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THE EFFECT OF AIRPORT SERVICE QUALITY PERFORMANCE ON PASSENGER SATISFACTION AT JUWATA TARAKAN INTERNATIONAL AIRPORT

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ABSTRACT

Airports play a significant role in supporting the efficiency and comfort of air transportation. The quality of service performance at airports is a crucial factor in enhancing passenger satisfaction. The purpose of this study was to determine the level of service performance and the effect of airport service quality on passenger satisfaction at Juwata Tarakan International Airport. Service quality measurement is based on five dimensions, namely: tangibles, empathy, reliability, assurance, and responsiveness, which are further elaborated into 37 indicators. Satisfaction is measured based on passenger perceptions, specifically their interests/expectations and experiences with airport performance. The method used in this research is descriptive quantitative, utilizing a survey approach. Data were collected through questionnaires distributed to passengers at Juwata Tarakan International Airport. Data analysis employs statistical tools to assess the effect and level of conformity. Additionally, a Cartesian diagram is used to determine the ranking of each service quality indicator. The results from data processing and analysis indicate a positive and significant influence of airport service quality on passenger satisfaction. There are 17 indicators identified as performing below average, with 4 of these considered particularly important by passengers. These findings have implications for airport managers, highlighting the need to further improve performance, especially regarding the 4 key indicators of airport service quality.

KEYWORDS *service quality, passenger satisfaction, airports*

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INTRODUCTION

Air transportation is an important aspect of modern human life. With the development of air transportation facilities and infrastructure, the movement of people and goods has become easier and faster, resulting in an increased demand for air transportation services (Albalate et al., 2015; Angelelli et al., 2020; Archetti & Peirano, 2020; Rehman Khan et al., 2017; Yang, 2024). From an economic perspective, air transportation enhances the efficiency and effectiveness of trade activities, which are fundamental to economic growth. Socio-culturally, air transportation enables interaction between different groups, fostering social integration and intercultural understanding. Air transportation is a mode that requires significant financial investment to use; in addition to its advanced technology, it remains the fastest means of transportation compared to others (*Nasiruddin & Eva Hany Fanida, S.AP.*, 2018). Overall, air transportation is a key element in supporting development and growth across all sectors.

One of the main facilities and infrastructures of air transportation is the airport. An airport serves as a gateway for the entry and exit of people and goods into or out of a region or country, making it a central component of the air transportation sector. For airports to function effectively, integrated management is essential to ensure that services are well received by passengers (Hong et al., 2020; Khuzaifah et al., 2023; Prentice & Kadan, 2019; Saut & song, 2022). The implementation of airport services encompasses safety and security, air traffic management, the smooth and orderly movement of passengers, cargo, and mail, serving as a modal interchange, and fostering national and regional economic growth. In response to globalization, government policies now allow foreign investment in airport operations, further motivating airport managers to enhance service quality.

The evaluation of service quality is not solely determined by the government but also by the community. As *Barata* explains, when it comes to service quality, the standard is not just set by the service provider but more importantly by the service recipient, as they are the ones who experience and can assess the quality based on their expectations and satisfaction (*Erlianti*, 2019). Airplane passengers are primary recipients of airport services. Their presence is vital, as the number of passenger movements at an airport directly affects aircraft movements and, consequently, the airport's classification. In the airport industry, service quality is measured based on passenger perceptions, which are used for operational performance assessment and benchmarking (*Syafei et al.*, 2022). Passenger satisfaction is a critical factor in airport operations. Effective airport service management can enhance passenger satisfaction. Passengers now expect not only safe, orderly, and timely travel but also comfort, which ultimately determines their satisfaction with the services provided.

The purpose of this study is to analyze the level of performance, importance, suitability, and ranking of airport service quality indicators, as well as to determine the influence of airport service quality on customer satisfaction at Juwata Tarakan International Airport. This research is expected to benefit both passengers and the airport. For passengers, it can contribute to improving service quality, resulting in a more pleasant, efficient, and effective travel experience and increased loyalty. For

airports, the findings can help management identify which service quality indicators need improvement or maintenance, enhance reputation and image, and ultimately improve operational efficiency and revenue. For academics, this research enriches theory, literature, and collaboration opportunities, thereby advancing the quality of research in related fields.

