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REVITALIZATION OF PUBLIC PASSENGER CARS IN BEKASI REGENCY

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ABSTRACT

Transportation is a basic necessity that is crucial, especially for urban communities. Public Passenger Cars (PPC) in Bekasi Regency play a vital role in supporting the daily mobility and activities of residents. However, the current performance of PPC is still suboptimal, as indicated by loading factors, frequencies, travel times, waiting times, and headways that do not meet established standards. This study utilizes the Importance-Performance Analysis (IPA) method to assess PPC performance from the perspective of service users. The analysis results indicate the need for route reorganization from 10 to 9 routes, and a fare of Rp. 3000,00 per passenger or Rp. 700,00 per km. Key areas for improvement include room temperature regulation, fare, ease of reaching routes, stopping times, the number of operating vehicles, and vehicle age. Linear regression analysis shows that vehicle waiting time and passenger safety and security are the most influential factors.

KEYWORDS *Urban Transportation, Public Passenger Car (PPC), Importance-Performance Analysis (IPA), Transportation Revitalization*

INTRODUCTION

Transportation is one of the basic needs that is very important, especially for urban communities (Susilo, 2015). People in general really need transportation as a means of supporting the movement of daily activities to meet their needs, this makes the transportation function in urban activities have an important role that is influential in all aspects or sectors of life (Darmastuti & Rahaju, 2019). Transportation is also an important and strategic part of the development process, encouraging and supporting the economy, so it needs to be arranged in a system that can combine and realize transportation with an orderly level of needs and service levels, safe, comfortable, fast, orderly, smooth and at an affordable cost (Oktariansyaha et al., 2017).

The Public Passenger Car (PPC) is an important means of transportation as a

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mode that can support the daily activities and mobility of residents in an urban area. The good and bad state of transportation in an urban area in general can be seen from the available PPC services (Sugianto & Kurniawan, 2020). PPC services are expected to be able to provide good accessibility for the community so that PPC has an important role in fulfilling the needs of life and can affect the economic activities of a region (Astuti et al., 2018).

The implementation of transportation in Bekasi Regency through the existing transportation network infrastructure and service system has been able to support regional economic activities but has not been optimally served. The available road network is quite well supported by transportation nodes as gathering points and transfer points for the public passenger car transportation network is available with the existence of AKAP, AKDP, Urban Transportation, and railway service networks that regionally connect Bekasi Regency with other Greater Jakarta agglomeration areas (Lestari, 2018).

Revitalization in the great dictionary of Indonesian Language, means the process, methods, and deeds of reviving something that was previously less empowered (Sriastuti & Sumanjaya, 2018). While Revitalization is a process or way and act to revive something that was previously empowered so that revitalization means making something or an action to become vital, while the word vital has a very important or indispensable meaning (Kusuma, 2019).

PPC in Bekasi Regency has not been maximized because there are still many shortcomings in both facilities or infrastructure and services in terms of operators and in terms of the government that need to be revitalized so that service users get good service, these indicators can be seen in terms of security, comfort, or safety, all of these aspects are the obligation of the government which is responsible as a public transportation operator (Tunjungsari et al., 2019). The step taken is to conduct an analysis of the existing PPC performance, then determine the good and bad and propose recommendations to revitalize the PPC in Bekasi Regency.

RESEARCH METHOD

In analyzing the data in this study, namely to answer the formulation of problems regarding the assessment of the performance of urban transportation services that currently exist, based on the perspective of service users (passengers), the *Importance-Performance Analysis method is used*, this method is considered to be able to provide accurate and effective calculations (Barros et al., 2020). By using the IPA method, the level of importance and performance of several indicators related to the quality of urban transportation services can be determined.

RESULT AND DISCUSSION

Route Structuring Scenario

Route Consolidation

The plan to merge the K-33 and K-42 routes starts from Cikarang Terminal - Lemah Abang Station - Lippo Cikarang Mall, this route is made based on the following provisions:

1. The route pattern plan made in accordance with the literature of Giannopoulus

GA (1989) is to form irregular routes.
2. In accordance with PM 15 of 2019 concerning the Implementation of Transportation of People with Public Motorized Vehicles on Routes. The merger of Routes K-33 and K-42 connects transportation nodes, namely the Kalijaya Type A Terminal with Lemah Abang Station.
3. In accordance with the performance parameters recommended by the Minimum Service Standards (SPM LLAJ), the level of overlap on urban transportation routes is a maximum of 50% of the existing routes. In the plan to merge the K-33 and K-42 routes, it has an overlap rate of 71%
4. In the plan to merge the K-33 and K-42 routes, it will pass through several road sections, namely Jalan R.E Martadinata – Jalan Gatot Subrot – Jalan Jend Urip Sumoharjo – Jalan Lemah Abang – Jala Raya Cibarusah – Jalan Raya Indutri – Jalan Raya Cikarang – Cibarusah – Jalan M.H. Thamrin.
5. There are several passenger pockets along the plan to merge the K-33 and K-42 routes, including Educational Areas, Residential Areas and Trade Centers.

