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THE IMPACT OF INNOVATIVE CUSTOMER SERVICE PRACTICES ON ORGANIZATIONAL PERFORMANCE IN AIRLINE COMPANIES: A QUALITATIVE ANALYSIS

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ABSTRACT

This study investigates the impact of innovative customer service practices on the performance of airline companies operating in Turkey. A qualitative research approach was adopted, comprising structured interviews with company officials and secondary data analysis. The research examines the influence of differentiated customer service innovations on both financial and non-financial performance metrics, such as operational efficiency, customer satisfaction, and environmental sustainability. A research model was developed, underpinned by three hypotheses: the positive effect of differentiated customer service on customer loyalty, the relationship between customer loyalty and airline performance, and the overall impact of these services on financial and non-financial performance dimensions. Interviews were conducted with representatives from five airlines, covering diverse business models, including low-cost and full-service carriers. The findings underscore that innovative practices—such as self-service kiosks, digital check-ins, and advanced loyalty programs—enhance customer satisfaction and operational performance, leading to measurable improvements in financial metrics like profitability and cash flow. This study highlights the strategic importance of integrating innovation into customer service processes for sustainable competitive advantage. By linking innovative practices to performance outcomes, the research offers actionable insights for airlines aiming to optimize their operational models and customer service strategies in a competitive industry.

Keywords: *Differentiated customer service, Innovation, Performance, Airlines, Airline performance.*

INTRODUCTION

According to Levy and Weitz (2007), customer service is all of the retailer activities that increase the value that consumers receive while shopping. It can also be said that customer service is all the work that businesses do to meet the expectations of their customers and to ensure customer satisfaction and loyalty (Johnson & Lee, 2021). According to another definition, customer service is all activities that support the company's main product (Pettigrew, 2008; Bhat *et al.*, 2023). In a more widely accepted definition, customer service is the creation of bonds based on mutual benefit with the groups and customers with whom it has a mutual relationship in the market to establish and develop long-term relationships with customers (Apty, 2021; Gautam *et al.*, 2023). Customer service is the whole process of continuing to create value for the customer before,

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during, and after the sale or transaction (Okumuş & Hilal, 2007). In the aviation industry, the service provided at every moment of the flight, starting from before the flight and even after the flight, forms the customer's general perception of the service as a whole. Security concerns may arise in relation to other nations, alliances of states, various organizations, non-state entities, or in the context of airline relations (Çora, 2024; Deloitte, 2024). The whole of the services provided before, during, and after the flight constitute the transportation service.

Customer service falls within the value chains of an airline. The value chain of an airline consists of three stages (Shank & Govindarajan, 2004): Making reservations and providing ticketing services. Operation of the aircraft from point A to point B. Other services are offered to passengers before, during, and after arrival.

The service that enables people, goods, living, and non-living beings to move between two points is called transportation (Pradhan *et al.*, 2023; Condé Nast Traveler Editors, 2024). In other words, transportation is considered a service that enables people and goods to move due to certain needs and creates benefits while doing so (Williams & Thompson, 2020). This change can be realized between any two places on earth, underground or outside our planet (Kaya & Aydın, 2024). When this transportation service is carried out by air, it is called air transportation (Tan & Masood, 2021).

The service process in airline transportation is described in **Figure 1**. Therefore, it is assumed that innovative designs made at each stage of this service process affect customer satisfaction and service process and various dimensions of airline performance.

