PROBLEMS ENCOUNTERED BY AIR TRAVELERS IN THE UTILIZATION OF TOUCHLESS TECHNOLOGY SERVICES AT AIRPORTS IN SOUTH INDIA

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Abstract

The airline industry plays a noteworthy role in the development of the financial system and also facilitates tourism and development. Nowadays, the world has turned into a global countryside. It has increased the number of passengers traveling to and from the country, via air and created a way for business networks without much of a hassle. At present, in the post-COVID-19 crisis, airlines' major adoption of digital technology may have changed how customers experience the services, it may affect passengers' perceptions compared to the past and may create many inconveniences for the passengers to understanding and using the modern touchless technologies. However, there is a lack of studies systematically examining the adoption of new technology in the airline industry from a passenger satisfaction-centric perspective. This study investigates passengers' satisfaction and problems faced by passengers with digital technology adoption by airlines after the COVID-19 pandemic. An online interview schedule was developed and a survey was conducted with 700 respondents to examine passengers' perceptions and problems with digital technology-based services offered by airlines. Finally, 680 valid responses were analyzed using ANOVA tests and stepwise multiple linear regression analysis. The analysis indicates that most passengers have a positive attitude towards airlines' new technology adoption. In the final selected regression model, many of the adopted technologies have fewer problems and have impacted passenger satisfaction significantly. The facial recognition service and digital documentation are the highly favorable technologies offered by the airlines.

Keywords: Touchless Service, Customer Satisfaction, Customer Problems, Airline Industry, Airline Transport Passenger

INTRODUCTION

The airline industry contributes a very significant part to the growth of the economy and also facilitates tourism and development. Nowadays, the globe has turned into a worldwide countryside it has turned out to be easier for people living in great corners of the globe, as increase business network, the number of passengers traveling to and from the country, via air has been increased without much of a hassle. The occurrence of COVID-19 is the most forceful and enduring catastrophe in the aviation sector. The present dynamics airline industry has been changed as compared to that of the past, the pandemic has required the airline industry to transform and adopt new business strategies. Apart from ensuring business continuity, maintaining the same level of service standards as in the pre-pandemic era and also overcoming the challenges posed by the crisis, the airline industry is forced to have strengthened digital

technology capabilities, i.e., like artificial intelligence (AI), customer service, e-luggage tag, cleaning robot, ultraviolet light and antimicrobial cabin cleaning, an app-controlled in-flight entertainment system, e-library and digital documentation. Passenger satisfaction is critical in the upcoming competitive market.

Hence, by implementing digital technology, enhanced working efficiency, competitiveness and also passengers' experience of the services may affect passengers' perceptions compared to the past. The adoption of digital technology, several specific non-contact digital services such as biometrics, self-check-in kiosks, service robots and in-flight entertainment and connectivity services, is an opportunity to improve passengers' services further to gain the trust of passengers.

STATEMENT OF THE PROBLEM

In the modern period, airline transport services are the most crucial for mobility of passengers and avail better and comfortable travel. With the relaxation of various COVID-19 restrictions, passenger flow is on the course to recover to pre-pandemic levels. The global public health crisis has ushered in an assortment of different protocols and requirements for passengers. Vaccine passports, COVID-19 testing, passenger locator forms, compulsory face masks, and comprehensive deep cleaning routines are all common.

The aviation industry can no longer rely on outdated mechanisms. Under the global phenomenon of digitalization, the airline industry is inevitably trending towards increased digitalization. Airports must be prepared to welcome returning passengers and technology could support a smoother return to normal. Digitalization can enhance aviation safety, efficiency, accessibility, collaboration, and cost reduction.

In this post-covid era, an airport's digital capabilities are arguably as integral to a successful passenger experience as the airport's physical infrastructure. Airline executives have also acknowledged and agreed that touchless technologies can help create a more seamless experience for passengers and a safer journey for everyone.

If airlines can conduct their business with more Digitalized Technologies, a better passenger experience can be achieved and technological advancements will likely benefit passengers by making the airport experience more convenient and streamlined. The airline industry is already undergoing different new Touchless or contactless technology evolutions after the pandemic, like Online check-in, Smart baggage kiosks, Biometrics, Virtual queuing, Contactless fast track, Digital cameras, Track & Trace technologies etc..

Changes in passengers' air travel experience might influence their satisfaction, since passenger satisfaction is crucial to airlines and a deeper insight into the changes in passenger satisfaction towards airlines' Touchless or contactless technology adoption is needed. Understanding passengers' perception of these technology adoptions and recognizing that they will continue to evolve is critical to successfully operating an airport in the Post-Covenant era. Hence, customer satisfaction surveys are frequently used to collect users' opinions on-the touchless-technology based services.

Objectives of the Study

The main aim of this study is to throw light on the passengers' perception of the adoption of new touchless technology by airports. The objectives of this research are given below:

1. To Analyse passenger expectations of different touchless technologies adopted by airports

2. To Analyse passenger perception of problems associated with using touchless technologies adopted by airports

Scope of the Study

The present study frames proper recognition of passengers' satisfaction and problems with the touch-less contact services offered by the Airline Industry and also by both public and private sector airlines in South India. Further, the study has a keen concentration on evaluating passengers' satisfaction with digitalized services based on five different dimensions and finding the service quality gap between expectations and perceived service. The study highlights various dimensions of problems faced by passengers while availing touchless services. It will help toalter its products and services in such a way that it can attract a greater number of passengers towards touchless technology services.

