

The Influence of Self Service Technology on Passenger Satisfaction at General Ahmad Yani International Airport Semarang

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Abstract

PT. Angkasa Pura I as the manager of Semarang General Ahmad Yani International Airport always strives to improve its services which is manifested by self-service. Self service technology is used to serve passenger check-in independently so it is very easy to use and saves time. The conveniences provided by implementing self-check-in are certainly very influential on passenger satisfaction. This study used a quantitative method by distributing questionnaires. The questionnaire in this study was distributed to all passengers at General Ahmad Yani International Airport in Semarang with a total of 100 respondents. This study used data analysis techniques, namely instrument testing, classical assumption testing, simple regression analysis and hypothesis testing. The results of this study are that there is an effect of self-service technology on passenger satisfaction at Jenderal Ahmad Yani International Airport, Semarang. This is reinforced by the results of the calculation of the coefficient of determination where R is 0.893 with R² of 79.7%.

Keywords: Self Service Technology, Satisfaction



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INTRODUCTION

The role of service and innovation in creating a good image for the company is very important. This underlies PT. Angkasa Pura I as the manager of General Ahmad Yani International Airport in Semarang always strives to improve its services. One of the ways used is to innovate in the service sector. Innovation in the field of service is realized by the existence of self-service. Self Service Technology (SST) is an interface technology that enables independent services without the need for direct employee involvement. Self-service technology at airports is used to serve passenger check-in independently, this self-service technology is proven to be able to overcome queues during the check-in process which is usually done at the check-in counter. This is because passengers only need to click a few times when checking in independently, so it is very easy to use and saves a lot of time.

Self check-in is a facility or place that functions to complete various procedures and security requirements and services using a machine. This self check-in service does not include baggage drop service. Baggage drop is an automatic machine facility that will carry passengers' luggage before the flight. The advantages of self check-in are that you don't have to wait in long queues, save time, make it easier to order additional facilities, and reduce the risk of missing your flight. PT. Angkasa Pura I as the Manager of General Ahmad Yani Semarang International Airport, one of the organizers of the air transportation sector, is required to be able to provide facilities and always provide optimal service. The conveniences provided by implementing self-check-in will certainly greatly affect passenger satisfaction. In using this self check-in, the only steps to take are scanning the barcode or entering the e.ticket number, then selecting a seat and printing a boarding pass. Due to the easy check-in procedure and no long queues, 83% of

passengers prefer the self-check-in system (IATA Global Passenger Survey, 2014). Next to the self-service technology machine, there is a weighing device that passengers can use to find out the weight of their baggage. But for passengers who carry baggage after self-check-in, passengers with baggage still have to go to the manual check-in counter to register and hand over their baggage.

Based on the description above, the authors are interested in conducting research with the title "The Influence of Self Service Technology on Passenger Satisfaction at General Ahmad Yani International Airport, Semarang". Problem Formulation: Does airport self-service technology affect passenger satisfaction at Jenderal Ahmad Yani International Airport in Semarang? How big is the influence of self-service technology on passenger satisfaction at General Ahmad Yani International Airport in Semarang? Research Objectives: To find out whether airport self-service technology affects passenger satisfaction at Jenderal Ahmad Yani International Airport in Semarang? Do you know how much influence self-service technology has on passenger satisfaction at Jenderal Ahmad Yani International Airport in Semarang?

Theoretical Basis

Self Service Technology

Self service technology (SST) is a technological intermediary that allows consumers to produce their own services without depending on employees, for example ATMs and company services via the internet (Rambat 2013). The use of this technology is attractive to service providers because it improves operational services, improves service efficiency, provides more benefits for consumers, and increases service access options (Curran and Meuter, 2010). Service innovation using this technology will be an important component for companies that interact directly with consumers for the company's long-term success (Meuter et al, 2010). According to Bitner et al, (2010) cited in lin, shih, and sher (2011), in the SST context, companies cannot create services without active participation and consumer involvement. The use of SST is known internationally because it has transformed business processes over the past several decades (Bitner, et al, 2010).