Route Crossing Cutting

The plan to cut the K-32 Route track starts from the Cikarang Terminal to Jatiwangi District, but this track will be operated starting from the intersection of the bongkok stall because it is to reduce the level of overlap with the K-39C route which crosses the Pantura road. The cutting of this track is made based on the following conditions: (Kambuaya, 2021; Wahyudi, 2019)

1. The route pattern plan made in accordance with the literature of Giannopoulus GA (1989) is to form irregular routes.
2. In accordance with PM 15 of 2019 concerning the Implementation of Transportation of People with Public Motorized Vehicles on Routes. The extension of Route K – 32 connects transportation nodes, namely activities in one region with activities in other regions.
3. In the plan to cut the K-16 route, it will pass through several road sections, namely Jalan Perjuangan - Jalan Jarakosta - Jalan Irian - Jalan Irian IV
4. There are several passenger pockets along the plan to extend the K-32 route, including Residential Areas, Industries and Trade Centers.

The plan to cut the K-17 Route track starts from Cikarang Terminal to Cibarusah Market but this track will be operated starting from the SGC junction to Serang Market based on the results of field observations, where the existing conditions are a reflection of the current demand conditions. The cutting of this track is made based on the following conditions:

1. The route pattern plan made in accordance with the literature of Giannopoulus GA (1989) is to form irregular routes.
2. In accordance with PM 15 of 2019 concerning the Implementation of Transportation of People with Public Motorized Vehicles on Routes. The K-17 route cuts connect the activity center, namely the Cikarang Wholesale Center with the Serang Market.
3. In the plan to cut the K-17 route, it will pass through several road sections, namely the Industrial highway - M.H. Thamrin road - Cikarang - Cibarusah

highway.
4. There are several passenger pockets along the plan to extend the K-17 route including Residential Areas, Industries and Trade Centers.

The plan to cut the K-16 Route track starts from Tambun Market to Tambelang Market but this track will be operated starting from Tambun Market to Griya Asri 1 Housing based on the results of field observations, where the existing conditions are a reflection of the current demand conditions. The cutting of this track is made based on the following conditions: (Latif et al., 2021; Rumokoy et al., 2020)
1. The route pattern plan made in accordance with the literature of Giannopoulus GA (1989) is to form irregular routes.
2. In accordance with PM 15 of 2019 concerning the Implementation of Transportation of People with Public Motorized Vehicles on Routes. The K-16 route cuts connect the activity center, namely Tambun Market with Settlements.
3. In the plan to cut the K-16 route, it will pass through several road sections, namely Jalan Mekar Sari Tengah - Jalan Mangun Jaya - Jalan Sumber Jaya - Jalan Buwek Raya.
4. There are several passenger pockets along the plan to extend the K-16 route including residential areas, offices and trade centers.

The plan to cut the K-35 Route track starts from Cikarang Terminal to Deltamas but this track will be operated starting from Lemah Abang Station to Deltamas based on the results of field observations, where the existing condition is a reflection of the current demand condition. The cutting of this track is made based on the following conditions: (Handayani & Sudriyanto, 2020; Riawan, 2018)
1. The route pattern plan made in accordance with the literature of Giannopoulus GA (1989) is to form irregular routes.
2. In accordance with PM 15 of 2019 concerning the Implementation of Transportation of People with Public Motorized Vehicles on Routes. The K-35 Route cuts connect the center of activity, namely Lemah Abang Station with Settlements.
3. In the plan to cut the K-35 route, it will pass through several road sections, namely Jalan Raya Lemah Abang - Jalan Simpangan - Jalan Dr. Cipto Mangun Kusumo - Jalan Dr. Satrio - Jalan H. Usmar Ismail - Jalan Cikarang Baru Raya - Jalan Orange County Boulevard - Jalan Deltamas Boulevard.
4. There are several passenger pockets along the plan to extend the K-35 route including residential areas, offices and trade centers.