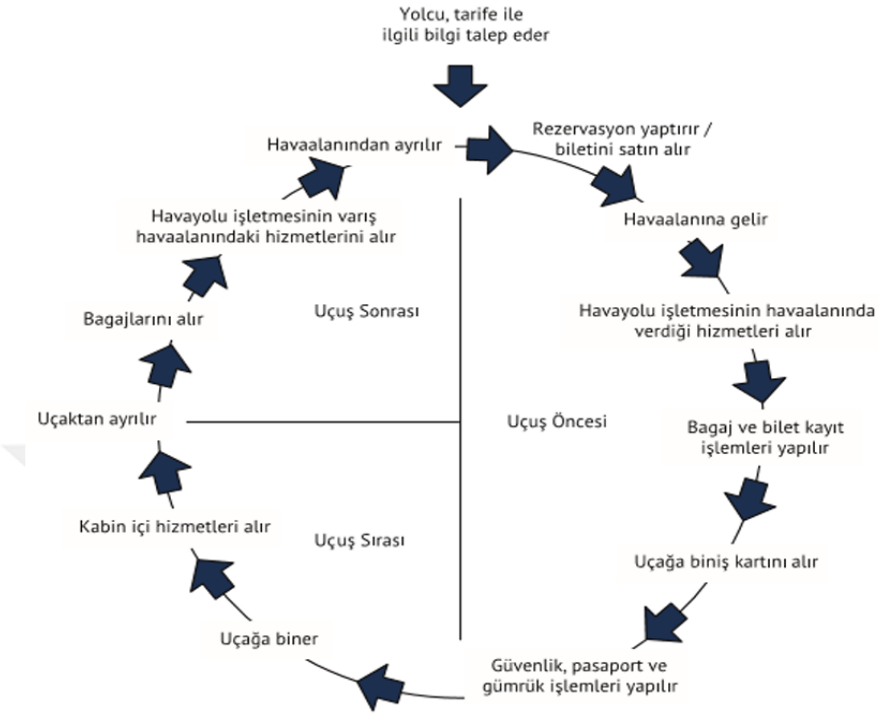

Figure 1. Service Process in Airline Transportation

Source: Ender Gerede, "Airline Transportation and Economic Regulations Theory and Turkish Practice", ed. Ender Gerede, (Ankara, DGCA Publications, 2015), 10.

Field Research

There are many studies in the literature to determine airline service quality criteria, services that affect passenger preferences, and the impact of innovative practices on airline employees or airline performance (Konyalılar, 2020; Süzen, 2020; Konyalılar, 2021; Turgut & Songur, 2022). Artar and Türkay (2021) examined the contribution of innovation efforts to socio-economic welfare in 6 different airports around the world that have undergone digital transformation at airports. It was revealed that the adaptation of airports to innovations in the digitalization process has a positive relationship with the level of socio-economic welfare in countries (Moghadas, 2024).

Park (2007) examined three traditional full-service airlines offering international services in Korea (Korean Airlines and Asiana Airlines) and Australia (Qantas). He found that the most common criteria in the preferences of passengers who usually use these airlines are in-flight service, airport service, reservation service, reliability, flight availability, price, perceived value, staff behavior, customer satisfaction, airline image, and overall service quality (Stern, 2024).

In a study conducted by Çelikkol *et al.* (2012), a 16-question survey was conducted on why passengers prefer the airline they use the most, and the answers to the 16 questions in this survey were received as reliability and good service, expertise, and flexibility, advantages, and convenience, respectively. When the factors obtained as a result of the questionnaires are analyzed, it is seen that safety, service quality, and advantages are the priorities of the customers in clarifying their preferences.

Nadiri *et al.* (2008) surveyed 583 customers of Turkish Airlines of Northern Cyprus and found that the most important factors affecting the decision of passengers to fly with the airline again are the physical elements of the aircraft and the high number of positive reports for the airline.

Pekkaya and Akıllı (2013), in their study conducted with 410 customers for 8 different airline companies carrying passengers within Atatürk Airport, concluded that the dimensions of service quality perceived by passengers were significant in the dimensions of reliability, assurance, adequacy, and physical facilities; however, quality service provision was relatively low in the dimensions of enthusiasm and emotionality.

Sarıgül and Coşkun (2022), "Effects of Innovation Strategies in the Aviation Industry" examined the effects of innovation strategies on the Turkish Civil Aviation sector. As a result of the study, it was concluded that innovative actions taken in the aviation industry positively affect business performance, employee motivation, and customer satisfaction and increase the profit of businesses in the long term.

Yağız (2021), in his study titled "International Marketing and Innovation in the Context of Digital Transformation of the Civil Aviation Sector", investigated the impact of transformations in marketing activities on market shares as a result of the digitalization of the civil aviation sector (Shiwakoti *et al.,* 2022). As a result of the study, it was concluded that as a result of the acceleration of civil aviation activities with the developing technology and the new airport opened in our country, businesses have increased their market shares positively by developing innovative marketing strategies in aviation.

