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The Effect of Chatbot Quality in Distribution on Customer Satisfaction and Continuing Use Intention*

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Abstract

Purpose: This study examines the influence of support quality in airline and distribution sector chatbot services on customer satisfaction and usage intention. As AI-powered chatbots become essential in these industries' customer service landscape, understanding how different types of support affect user behavior is important. **Research design, data and methodology:** The research conceptualizes support quality in two dimensions: emotional support and informational support. A structural equation modeling (SEM) approach was employed to test four hypotheses. Data were collected through a survey of airline chatbot users in Korea, resulting in 368 valid responses. Confirmatory factor analysis and model fit indices were used to validate the measurement and structural models. **Results:** Both emotional and informational support showed statistically significant positive effects on customer satisfaction and continued usage intention. Informational support had a slightly stronger influence on continued usage. The explanatory power (R^2) of support quality on customer satisfaction and continued usage intention was 37.7% and 48.3%, respectively. **Conclusions:** This study highlights the importance of enhancing both emotional and informational dimensions of chatbot service quality. Practical implications suggest that airlines and distribution firms should design chatbot systems capable of not only providing accurate information but also responding with empathy to strengthen long-term customer engagement.

Keywords: Chatbot, Customer Satisfaction, Continuing Use Intention, Distribution Industry, Emotional Support, Informational Support

JEL Classification Code : L86, L81, M31, O31

1. Introduction

The recent rapid development of artificial intelligence (AI) technology and the acceleration of digital transformation are bringing about fundamental changes in customer response methods and service delivery structures across the service industry. Chatbot technology enables real-time interaction with customers and is drawing attention as a key means for improving a company's customer experience (Kim, 2024).

The airline and distribution industry is also actively introducing chatbot services as a means to respond quickly and efficiently to various customer needs, thereby strengthening customer-centered non-face-to-face communication channels. Chatbot is an abbreviation for 'Chatterbot' and is an AI-based response system that interacts with users through text or voice-based natural language processing (NLP: Natural Language Processing) (Park & Lee, 2022).

Airlines and retail firms have an industrial environment that is advantageous for the technological advancement and commercialization of chatbots as it is easy to secure large

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amounts of real-time data and the frequency of customer responses is high. Airlines are building chatbots that can provide 24-hour customer service in various areas such as reservations, schedule guidance, baggage information, and flight changes, which is having a positive effect on improving customer convenience and satisfaction (Suh & Yoon, 2019).

Chatbot services are being utilized as self-service facilitation technologies that go beyond simple automatic response functions and support customers to search for necessary information and solve problems on their own. Informational support provided by chatbots helps customers solve problems by providing accurate and quick information, and emotional support relieves customers' anxiety or stress through empathetic responses and positive language use (Kim & Choi, 2022).

These functions are considered as a substitute or supplement to the social support expected from human interaction, further increasing the value of chatbots (Go & Sundar, 2019). Despite the increasing use of chatbot services, there is still a lack of empirical research on how the service quality and social support elements of chatbots perceived by customers actually affect customer satisfaction and intention to continue using them.In particular, there is a relative lack of research that empirically analyzes the impact of chatbots on customer experience in high-involvement service fields such as the airline and distribution industry. Existing studies tend to focus on functional aspects such as the Technology Acceptance Model (TAM) or usability, and there is limited research that comprehensively analyzes the impact of qualitative service elements centered on informational and emotional support on customers' psychological responses and behavioral intentions (Choi & Choi, 2022).

This study aims to identify how informational and emotional support provided by an airline's and distribution firm's AI chatbot service affect customer satisfaction and empirically analyze how this satisfaction affects the intention to continue using the chatbot service.

This analysis will not only provide basic data for establishing digital-based service strategies in the airline and distribution industry, but also provide practical implications for the design and operation of customer-centered chatbots.The specific objectives of this study are as follows.

First, we analyze the impact of informational and emotional support of an airline's and retailer's chatbot service on customer satisfaction.

Second, we examine the impact of customer satisfaction on the intention to continue using the chatbot service.

Third, the purpose is to explore the strategic value and long-term usability of chatbot services in the aviation industry through analysis of these relationships, and ultimately to present a theoretical foundation and practical measures for building a successful chatbot service model.