For more details, please see the table below:

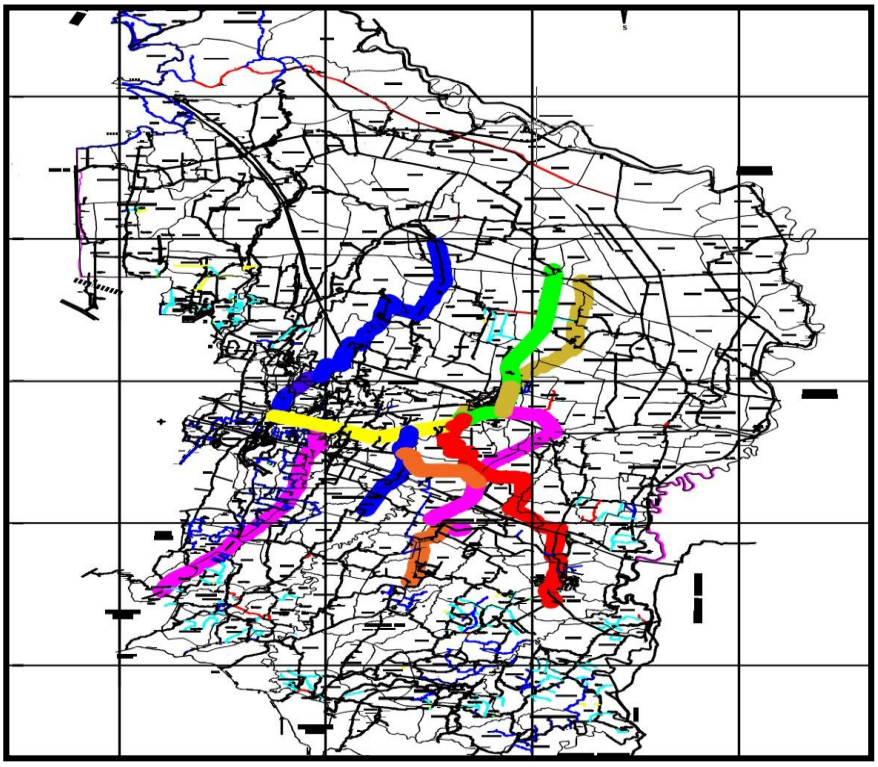

Figure 1. Proposed Route Trajectories

Analysis of Public Transportation Operational Performance (New Routes)

Stack Extreme Trayek AU

The proposed plan to arrange the urban public transportation route network in Bekasi Regency with an initial number of 10 routes to 9 routes will certainly have the potential to change the operational performance of public transportation. In the provisions of the Decree of the Director General of Land Transportation Number 687 of 2002, the overlap of routes must not be more than 50%. For the city center, overlapping route services are still allowed. The following is the percentage of overlap of planned routes.

Table 1. Levels of Overlap Each Route

Route Code	Route Trajectory	Track Length (Km)	Stack Tindih (km)	Overlap Percentage (Max 50%)	Information
K-14	Kp. Utan -Setu - Serang - PP	15.2	0	0%	Meet
K - 16	Tambun - Griya Asri 1 - PP	5.3	0	0%	Meet
K - 17	Terminal Cikarang - Pasar Serang - PP	12.9	5.05	39%	Meet
K - 18	Cikarang - Sukatani -	11.8	0.8	7%	Meet

	PP				
K - 32	Warung Bongkok - Taman Limo Jati-wangi - PP.	8.2	0.85	10%	Meet
K - 33 & K - 42	Cikarang - Lemah Abang - Pasir Gom-bong - lippo Mall - PP.	17.8	4.2	24%	Meet
K - 35	Lemah Abang Sta-tion Jababeka - Del-tamas - PP	16.5	0	0%	Meet
K - 38	Cikarang - Plaukan - Pulo Bambu - PP.	11.3	0.8	7%	Meet
K - 39 C	Tambun Station - Cibitung - Cikarang - PP.	13.5	0	0%	Meet

Source: Analysis, 2023

From Table 1 above, the results of the analysis regarding the overlap level of planned routes can be stated that they still meet the criteria for determining routes with the condition of not more than 50%. The largest overlap rate is the K-17 route with a percentage of 39%. This is because on some roads are trade and residential centers. So that the road section passed through becomes a place that has the potential to have a large number of passengers.