Self Check-In

Self check-in is an example of self-service technology implemented at Ahmad Yani International Airport in Semarang so that the self-check-in indicator is the same as using self-service technology indicators. Self check-in is a tool that uses a machine like a computer that will read (scan) passenger tickets and e.ticket numbers (if using e-tickets). According to liongroup.com support, the following is the working procedure for the self check-in counter: Select the Check-in option on the machine display menu; Enter the six-digit booking number or scan the barcode printed on the electronic ticket; Wait until the screen displays the names of the prospective passengers; Make sure the information on the screen is correct. After that, check the name that appears to continue the boarding pass printing process; Press the print button to print the boarding pass, the self service process is complete; A self check-in machine is a facility/place that functions to complete various procedures and security requirements and services using a machine excluding baggage drop. If using a self check-in machine, passengers who are pregnant and have certain medical conditions are still allowed to use the facility. However, it is recommended to contact the airline staff concerned first.

Passenger Satisfaction

Passenger satisfaction can be felt after passengers compare their experience in carrying out activities related to users of goods/services from sellers or providers of goods/services

with the expectations of the users themselves. These expectations are formed through their first experiences in using a product/service, comments from friends and acquaintances, as well as promises and information from marketers and competitors. Marketers who want to excel in competition must pay attention to customer expectations and passenger satisfaction. Companies are required to fulfill passenger satisfaction, so companies must be observant in seeing shifts in needs and desires that change very quickly. Passengers will consider satisfaction based on expectations and services provided. According to Tjiptono (2015) passenger satisfaction is a person's feeling of pleasure or disappointment that arises after comparing perceptions of the performance (results) of a product or service that is felt in accordance with his expectations.

According to Hawkins and Lonney quoted in Tjiptono (2014) indicators forming passenger satisfaction consist of: Conformity of expectations, which is the level of compatibility between service performance expected by consumers and what is felt by consumers. Interest to visit again, is the willingness of consumers to visit again or to re-apply related services. Willingness to recommend, is a willingness to recommend services that have been felt to friends and family.

Relevant Research

Table 1. Relevant Research

NO	Name	Year	Title	Research Result
1.	Eka Doni Prasetya, Joko Rianto	2022	The Effect of Electronic Flight Plan (E.FPL) Innovation and Centralized Flight Plan Service Units on Customer Satisfaction at Airnav Indonesia Offices	The results of this study indicate that based on the t test with a t value of 13,002 > t table of 1,996 and a significance of 0,000 < probability 0.05, the first hypothesis is partially accepted as electronic flight plan products have a positive and significant effect on customer satisfaction and based on the t test with a t value of 21,126 > probability 0.05 then the second hypothesis is partially accepted FPL centralized unit service has a positive and significant impact on customer satisfaction.
2.	Benny Benny	2022	The Influence of Airport Digital Lounge Facilities on Aircraft Passenger Satisfaction at Soekarno Hatta International Airport	The results of this study obtained a significance value of 0.000 < 0.05 meaning that there was a positive influence of the Airport Digital Lounge facility on passenger satisfaction at Soekarno Hatta International Airport. Likewise with the calculated value obtained 11.771. Value $a/2 = n-2 = 0.05/2 = 0.0025$. Degree of freedom (df) = $n-2 = 100-2 = 98$, then the T table value is 1.984. Thus, T count > T table is $11.771 > 1.984$. Therefore, H_0 is rejected and H_a is accepted which states that there is a significant effect on the Airport Digital Lounge facility on passenger satisfaction at Soekarno Hatta International Airport.
3.	Muhammad Hilal Aulia Shalih	2021	The Influence of Perceived Ease Of Use And Perceived Usefulness To Adoption Behavior Of Passengers Using Self Service Check-in Kiosks At Yogyakarta International Airport	The results of this research are that Perceived Ease of use has a significant positive effect on Perceived Ease of use, Perceived usefulness and the conditions of the "New Normal" pandemic covid-19 have an insignificant positive effect on Adoption and Behavior of passengers who use Self Check-in Kiosks, as well as the moderating effect of conditions The "New Normal" of the Covid-19 pandemic on the influence of Perceived Ease of Use and Perceived Usefulness on Adoption and Behavior of passengers using Self Check-in Kiosk was not found strongly.

