ensure that the analysis reflects genuine respondent-level variation.

Univariate distributions were evaluated using skewness and kurtosis. While SEM with Maximum Likelihood (ML) is reasonably robust to mild deviations from normality, checking these diagnostics supports the appropriateness of ML estimation and provides transparency about distributional assumptions.

Because cross-sectional surveys can be susceptible to common method bias (CMB), two complementary diagnostics were applied. First, Harman's single-factor test indicated that the first unrotated factor explained 25.8% of the variance (below the commonly used 50% threshold), suggesting that a single factor is not dominating the covariance structure. Second, full collinearity variance inflation factors (VIFs) were below 3.3 (maximum VIF = 1.80), providing additional evidence that CMB is unlikely to materially threaten the findings. Using more than one diagnostic strengthens this conclusion because each test captures different manifestations of method-related inflation.

Analytical approach (CB-SEM; AMOS-style reporting)

Covariance-based SEM (CB-SEM) with Maximum Likelihood estimation is justified when the research objective emphasizes theory testing, model fit evaluation, and the estimation of a full latent-variable model that includes both measurement and structural components. CB-SEM is particularly suitable for reflective constructs and allows researchers to assess global model fit indices (e.g., CMIN/df, CFI, TLI, RMSEA) alongside parameter estimates (Gaith Ibrahim Alshammare; Mutia Sobihah Biti Abdul Halim & Gaith Abdulraheem Ali Alsheikh, 2022).

Although the model was estimated using a CB-SEM engine in Python, the results are reported in a format comparable to IBM SPSS AMOS outputs. This reporting choice improves accessibility for readers familiar with AMOS conventions and facilitates replication. Replication in AMOS is straightforward: import the dataset, draw the measurement and structural paths, fix the first loading of each latent construct to 1.0 for identification, and estimate the model using Maximum Likelihood. Presenting results in this standardized format also enhances transparency and comparability with prior SEM studies.

Hypothesis Development

Digital marketing capability can increase engagement by enabling timely, relevant, and interactive communications, reducing friction in the journey, and supporting two-way value co-creation.

a. H1: Digital Marketing Capability positively influences Customer Engagement.
   Brand experience is expected to enhance engagement because vivid, consistent, and emotionally resonant experiences invite customers to interact and participate.
b. H2: Brand Experience positively influences Customer Engagement.
   Engagement is a proximal driver of loyalty because it deepens relational attachment and reinforces the preference for the brand.
c. H3: Customer Engagement positively influences Customer Loyalty.
   Capabilities and experiences may also directly affect loyalty. Digital processes may increase loyalty through convenience and service quality, while brand experience can directly foster preference.
d. H4: Digital Marketing Capability positively influences Customer Loyalty.
e. H5: Brand Experience positively influences Customer Loyalty.

Finally, we expect CE to transmit the effects of DMC and BE into loyalty formation.

f. H6: Customer Engagement mediates the relationship between Digital Marketing Capability and Customer Loyalty.

g. H7: Customer Engagement mediates the relationship between Brand Experience and Customer Loyalty.

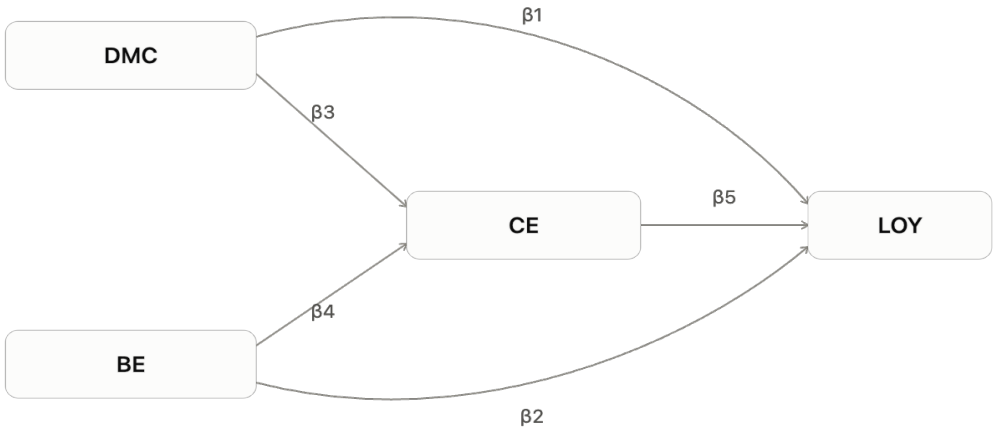

Figure 1. Conceptual Framework

Source : Data Processed by SEM AMOS

Note. DMC = Digital Marketing Capability; BE = Brand Experience; CE = Customer Engagement; LOY = Customer Loyalty