Hypotheses of the Study

The study considered the perception may be varying due to some demographic factors. To support the objectives of the study, the following null hypotheses have been formulated and tested: "There is no significant difference in policyholders' level of awareness towards products and services of selected insurance companies".

RESEARCH METHODOLOGY

Research Design

Based on the objectives of the study, the researcher has adopted a descriptive and exploratory research design for this investigation.

Nature of Data

The current study was based on primary data.

Tools for Data Collection

The primary data was collected through a structured interview schedule.

Size of Population

The target population for the present study is passengers frequently using selected five airports in south India.

Sampling Plan

In order to understand the perceptions and preferences of passengers, the responses were taken from Indian passengers flying abroad. The passengers travelling from and to five airports in South India were considered for the study. The data collected for the study is purely primary data. Before designing the interview schedule, a series of interviews were conducted to find out the parameters for research and also to check the validity of parameters already considered for research. Frequently flying passengers, airport authorities, employees of airline, cabin crew of International Airlines, travel agents, travel planning departments of companies, business travelers, international travelers, academicians and statisticians were considered for the interview. The data was collected through personal interaction with passengers. However, this would have taken a lot of time and, considering the limitations of time, it was decided to meet the passengers at the airport terminal and collect the primary data. A non-probability judgement sampling technique was used to choose the sample. The reason for choosing a non-probability sampling technique was that the sample frame could not be established as the population was unknown. Hence, the total sample size for the study is 700 respondents. Due to incomplete response, 20 interview schedules were excluded and finally, 680 samples were considered for the present study.

Tools for Data Analysis

The collected data will be processed and analyzed by SPSS software version 20.0. In order to suit the requirements of the present study, the following tools were employed. Simple percentage analysis, Descriptive Statistics, Factor Analysis, Cronbach's Alpha test, ANOVA, t-Test, Chi-square Test, Correlation Analysis, Regression and Multiple Regression Analysis. The tests in this study were carried out by formulating suitable hypotheses and were also tested at 5% level of significance.

Problems in Utilization of E-Retailers Services

When it comes to digitization, airports face a multitude of challenges including appropriate IT infrastructure for automated passenger flow forecast tools. The shortage of skilled staff,, resumption of international travel, and congestion at airports has made it challenging to manage bags and ensure their smooth handling at airports, particularly during peak travel periods. Focusing on improving operations and innovation while enhancing the passenger experience, airports use different new technologies and digital tools. The procedure of using touchless and other digitalized technological services is subject to quite a lot of problems and passengers need some kind of practices to use technological services to avoid numerous problems. The problems were studied and hence, an attempt was made by the researcher, who asked the respondents to identify the problems which they feel problems in utilizing touchless and others digitalized technological services. In this section equipment the researchers analyze the technological challenges determined by the required equipment for the digital transformation, like check-in area, security, customs control, departure control and passenger assistance services of selected airports and the impact of implementing, the touchless technologies, especially on the experience of the passengers, was examined with results and ranking

techniques and result details are shown in the following Table 1.

Table 1: Respondents Facing Problems Relating To Touchless Technologies in Airports

Problems	Mean	Mean %	Rank
Sync and share crucial data formats not seamlessly	4.10	82.09	1
FLUIX digital communication is not understandable	3.88	77.65	2
Preflight apps that delayed to receive boarding passes and luggage tags on their smart phones	3.78	75.56	3
Investment in touch less technologies is raised airfare	3.71	74.12	4
Increases the potentially dangerous errors	3.61	72.24	5
Security/passport checks technology that reduces human contact	3.55	70.94	6
Digitalization needs to follow the many procedures	3.53	70.50	7
Texts that communicate wait times and flight information to thin passenger queues and crowds not properly	3.52	70.41	8
Difficult to understanding, whom to contact for needed requires in Digitalized communication	3.51	70.18	9
Digital transformation does not cater to customer and employee preferences	3.50	70.03	10
Providing an easily accessible platform that allows access to stored personal data by others	3.45	69.09	11
Dealing in verification of digital signatures	3.44	68.88	12
Adopts new digital technologies for MRO is not up to the mark	3.44	68.76	13
More number of touch-free machines in restrooms, elevators, vending areas	3.38	67.59	14
Passengers have the necessary skills to apply these new technologies effectively	3.22	64.32	15
Automate wrong decision in automate passenger check-ins processes	3.18	63.53	16