2. Literature

2.1. Chatbot Service

2.1.1. Introduction of Airline Chatbot

Chatbots are artificial intelligence (AI)-based conversational software programs designed to conduct conversations in a human-like manner, and they provide information or solve problems through natural language interactions with customers (Jeon, 2023). This chatbot technology is gradually spreading in the airline industry to increase the efficiency of customer service and meet the demand for non-face-to-face responses.Since airlines have a high need for real-time responses for reservations, ticketing, flight inquiries, baggage handling, and flight delays, providing 24-hour service through chatbots can simultaneously increase customer convenience and reduce labor costs (Chung et al., 2020). As the preference for non-face-to-face contact has increased since the COVID-19 pandemic, airlines are actively introducing chatbots to strengthen digital contact points with customers, and this has emerged as one of the key strategies for improving customer experience.

In the airline industry, chatbots partially replace existing call center functions while providing flexibility and scalability to handle large-scale customer inquiries in real time. Korean Air supports major services such as flight reservations, flight status inquiries, and mileage accumulation through 'Chatbot KEBOT', which is evolving from simple information delivery to providing personalized services (Jeong & Kim, 2019).

However, airline chatbot services still have limitations in handling complex inquiries or sensitive situations (e.g., flight delay compensation, refunds, etc.), and there are consumer complaints about the accuracy of system responses and the level of natural language use. Chatbots are being used as an all-round assistance tool for customer response rather than completely replacing human counselors, and gradual supplementation is required (Kim, 2024).

2.1.2. The Role of Chatbots in Airline Customer Service

In airlines, chatbots play a role as a 'first responder' at customer contact points, and are considered a service quality factor that directly affects customer satisfaction and brand awareness. Customers evaluate chatbot services through qualitative factors such as response speed, naturalness of conversation, and empathic responses, beyond simple information acquisition (Noh & Choi, 2018).

The service quality of chatbots has a meaning beyond simple technical performance, and should be treated as part of a comprehensive customer experience that includes informational and emotional support. Airline chatbots can

be applied to various stages of the customer journey, such as information search, reservation, and aftercare, and their quality has a significant impact on customer satisfaction and the formation of continuous use intention (Ji & Cha, 2020). For the successful operation of airline chatbots, customer-centered design, sophisticated language processing technology, and user experience (UX) design must be combined.

Airline chatbot service quality can be understood as the sum of technical, cognitive, and emotional characteristics that customers experience when interacting with the system, and it is a concept that includes not only the presence or absence of a simple response but also the service value and level of trust perceived by the customer (Gefen & Straub, 2004). The airline industry is a field where accurate and consistent responses at customer contact points are particularly important, and the quality level of chatbot service is directly related to customer satisfaction and reuse intention due to the complex procedures and international standards. We examine the core components of airline chatbot service quality, focusing on informational support and emotional support.

2.2. Components of Airline Chatbot Service Quality

Airline chatbot service quality can be understood as the sum of technical, cognitive, and emotional characteristics that customers experience when interacting with the system, and it is a concept that includes not only the presence or absence of a simple response but also the service value and level of trust perceived by the customer (Gefen & Straub, 2004). The airline industry is a field where accurate and consistent responses at customer contact points are particularly important, and the quality level of chatbot service is directly related to customer satisfaction and reuse intention due to the complex procedures and international standards. This thesis examine the core components of airline chatbot service quality, focusing on informational support and emotional support.

2.2.1. The Importance of Emotional Support

Emotional support is an emotion-based service quality element that customers experience psychological stability, empathy, and a sense of respect during their interactions with chatbots (Lee, 2022). Airline travel involves various stressful elements such as departure screening, security screening, and unexpected delays beyond simple movement, so customers often expect emotional responses from chatbot services that go beyond the provision of mechanical information. Users feel more satisfied with the service experience when chatbots have a certain level of humanness (Jeong & Kim, 2019). When a customer is anxious due to a flight delay, using empathetic language such as “I apologize for the inconvenience. Instead, I will help you quickly.” alleviates the customer’s negative emotions and positively changes the evaluation of the entire service. This suggests that emotional support is not simply an additional element, but a key quality determinant. Emotional support plays an important role in enhancing brand image and forming customer trust, which in turn affects continued use intention and repurchase behavior (Lee, 2022).