Several previous studies are closely related to this topic, particularly those examining airport service quality. Most prior research has focused on specific areas, such as the cargo sector (*Subekti & Purnama*, 2015) or the check-in counter (*Astuti & Yudianto*, 2022). This study, however, covers the entire departure terminal area traversed by passengers. Airport service quality is a critical determinant of passenger satisfaction, significantly influencing the overall travel experience. Foundational research by *Parasuraman et al.* (1988) established the *SERVQUAL* model, identifying five key dimensions of service quality: *tangibles*, *reliability*, *responsiveness*, *assurance*, and *empathy*. Subsequent studies, such as those by *Fodness and Murray* (2007), applied this model to airports, demonstrating the direct impact of service quality on passenger satisfaction and loyalty. However, these studies often focus on large international airports, leaving a gap in understanding how these dynamics operate in smaller or regional airports like Juwata Tarakan International Airport. This research addresses this gap by examining the specific service quality dimensions influencing passenger satisfaction in a regional airport context.

Despite extensive research on airport service quality, there remains a notable gap in studies that comprehensively evaluate all service areas within a single airport. For example, *Astuti and Yudianto* (2022) focused solely on check-in counter performance, while *Subekti and Purnama* (2015) examined cargo terminal services. Such fragmented approaches overlook the holistic passenger experience, which encompasses multiple touchpoints from check-in to boarding. This study bridges that gap by evaluating 37 service quality indicators across all departure terminal areas, providing a more integrated understanding of passenger satisfaction. Consequently, it offers actionable insights for airport managers to prioritize improvements throughout the passenger journey.

The novelty of this research lies in its use of a Cartesian diagram to rank service quality indicators based on passenger perceptions and airport performance. While previous studies, such as those by *Nuraida and Danil* (n.d.), have utilized statistical tools to measure service quality, few have employed visual mapping to identify priority areas for improvement. This approach not only highlights discrepancies between passenger expectations and actual performance but also categorizes indicators into actionable quadrants, enabling targeted interventions. This method is particularly innovative for regional airports, where resource allocation must be optimized to maximize passenger satisfaction within limited budgets.

The implications of this research are twofold. For practitioners, the findings provide a clear roadmap for Juwata Tarakan International Airport to enhance service quality, particularly in areas deemed important by passengers but currently underperforming, such as staff responsiveness and facility maintenance. Academically, this study contributes to the broader literature on airport service

quality by validating the applicability of the *SERVQUAL* model in regional settings and introducing a novel methodological approach for prioritizing service improvements. These insights can inform future research on service quality in similar contexts, fostering a more nuanced understanding of the drivers of passenger satisfaction.

This research underscores the importance of continuous service quality improvement for sustaining passenger satisfaction and competitiveness, especially for regional airports seeking to attract more travelers. By addressing identified gaps and leveraging the study's novel methodology, airport managers can enhance operational efficiency and build a stronger reputation, ultimately driving regional economic growth. Thus, this study serves as a valuable reference for both academia and industry, offering practical and theoretical contributions to the field of airport service quality management.

RESEARCH METHOD

The dimension of service quality that must be a concern in improving quality consists of 3 (three dimensions), namely reliability, responsiveness, assurance, empathy and tangibles. Furthermore, the 5 dimensions are described in 37 indicators of airport service quality (Nuraida & Danil, n.d.). Furthermore, the technique analyzes the data to the 37 indicators, using a statistical approach. The method used in this study is a descriptive quantitative survey approach, by presenting the data as it is in accordance with the facts that occur regarding the circumstances that occur. Quantitative descriptive research tends not to take action or control and treatment on the research subject, but rather to reveal facts and symptoms when the research is carried out (Subana & Sudrajat, 2001). The object of research or variables in this study are the performance variable (X) which represents the level of implementation of service quality by airport managers and the interest variable (Y) which represents the level of passenger expectations.

To understand the facts of the problem in the field, it is necessary to collect data related to the variables proposed. Primary data collection instruments/tools in the form of questionnaires distributed to airport service users, in this case passengers.