Demir and Taşer (2020), in their study titled "The Effects of Service Innovations at Airports on Service Quality Perception and Passenger Satisfaction", examined service quality and the extent to which innovations in this field affect innovation expectations by using the survey method. The survey method used in the study was completed with 341 passengers selected from Istanbul Airport. Unlike others, this study aims to determine the impact of innovative practices in customer service to increase passenger satisfaction on various performance elements of the airline.

MATERIALS AND METHODS

This study focuses on how airline companies' innovations in customer service design make a difference and affect business performance. In this context, performance is analyzed in two main dimensions: financial and non-financial performance (operational performance, service quality, and environmental performance). It is emphasized that airline companies should decide in which direction and to what extent to change their services to increase their assets without decreasing their assets, and as a result of this decision, which performance dimension they will improve by directing energy. It will investigate how service innovation, also known as differentiated services, will be in line with customer demands and in which direction these strategies will affect company performance (Srinivas & Ramachandiran, 2020).

In addition, how airline companies become a customer-oriented business to maintain their presence in the market is investigated. It is aimed to measure customer satisfaction in airline companies and accordingly to determine company performance based on customer satisfaction (Kumar & Patel, 2021).

The research was conducted on airline companies in Turkey. Press, company data, and scientific studies were used as data boundaries. In addition to utilizing the results of previous academic studies and surveys applied to customers, the lack of a special survey prevented the study from being based on a survey and only circulating the survey. For the study, hypotheses that address the customer-company relationship mutually were generated. Interview questions related to these hypotheses were prepared and the hypotheses were tested as a result of the available data by commenting on the answers to these questions.

The research was conducted on five different airlines, two low-cost, two full service and one charter airline. In particular, airlines with different business models were preferred. The aim was to find out whether this difference makes a difference in differentiated services in the context of customer service and performance measurement. The interview questions were answered by mid-level officials of the relevant performance unit and public relations (customer service) unit of the airlines and the interview lasted between 25 and 40 minutes. A total of 10 people from each company were interviewed, one from the performance unit and one from the customer service unit. For reasons of confidentiality, detailed information about the airlines and interviewees will not be provided. Performance interviews were conducted between April and May 2018 and customer service interviews were conducted between September and October 2018.

The technique used in the research was firstly an interview technique using a structured interview form, which is a qualitative research method. In the structured interview form, qualitative data were converted into quantitative data, and frequency was analyzed. A three-

tiered path was determined for the results and the answers to the questions based on the hypotheses were obtained in three different ways:

– Interview

In addition to interviews, secondary sources were also utilized. These included content descriptions of innovative practices and statistics from previous research reports.

– Content definitions of innovative practices
– Statistics

With the results found, the reliability and validity of the interview form were tested, and previous studies using these questions, as well as the annual reports and web pages of airline companies were examined.

The research model and the hypotheses developed according to this model to determine the effect of differentiated or innovative practices in airline companies' customer service on performance are shown below **(Figure 2)**.

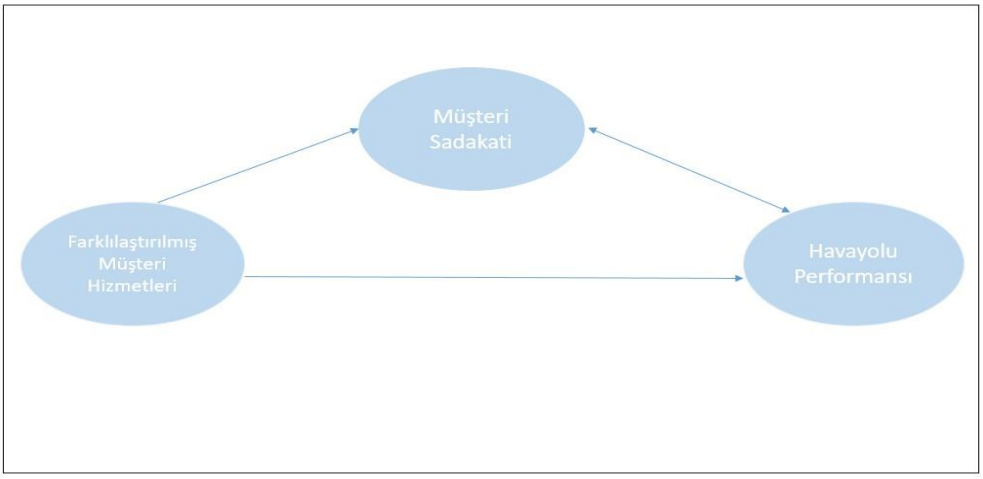

Figure 2. Research Model

Hypothesis 1: Differentiated customer service positively affects customer loyalty.