When airline chatbots respond to customers with polite and courteous expressions, friendly sentence structure, and emotional feedback, customers form a warmer and more trustworthy image of the airline brand.According to a study by Chung et al.(2020), the higher the perceived emotional intelligence of a chatbot, the stronger the psychological bond customers form with the service, which in turn acts as a variable that increases customer satisfaction and service reuse rate.In this way, designing chatbots to implement emotional responses is a key customer experience strategy, and its effect is especially prominent in high-involvement services such as airlines.

Emotional support can vary in quality depending on the chatbot's language processing ability (NLP) and the sophistication of the scenario design, and if the chatbot misunderstands the customer's intention or emotion, it can actually cause negative emotions, so careful system development is necessary (Gefen & Straub, 2004). Airline chatbots must strengthen their role as digital customer service agents that can convey emotions and consideration beyond simple information processing tools.

2.2.2. The Importance of Informational Support

Informational support is the act of providing accurate and purpose-oriented information to customers by chatbots, and is a quality factor that directly affects customers' problem-solving ability (Choi & Choi, 2022).

In the airline industry, various inquiries occur repeatedly, and in particular, flight reservations, baggage regulations, check-in methods, and flight delay and cancellation information are also information that customers urgently need. The ability of chatbots to provide such information quickly and without errors becomes a basic premise of service quality.

Recent studies emphasize that informational support can contribute to reducing customers' cognitive stress and increase service efficiency and customer trust by guiding users' decision-making more efficiently (Chung et al., 2020). For example, if users can quickly obtain the information they want with just a few questions, customers will evaluate the service positively in terms of information reliability and accessibility.In addition, when the informational support of airline chatbots operates in a customized manner for customers, the experience of perceived personalization of the service is further enhanced (Ji & Cha, 2020).

Chatbots that provide real-time notifications based on a

customer's reservation history or proactively provide relevant information without repetitive questions by reflecting previous inquiry history reduce the user's effort burden and increase cognitive efficiency.Such informational support is an important foundation for forming a customer's continuance intention and service loyalty.

However, informational support is not a complete concept in itself, but rather needs to be subdivided into subdimensions such as accuracy, speed, ease of navigation, and consistency (Kim., 2024). In the aviation industry, complex variables such as international aviation law, local airport regulations, and time zone differences are intertwined, so chatbots are required to go beyond the role of a simple information provider and have the ability to understand the context and coordinate timely responses.

2.3. Customer Satisfaction

Customer satisfaction is defined as an emotional and cognitive response that evaluates how well a service provider meets or exceeds customer expectations. It is one of the most central elements in a company's customer retention strategy and is recognized as a key antecedent variable that affects various outcome variables such as customer loyalty formation, repurchase intention, and positive word-of-mouth (Kim et al., 2019).

Customers make relatively expensive and high-involvement purchase decisions, so a single unsatisfactory experience can determine whether to use it in the future. As digital technology advances and contact points between customers and companies diversify, automated communication tools such as chatbots have emerged as new customer response channels.

This environmental change also affects the concept of customer satisfaction, and in addition to satisfaction factors centered on existing offline customer service, the quality of interaction in digital interfaces, reliability of AI technology, and ease of information search are emerging as important factors (Lee, 2022; Park & Lee, 2022).

The aviation industry is a field with high customer expectations and high replacement costs due to its nature. The determinants of customer satisfaction tend to be more complex and delicate than those in general service industries. According to previous studies, the factors affecting airline customer satisfaction can be summarized as follows:

Information quality: The accuracy, timeliness, and relevance of information provided by airline chatbots affect customers' satisfaction with information search (Nog & Choi, 2018).

Ease of use: The more intuitive and convenient the chatbot usage process is, the lower the customer perceives the technology barrier and feels satisfied (Suh & Yoon, 2019).

Emotional response of interaction: Interactions designed to allow customers to experience psychological stability through chatbots are key factors in increasing the level of satisfaction (Kim & Chio, 2022).

