

Beyond Personalization: The Influence of Generative AI Chatbot on Consumer Decision Quality

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Abstract:

The present research study examines the relationship between generative AI chatbot effectiveness and consumer decision quality among Indian consumers. Past research has largely focused on chatbot adoption and usage, while less attention has been given to whether interaction with these tools is associated with the quality of consumers' final decisions. To address this gap, a quantitative cross-sectional study was conducted using primary data from 300 consumers selected through purposive sampling. Data were collected through a structured questionnaire using a five-point Likert scale. Generative AI Chatbot Effectiveness was considered the independent variable and Consumer Decision Quality the dependent variable. Descriptive statistics, cross-tabulation, chi-square, reliability analysis, Pearson correlation and simple linear regression were used for analysis. The reliability results were strong. Cronbach's alpha was 0.897 for chatbot effectiveness and 0.887 for decision quality. The KMO value was 0.88 and Bartlett's test was significant ($p < .001$), indicating that the data were suitable for further analysis. The cross-tabulation showed clear differences across usage groups. Weekly users had 53.0% reporting high decision quality, while occasional users had only 20.0%. This association was significant, $\chi^2(6) = 38.287$, $p < .001$, with Cramer's $V = .253$. Pearson's correlation was also strong and positive ($r = .693$, $p < .001$). The regression analysis further showed that chatbot effectiveness significantly predicted decision quality ($B = .702$, $p < .001$). The model explained 48.0% of the variance ($R^2 = .480$; $F(1, 298) = 275.224$, $p < .001$). The findings indicated that generative AI chatbots are useful in consumer decision-making. Their usefulness depends on how effectively they provide relevant information and help consumers compare and evaluate options. Overall, the results indicate that better-quality chatbot interaction is positively associated with higher consumer decision quality.

Keywords: Generative Ai Chatbot, Consumer, Decision Quality, Influence, Personalization

1) Introduction:

AI Chat Bots is very important tool for navigating to help consumers in decision making process on specific area. The digital platform as major tool for Ecommerce as well as also for offline purchase market in last five years. different sectors numbers of alternative under Chat Boats like ChatGPT, Gemini, Claude etc, have better ecosystem doing best generative AI based Chat Boats facilities rather

than not possible for traditional search browser. The single or random query related answer is not helpful but generative AI chat boats useful in responds, follow up questions and respective answers such specific questions, clarification, justification, comparisons, preference, recommendations. The user's experience is one of the overall all experts help which clears the ambiguity, preferences measurements as well as recommendation as per requirements which completely change the behavioural processing through information representations. The Utility Theory of Acceptance – Use of Technology (**Pillai:2024**) trust framework studies identified the Chat Boats tool is very engagement and full of information which is directed to the customers. The different experimental study (**Priluck:2025**) also found about consumers mostly evaluate product through Generative AI based Chat Boats rather than traditional search browser engines. Further also confidence decisions as well as satisfaction decisions (**Tafesse & Sandhu:2026**) like variables have positive association with quality information getting from Generative AI Chat Bots.

The nation with average digital literacy like India, Southeast Asia, Some Parts of Africa etc have higher penetration of the smartphone where higher trust in automated systems and also prior experience with comparison tool for product (**UNCTAD: 2024**). These types of market basically heavy depends on social networks, local influence with mouth offline impact on purchase decisions. In theses regions have higher trust on automated systems comparatively then western regions. Thus, technology optimism play very important role under perceives information as well as directional system create more efficient decisions.

2) Research Problem:

The past research study mostly focused on the Generative AI based Chat Boats engagement level but here mostly concentrate the questions about Decision Quality of Consumer which results from assistance of Generative AI based Chat Boats. Further empirical relationship between effective Generative AI Chat Boats interaction & Final decisions of the consumer has questions need to scientific inquiry.

3) Objectives:

- To Identify influence of Generative AI Based Chatbot Effectiveness on Decision Quality of The Consumer in India.
- To Assess Consumer Interaction with Generative AI Chatbot Associate linked to Customer Perceived Decision Quality.

4) Hypothesis

H1: There are Significant Positive Impact of Generative AI Chatbot Effectiveness On Consumer Decision Quality

5) Methods & Tools:

The present research study is empirical study where quantitative approach undertaken for solving related research questions. Here, focused on the cross-sectional research design which undertaken cross sectional research survey of 300 consumers through purposive sampling. Thus, study focused

on the primary data with pre-construct questionnaire tool what use of five-point Likert scale in response. Under the exploration of variables: consumer decision quality as dependent variable while Generative AI Chatbot effectiveness as main independent variable in the present study. The present study undertaken statistical tool like frequency, cross tabulations, chi square, reliability, correlation and regression.