Hypothesis 2: There is a significant relationship between customer loyalty and airline performance.

Hypothesis 3: Differentiated customer service positively affects airline performance in Non-Financial Performance and Financial Performance dimensions.

RESULTS AND DISCUSSION

In the interviews conducted with five airline companies, airline company officials were asked 6 questions related to performance. With these questions, it was tried to understand how the airline companies perform performance measurements with financial and non-financial performance indicators, what the indicators related to performance measurement based on customer loyalty what kind of studies they carry out, and whether performance determination is made regarding different innovative services in their companies.

Question 1. What are the financial performance indicators that you use for strategic goals in your company? According to the answers received, the most commonly used indicators are P1 operational cost, P2 operating income, P4 profitability, and P3 debt/equity ratio which are measured by all airlines. P6 return on invested capital is measured by 4 companies, P5 cash flow is measured by all companies, while the cash flow to equity ratio is measured by 2 companies. Other indicators such as price/earnings ratio and stock prices are used by only one airline.

Question 2: What are the non-financial performance indicators you use for strategic objectives in your company? P8, P9, P10, P11 are measured by all airlines. P7 environmental performance is measured internally by all but one airline.

Question 3: What are the performance indicators you use to measure performance based on customer loyalty? Have there been any changes in the relevant indicators on a company basis in the last 5 years? It has been determined that they use 4 different customer-based performance indicators. Of these, P9, P11, and P8 are used by all interviewed airlines. While the least used performance item is P12, all airlines stated that they measure employee satisfaction or have it measured by a consulting company to be objective. Ton kilometers per employee, which measures employee productivity, is measured by 3 airlines. When asked whether there has been any change in customer-related performance in the last 5 years, 3 airlines stated that there has been no change and 2 airlines stated that there has been a change.

Question 4: Is there a performance assessment for different innovative practices in your company? Which performance dimensions are more affected by innovative practices? Only one of the companies does not have a set performance for different innovative practices, while the other companies have performance indicators for innovative practices that they have identified or foreseen. In the interviews, it was also pointed out that this determination is also made through external studies, but the company that does not determine performance stated that general performance measurement is made not for innovative practices, but rather based on the effects felt in different units. Affected performance dimensions P7, P8, P9, P10, P11, P12.

Question 5: Does the company outsource performance measurement services? If so, what are the criteria for determining this service? Four of the airline company officials stated that they outsource performance measurement services for company performance. Two of these companies stated that this measurement is done for standard operations, while the other two company officials stated that they receive such a service partially. In particular, companies that do not perform ground handling activities themselves outsource performance measurement to these companies or monitor them together.

Question 6: What are the performance measurement systems you use for performance measurement? It was learned that all airlines using different types of performance used comparative measurement P15, quality management P15, and process management system P16. Environmental management system P17 (ISO14001) is used by four companies, business excellence model P13 (EFQM) is used by two airlines, other measurement systems P18; ISO 1002, Customer satisfaction management system and Total quality management are used by two airlines, DSK and Value-based management system is used by one airline. P14 (ISO9001) performance and comparative measurement system is one of the most widely used performance systems by airlines worldwide. Within the scope of the quality management system, the process approach has been adopted by airline companies. Therefore, we can say that P14 and P16 are

used together with the process management system. Not every airline can use the benchmarking measurement method P15, which is one of the most used ones, it has to compare with a company with similar characteristics.

In this part of the study, questions covering customer relations based on the hypotheses developed and modeled are generated and answers to these questions are sought. With these questions, it is aimed to facilitate the testing of the hypotheses.