Reliability and consistency of response: Chatbots that provide consistent answers to repetitive inquiries give customers trust, which leads to satisfaction (Jeong & Kim, 2019).

In this way, various service factors affect satisfaction in the airline industry, and chatbot services should also effectively reflect these decision factors. In response to sensitive issues such as flight delays, refunds, and lost luggage, customers expect an empathetic attitude and quick response beyond simple information provision.

2.4. Continuing Use Intention

The intention to continue using a service is a concept that explains whether a customer intends to continue using a certain service or system after using it for the first time, and is considered a key variable closely related to customer loyalty and long-term profitability in the fields of information systems (IS) and service management (Lee, 2022). Since services provided in a digital environment interact with users without physical contact, the intention to continue using acts as a strong leading indicator of actual usage behavior.

The airline industry has the characteristics of a market with fierce price competition and many alternative services, so strategic management of the intention to continue using is important for customer retention. The airline's chatbot service is one of the digital contact points where customers interact without directly meeting each other, and as its quality and satisfaction experience accumulate, it becomes a factor that leads to customers' repeated use in the long term (Jeon, 2023).

Airlines' chatbots automate and provide various services such as flight reservations, check-in, baggage inquiry, flight changes, and mileage confirmation. This provides customers with information accessibility and convenience regardless of time and place, and also has the advantage of reducing the burden on call centers. Even if these technology-based services are useful in the short term, customers' intention to continue using them must be a prerequisite for long-term channel maintenance and activation (Chio & Choi, 2022). The factors that lead customers to continuously use chatbots in the airline industry can be largely divided into two axes:

- Functional factors: Practical problem-solving capabilities such as response speed, accurate information provision, ease of use, and interface design
- Emotional factors: Emotional satisfaction such as polite expressions, empathetic responses, and conversation

flow that considers customers' emotions. According to a study by Jeon (2023), airline chatbot users are more satisfied with 'empathetic responses' than with simple information provision functions, which plays an important role in forming trust in the service and increasing the likelihood of reuse.In addition, Chung et al. (2020) emphasized that the emotional intelligence of chatbots (perceived emotional intelligence) has a positive effect on the intention to continue using them, and pointed out that emotional responses are becoming a key success factor rather than a simple supplementary element.

Airlines chatbot services serve as part of the brand image, and are important touchpoints that affect the overall customer experience. Chatbot quality management and measurement should be approached as part of a long-term customer relationship building and brand loyalty strategy, beyond short-term technical operation management (Jeong & Kim, 2019).

The airline industry operates for customers in various countries, languages, and time zones, so factors such as language diversity, cultural context, and 24-hour response systems should be considered when measuring chatbot quality. A systematic management system is required that regularly evaluates and improves quality through real-time customer inquiry response.

3. Research Methodology

3.1. Research Model

The purpose of this study is to empirically analyze the impact of airline chatbot service support quality on customer satisfaction and intention to continue using the service. The support quality of airline chatbot service is divided into emotional support and informational support, and the impact of each on customer satisfaction and intention to continue using the service is investigated. This chapter designs a research model based on related prior studies and establishes research hypotheses to verify the causal relationship between variables.

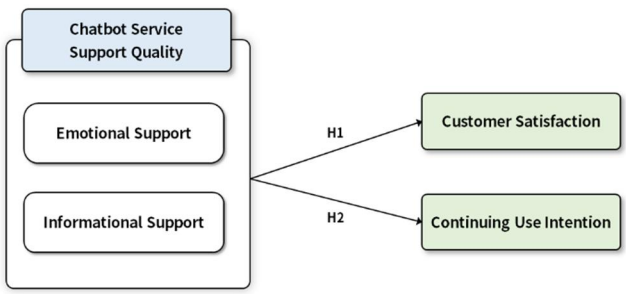

Figure1: Research Model

3.2. Definition and Components of Variables

3.2.1. Airline Chatbot Service Support Quality

The support quality of airline chatbot services refers to the overall quality of service support perceived by customers in the process of using airline chatbots.This study divides support quality into the following two subdimensions based on the concept of social support proposed in recent studies (Chung et al., 2020; Choi & Choi, 2022; Kim & Choi, 2022).