RESULTS AND DISCUSSION

Descriptive statistics and correlations

Table 1. Construct means, standard deviations, and correlations

Construct	Mean	SD	DMC	BE	CE	LOY
DMC	3.298	0.522				
BE	3.474	0.505	0.308			
CE	3.456	0.64	0.476	0.493		
LOY	3.204	0.474	0.401	0.447	0.563	

Source : Data Processed by SEM AMOS

The table 1 above reports the descriptive statistics (means and standard deviations) for four constructs—DMC, BE, CE, and LOY—and the Pearson correlations among them (shown below the diagonal). Overall, the constructs have moderate mean scores (about 3.20–3.47) with standard deviations ranging from 0.474 to 0.640, indicating modest variability. All correlations are positive and statistically significant at $p < .01$ (two-tailed), meaning higher scores on one construct tend to be associated with higher scores on the others. The strongest relationship is between CE and LOY ($r = 0.563$), while the weakest is between DMC and BE ($r = 0.308$).

Beyond statistical significance, it is useful to interpret which predictors are most dominant. In the structural model, Brand Experience (BE) is the strongest driver of Customer Engagement (CE) ($\beta = 0.453$), exceeding the effect of Digital Marketing Capability (DMC) on CE ($\beta = 0.369$). For Customer Loyalty (LOY), Customer Engagement is the most dominant direct predictor (CE → LOY: $\beta = 0.460$). This is consistent with the correlation pattern where CE has the strongest bivariate association with LOY ($r = 0.563$).

Considering overall influence on loyalty (total effects), BE is also the most dominant antecedent of LOY because it affects LOY both directly ($\beta = 0.211$) and indirectly through engagement. Using the standardized paths, the implied standardized indirect effect of BE on LOY via CE is approximately 0.208 (0.453×0.460), yielding an approximate total effect of 0.419. In contrast, DMC's direct path to LOY is small and not statistically supported ($\beta = 0.137$,

p = 0.074), while its influence on LOY occurs primarily through engagement (full mediation), with an implied standardized indirect effect of about 0.170 (0.369 × 0.460) and an approximate total effect of 0.307. Therefore, improving BE is likely to produce the largest overall gains in loyalty, particularly when it also elevates engagement.

Implications of the magnitude of effects can be interpreted using common SEM heuristics where standardized coefficients around 0.10 are small, around 0.30 are moderate, and around 0.50 are large (context-dependent). On this basis, BE → CE (β = 0.453) and CE → LOY (β = 0.460) are moderate-to-strong effects, indicating practically meaningful levers. DMC → CE (β = 0.369) is a moderate effect, suggesting that investments in digital capability matter, but mainly because they intensify engagement rather than directly generating loyalty. BE → LOY (β = 0.211) is small-to-moderate, meaning brand experiences contribute to loyalty even beyond engagement, but the larger portion of BE's influence is transmitted through engagement mechanisms.

From a managerial perspective, these effect magnitudes imply a clear prioritization: (1) design and deliver distinctive brand experiences to directly strengthen loyalty and, more importantly, to stimulate engagement; (2) build digital marketing capabilities (data, personalization, journey orchestration, interactivity) as an enabling platform that converts into loyalty through higher engagement; and (3) treat customer engagement as the central KPI, because it is the strongest proximal driver of loyalty in the model. Finally, the explained variance is substantial ($R^2 \approx 0.534$ for CE and $R^2 \approx 0.554$ for LOY), suggesting the model has meaningful explanatory power in this context.