The first question developed based on the hypothesis: Have airlines developed a customer demand function? In this question, three types of analysis systems are generally used by airlines to forecast customer demand. These are: Regression analysis, Artificial neural networks, Adaptive network-based fuzzy inference system (ANFIS)

According to the data obtained from 114 studies analyzed worldwide by Efendigil and Eminler, (2017) 96% of airlines prefer quantitative methods. Accordingly, it was found that 80 studies used regression analysis for demand forecasting.

As a result of the information obtained in the interview, they prefer regression analysis as they mostly use P9 and P8 as customer-based performance indicators. Within the framework of the interview, since only one of the companies does not have a performance indicator for different innovative practices, while the other companies have performance indicators that they have determined or foreseen for innovative practices, it is thought that other systems will become widespread over time due to the importance that airlines attach to performance measurement.

Question 2: What are the performance indicators used for strategic objectives in airlines? The final answer to this question is the answers to questions 1 and 2 obtained from the interview with company officials.

1. P1 Operational cost, P2 operating income, P3 Debt/Equity ratio, P4 Profitability, P5 Cash flow (Financial Performance)
2. P8 Service quality, P11 On-time departure rate, P9 Customer satisfaction and P10 Operational performance (Non-financial Performance)

Question 3: What are the customer-related performance indicators used by airlines? Customer satisfaction, Human resources, Service quality, and On-time departure rate are given as the predominant answers to this question. The reason for addressing this question separately is that innovative services are closely related to the customer.

Question 4: What are the performance measurement systems used by airlines? The answer to this question, based on the interview information with airline company officials, shows that airline companies use many different performance measurement systems. These include Comparative Measurement Systems, Quality Management Systems, Process Management Systems, EFOM, Environmental Management Systems, and others such as Customer Satisfaction Management Systems, Balanced Scorecards, Total Quality Management Systems, and Value Based Management Systems.

Question 5: What is done to ensure that the services provided in your company are differentiated and privileged in the eyes of your customers?

Interviewee 1: "We are the airline with the longest seat spacing with 77 cm. In addition, the cheese in the cheese sandwich we serve is a melting cheese with special fat. We are the first airline to launch the survey application. We also offer our passengers an airline program where they can buy free flight tickets for themselves or their relatives in return for the miles they earn."

Fifth interviewee: "We are a price-oriented airline and we make a difference with the affordability of our ticket prices. In addition, with our mobile applications, you can buy airline tickets anytime, anywhere, and perform all online transactions you need for the flight easily and quickly. We have an environmental management system. We try to minimize greenhouse gas emissions from our operations. We also have an airline program that earns our passengers points as they fly."

Third Interviewee: "Our passengers are divided into two groups: upper class and economy passengers. While the demands of upper-class passengers are more service-based, economy passengers are more interested in ticket prices. We try to meet their expectations by offering services accordingly."

These responses from airlines with two different business models are used as examples, as other interviewees' responses were similar, it is not necessary to mention them all.

Sixth question: How do you measure customer satisfaction?

Second Interviewee: "We ensure passenger satisfaction by classifying the requests and complaints received by my call center through the survey method and by evaluating the requests and complaints received in the "Feedback" section on our website. Incoming requests are transferred to the file unit at our headquarters. They are examined there, the accuracy of what the passenger says is investigated, and if it is correct, necessary actions are taken. Our passengers are informed within 2-7 days, but this process is accelerated if the customer requests urgent feedback. We also determine the success of customer service by using our corporate measurement techniques. We evaluate the success of our call center with a 3-question survey we apply at the end of the calls."

Fourth Interviewee: "We have a "Passenger Rights" section on our website where they can send us their requests and complaints. We also have a "live support" line on our website. Our feedback to our passengers takes between 4-6 weeks due to our busy schedule. We do not conduct satisfaction surveys." It has been observed that other airline companies generally use the same methods, with very few differences.