- Emotional support refers to the extent to which a chatbot empathizes with users' emotions and interacts in an emotionally friendly manner. This is related to warmth of language expression, empathetic responses, and polite expressions.
- Informational support refers to the functional capacity to provide accurate and useful information to customers' questions, including specific information delivery such as flight schedules, reservation information, and baggage guidance.

3.2.2. Customer Satisfaction

Customer satisfaction refers to the overall level of satisfaction felt by users after experiencing airline chatbot services.It is formed according to the degree of congruence between customers' expectations and actual experiences, and is affected by both service quality and emotional experiences (Jeong & Kim, 2019).

3.2.3. Continuing Use Intention

Continuing use intention refers to the customer's intention to repeatedly use the same airline chatbot service in the future. This can be used as a performance indicator of airline digital service strategy and is an important variable for customer loyalty and service continuity (Kim & Choi, 2022).

3.3. Hypothesis

In order to empirically verify the relationship between the variables presented above, the following research hypotheses were established.

3.3.1. Relationship between Chatbot Service Support Quality and Customer Satisfaction

Emotional support is a factor that helps customers using airline chatbots experience warm and empathetic interactions, and this factor can significantly increase customer satisfaction. Informational support contributes to increasing satisfaction by providing customers with the airline service information they need quickly and accurately (Chung et al., 2020). Accordingly, the following hypotheses

were established.

H1. The quality of airline chatbot service support will affect customer satisfaction.
H1-1. Emotional support of airline chatbot services will have a positive (+) effect on users' satisfaction with chatbot services.
H1-2. Informational support of airline chatbot services will have a positive (+) effect on users' satisfaction with chatbot services.

3.3.2. Relationship between Airline Chatbot Service Support Quality and Continuous Use Intention

If users receive emotional support and efficient provision of necessary information through airline chatbots, their positive perception of the service will be strengthened, increasing the likelihood of continuous use (Jeon, 2023). Accordingly, the following hypotheses were set.

H2. Airline chatbot service support quality will affect continuous use intention.
H2-1. Emotional support of airline chatbot services will have a positive (+) effect on the intention to continue using chatbot services.
H2-2. Informational support of airline chatbot services will have a positive (+) effect on the intention to continue using chatbot services.

To examine the relationship between users' intention to use chatbot services and their continued usage intention, a research framework is proposed as illustrated in Figure 1. Based on prior studies, research hypotheses were formulated, and empirical data were collected through a survey conducted from June to July 2025 targeting individuals who had experience using chatbot services in both airline and distribution sectors. A total of 519 valid responses were obtained.

The survey utilized a self-report method to capture respondents' personal characteristics and system-related features of the chatbots, as well as perceptions of ease of use, perceived usefulness, and behavioral intention. All questionnaire items were adapted from previous research and reorganized to align with the objectives of this study. Data analysis was conducted using SPSS 24.0, following these steps: first, descriptive statistics summarized respondent demographics and usage patterns; second, factor analysis assessed construct validity; third, reliability of the measures was evaluated using Cronbach's alpha; and finally, regression analyses tested the proposed hypotheses.

This study specifically investigates whether ease of use and perceived usefulness mediate the relationship between users' personal and system characteristics and their intention to use chatbot services in high-involvement service contexts such as airlines and distribution firms. The hypotheses derived from this framework guide the empirical analysis and provide insight into how chatbot service quality influences continued usage intentions across multiple sectors.

4. Results

4.1. The Demographic Characteristics

Prior to hypothesis testing in this study, the status of information acquisition and demographic characteristics of the 519 samples used in the empirical analysis are shown in Table 1.