Problem solving analysis is processed using statistical tools as follows:

To find the average score value of the level of implementation (performance) and the average score value of the level of importance of each dimension of service quality, it is formulated with the following formula:

$$\bar{X} = \frac{\Sigma Xi}{n} \qquad \bar{Y} = \frac{\Sigma Yi}{n}$$

Information:

$\bar{X}$ = Average score of the performance indicator
$\bar{Y}$ = Average score of the importance indicator
n = Number of respondents

To determine the level of conformity between performance and importance, the following formula is used:

$$T_{ki} = \frac{X_i}{Y_i} \times 100\ \%$$

Information:
TKI = Conformity Level
Xi = Performance appraisal score
Yi = Importance score

Cartesian diagrams are used to find out what dimensional rankings and indicators are considered important or unimportant and what indicators are performing well or not well. The Cartesian diagram has a space structure consisting of 4 parts bounded by two lines that cut perpendicular to certain points as seen in the following image:

$\bar{\bar{X}}$ = Average score of all performance level indicators
$\bar{\bar{Y}}$ = Average score of all indicators of interest

Cartesian diagrams are used to find out what dimensional rankings and indicators are considered important or unimportant and what indicators are performing well or not well. The Cartesian diagram has a space structure consisting of 4 parts bounded by two lines that cut perpendicular to certain points as seen in the following image:

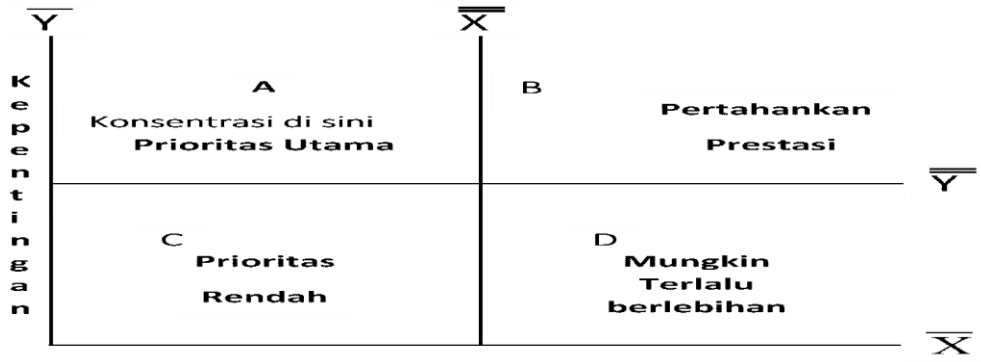

Figure 1. Cartesian Diagram

Furthermore, all indicators of airport service quality are included in the Cartesian diagram, then it can be explained as follows (Supranto, 1997):

Quadrant A : In this quadrant, it can be known that the service quality indicators are above average but lack attention from the management (airport), so that the level of performance is below average, so that it is less satisfactory to consumers (passengers).

Quadrant B : In this quadrant, it can be known that the service quality indicators are considered by the participants to be above average and implemented by the management well, the performance is above average, consumers are satisfied.

Quadrant C : In this quadrant, it can be known that the quality indicators of service are carried out mediocrely or mediocrely by the management and are considered as something that is not so important by consumers.

Quadrant D : In this quadrant, it can be known that the indicators of service quality are not so important by consumers, which are carried out very well by the management as something that may be very excessive.

Product Moment Correlation Analysis (rxy correlation coefficient) is used to find the magnitude of the influence of service quality on consumer satisfaction, while for significance testing can be calculated using the r product moment table or using the t-test with the following formula (Sugiono, 2005):

$$r_{xy} = \frac{n\sum x_i y_i - (\sum x_i)(\sum y_i)}{\sqrt{\left[n\sum x_i^2 - (\sum x_i)^2\right]\left[n\sum y_i^2 - (\sum y_i)^2\right]}}$$

$$r_{xy} = \frac{xy}{\sqrt{(x^2 y^2)}}$$

RESULT AND DISCUSSION

The data from the questionnaire distributed to as many as 100 respondents as a sample, processed using statistical tools as stated above, the results of data processing can be seen in the table below:

