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The Influence of Chatbot Service Features on Purchase Intention

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Abstract
This article examines how chatbot service features shape purchase intention among chatbot users and online shoppers in Pakistan. Drawing on the DeLone and McLean information systems success model and the stimulus–organism–response framework, the study tests whether information quality, system quality, chatbot experience, and perceived customization influence purchase intention through customer satisfaction and brand relationship quality. Data were collected through an online questionnaire from 160 respondents with prior chatbot interaction experience and analyzed using partial least squares structural equation modeling (PLS-SEM) in SmartPLS. The measurement model showed acceptable reliability and validity. In the structural model, information quality ($\beta = 0.456$, $p = 0.002$) and chatbot experience ($\beta = 0.273$, $p = 0.021$) significantly increased customer satisfaction, whereas system quality ($\beta = -0.088$, $p = 0.492$) and perceived customization ($\beta = 0.239$, $p = 0.077$) were not statistically significant. Customer satisfaction significantly strengthened brand relationship quality ($\beta = 0.477$, $p < 0.001$), but neither customer satisfaction nor brand relationship quality had a significant direct effect on purchase intention. Indirect effects showed that customer satisfaction transmitted the effects of information quality and chatbot experience to brand relationship quality, while the sequential indirect paths to purchase intention remained non-significant. The findings suggest that brands can use chatbots to improve satisfaction and relationship outcomes, yet additional determinants are needed to convert favorable chatbot experiences into stronger purchase intention in the Pakistani e-commerce context.

Keywords: Chatbots; Information quality; System quality; Perceived customization; Customer satisfaction; Brand relationship quality; Purchase intention; Pakistan

1. Introduction

Artificial intelligence-enabled chatbots have become an important interface between firms and customers in digital commerce. Their role is no longer limited to answering routine questions; they now support product search, service recovery, recommendations, and ongoing relationship management.

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In management and marketing research, this makes the chatbot a strategic touchpoint rather than a purely technical tool.

Recent studies show that chatbot attributes such as informativeness, usability, interaction quality, and customization shape how consumers evaluate digital service encounters and how they respond behaviorally. Chatbot marketing efforts can strengthen customer–brand relationships and influence downstream outcomes such as loyalty and purchase-related intention (Cheng & Jiang, 2022). Likewise, chatbot attributes that combine utilitarian and hedonic value can improve customers' relationships with brands by increasing satisfaction with the interaction (Magno & Dossena, 2023).

Despite this progress, two limitations remain visible in the literature. First, many studies focus on adoption, continuance, or reuse rather than purchase intention itself. Second, several studies examine only one or two chatbot attributes, such as trust or anthropomorphism, without integrating transactional and relational mechanisms in the same model. This is especially relevant in emerging markets, where digital service adoption patterns and e-commerce frictions may differ from those in developed economies.

The present study addresses this gap by repackaging a thesis-based empirical investigation into a journal article focused on Pakistan. The model evaluates how information quality, system quality, chatbot experience, and perceived customization affect customer satisfaction, how satisfaction shapes brand relationship quality, and whether these mechanisms ultimately translate into purchase intention. In the source thesis, the empirical construct labeled PC is described inconsistently in some sections; because the conceptual model and questionnaire items clearly define PC in terms of individualized fit and problem handling, this article uses the label perceived customization consistently throughout.

2. Theoretical Background and Hypotheses Development

The study is anchored in two complementary theoretical lenses. The first is the DeLone and McLean information systems success model, which argues that information quality, system quality, and user satisfaction are central dimensions of system success. In chatbot-enabled service encounters, the chatbot functions as an information system interface, so the model provides a strong basis for expecting information quality and system quality to affect customer satisfaction.

The second lens is the stimulus–organism–response (S–O–R) framework. Within this logic, chatbot service features operate as stimuli; customer satisfaction and brand relationship quality represent internal organism states; and purchase intention is the behavioral response. This

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perspective is appropriate because chatbot features do not automatically generate buying behavior. Instead, they shape how customers evaluate the interaction and how they relate to the brand before any behavioral intention is formed.

Prior empirical work supports this sequence. Cheng and Jiang (2022) show that chatbot marketing efforts, including interaction, information, accessibility, entertainment, and customization, improve customer–brand relationship outcomes. Magno and Dossena (2023) further demonstrate that chatbot attributes can strengthen the customer–brand relationship by improving satisfaction with the chatbot encounter. More recent evidence also links customer satisfaction with online purchase intention and reuse intention in chatbot-supported commerce (Akdemir & Bulut, 2024).