Service Operating Hours (To)

The operating time or travel time from the starting point of the route to the end point of the planned route route with vehicle speed regulation in accordance with the minimum speed of the vehicle based on the road class, function and type of transportation listed in the Decree of the Director General of Land Transportation Number 687 of 2002. So that for the merger of Route K-14 with Route length (L) = 15.2 km, the operation time required in one rit is:

WO = (L/25)
= 14,5 / 25
= 0.58 hours or = 34 minutes

Table 2. Proposed Route Travel Time

Route Code	Route Trajectory	Track Length (Km)	Travel Time	Standard (Minutes)	Information
K - 14	Kp. Utan -Setu - Se-rang - PP	15.2	36	90	Meet
K - 16	Tambun - Griya Asri 1 - PP	5.3	13	90	Meet
K - 17	Terminal Cikarang - Pasar Serang - PP	12.9	31	90	Meet
K - 18	Cikarang - Sukatani -	11.8	28	90	Meet

	PP				
K - 32	Warung Bongkok - Taman Limo Jatiwangi - PP.	8.2	20	90	Meet
K - 33& K - 42	Cikarang - Lemah Abang - Pasir Gombong - lippo Mall - PP.	17.8	43	90	Meet
K - 35	Lemah Abang Station - Jababeka - Deltam - PP	16.5	40	90	Meet
K - 38	Cikarang - Plaukan - Pulo Bambu - PP.	11.3	27	90	Meet
K - 39 C	Tambun Station - Cibitung - Cikarang - PP.	13.5	32	90	Meet

Source: Analysis 2023

Round Trip Time (RTT)

Round trip time is the time it takes for a vehicle to make one round trip plus a stopover time at the terminal.

RTT for K-14 Route merger
To (Operating Time) = 36 minutes
Tt (downtime at the terminal) = 5 minutes
RTT = 2 x (To+Tt)
= 2 x (36'+5')
= 81 minutes or 1 hour 21 minutes

Operating Speed

The operating speed (Vo) or travel speed from the start point to the end point of the route for the incorporation of Route K- 14 is as follows:

Vo = 60 x L/To
= 60 x 15.2/36
= 25 km/h

Headway

Headway is the difference in departure time between a city transportation vehicle and a city transportation vehicle behind it on one route at a certain point. The headway used uses the assumption of 5 minutes based on the provisions of the Minimum Service Standard that the ideal headway is 5 to 10 minutes. A 5-minute headway is used because it uses the shortest time between vehicles to minimize the waiting time for public transportation.

Frequency

Frequency is the number of departures or arrivals of planned public transportation vehicles that pass through a certain point. The frequencies in the merger of Routes 03B and 15 during a given time period are as follows:

F =60/H
= 12 vehicles/hour

Determination of Fleet Number

In determining the number of fleet needs that will operate on each route, the plan has a basis for calculation. The basis of calculation used in determining the number of planned fleets is determined by the capacity of vehicles of a predetermined type, round-trip travel time, vehicle downtime at the terminal, and transportation demand on each route. To determine the number of fleet needs, there are several things that need to be taken into account, namely:

a. Transportation Capacity. For transportation that is planned to operate in the urban area of Bekasi Regency, there are as many as 12 seats/vehicles
b. The service time used in a day is 12 hours of operation starting from 05.30 - 17.30.
c. The average travel speed of each vehicle is assumed to be 25 km/h by taking into account the condition of the road network, traffic conditions and land use.
d. Round Trip Time or the time required for the round trip plus the stopover time at the terminal. For vehicle travel time, it is assumed that the vehicle speed is regulated in accordance with the minimum speed of the vehicle based on the road class, function and type of transportation listed in the Decree of the Director General of Land Transportation Number 687 of 2002 concerning the Implementation of Public Transportation in Urban Areas with Fixed and Regular Routes.

RTT =2 x (17+5')
= 44 minutes

e. Number of fleets (N) for each route:

The following is an estimate of fleet needs for each planned route

Table 3. Estimated Fleet Needs

Route Code	Route Trajectory	Track Length (Km)	Travel Time (minutes)	RTT (minutes)	Standard Headway (min)	K (Navy)
K - 14	Kp. Utan -Setu - Serang - PP	15.2	36	82.96	10	9
K - 16	Tambun - Griya Asri 1 - PP	5.3	13	35.44	10	4
K - 17	Terminal Cikarang - Pasar Serang - PP	12.9	31	71.92	10	8
K - 18	Cikarang - Sukatani - PP	11.8	28	66.64	10	7
K - 32	Warung Bongkok - Taman Limo Jatiwangi - PP.	8.2	20	49.36	10	5

K – 33 & K - 42	Cikarang - Lemah Abang - Pasir Gombong - lippo Mall - PP.	17.8	43	95.44	10	10
K - 35	Lemah Abang Station Jababeka - Deltamas - PP	16.5	40	89.2	10	9
K - 38	Cikarang - Plaukan - Pulo Bambu - PP.	11.3	27	64.24	10	7

Source: Analysis 2023

Online Vehicle Operational Analysis

This study used 132 respondents who came from current online vehicle users. The survey technique used is an interview using questionnaires and questionnaires distributed and guided by surveyors to reduce the level of errors, differences in meaning and intention in the perception of respondents. The survey carried out was in the area where the vehicle was stopped. This is intended so that respondents are more calm and have plenty of time to answer every question and choice. Based on the data obtained, answer recapitulation and data processing are carried out. So that the characteristics of the respondents and the assessment of the performance and importance of each existing service variable can be known based on the applicable service standards.