Table 1: Demographic Characteristics (n=519)

Classification		Frequency (person)	Percentage (%)
Gender	Male	301	58.0
	Female	218	42.0
Purpose	Tour	300	57.8
	Work	149	28.7
	Visiting relatives	51	9.8
	Attending education	14	2.7
	Other	5	1.0
Source of Information Acquisition	Internet	319	61.5
	Travel Agency	110	21.2
	Post	4	o.8
	Recommed	48	9.2
	TV/Radio	11	2.1
	others	27	5.2
Aircraft Using number of times	1-2 times	223	43.0
	3-4 times	183	35.3
	5-6 times	54	10.4
	Over 7 times	59	11.4
Age	20s	186	35.8
	30s	180	34.7
	40s	119	22.9
	Over 50s	34	6.6
Occupation	Emplyoee	449	86.5
	Self-employed	19	3.7
	Student	11	2.1
	Civil servant	11	2.1
	Housewife	8	1.5
	Other	21	4.0

4.2. Feasibility and Reliability of Data

In this study, the construct validity of the measurement tool was evaluated through convergent validity, discriminant

validity, and law validity, and the internal consistency was evaluated based on the Cronbach's α coefficient to determine whether the reliability of the measurement tool was secured.

For the construct validity and reliability, this study conducted confirmatory factor analysis using AMOS 18.0 and reliability analysis using SPSS 18.0.The results of the confirmatory factor analysis are shown in Table 2.

The fit of this study was inappropriate with an χ^2 value of 315.946 (df=98, p=.000).Since this is sensitive to the sample size and the number of observed variables, the fit cannot be evaluated solely based on its significance, so it was judged based on various fit indices such as the absolute fit index, incremental fit index, and parsimony fit index.

The AGFI value was found to fall below the standard value. However, it was judged to be a suitable model because it showed above the criterion in other values (χ^2 =315.946 (df=98, p=.000), χ^2 /df=3.223, RMR=.059, GFI=.939, AGFI=.890, NFI=.947, TLI=.936, CFI=.964, RMSEA=.045). In addition, the standardized factor loading values of all measurement items showed 0.5 or higher.

The average variance extracted (AVE) and concept reliability (CCR), which are convergent validity evaluation methods suggested by Fornell and Larcker (1981), both met the criteria of AVE>0.5 and CCR>0.7.It was judged that the measurement items in this study had sufficient convergent validity. The Cronbach's α coefficients of all constructs were very high at 0.9 or higher, which ensured the reliability of the measurement items selected in this study.

Table 2: Confirmatory Factor Analysis Results

Measurement		Std. factor loading value	Std. error	C. R.	p	AVE (CCR)	CCR	Cronbach's α
Emotional Support	Have you ever felt that talking to a chatbot helped you emotionally?	.659	-	-	-	.517	.810	.805
	Have you ever felt more comfortable talking to a chatbot instead of a person when you were feeling emotionally distressed?	.696	.108	12.987	***			
	Have you ever felt like a chatbot seemed to empathize or understand you?	.769	.094	13.924	***			
	Have you ever felt like a chatbot seemed to empathize or understand you?	.746	.097	13.659	***			
Informational Support	Did you quickly get the information you needed through the chatbot?	.877	-	-	-	.664	.886	.881
	Did you feel that the information provided by the chatbot was trustworthy?	.910	.039	27.624	***			
	Did you feel that the chatbot provided information that was helpful in solving problems or making decisions?	.773	.038	21.501	***			
	Did you feel that you could easily get information through the chatbot that was difficult to ask a person?	.678	.035	17.621	***			
Customer Satisfaction	Were you satisfied with your overall experience using the airline chatbot?	.837	-	-	-	646	.879	.719
	Were you satisfied with the services the chatbot provided?	.808	.262	7.321	***			
	Were you satisfied with the speed and convenience of the airline chatbot's response?	.814	.263	7.331	***			
	After using the airline chatbot, did your overall perception of the airline change in a positive way?	.753	.253	7.229	***			
Continuing Use Intention	Would you continue to use airline chatbots in the future?	.818	-	-	-	.641	.877	.875
	Do you think you will use chatbots as a first choice for airline-related inquiries or reservations in the future?	.787	.055	19.902	***			
	Would you recommend airline chatbots to your friends or family?	.797	.050	20.242	***			
	Do you think you will prefer airlines that offer chatbot services over others?	.799	.051	20.310	***			

χ^2=315.946(df=98, p=.000), χ^2/df=3.223, RMR=.059, GFI=.939, AGFI=.890, NFI=.947, TLI=.936, CFI=.964, RMSEA=.045 ***: p<.001

As shown in Table 3, the relationships between all latent variables are below the absolute value of 0.7, so there is no need to suspect multicollinearity. The AVE values of all latent variables were found to be greater than the squared correlations between latent variables.The discriminant validity between each construct was determined to be established.