Measurement model: reliability and validity

Table 2. Reliability and convergent validity (standardized loadings from CFA)

Construct	Number of indicators	Cronbach's α	CR	AVE	Standard loading range
DMC	15	0.901	0.904	0.39	0.497–0.771
BE	11	0.847	0.848	0.338	0.511–0.659
CE	10	0.885	0.887	0.445	0.539–0.818
LOY	11	0.863	0.864	0.37	0.494–0.705

Source : Data Processed by SEM AMOS

Table 2 above summarizes the measurement quality of four constructs (DMC, BE, CE, and LOY) by reporting internal consistency and convergent validity indicators. All constructs show good reliability, with Cronbach's alpha ranging from 0.847 to 0.901 and composite reliability (CR) from 0.848 to 0.904. The standardized CFA loadings fall between 0.494 and 0.818, suggesting the indicators generally load acceptably on their intended constructs (Rogers, 2024). However, the AVE values are relatively low (0.338–0.445), indicating that the constructs may explain less than half of the variance in their indicators, which suggests convergent validity is weaker than ideal and may need further attention.

Table 3. Discriminant validity (HTMT ratios)

Construct	DMC	BE	CE	LOY
DMC	1.0	0.353	0.533	0.469
BE	0.353	1.0	0.568	0.522
CE	0.533	0.568	1.0	0.648
LOY	0.469	0.522	0.648	1.0

Source : Data Processed by SEM AMOS

Table 3 above presents discriminant validity results using HTMT (Heterotrait–Monotrait) ratios for the four constructs (DMC, BE, CE, and LOY). All HTMT values are below 0.85 (ranging from 0.353 to 0.648), which indicates adequate discriminant validity—meaning each construct is sufficiently distinct from the others. The highest HTMT is between CE and LOY (0.648), suggesting they are the most closely related, but still within the acceptable threshold.

Model fit

Table 4. Overall model fit (AMOS-style indices)

CMIN	df	CMIN/df	CFI	TLI	RMSEA	SRMR
1235.794	1028.0	1.202	0.938	0.934	0.032	0.084

Source : Data Processed by SEM AMOS

Table 4 above reports the overall SEM/CFA model fit indices. The results indicate a generally good model fit: the CMIN/df = 1.202 is well below the common cutoff of 3.0, and both CFI = 0.938 and TLI = 0.934 exceed 0.90, suggesting acceptable incremental fit. The RMSEA = 0.032 indicates an excellent approximate fit. The SRMR = 0.084 is slightly above the typical 0.08 threshold, which suggests a minor area for improvement, but overall the model fit can be considered adequate to good.

Structural model and hypothesis testing

Table 5. Structural paths and hypothesis tests

Hypothesis	Path	Std. β	CR (z)	p-value	Decision
H1	DMC → CE	0.369	4.551	0.000	Supported
H2	BE → CE	0.453	4.959	0.000	Supported
H3	CE → LOY	0.46	4.265	0.000	Supported
H4	DMC → LOY	0.137	1.787	0.074	Not supported
H5	BE → LOY	0.211	2.433	0.015	Supported

Source : Data Processed by SEM AMOS

Table 5 above reports the structural path results and hypothesis testing from the model. The findings show that DMC has a significant positive effect on CE (H1: $\beta = 0.369$, $p < .001$) and BE also significantly increases CE (H2: $\beta = 0.453$, $p < .001$). In turn, CE significantly and positively affects loyalty (LOY) (H3: $\beta = 0.460$, $p < .001$). Regarding direct effects on LOY, DMC → LOY is not significant (H4: $\beta = 0.137$, $p = .074$), so this hypothesis is rejected. Meanwhile, BE → LOY is significant (H5: $\beta = 0.211$, $p = .015$), meaning BE directly contributes to loyalty.

Mediation analysis

Table 6. Indirect effects (Sobel test approximation)

Indirect effect	Indirect (unstd.)	Sobel z	p	Mediation
DMC → CE → LOY	0.177	3.112	0.002	Full (direct n.s.)
BE → CE → LOY	0.223	3.233	0.001	Partial (direct sig.)