Table 1. Results of Data Processing of Airport Service Quality Indicators

Size	Indicator	Importance (Y)					Performance (X)					Y	X	Y	X Dimension	X	Y Dimension	T(Ki)	
		SP	P	CP	KP	HC MC	SB	B	CB	KB	TB								
TANGIBLE	1	71	25	3	1	0	41	50	6	3	0	466	429	4.66	4.42	4.29	4.17	92	94
	2	66	29	5	0	0	37	56	4	3	0	461	427	4.61		4.27		93	
	3	64	34	2	0	0	41	53	4	1	1	462	432	4.62		4.32		94	
	4	60	29	9	1	1	37	51	9	2	1	446	421	4.46		4.21		94	
	5	66	27	6	1	0	40	48	10	2	0	458	426	4.58		4.26		93	
	6	46	39	12	2	1	33	52	15	0	0	427	418	4.27		4.18		98	
	7	54	35	9	1	1	28	57	14	1	0	440	412	4.40		4.12		94	
	8	41	42	13	3	1	26	52	17	3	2	419	397	4.19		3.97		95	
	9	40	45	13	2	0	26	62	12	0	0	423	414	4.23		4.14		98	

	10	42	42	15	1	0	29	61	10	0	0	425	419	4.25		4.19		99	
	11	47	39	13	1	0	32	48	19	1	0	432	411	4.32		4.11		95	
	12	56	33	9	1	1	31	52	13	3	1	442	409	4.42		4.09		93	
	13	68	28	4	0	0	39	55	6	0	0	464	433	4.64		4.33		93	
	14	57	38	4	1	0	35	56	8	1	0	451	425	4.51		4.25		94	
	15	56	36	8	0	0	34	52	13	1	0	448	419	4.48		4.19		94	
	16	39	50	9	0	2	27	55	15	2	1	424	405	4.24		4.05		96	
	17	47	41	11	1	0	28	50	20	2	0	434	404	4.34		4.04		93	
	18	46	44	10	0	0	28	57	14	1	0	436	412	4.36		4.12		94	
EMPATHY	19	61	32	7	0	0	34	55	10	1	0	454	422	4.54	4.45	4.22	4.15	93	93
	20	53	41	6	0	0	26	59	14	1	0	447	410	4.47		4.10		92	
	21	41	42	14	2	1	21	56	19	4	0	420	394	4.20		3.94		94	
	22	66	28	5	1	0	46	44	8	2	0	459	434	4.59		4.34		95	
RELIABILITY	23	54	43	2	1	0	27	57	15	1	0	450	410	4.50	4.49	4.10	4.14	91	92
	24	53	42	5	0	0	32	56	11	1	0	448	419	4.48		4.19		94	
	25	56	36	7	1	0	30	59	10	1	0	447	418	4.47		4.18		94	
	26	62	33	5	0	0	35	55	10	0	0	457	425	4.57		4.25		93	
	27	57	35	7	1	0	31	53	16	0	0	448	415	4.48		4.15		93	
	28	54	37	8	1	0	26	51	18	5	0	444	398	4.44		3.98		90	
	29	51	42	7	0	0	26	57	16	1	0	444	408	4.44		4.08		92	
	30	57	38	4	1	0	30	59	9	2	0	451	417	4.51		4.17		92	
INSURANCE	31	55	37	4	4	0	36	54	8	2	0	443	424	4.43	4.46	4.24	4.21	96	95
	32	58	36	6	0	0	35	55	9	1	0	452	424	4.52		4.24		94	

	33	50	43	7	0	0	29	57	14	0	0	443	415	4.43		4.15		94	
	34	52	42	5	0	1	37	50	12	0	1	444	422	4.44		4.22		95	
RESPON-SIVNESS	35	59	33	7	1	0	29	53	18	0	0	450	411	4.50		4.11		91	92
	36	56	32	12	0	0	31	51	16	2	0	444	411	4.44	4.50	4.11	4.14	93	
	37	62	32	6	0	0	30	59	11	0	0	456	419	4.56		4.19		92	
													And	4.45	X	4.16			

Indicator Analysis

Tangible Analysis

Airport management is characterized by the implementation of complete, clear, and easy-to-understand written procedures and regulations. These structured SOPs not only guide daily operations but also help minimize errors and improve passenger safety and security. This can be seen from the presence of accurate and easy-to-read directional signs, which make it easier for passengers to navigate throughout the area, from check-in to the terminal entrance.