Research focused on Pakistan suggests that locally relevant factors such as responsiveness, usability, trust, and satisfaction remain central to purchase-related outcomes in e-commerce chatbot environments. This makes Pakistan an analytically meaningful setting for testing a feature-based chatbot model rather than assuming that findings from more mature digital markets can be transferred directly.

Based on the theoretical logic and prior evidence, the study advances the following hypotheses.

Hypothesis	Statement
H1	Information quality has a significant positive effect on customer satisfaction.
H2	System quality has a significant positive effect on customer satisfaction.
H3	Chatbot experience has a significant positive effect on customer satisfaction.
H4	Perceived customization has a significant positive effect on customer satisfaction.
H5	Customer satisfaction has a significant positive effect on brand relationship quality.
H6	Customer satisfaction has a significant positive effect on purchase intention.
H7	Brand relationship quality has a significant positive effect on purchase intention.

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Hypothesis	Statement
H8a	Customer satisfaction and brand relationship quality sequentially mediate the effect of information quality on purchase intention.
H8b	Customer satisfaction and brand relationship quality sequentially mediate the effect of system quality on purchase intention.
H8c	Customer satisfaction and brand relationship quality sequentially mediate the effect of chatbot experience on purchase intention.
H8d	Customer satisfaction and brand relationship quality sequentially mediate the effect of perceived customization on purchase intention.

3. Method

The study used a quantitative, cross-sectional design. Data were collected through a self-administered online questionnaire distributed via Google Forms to online shoppers and chatbot users in Pakistan. The unit of analysis was the individual consumer, and only respondents with prior chatbot interaction experience were included.

A non-probability convenience sampling approach was used, yielding 160 valid responses. This sample size is adequate for prediction-oriented PLS-SEM analysis, particularly given the moderate complexity of the proposed model.

The instrument measured information quality, system quality, chatbot experience, customer satisfaction, brand relationship quality, perceived customization, and purchase intention on five-point scales. For journal clarity, the PC construct is labeled perceived customization because the questionnaire items reflect personal needs fit, problem resolution, and individualized handling rather than general convenience.

Data analysis was conducted in SmartPLS using bootstrapping with 5,000 resamples. The assessment followed the usual two-stage logic of first evaluating the reflective measurement model and then estimating the structural model.

4. Results

The measurement model was satisfactory. Indicator loadings were generally above 0.70, with only one system quality item slightly lower but still retained because overall convergent validity remained acceptable. Cronbach's alpha ranged from 0.768 to 0.891, composite reliability from 0.865 to 0.920, and

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average variance extracted from 0.681 to 0.756. Discriminant validity was also supported through both the Fornell–Larcker criterion and HTMT, with the highest HTMT ratio at 0.714.

The structural model explained a moderate share of the variance in customer satisfaction (R^2 = 0.595), a weaker but meaningful share in brand relationship quality (R^2 = 0.227), and a relatively weak share in purchase intention (R^2 = 0.190). Predictive relevance values were positive for all endogenous constructs, indicating acceptable out-of-sample predictive usefulness.

Table 1: ***Measurement Model Summary***

Criterion	Reported range/value	Threshold used	Assessment	Interpretation
Indicator loadings	Mostly > 0.70; one SYQ item ≈ 0.63	Preferably > 0.70	Acceptable	Item reliability adequate overall
Cronbach's alpha	0.768–0.891	≥ 0.70	Supported	Internal consistency established
Composite reliability	0.865–0.920	≥ 0.70	Supported	High reliability
Average variance extracted	0.681–0.756	≥ 0.50	Supported	Convergent validity established
HTMT	Maximum 0.714	< 0.85	Supported	Discriminant validity established

Three direct hypotheses were supported. Information quality had a positive and significant effect on customer satisfaction (β = 0.456, p = 0.002), chatbot experience also positively influenced customer satisfaction (β = 0.273, p = 0.021), and customer satisfaction strongly increased brand relationship quality (β = 0.477, p < 0.001). In contrast, the paths from system quality to customer satisfaction, from perceived customization to customer satisfaction, from customer satisfaction to purchase intention, and from brand relationship quality to purchase intention were not significant.

The mediation analysis sharpened the interpretation. Customer satisfaction significantly mediated the effects of information quality and chatbot experience on brand relationship quality. However, the sequential

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indirect effects from chatbot service features to purchase intention through customer satisfaction and brand relationship quality were not significant. Thus, the empirical chain in this sample is better understood as feature-to-satisfaction-to-relationship rather than feature-to-purchase.