6) Results & Discussion:

6.1 Sample Profile:

Table:1 Sample Profile with Distribution

Variable	Category	n	%
Gender	Male	164	54.667
	Female	136	45.333
	Total	300	100.000
Age	18–25	96	32.000
	26–35	112	37.333
	36–45	61	20.333
	46–55	22	7.333
	56+	9	3.000
	Total	300	100.000
GenAI experience	<1 year	128	42.667
	1–2 years	109	36.333
	>2 years	63	21.000
	Total	300	100.000
Usage frequency	Occasionally (<monthly)	70	23.333
	Monthly (1–3/month)	90	30.000
	Weekly (1–6/week)	100	33.333
	Daily/almost daily	40	13.333
	Total	300	100.000
Education	Secondary	27	9.000
	Undergraduate	137	45.667
	Postgraduate	100	33.333
	Doctoral	19	6.333
	Other	17	5.667
	Total	300	100.000
Occupation	Student	66	22.000
	Salaried	98	32.667
	Self-employed/Business	59	19.667
	Professional	46	15.333
	Homemaker	17	5.667
	Other	14	4.667
	Total	300	100.000
Monthly household income	<₹25k	50	16.667
	₹25–50k	100	33.333
	₹50,001–1L	73	24.333
	₹1,00,001–2L	43	14.333
	>₹2L	16	5.333
	Prefer not to say	18	6.000
	Total	300	100.000
Decision type	Electronics	68	22.667
	Clothing	48	16.000
	Travel	36	12.000
	Food	29	9.667
	Education	39	13.000
	Financial	26	8.667
	Household	16	5.333
	Healthcare	15	5.000
	Beauty	19	6.333
	Other	4	1.333
	Total	300	100.000
Chatbot used	ChatGPT	157	52.333
	Gemini	60	20.000
	Copilot	26	8.667
	Claude	24	8.000
	DeepSeek	18	6.000
	Other	15	5.000
	Total	300	100.000
Main purpose	Information	74	24.667
	Compare alternatives	58	19.333
	Recommendations	59	19.667
	Features/specs	42	14.000
	Pros/cons	35	11.667
	Final decision	25	8.333
	Other	7	2.333
	Total	300	100.000

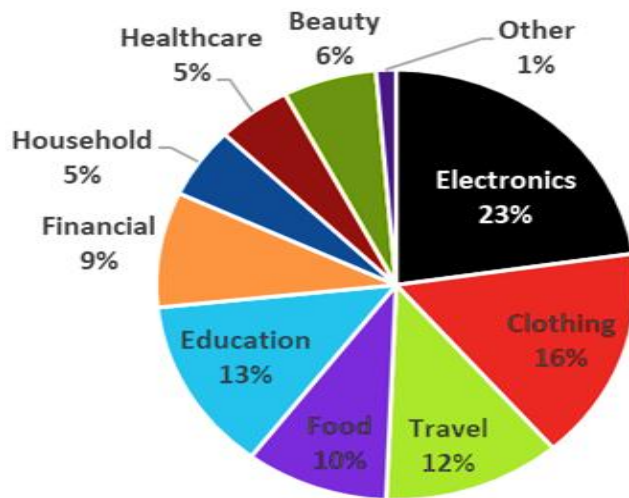


Fig:1 % DecisionTypes

Here, sample profile showing the distribution where highest concentration in Male by 54.667 percent against 43.333 percent in Women. Further highest age concentration between the 18 to 35 years by 49.33 percent which indicating youngest distributions are higher here.

Moreover, Generative AI experience highest distribution in the less than 1 year with 42 percent overall whereas higher experience year 2 + years distributed 21 percent against 36 percent distribution of 1 to 2 years' experience during period. Under Graduate and Postgraduate distribution around 70 percent in education as highest concentration area.

Under the distribution of occupation where its majorly dominants by salaried and students with 55 percent around distributions. The self employed also distributed far batter than homemaker & homemaker & another occupational group. In addition, Chat GPT major dominance as tool utilized highest distributed in the consumers in Chatbot used during period. Whereas Gemini has second highest distributed after Chat GPT by 20 percent distributions.

The purpose for Chatbot using is very important where it distributed highest 24.67 percent in purpose of information while second highest by Recommendations & Compare Alternative purpose for chatbot used. The Chatbot purpose used lowest with 2.33 percent in others purpose while 8.33 percent for final decision which is 12 times and 3 times lower than information purpose distributions.