The operational aspect is shown by the provision of basic facilities that support passenger comfort. The proximity between the check-in area and the terminal entrance, as well as the availability of toilet facilities, seats, stairs or escalators, and trolleys, are important elements that minimize fatigue and ensure smooth passenger movement. These facilities, designed for convenience and efficiency, are key in enhancing the passenger experience.

Passengers get additional convenience through the existence of supporting facilities such as retail stores, ATMs, money exchange, restaurants, and mini markets that are strategically placed between the check-in area and the terminal entrance. These facilities support practical needs and provide added value in service, so that passengers can easily access financial services, culinary, and daily necessities without having to leave the airport area.

The aesthetic and infrastructure aspects also receive serious attention. The availability of adequate transportation facilities, internet and IT facilities, and consistent cleanliness create a comfortable and modern environment. In addition, lighting management, controlled air temperature, pleasing interior color scheme, and no noise reinforce the airport's commitment to providing a pleasant, safe, and efficient experience for all passengers.

Other supporting facilities also play a role in creating a satisfying experience for passengers. The presence of retail stores, ATMs, and money exchange services in strategic locations allows passengers to easily access practical needs, from financial transactions to the purchase of essential items. Restaurants and

convenience stores are provided in the area between check-in and the terminal entrance, providing culinary options and emergency needs, while adequate transportation facilities ensure accessibility to and from the airport. Internet facilities and modern IT devices are increasingly supporting passenger activities, both for work and entertainment, in an increasingly digitally integrated environment.

The comfort and quality of the environment at the airport also received serious attention. Consistent cleanliness throughout the area creates a healthy and pleasant atmosphere, while the safety and order of visitors ensures a safe and orderly atmosphere. Ideal air temperature regulation provides physical comfort, supported by a visually pleasing interior color scheme as well as good enough lighting to improve visibility and ambiance. Effective noise management also results in a quiet environment, so that passengers can feel calm and comfortable while within the airport area.

Empathy Analysis

Friendly staff create a positive experience for passengers, build loyalty and increase trust in airport services. The assessment showed a level of friendliness of 93 percent, reflecting how the warm attitude of the officers made passengers feel valued and comfortable.

The in-depth understanding of the needs of passengers can be seen from the officer's quick response in aiding without having to be asked. The suitability score of 92 percent confirms that the officer not only knows what the passenger needs but is also able to provide the right solution in situations that require special attention.

Offers of personal assistance for passengers experiencing difficulties, such as elderly or disabled passengers, show a high level of individualized attention. This action received a score of 94 percent, confirming a positive perception of the officers' commitment to supporting passenger comfort and safety.

The implementation of service with a polite, friendly, and attentive attitude shows sincere appreciation for every passenger. The value of 95 percent in this aspect of service adds to the dimension of empathy quality, so that the overall analysis of the empathy dimension reaches a level of conformity of 93 percent.

Analysis Reliability

Waiting time measurements for baggage delivery show passengers receive baggage within a reasonable timeframe, reflecting the speed and efficiency of the baggage collection process with a satisfaction rate of 92 percent. The check-in and departure process of the aircraft took place on time with a suitability score of 94 percent, and the punctuality of departure and arrival (except for special cases) also

received a score of 94 percent, which ensured that passengers could plan their trips without uncertainty.

Evaluation of the punctuality of service personnel, such as the opening of check-in counters and tax services, resulted in a score of 93 percent, which signifies professionalism and efficiency in serving passengers. The provision of accurate information, including explanations of flight delays due to certain factors, also obtained a conformity rate of 93 percent, confirming the reliability and transparency of the data submitted to passengers.

The handling of damage or lost baggage by airport staff shows a good level of responsibility with a score of 90 percent, which creates passenger confidence in the resolution of the problem. Effective and efficient service procedures, including the complaints mechanism, achieved a score of 92 percent, as did the assessment of the airport's overall service quality, which also reached 92 percent, reflecting a consistent commitment to providing satisfactory service.

Assurance Analysis

Airport staff demonstrate a professional and ethical work attitude and behavior in interaction with passengers. The performance assessment in this respect achieved a suitability level of 96 percent, which reflects the high dedication in providing services that make passengers feel valued and comfortable.