Table 3: Discriminant Validity and Law Validity Verification Results for Construct Concepts

	Emotional Support	Informa-tional Support	Customer Satis-faction	Continuing Use Intention
Emotional Support	.517[a]	.108[b]	.116[b]	.173[b]
Informational Support	.328	.664[a]	.120[b]	.117[b]
Customer Satisfaction	.340	.346	.646[a]	.187[b]
Continuing Use Intention	.416	.421	.432	.628[a]

a.AVE value, b.Square of bivariate correlation coefficient (r2)

4.3. Hypothesis Verification

The results of analyzing the structural equation model for hypothesis verification in this study are shown in Table 4. The fit of this study was the same as the confirmatory factor analysis value.

The χ^2 value was 335.735 (df=100, p=.000), indicating inappropriateness.Since this is sensitive to the sample size and the number of observed variables, the fit cannot be evaluated solely by its significance, so it was judged based on various fit indices such as the absolute fit index, incremental fit index, and parsimony fit index.Although the values of AGFI and TLI were below the standard, the other values were above the standard, so it was judged to be an appropriate model (χ^2 =335.735 (df=100, p=.000), χ^2/df=3.357, RMR=.043, GFI=.901, AGFI=.830, NFI=.902, TLI=.881, CFI=.917, RMSEA=.031).

The explanatory power of customer satisfaction by chatbot service support quality was 37.7%. The explanatory power of continuous service use intention by chatbot service support quality was high at 48.3%.

H1, The results of verifying the effect of chatbot service support quality on customer satisfaction are as follows.

The standardized path coefficient of the effect of emotional support on customer satisfaction, H1-1, was .440.t=5.466(p<.001). It was shown to have a significant effect. Therefore, H1-1 'Emotional support of chatbot service will have a positive effect on user satisfaction with chatbot service' was adopted. The standardized path coefficient of the effect of informational support, H1-2, on customer satisfaction was .429. t=5.715(p<.001). It was shown to have a significant effect. Therefore, H1-2, 'Informational support of chatbot services will have a positive (+) effect on users' satisfaction with chatbot services', was adopted.

The results of verifying the influence of H2, chatbot service support quality, on the intention to continue using the service are as shown in Table 4.

Table 4: Structural Equation Analysis

	Path			Std. path coefficient	Std.E	CR[a]	p-value	SMC[b]
H1	Emotional Support	→	Customer Satisfaction	.440	.055	5.466	.000	.377
	Informational Support			.429	.027	5.715	.000	
H2	Emotional Support	→	Continuing Use Intention	.491	.063	9.554	.000	.483
	Informational Support			.492	.028	11.250	.000	
χ^2 =335.735 (df=100, p=.000), Normed-χ^2 df=3.357, RMR=.043, GFI=.901, AGFI=.830, NFI=.902, CFI=.917, RMSEA=.031								
***:p<.001, a. C.R.(Critical Ratio), / b. SMC(Squared Multiple Correlation)								

The standardized path coefficient of the influence of H2-1, emotional support, on the intention to continue using the service was .491.t=9.554(p<.001), indicating a significant influence. Therefore, H2-1, 'Emotional support of chatbot service will have a positive (+) influence on the intention to continue using chatbot service' was adopted. The standardized path coefficient of H2-2, informational support, on the intention to continue using the service was .492, t=11.250(p<.001), indicating a significant influence. Therefore, H2-2, 'Informational support of chatbot service will have a positive (+) influence on the intention to continue using chatbot service' was adopted.