Seventh question: What are the innovative practices that airlines have provided for passengers in recent years? The answer to this question is sought. Innovative practices used by the airline companies subject to the research:

- Improvements in ticket prices
- Power to resolve requests and complaints
- Cancellation and notification systems
- Integrated Applications (Frequent Flyer Programs such as Miles&Smiles, Earn Plenty, SunBonus, JetGenç, Atlasmiles, Onur Extra, etc.) Online reservation services)
- Monitise company applications (Digital technologies)
- Online check-in with automatic self-check-in and self-service baggage claim machines
- New boarding applications (such as fingerprint boarding, and subcutaneous implant boarding)

Some of the current applications are new for airlines, while others are upgraded, i.e. updated applications.

As a result of the interviews, it was found that airlines do not differ significantly from each other in the techniques of measuring customer satisfaction and that they all have a pay-as-you-fly airline program for customer loyalty (NEC Corporation, 2024). In terms of differentiated services, it was concluded that low-cost carriers focus on ticket prices, while traditional carriers focus on service quality, wide seat ranges (comfort), and in-flight catering. In addition, innovative practices applied in customer service are used by all airlines, although they differ according to their market position and customers (Xie *et al.*, 2022).
Final question: What is the local performance aggregation point for each innovative application?

Table 1. Overall Performance Table for Innovative Practices

FOR INNOVATIVE APPLICATIONS (GENERAL)	
Performance	Indicator
For financial performance	P1 and P6, P4, P5
For non-financial performance	P9
For performance based on customer loyalty	P9
Effective performance	P9

Table 2. Effective Performance Table for Innovative Practices

INNOVATIVE APPLICATIONS	INDICATOR
Improvements in ticket prices	P9
Power to resolve requests and complaints	P8-P9
Cancellation and delay notification systems	P8 - P9
Integrated Applications (Miles&Smiles, Online registration services, SUP and BRS)	P8 - P9
Monitise company apps	P8 - P9
Automated self-check-in machines and Online Check-in	P11 - P8 - P9
New boarding applications (fingerprint boarding, subcutaneous implant boarding, biometric identification)	P11 - P8 - P9

According to **Tables 1 and 2**, P9 performance is the performance dimension most affected by innovative practices. P1 operational cost, P6 return on invested capital, P4 profitability, and P5 cash flow were affected as financial performance indicators. In terms of non-financial performance and performance based on customer loyalty, the most affected dimension is customer satisfaction P9, followed by service quality P8.
Considering the tables and hypothesis questions above, the hypothesis solution **Table 3** is shown below.

Table 3. Hypothesis Test Table

HYPOTHESIS	NOTATION	SOLUTION
Hypothesis 1: Differentiated customer service positively affects customer loyalty.	Through Performance Management System P9	Customer Satisfaction Performance and differentiated customer services on the Performance Management System axis positively affect customer loyalty.

Hypothesis 2: There is a significant relationship between customer loyalty and airline performance.	Through Performance Management System P9	The fact that the indicator identified for Customer Loyalty in the Performance Management System axis and the effective indicator identified for airline performance are the same (Customer Satisfaction) shows that there is a significant relationship between Customer Loyalty and airline performance.
Hypothesis 3: Differentiated customer service positively affects airline performance through Non-Financial Performance and Financial Performance.	Through the Performance Management System P1 - P4,P5,P6 and P9	In the Performance Management System axis, P1 and P6-P4-P5, which induce each other, are the most affected as financial performance indicators, P9 is affected as a non-financial performance indicator, and when P9 is increased through innovative designs, P1 and P6-P5-P4 also increase reciprocally.

CONCLUSION

Through the interviews conducted within the scope of the research it was aimed to learn what kind of studies airlines conduct in terms of performance determination and which performance dimensions they measure. It was found that airline companies operating in Turkey conducted some studies to improve their performance and utilize some performance improvement models. It is concluded that differentiated services are not neglected by companies to improve performance through the customer. It was concluded that some airlines outsource performance measurement services as mandatory measurement, partial or full performance measurement, while some airlines do the measurement themselves (Mirthipati, 2024). It was observed that low-cost carriers focus more on ticket prices with the condition of compromising on some services, while traditional carriers focus on service quality, wide seat pitches (comfort), and in-flight catering (Garcia & Lopez, 2023).

As a result of the interpretation of the answer tables created for the questions developed based on the hypotheses and the interviews with the officials of the companies, the hypothesis statements were tested and a notation and solution table was created.