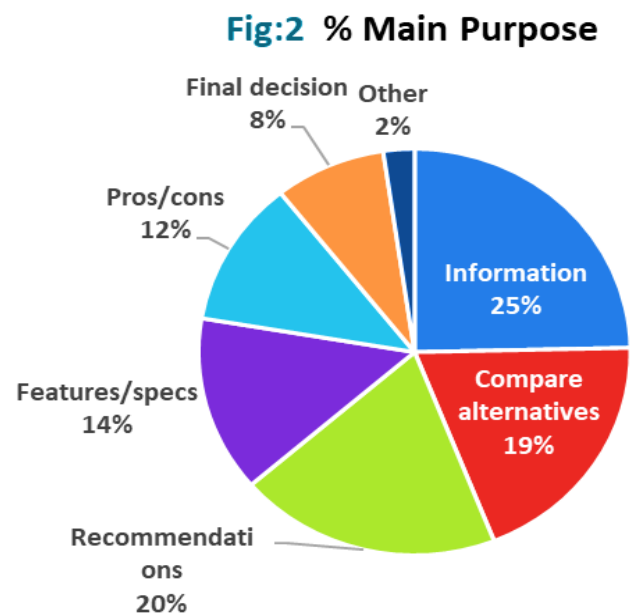


Fig:2 % Main Purpose

6.2 Reliability-Validity Construct

Here, total 14 items as instruments have been included in reliability construction. The result showing in **Table:2** by Cronbach's **Alpha= 0.897** for Generative AI Chatbot Effectiveness under 8 items whereas **Alpha= 0.887** for Consumer Decision Quality under 6 items. Here, both alpha value is above 0.70 thresholds so its indicating the internal consistency of include measurement items.

Table:2 Reliability: Cronbach's Alpha

Construct	Items	Cronbach's a
GenAI Chatbot Effectiveness	8	0.897
Consumer Decision Quality	6	0.887

The Validity test result showing in the **Table: 3** which indicating to sample is suitable for factor based analysis due to KMO= 0.88 which is significant under Bartlett's Test ($\chi^2 = 1,486.27$, $df=45$, $P=0.000$).

Table:3 Validity Construct

Test	Result	Interpretation
KMO	0.88	Adequate
Bartlett's Test	$\chi^2 = 1,486.27$	Significant
df	45	—
p-value	<0.001	Significant

6.3 Cross Tabulation for Generative AI Usage Frequency & Decision Quality

Table:4 Validity Construct

GenAI chatbot usage	Low decision quality	Moderate decision quality	High decision quality	Total
Occasionally	32 (42.1%)	24 (31.6%)	14 (18.4%)	70
Monthly	25 (27.8%)	42 (46.7%)	23 (25.6%)	90
Weekly	13 (13.0%)	34 (34.0%)	53 (53.0%)	100
Daily	6 (15.0%)	18 (45.0%)	16 (40.0%)	40
Total	76 (25.3%)	118 (39.3%)	106 (35.3%)	300

Table: 4 Cross Tabulation indicating the respondent' use of Generative AI Chatbot weekly with highest proportion of high quality by 53 percent against occasionally by 18 percent. Here, Daily users also showed a relatively high proportion of high decision quality (40.0%). This pattern suggests that regular interaction may be associated with greater perceived ability to use Generative AI tools for decision support.

6.4 Chi Square Test & Correlation:

Table:5 Chi-Square Test for Association Between Usage Frequency of GEN AI Chatbot & Consumer Decision Quality

Statistic	Value
Pearson χ^2	38.287
df	6
p-value	<0.001
Cramer's V	0.253

Here, **Table: 5** showing the testing results for association between usage frequency of generative AI chatbot and consumer decision quality by Chi-Square test. This indicating to significant association between the usage frequency of AI chatbot & consumer decision quality by evident with $p < 0.001$

(Pearson $\chi^2 = 38.287$, Df=6,) (Correlation test $r = 0.69$, $p = 0.000$) supporting to consumers who perceived chatbot interaction as more relevant, useful, clear and decision-supportive also tended to report higher decision quality.

6.5 Regression Analysis:

Table:6 Regression Result for Gen AI Chatbot Effectiveness Impact on Consumer Decision Quality

Statistic	R ²	Adjusted R ²	B (slope)	SE of B	t	p	F(1,298)
Result	0.48	0.478	0.702	0.042	16.59	< .001	275.224

$$\text{Regression Model CDQ} = 0.859 + 0.702 (\text{GCE})$$

Here, **Table: 6** clearly showing the regression model indicates that Generative AI Chatbot Effectiveness significantly predicts Consumer Decision Quality. The positive regression coefficient (**B = 0.702**) indicates that an increase of one unit in perceived chatbot effectiveness is associated with an estimated 0.702-unit increase in consumer decision quality. In depth model explaining to 48 percent variance in the consumer decision quality (**R² = 0.480**, **Adjusted R² = 0.478**), as regression overall statistically significant **F(1,298) = 275.224**, **p < 0.001**.

Thus, here enough evidence of Generative AI Chatbot Effectiveness have positively impact on Consumer Decision Quality

7) Conclusion:

The present research study showing the Generative AI chatbots are more than traditional way of information obtaining as well as also supporting to quality of interaction with chatbot has been closely connected with the quality of the decision made by customers during period. There are positive relationship explained through $r = 0.693$ as well as chatbot effectiveness also explained by 48 percent variation in consumer decision quality which has empirical support. Further research questions also answered here with consumer have get relevant information, useful comparison, clear explanations & its supports and impact to consumer's decisions. The consumer interaction through AI chatbot has significance association with decision quality levels, in overall the research paper evidenced to the role of generative AI chatbots are not only informative and usefulness but also supporting to improve quality of decision of consumers.

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