RESEARCH METHODS

Research Design

This research design uses quantitative research. According to V. Wiratna Sujarweni (2018) quantitative research is a type of research that produces discoveries that can be achieved (obtained) using statistical procedures or other methods of quantification (measurement). Meanwhile, the definition of a quantitative research method, according to Sugiyono (2017) is a research method based on the philosophy of positivism, used to examine certain populations or samples, collecting data using research instruments, analyzing data quantitative or statistical, with the aim of testing the established hypotheses. According to Sugiyono (2018) quantitative data is a research method based on positivistic (concrete data), research data is in the form of numbers that will be measured using statistics as a calculation test tool, related to the problem being researched to produce a conclusion. The purpose of quantitative research is to develop and use mathematical models, theories or hypotheses related to natural phenomena. The measurement process is a crucial part of quantitative research.

Population

According to (Sugiyono, 2016) Population is a generalized area consisting of objects or subjects that become certain quantities and characteristics set by researchers to study and then draw conclusions. According to tempo.co. Semarang until October 31, 2022, a total of 1,273,898 passengers crossed Semarang's General Ahmad Yani International Airport and the number of aircraft that took off and landed at the airport was recorded as 11,500. Therefore the researcher made as many as 100 airplane passengers at General Ahmad Yani International Airport Semarang as a population.

Sample

The population has a very large number, so researchers use samples to facilitate the processing of research data. The sample is part of the number and characteristics possessed by the population (Sugiyono, 2016), so the number of samples taken must be able to represent the population in the study. The sampling technique is a sampling technique. To determine the sample to be used in research, there are various sampling techniques used. According to (Sugiyono, 2017) Probability Sampling is a sampling technique that provides equal opportunities for each element (member) of the population to be selected as a member of the sample. According to (Purwanto, 2016) Purposive Sampling, namely researchers assume that they can use their knowledge of the population to assess whether a particular sample is representative or not.

The sampling technique used was Accidental Sampling because researchers distributed questionnaires to airplane passengers who used them at Jenderal Ahmad Yani International Airport, Semarang. The type of sample used in this study is Nonprobability Sampling, namely a sampling technique that does not provide equal opportunity/opportunity for each element or member of the population to be selected as a sample (Sugiyono, 2017). The sample of this research uses theory from Roscoe. According to Roscoe (Sugiyono, 2015) an appropriate sample size in research is 30 to 500, besides that if the research is to carry out multivariate analysis (correlation or regression), then the number of sample members is at least 10 times the variable being studied. The number of samples to be used in this study is 100 respondents so that the results of the accuracy of the questionnaire or questionnaire can be better.

Data Collection Technique Research Instruments

This study used a research instrument in the form of a questionnaire, namely a closed questionnaire. The closed questionnaire is part of the questionnaire which is composed of a series of questions that do not give the respondent the opportunity to give answers freely, because the answers to the questions from the questionnaire have been provided by the researcher. The questionnaire used in this study uses a Likert scale measurement. The Likert scale is a research scale used to measure attitudes and opinions. This scale is used to complete a questionnaire that requires respondents to indicate their level of agreement with a series of questions. Usually the questions used for research are called research variables and are specified specifically.

Data Type

1. Primary Data. According to Husein Umar (2013) primary data is data obtained from the first source either from individuals or individuals such as the results of interviews or the results of filling out questionnaires that can be carried out by researchers. In this study, researchers used primary data obtained from questionnaires as the primary data source.
2. Secondary Data. Sugiyono (2017) secondary data is a source that does not directly provide data to data collectors. This means that research data sources are obtained through intermediary media or indirectly in the form of notebooks, existing evidence or archives, both published and not published in general. The secondary data used in this study is the details of self-service technology data on passenger satisfaction at Jenderal Ahmad Yani International Airport, Semarang.