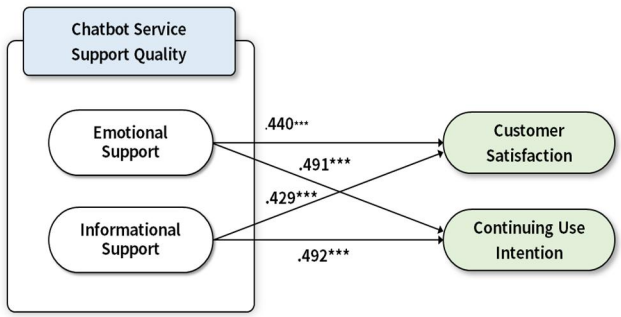

Figure 2: Structural Equation Analysis Results

5. Conclusion

5.1. Conclusion and Implications

This study aims to empirically investigate the impact of airline and distribution chatbot service support quality on customer satisfaction and intention to continue using the service. The airline and distribution industry is rapidly transforming customer contact points into digital, and in particular, AI-based chatbots are causing significant changes in the communication methods between airlines and customers. This study segmented the support quality of airline chatbot services into two dimensions: emotional support and informational support, and analyzed the impact of each dimension on customer satisfaction and intention to continue using the structural equation model.

This study provides the following theoretical implications by structuring the quality components of airline and distribution chatbot services into a theoretical framework of emotional support and informational support and empirically verifying them.First, existing chatbot-related studies tended to focus on technology-centered elements such as functional efficiency, response time, and automation level.

This study introduced a perspective on users' emotional experiences and shed light on the role of social interaction provided by chatbot services. This contributes to expanding the function of chatbots as a digital communication tool beyond simple information provision to a medium of emotional connection (Choi & Kwak, 2022).

Second, it is different from existing studies in that it analyzed the role of chatbots in the high-involvement service industry of airlines and distribution. Airline services include various customer contact situations such as reservations, changes, boarding procedures, and baggage inquiries, while retail services include product inquiries, order tracking, and returns (Li et al., 2021). This contributes to expanding the scope of chatbot research to focus on more advanced customer experiences.

Third, this study empirically proved that emotional support and informational support have significant and independent effects on customer satisfaction and intention to continue using the service. This suggests that support quality has a multidimensional structure rather than a single dimension, and can be used as basic data for constructing related theories in the future.

The results of this study provide the following implications for practitioners planning and operating chatbot services in various service industries, including airlines and distribution firms.

First, considering that emotional support has a very significant impact on customer satisfaction and intention to continue using, it is important to design a linguistic interface that allows chatbots to recognize customers' emotional states and respond appropriately. It is necessary to build a system that detects customers' complaints, confusion, and urgent requests by introducing natural language processing (NLP) technology based on sentiment analysis and provides empathetic responses to them.

Second, informational support also has a decisive impact on customer behavior, the accuracy, real-timeness, and response consistency of the information provided by the chatbot must be guaranteed. Since airlines and retailers often have inquiries related to real-time changes or emergency information, the backend linkage function of the chatbot (e.g., linkage with real-time reservation systems, provision of weather and delay information based on departure point, etc.) is very important.

Third, it is necessary to strengthen the integration of services and brand consistency so that chatbots can be utilized as strategic tools that serve as digital contact points between customers and airlines, rather than simple automatic response services. For example, designing a conversation style that reflects the brand's friendly and trustworthy tone and manner can be one direction.

Fourth, since the satisfaction that customers feel after using a chatbot tends to lead to not only short-term service quality but also overall digital experience satisfaction, chatbots should be operated in connection with other channels such as mobile apps, homepages, and emails.This omnichannel strategy can also have a positive effect on securing customer loyalty in both airline and distribution contexts.

5.2. Limitations of the Study

This study has derived meaningful theoretical and practical implications in many aspects, but has the following limitations.

First, since this study focused on users of domestic airline chatbot services, it is difficult to generalize the results to all airlines or industries. A more comprehensive analysis should be conducted through samples including various airlines.

Second, since the customer's perception and response to support quality may vary depending on personal characteristics such as age, digital proficiency, and previous chatbot experience, it will be possible to derive strategic implications for a segmented customer group through moderating effect analysis in the future.

Third, additional analysis of intermediate or interaction variables, such as the mediating effect of customer satisfaction on continuous use intention or the moderating effect of experience quality, can be a future research topic. Such analysis can contribute to establishing a more sophisticated theoretical basis for improving chatbot

services.

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