Source : Data Processed by SEM AMOS

Table 6 above reports the mediation (indirect effect) results using a Sobel test approximation. The indirect effect of DMC on LOY through CE is 0.177 and is significant (z = 3.112, p = 0.002), indicating full mediation because the direct effect is not significant. Meanwhile, the indirect effect of BE on LOY through CE is 0.223 and significant (z = 3.233, p = 0.001), indicating partial mediation because the direct effect remains significant. Overall, the model explains about 53.4% of the variance in Customer Engagement (CE) and 55.4% of the variance in Customer Loyalty (LOY).

The pattern of results can be interpreted through an engagement-based view of loyalty formation and the resource-based logic of marketing capabilities. From a capability perspective, Digital Marketing Capability (DMC) represents an organizational resource that helps the firm sense, respond, and personalize customer interactions. However, the non-significant direct path from DMC to Customer Loyalty (H4 not supported; β = 0.137, p = 0.074) suggests that capability alone does not automatically translate into loyalty outcomes. Instead, DMC contributes to loyalty primarily by enabling higher Customer Engagement (CE), as indicated by the significant DMC → CE path (β = 0.369) and the significant indirect effect DMC → CE → LOY (full mediation). Conceptually, this supports the argument advanced in relationship marketing and engagement scholarship: customers respond to the quality of the interactive relationship (the engagement it generates), rather than to organizational capabilities as an abstract attribute.

In contrast, Brand Experience (BE) shows both a direct effect on loyalty (β = 0.211) and an indirect effect via engagement (partial mediation). This aligns with experiential branding theory (e.g., brand experiences shape emotional attachment, meaning-making, and approach behaviors) and with contemporary loyalty syntheses that emphasize experiential mechanisms in loyalty formation. In the present results, BE is also the strongest driver of engagement (β = 0.453), which is consistent with prior findings that experiential and affective cues are often more proximal triggers of engagement than back-end capability perceptions.

Compared with previous empirical studies, the findings mostly agree with research that positions engagement as a key pathway to loyalty (i.e., engagement predicts repurchase intention, advocacy, and resistance to switching). The significant CE → LOY effect (β = 0.460) supports an engagement-first explanation of loyalty that complements satisfaction-based and value-based accounts. The mediation results also converge with studies showing that digital initiatives (analytics, personalization, journey orchestration) tend to influence loyalty indirectly because they enhance relevance and interaction quality, which then increases engagement and, ultimately, loyalty.

However, the non-significant direct DMC → LOY relationship diverges from some prior work that reports a more immediate effect of digital convenience or platform quality on loyalty intentions. One plausible interpretation is contextual: when a baseline level of digital performance is widely available, DMC may function as a ‘hygiene factor’ that reduces friction but does not differentiate loyalty unless it translates into a more engaging experience. This reading is consistent with the observed full mediation: capabilities matter most when they are converted into engagement.

Potential sources of bias and measurement limitations should be considered. First, the study uses a single self-reported survey administered at one point in time. Even when statistical diagnostics suggest that common method bias is not severe, self-report designs can still inflate associations through consistency motifs, social desirability, and shared scale formats. Second, convergent validity is weaker than ideal (AVE values below the conventional 0.50 benchmark), implying that the constructs may not capture as much shared variance with their indicators as preferred; this can attenuate true relationships and increase measurement error. Third, item removal improves measurement performance but may narrow the conceptual domain of the constructs, which can reduce comparability with earlier studies that used the full scales.

Contextual limitations also apply. The cross-sectional design limits causal claims; the paths should be interpreted as theoretically informed associations rather than definitive temporal effects. Results may be contingent on the specific online retail context (e.g., market maturity, competitive intensity, product category, platform features, and customer demographics). If the sample is concentrated within a particular region, brand community, or user segment, selection bias may occur and may overstate engagement/loyalty or weaken the generalizability of the estimates. In addition, the slightly elevated SRMR (relative to the common 0.08 guideline) suggests some residual covariation is not fully captured, possibly because omitted variables (e.g., satisfaction, trust, perceived value, switching costs, or relationship quality) also shape loyalty.

Conceptually, the findings yield three implications. (1) Customer Engagement emerges as the core mechanism translating both capability-based inputs (DMC) and experiential inputs (BE) into loyalty. This supports a process view of loyalty: firms create enabling resources and experiences that first shape engagement, and engagement then becomes the most proximal driver of loyalty. (2) The partial mediation for Brand Experience indicates a dual-route effect—experiences can directly build loyalty (e.g., attachment and preference) and indirectly build loyalty by energizing engagement. (3) The full mediation for Digital Marketing Capability suggests that digital capability should be theorized primarily as a relational enabler rather than a direct determinant of loyalty; its impact depends on whether it produces meaningful, engaging interactions for customers.