Data Collection

The method used for data collection in this study, namely:

1. Questionnaire. The questionnaire is a data collection technique that is carried out by giving a set of written questions to the respondent to answer, which can be given in person or via internet mail. According to Sugiyono (2018) a questionnaire or questionnaire is a data collection technique that is carried out by giving a set of questions or written statements to respondents to answer.
2. Observation. The observation that was carried out directly by the researcher was the use of self-service technology which was widely used by all passengers at General Ahmad Yani International Airport, Semarang. According to (Morissan, 2017) observation or observation is a daily human activity by using the five senses as the main tool. In other words, observation is a person's ability to use his observations through the work of the five senses.

RESEARCH RESULTS AND DISCUSSION

This research was conducted to examine the effect of self-service technology on passenger satisfaction at Jenderal Ahmad Yani International Airport, Semarang. Based on the results of the data collected and distributing questionnaires to all passengers at Jenderal Ahmad Yani International Airport Semarang, it is explained as follows: Based on a simple linear regression output research using IBM SPSS 23 Statistics For Windows shows that Self Service Technology has a significant effect on passenger satisfaction with the coefficient value obtained that is equal to 1,310. Based on the results of the T test, the calculated T score of the Self Service Technology variable is 1.984. So it can be concluded that Self Service Technology has a significant influence on passenger satisfaction. Based on the hypothesis test using the T test with the coefficient table, it is known that there is a significant influence between variable X (Self Service

Technology) on variable Y (Passenger Satisfaction). This is evidenced from the variable Self Service Technology with the results of the T test of 1.310 with T table 1.984 at a significant level of 0.05 which means that the hypothesis Ho is rejected and H1 is accepted, thus showing the results that there is an effect of Self Service Technology on passenger satisfaction at the airport International Gen. Ahmad Yani Semarang. Based on the results of the hypothesis test using the coefficient of determination test, the R value was 0.893 with a calculation of the coefficient of determination (R²) of 79.7% and the remaining 20.3% was influenced by other factors not examined by researchers. Self Service Technology has a positive influence on passenger satisfaction at General Ahmad Yani International Airport, Semarang. This research is supported by previous research conducted by Oka Yoga Syah Putra, Sarinah Sihombing (2020) with the research title The Effect of Digital Services and Facilities on Passenger Satisfaction at Kuala Namu International Airport with the results of the research showing that there is a very strong relationship between digital services and facilities on passenger satisfaction. The value of the variable contribution of digital services and facilities is 77.1% affecting passenger satisfaction at Kuala Namu International Airport, Medan.

CONCLUSION

Based on the results of this study and the discussion in Chapter IV, the conclusions obtained regarding the effect of Self Service Technology on passenger satisfaction at General Ahmad Yani International Airport Semarang are as follows: Self Service Technology has a positive influence on passenger satisfaction supported by T count 19.622 where the value greater than T table 1.984 and a significance value of 0.000 less than a probability of 0.05 so it can be concluded that the variable Self Service Technology (X) has an effect on the variable Passenger Satisfaction (Y). If the Self Service Technology provided is getting better and in line with passenger expectations, passenger satisfaction will increase. After conducting the R square test to predict how much influence the contribution of the independent variable Self Service Technology (X) has on the dependent variable Passenger Satisfaction (Y) where the results show a value of 79.7%. This means that the effect of Self Service Technology (X) on Passenger Satisfaction (Y) is 79.7% and the remaining 20.3% is influenced by other factors not examined by researchers.

Based on the results of the research, discussion and conclusions obtained, the suggestions that the author can give are as follows: Suggestions for Companies. The results of this study are expected that companies can further increase the influence of Self Service Technology so that passengers feel satisfied because of the Self Service Technology system so that it will increase satisfaction of all passengers. Suggestions for Further Researchers, for future researchers are expected to be able to provide information and help increase knowledge for future readers or researchers. For future researchers, it is expected to add other variables such as corporate image and so on.

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