Hypothesis 1: Differentiated customer service positively affects customer loyalty. In the Performance Management System axis, Customer Satisfaction Performance and differentiated customer service positively affect customer loyalty.

Hypothesis 2: There is a significant relationship between customer loyalty and airline performance. The fact that the indicator identified for Customer Loyalty in the Performance Management System axis and the effective indicator identified for airline performance, customer satisfaction, are the same shows that there is a significant relationship between customer loyalty and airline performance.

Hypothesis 3: Differentiated customer service positively affects airline performance through Non-Financial Performance and Financial Performance. On the Performance Management System axis, Operational Cost as a financial performance indicator, Return on Invested Capital, Profitability and Cash Flow as performance dimensions that induce each other, and Customer Satisfaction as a non-financial performance indicator are most affected, and when Customer

Satisfaction increases, Operational Cost increases reciprocally. All these innovations, i.e. technological conveniences, not only increase the airline's operational performance and customer satisfaction, but also increase its costs, and at the same time positively affect the return on invested capital and make the company profitable over time. With their solutions, airline companies are positively affected through hypotheses H1 and H2, and through hypothesis H3, they neutralize operating costs and return on invested capital, thus increasing profitability and cash flow at the same time.

As a result, all these innovations, i.e. technological conveniences, increase the airline's operational performance as well as its costs (Civil Aviation Authority, 2024). Since these practices require investment, they may seem like an expense at first, but in the long run, they can reduce company costs and create profitability. When the performance elements affected by innovative designs are analyzed, the fact that P1 and P6-P4-P5, which induce each other, are the most affected elements supports this conclusion. As a result, the company will be profitable in the long run.

Considering that new company models also suggest customer orientation, it is thought that this will be a contribution in terms of having a scientific infrastructure (Financial Times, 2024). This study has highlighted the significant role of innovative customer service practices in enhancing the performance of airline companies operating in Turkey. Through qualitative analysis of structured interviews and secondary data, the findings confirm that differentiated services such as digital self-service systems, loyalty programs, and advanced boarding technologies positively impact both financial and non-financial performance metrics (Smith & Brown, 2023).

By integrating advanced technological and service-oriented strategies, airlines can mitigate operational costs, improve customer retention, and create long-term value (Chen & Zhang, 2022). The results also emphasize the need for performance measurement systems that holistically evaluate the impacts of customer service innovations. Despite the initial costs of these innovations, their long-term benefits in terms of profitability and operational efficiency are evident.

Several limitations should be acknowledged in interpreting the findings of this study:

1. Geographical Scope: The research focused solely on airlines operating in Turkey, limiting the generalizability of the findings to other regions with differing market dynamics and regulatory frameworks.
2. Data Collection Method: The reliance on structured interviews and secondary data may not fully capture the dynamic and multifaceted nature of customer service innovations. The absence of a dedicated survey limits the direct insights from passengers, which could have enriched the findings.
3. Temporal Scope: Data were collected over specific timeframes, potentially overlooking evolving trends in customer preferences and technological advancements that may have emerged subsequently.
4. Sample Size: The study involved a limited number of airlines and interviewees, which may not represent the full spectrum of practices and performance outcomes in the global airline industry.

To build on the insights gained from this study, future research could explore the following dimensions:

1. Cross-Cultural Analysis: Expanding the study to include airlines from diverse regions and cultures could provide a broader understanding of how innovation impacts performance across different market contexts.
2. Passenger-Centric Insights: Conducting large-scale surveys or experiments involving passengers could yield valuable perspectives on how innovative practices influence customer satisfaction and loyalty directly.
3. Technology-Driven Innovations: Further exploration of cutting-edge technologies, such as artificial intelligence, biometric identification, and personalized service offerings, could provide deeper insights into the evolving landscape of airline customer service.
4. Environmental Impact: Examining the relationship between innovative practices and environmental performance could offer airlines actionable insights for balancing sustainability with operational efficiency.
5. Comparative Studies: Comparing the performance impacts of innovative practices between low-cost and full-service carriers could uncover tailored strategies suited to different business models.

By addressing these dimensions, future research can offer a more comprehensive understanding of how innovation shapes the airline industry and supports strategic decision-making.

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