Table 2: ***Structural Path Estimates***

Path	β	t-value	p-value	Decision	Interpretation
IQ → SAT	0.456	3.030	0.002	Supported	Information quality improves satisfaction
SYQ → SAT	−0.088	0.687	0.492	Not supported	System quality not significant
EXP → SAT	0.273	2.315	0.021	Supported	Better chatbot experience improves satisfaction
PC → SAT	0.239	1.768	0.077	Not supported	Customization effect positive but not significant
SAT → BRQ	0.477	4.534	<0.001	Supported	Satisfied customers report better brand relationship quality
SAT → PI	−0.149	0.802	0.423	Not supported	Satisfaction does not directly predict purchase intention
BRQ → PI	−0.094	0.969	0.333	Not supported	Brand relationship quality does not directly predict purchase intention

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Model explanatory power. R^2 values were 0.595 for customer satisfaction, 0.227 for brand relationship quality, and 0.190 for purchase intention. Q^2 values were positive for all three endogenous constructs (SAT = 0.486, BRQ = 0.198, PI = 0.081), indicating predictive relevance.

Table 3: ***Indirect Effects***

Indirect path	β	p-value	Decision	Interpretation
IQ → SAT → BRQ	0.217	0.036	Supported	Satisfaction transmits the effect of information quality to brand relationship quality
EXP → SAT → BRQ	0.130	0.034	Supported	Satisfaction transmits the effect of chatbot experience to brand relationship quality
PC → SAT → BRQ	0.114	0.080	Not supported	Indirect customization effect not significant
SYQ → SAT → BRQ	≈ −0.040	>0.500	Not supported	Indirect system quality effect not significant
Feature → SAT → BRQ → PI	All near zero	>0.400	Not supported	Sequential mediation to purchase intention not supported

5. Discussion

The findings make two substantive contributions. First, they show that content-related and experiential aspects of chatbot performance matter more than technical system attributes for satisfaction in this sample. When customers perceive chatbot responses as accurate, relevant, and useful, and

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when the interaction itself feels smooth and engaging, satisfaction rises. This reinforces the idea that firms should treat chatbot content and interaction design as part of the customer experience rather than as an isolated IT issue.

Second, the study shows that satisfaction translates strongly into brand relationship quality but does not automatically convert into purchase intention. This is an important correction to overly linear assumptions in the literature. In emerging markets, purchase intention may depend not only on chatbot performance but also on broader contextual factors such as trust in online payment systems, perceived risk, delivery reliability, pricing, and product involvement.

The non-significant direct effect of perceived customization deserves careful interpretation. The questionnaire items capture individualized fit and service handling, yet the effect did not reach conventional significance. One explanation is that respondents may have perceived basic personalization as a standard expectation rather than as a differentiating feature. Another is that the practical value of customization may emerge only when stronger trust or lower risk is present.

Similarly, the non-significant path from brand relationship quality to purchase intention suggests that a positive relational orientation toward the brand alone was insufficient to prompt buying intention in this sample. This pattern indicates that marketers should not assume that relationship gains will immediately produce transactional outcomes.

6. Theoretical and Managerial Implications

The study offers three managerial implications. First, marketing managers should prioritize information quality. Chatbots must deliver accurate, relevant, and complete responses at the pre-purchase stage because informational usefulness was the strongest driver of customer satisfaction.

Second, chatbot design teams should invest in interaction experience. Natural language quality, conversational clarity, and low-friction flows should be treated as conversion-supporting capabilities because experience significantly improved satisfaction, which in turn strengthened brand relationship quality.

Third, firms should evaluate chatbot success through a layered scorecard. Operational metrics such as response speed remain important, but they should be supplemented with measures of customer satisfaction, perceived helpfulness, trust, and relationship quality. This is especially important in Pakistan's e-commerce context, where broader confidence-building mechanisms may determine whether positive service experiences actually result in purchase intention.

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7. Limitations and Future Research

The study has several limitations. It uses convenience sampling, so the results should not be generalized to all Pakistani consumers without caution. The cross-sectional design also limits causal inference. In addition, the model relies on self-reported responses and does not capture behavioral purchase data.

Future research should test the model with larger probability-based samples and compare sectors such as retail, banking, travel, and telecommunications. It would also be valuable to extend the model with trust, privacy risk, perceived value, delivery reliability, and payment confidence to better explain the transition from positive chatbot experience to purchase intention.

8. Conclusion

This article demonstrates that chatbot service features influence consumer outcomes in Pakistan primarily through evaluative and relational mechanisms rather than through a simple direct path to purchase intention. Information quality and chatbot experience improved customer satisfaction, and satisfaction strengthened brand relationship quality. Yet the final step from favorable chatbot evaluation to stronger purchase intention remained unsupported.

For scholars, this highlights the importance of separating relationship-building outcomes from transactional outcomes. For practitioners, it indicates that better chatbot performance is necessary but not sufficient: firms must also address broader trust and commerce conditions if they want chatbot investments to produce stronger buying intentions.

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