Source: Computed from Primary data

It is found from the above table 1 that problems like Sync and share crucial data formats not seamlessly (4.10), FLUIX digital communication is not understandable (3.88), Preflight apps that delayed to receive boarding passes and luggage tags on their smart phones, (3.78), Investment in touch less technologies is raised airfare (3.71),Increases the potentially dangerous errors , (3.61). The mean score for these five problems fall between (3.61 and 4.10). the second top five problems are Security/passport checks technology that reduces human contact (3.55), Digitalization needs to follow the many procedures (3.53), Texts that communicate wait times and flight information to thin passenger queues and crowds not properly (3.52), Difficult to understanding, whom to contact for needed requires in Digitalized communication (3.51), Digital transformation does not cater to customer and employee preferences (3.50). The mean score for these five problems lies between (3.50 and 3.55). The least level problems are   Providing an easily accessible platform that allows access to stored personal data by others (3.45), Dealing in verification of digital signatures (3.44), Adopts new digital technologies for MRO is not up to the mark (3.44), More number of touch-free machines in restrooms, elevators, vending areas (3.38), Passengers have the necessary skills to apply these new technologies effectively (3.22), Automate wrong decision in automate passenger check-ins processes (3.18). The mean score for these five problems lies between (3.18 and 3.45).

Passengers' Problems towards Utilizing Touchless Technologies in Airports– Sector Wise Analysis

In order to find significant difference in level of problems faced by different sector group of passengers about utilizing touchless technologies in airports and airlines, the researchers made an analysis with the null hypothesis as, "There is no significant difference in level of problems on utilizing touchless technologies in airports among passengers preferred public and private sector airlines". The result of 't' test for satisfaction among customers of public and private sector is presented in the following table 2.

Table 2: Comparison of Problems towards Utilizing Touchless Technologies in Airports between Public and Private Sector Airline Passengers

Problems	Public Sector Mean (SD)	Private Sector Mean (SD)	T test	P Sig
Sync and share crucial data formats not seamlessly	2.20 (1.06)	2.40 (1.25)	14.164	.000*
FLUIX digital communication is not understandable	2.36 (1.31)	2.96 (1.09)	20.563	.000*
Preflight apps that delayed to receive boarding passes and luggage tags on their smart phones	2.22 (1.08)	2.46 (1.21)	4.272	.071
Investment in touch less technologies is raised airfare	2.76 (1.25)	2.58 (1.32)	1.738	.187
Increases the potentially dangerous errors	2.50 (1.21)	2.00 (0.87)	14.249	.000*
Security/passport checks technology that reduces human contact	2.38 (1.23)	2.70 (1.38)	9.241	.004*
Digitalization needs to follow the many procedures	2.42 (0.95)	2.22 (1.03)	.259	.623
Texts that communicate wait times and flight information to thin passenger queues and crowds not properly	2.40 (1.24)	2.64 (1.41)	10.042	.002*
Difficult to understanding, whom to contact for needed requires in Digitalized communication	2.64 (1.31)	2.54 (1.36)	.271	.603
Digital transformation does not cater to customer and employee preferences	2.36 (1.23)	2.66 (1.32)	4.117	.004*
Providing an easily accessible platform that allows access to stored personal data by others	2.70 (1.42)	2.44 (1.22)	14.063	.000*
Dealing in verification of digital signatures	2.44 (1.08)	2.38 (1.22)	5.425	.000*
Adopts new digital technologies for MRO is not up to the mark	2.54 (1.24)	2.46 (1.25)	.579	.447
More number of touch-free machines in restrooms, elevators, vending areas	2.58 (1.30)	2.44 (1.32)	.292	.589
Passengers have the necessary skills to apply these new technologies effectively	2.44 (1.30)	2.40 (1.27)	8.234	.014*
Automate wrong decision in automate passenger check-ins processes	2.68 (1.34)	2.46 (1.22)	4.148	.284

Source: Computed from Primary data

* Significant at 5% level

While comparing the passengers' preferred public and private airlines, the mean score of passengers mostly preferred public sector airlines is higher. The following problems: investment in touchless technologies is raised airfare (2.76), Increases the potentially dangerous errors (2.50), Difficult to understanding, whom to contact for needed requires in Digitalized communication (2.64), Providing an easily accessible platform that allows access to stored personal data by others (2.70), Dealing in verification of digital signatures (2.44), Adopts new digital technologies for MRO is not up to the mark (2.54), More number of touch-free machines in restrooms, elevators, vending areas (2.58) , Passengers have the necessary skills to apply these new technologies effectively (2.44) , Automate wrong decision in automate passenger check-ins processes (2.68). On the other hand, the mean score of the following problems was higher for passengers, mostly preferred private sector airlines, i.e., Sync and share crucial data formats not seamlessly (2.40) Out FLUIX digital communication is not understandable (2.96) faced Preflight apps that delayed to receive boarding passes and luggage tags on their smart phones (2.46), Security/passport checks technology that reduces human contact (2.70), Texts that communicate wait times and flight information to thin passenger queues and crowds not properly (2.64) , Digital transformation does not cater to customer and employee preferences(2.44) Sixteen measurement items assessed the problems in utilizing touchless technologies in airports selected for the present study were taken into analysis and results is shown in the above table 2.out of sixteen measurement items nine problems have significant difference in level of problems facing by public and private sector airlines preferred passengers.   From the above analysis, it is found that the majority of the selected problems have significant differences, hence the null hypothesis is rejected, and concluded that the problems of passengers preferring public and private sector airlines significantly different.

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