Officers have in-depth knowledge of operational procedures and regulations that apply in the airport environment. The value of conformity in the knowledge aspect was recorded at 94 percent, indicating the ability of officers to carry out their duties appropriately and accurately and minimize errors in the service process.

Officers showed high technical skills in carrying out their duties, which was reflected in the conformity value of 94 percent. This capability allows for quick and effective resolution of issues, which in turn improves operational efficiency as well as passenger satisfaction.

Officers can complete tasks optimally, supported by the potential for future performance development. With a conformity rate of 95 percent, this aspect of capability indicates a good capacity to adapt to operational dynamics and meet increasingly complex service needs.

The combination of all indicators in the Assurance dimension shows an overall conformity value of 95 percent. This reinforces the airport's commitment to providing reliable, professional, and high-quality services, so that it is able to increase passenger trust and loyalty.

Responsiveness Analysis

Airport officials took the initiative to help passengers who were experiencing difficulties without having to wait for requests. This proactive action creates a

positive experience that has an impact on passenger loyalty. The data showed a conformity value of 91 percent, reflecting the commitment of officers in detecting and responding to needs independently.

Officers provide a quick and responsive response when passengers need help. The response provided immediately ensures that passengers get assistance in a timely manner, so that the operational process runs efficiently and the needs of passengers are met. The assessment of speed and responsiveness reached a score of 93 percent, confirming that the service was running optimally.

Officers are always at the right location when needed, so passengers can easily access the necessary assistance. An easy-to-find presence creates a sense of security and supports an effective service process. This attendance indicator received a suitability score of 92 percent, which shows the readiness of the officers in serving passengers.

The combination of all indicators in the Responsiveness dimension resulted in an overall suitability value of 92 percent. This data underscores that the aspects of initiative, response speed, and officer attendance have consistently met the standards of passenger interest.

Cartesian Diagram Analysis

From the results of data processing, the values of each dimension and the airport service quality indicators that have been obtained are included in the Carteses diagram, as follows:

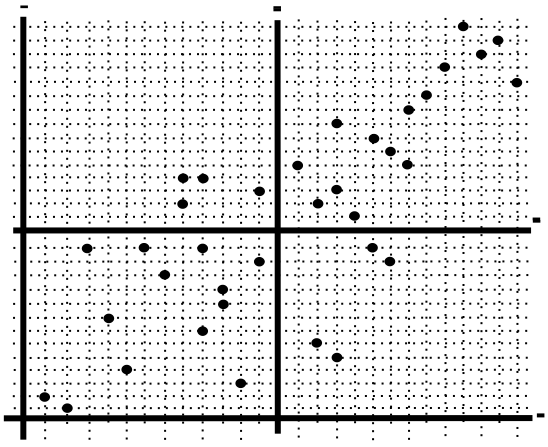

Figure 2. Cartesian Diagram of Airport Service Quality Indicator Ranking

Based on the Cartesian diagram above, it can be analyzed as follows:

1. In quadrant A, there are 4 (four) indicators of airport service quality, namely indicators no. 20, no. 23, no. 27 and no. 35. This can be interpreted that the four indicators of airport service quality are considered important by passengers but receive less attention from the airport.

2. In quadrant B, there are 16 (sixteen) indicators of airport service quality, namely indicators no. 1, no. 2, no.3, no. 4, no. 5, no. 13, no. 14, no. 15, no. 19, no. 22, no. 24, no. 25, no. 26, no. 30, no. 32 and no. 37. In this quadrant, the indicators of airport service quality that are considered important by passengers are important and well implemented by the airport.
3. In quadrant C, there are 13 (thirteen) indicators of airport service quality, namely indicators no. 7, no. 8, no. 9, no. 11, no. 12, no. 16, no. 17, no. 18, no. 21, no. 28, no. 29, no. 33, no. 36. This indicates that the performance provided by the airport on the airport service quality indicators is carried out mediocrely (ordinary), but is not considered important by passengers.
4. In quadrant D, there are 4 (four) indicators of airport service quality, namely indicators no. 6, no. 10, no. 31 and no. 34. It can be said that the 4 (four) indicators are not important according to passengers, but are implemented very well by the airport.