These conceptual implications also point to future research directions. Engagement may operate as both a mediator and a boundary condition: in markets where digital performance is standardized, DMC differentiates outcomes only when paired with distinctive experiences that trigger engagement. Future studies could test moderators such as customer involvement, privacy sensitivity, hedonic versus utilitarian product type, omnichannel intensity, and platform trust to clarify when DMC has a direct loyalty effect versus an engagement-mediated effect. Methodologically, longitudinal or experimental designs, multi-source data (e.g., behavioral logs and transaction histories), and scale refinement to strengthen convergent validity would help reduce bias and support stronger causal interpretation.

Mediation results suggest that engagement fully mediates the influence of Digital Marketing Capability on loyalty: once engagement is accounted for, the direct path from DMC to loyalty becomes statistically non-significant. This finding implies that digital tools and analytics translate into loyalty primarily through the engagement they enable (e.g., interactivity, personalization, and journey orchestration). In contrast, Brand Experience shows both a direct effect and an indirect (engagement-mediated) effect on loyalty, indicating partial mediation. This aligns with recent loyalty syntheses emphasizing the central role of experiential mechanisms in loyalty formation (Desveaud,et al., 2024).

CONCLUSION

This study demonstrates that digital marketing capability and brand experience foster customer loyalty largely by enhancing customer engagement. In digital-first markets, the

managerial message is clear: technology investments must be translated into experiences and interactions that invite customers to participate, connect, and co-create value with the brand. Engagement, in turn, becomes the bridge between operational digital excellence and enduring loyalty.

Several limitations should be acknowledged. First, the study uses a cross-sectional design, which prevents strong causal claims about the direction of effects; reverse causality (e.g., loyal customers reporting higher engagement) cannot be ruled out. Second, the data are self-reported and collected using a single instrument, which may introduce common method variance, social desirability, and consistency bias, even if diagnostic tests suggest that severe inflation is unlikely. Third, measurement quality is mixed: while reliability is high, convergent validity is weaker than ideal (AVE values below 0.50), implying that some indicators may not capture the constructs with maximum precision. Fourth, item deletion may have improved statistical performance but can narrow construct coverage, reducing comparability with studies using complete scales.

Fifth, the findings are context-bound to the sampled online retail setting and the characteristics of the respondent pool (e.g., geography, platform maturity, product category, and digital expectations). As a result, generalization to other industries (e.g., services, B2B) or to markets with different levels of digital infrastructure should be done cautiously. Finally, the model may omit relevant antecedents of loyalty such as satisfaction, trust, perceived value, perceived risk, switching costs, and relationship quality; omission may affect parameter estimates and partially explain residual misfit (e.g., SRMR slightly above the typical guideline).

Future research can extend these results in several ways. First, longitudinal designs (panel surveys) or experimental approaches (A/B testing of digital features) could strengthen causal inference and clarify temporal sequencing among capability perceptions, experiences, engagement, and loyalty. Second, researchers should consider multi-source and behavioral data (e.g., clickstream logs, purchase frequency, retention, and referral behavior) to reduce reliance on self-report measures and to capture engagement as both a psychological state and observable behavior.

Third, scale refinement is recommended to improve convergent validity: items can be reworded for contextual clarity, weak indicators replaced, and measurement models revalidated across samples to raise AVE while preserving theoretical breadth. Fourth, future studies could test moderating conditions that may explain when Digital Marketing Capability has a direct loyalty effect versus an engagement-mediated effect. Promising moderators include customer involvement, privacy sensitivity, technology readiness, platform trust, perceived switching costs, and product type (utilitarian vs. hedonic).

Finally, broader conceptual extensions could incorporate additional mechanisms such as customer satisfaction, perceived value, trust, and brand relationship quality to build a more integrative loyalty framework. Comparative studies across platforms, industries, and countries would also help establish boundary conditions and improve the generalizability of engagement-based loyalty explanations.

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