Hypothesis Test Analysis

To analyze the influence of variable X on Y, based on the formula of the Correlation Coefficient of Product Moment, the data is described in the following table:

Table 2. Data Elaboration of X and Y Variables Formula Correlation Coefficient Product Moment

Indicator	Variable		x	y	x2	y2	xy
	X	Y	(X-X)	(Y-Y)			
1	429	466	12.5	21.2	157.3	447.8	265.4
2	427	461	10.5	16.2	111.1	261.2	170.4
3	432	462	15.5	17.2	241.5	294.5	266.7
4	421	446	4.5	1.2	20.6	1.4	5.3
5	426	458	9.5	13.2	91.0	173.2	125.6
6	418	427	1.5	-17.8	2.4	318.2	-27.5
7	412	440	-4.5	-4.8	19.9	23.4	21.6
8	397	419	-19.5	-25.8	378.7	667.6	502.8
9	414	423	-2.5	-21.8	6.0	476.9	53.7
10	419	425	2.5	-19.8	6.5	393.5	-50.4
11	411	432	-5.5	-12.8	29.8	164.8	70.1
12	409	442	-7.5	-2.8	55.6	8.1	21.2
13	433	464	16.5	19.2	273.6	367.2	317.0
14	425	451	8.5	6.2	72.9	38.0	52.6
15	419	448	2.5	3.2	6.5	10.0	8.0
16	405	424	-11.5	-20.8	131.3	434.2	238.8
17	404	434	-12.5	-10.8	155.2	117.5	135.0
18	412	436	-4.5	-8.8	19.9	78.1	39.4
19	422	454	5.5	9.2	30.7	83.9	50.8
20	410	447	-6.5	2.2	41.7	4.7	-14.0
21	394	420	-22.5	-24.8	504.4	616.9	557.8
22	434	459	17.5	14.2	307.7	200.6	248.4
23	410	450	-6.5	5.2	41.7	26.6	-33.3

24	419	448	2.5	3.2	6.5	10.0	8.0
25	418	447	1.5	2.2	2.4	4.7	3.3
			0.0	0.0	**3415.2**	**5631.0**	**3204.8**

By describing the results of data processing as in table 2 above, to determine the influence of variables and prove the hypothesis of the relationship between two variables, namely the Performance variable (x) and the Importance variable (y) on the scores of airport service quality indicators, the figures obtained are included in the Product Moment Correlation formula, as follows:

$$r_{xy} = \frac{\sum xy}{\sqrt{\sum(x^2 y^2)}} = \frac{3204.8}{\sqrt{(3415.2*3204.8)}} = 0.738$$

Based on the results of the calculation above, which is 0.738, this shows that there is a positive correlation of 0.738. To find out whether the correlation coefficient is significant (generalizable) or not, it is necessary to compare it with the r table (r Product Moment), with a certain degree of error. By setting the error level to 5% and N = 100, then the price r table shows the number 0.195. It turned out that the price of r calculation was greater than r table, so Ho was rejected, and Ha was accepted.

There is a positive and significant relationship between the performance indicators of the quality of airport services provided and the interests of passengers. The data and coefficients obtained in the sample can be generalized to the population, where the sample reflects the state of the population.

CONCLUSION

This study demonstrates a significant positive relationship between airport service quality and passenger satisfaction at Juwata Tarakan International Airport, identifying 17 underperforming service indicators—four of which are highly prioritized by passengers. The use of a Cartesian diagram effectively pinpointed critical areas for improvement, such as staff responsiveness and facility maintenance, and highlighted inefficiencies in less important yet over-resourced services. These findings offer actionable recommendations for airport management to better align service delivery with passenger expectations while optimizing operational efficiency. For future research, it is suggested to expand the sample size to include a more diverse passenger demographic to enhance generalizability, conduct longitudinal studies to assess the long-term impact of service improvements, and undertake comparative analyses between regional and international airports. Additionally, qualitative approaches like passenger interviews could provide deeper insights into unmet needs, and exploring the role of emerging technologies—such as AI-driven customer service or smart airport systems—may reveal innovative strategies for advancing service quality in regional aviation hubs.

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