Descriptive Analysis

1. Gender

   Based on the results of the data recapitulation, the male gender is the more dominant with a percentage rate of 55% of the total number of respondents as many as 132 respondents, and the male gender as much as 45%. This can illustrate that the number of online vehicle passengers is currently dominated by men. This is very possible considering that the use of online vehicles is seen as very easy and helpful in traveling.

2. Age

   Based on the results of the data recapitulation, the age of the most respondents is in the age range under 20 years old, which is 15%, then 21-30 years old as much as 40%, 31-50 years old as much as 14%, 50 years and above as much as 4%. This illustrates that online vehicle users are productive age groups who have high mobility.

3. Work

   Based on the results of the data recapitulation, the most dominant type of work carried out by respondents today is civil servants as much as 55%, then private employees as much as 16%, self-employed as much as 14%, students as many as 8% and TNI/Polri as much as 2% of the total number of 132 respondents.

4. Fare

   Based on the results of the data recapitulation, the tariff issued by respondents below Rp. 15,000 is 15%, Rp. 16,000 – Rp. 50,000 is 27%, Rp. 51,000 – Rp. 100,000 is 21%, Rp. 100,000 – Rp. 200,000 is 18%, and above

Rp. 200,000 is 19%.

5. Travel Time

   Based on the results of the data recapitulation, the travel time taken by online vehicle users varies, currently the most dominant is 10-25 minutes as much as 33%, 26-40 minutes as much as 30%, 41-60 minutes as much as 16%, and more than 60 minutes as much as 21% of the total number of 132 respondents.

6. Comfort

   Based on the results of the data recapitulation, the comfort level of the most dominant online vehicle users who chose comfortable was 42%, then very comfortable as much as 29%, quite comfortable 20%, uncomfortable 8% and uncomfortable 1% of the total number of 132 respondents.

7. Security

   Based on the results of the data recapitulation, the level of security obtained from the respondents is currently 39% safe, 30% very safe, then 28% moderately safe, 2% less secure, and 1% unsafe out of the total 132 respondents.

8. Safety

   Based on the results of the data recapitulation, the level of safety obtained from the respondents is currently quite good 51%, good 25%, then very good as 18%, poor as much as 4%, and not good 2% of the total number of 132 respondents.

Statistical Analysis

Normality Test

Table 4. Kolmogorov-Smirnov Normality Test

Tests of Normality

	Alat Transportasi	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Waktu Operasi Kendaraan	Transportasi Konvensiona	,295	138	,000	,827	138	,000
	Transportasi Online	,283	126	,000	,775	126	,000
Jarak Tempuh	Transportasi Konvensiona	,359	138	,000	,706	138	,000
	Transportasi Online	,361	126	,000	,634	126	,000
Waktu Tunggu Kendaraan	Transportasi Konvensiona	,283	138	,000	,820	138	,000
	Transportasi Online	,359	126	,000	,682	126	,000
Waktu Perjalanan	Transportasi Konvensiona	,286	138	,000	,816	138	,000
	Transportasi Online	,375	126	,000	,670	126	,000
Kecepatan Perjalanan	Transportasi Konvensiona	,266	138	,000	,849	138	,000
	Transportasi Online	,305	126	,000	,729	126	,000
Ketepatan Jadwal Kedatangan dan Keberangkatan	Transportasi Konvensiona	,219	138	,000	,859	138	,000
	Transportasi Online	,370	126	,000	,695	126	,000
Tingkat Perpindahan	Transportasi Konvensiona	,266	138	,000	,855	138	,000
	Transportasi Online	,295	126	,000	,761	126	,000
Kemudahan Masyarakat mendapatkan informasi jadwal dan rute	Transportasi Konvensiona	,441	138	,000	,521	138	,000
	Transportasi Online	,357	126	,000	,695	126	,000
Kedisiplinan dan Ketrampilan Pramudi	Transportasi Konvensiona	,311	138	,000	,763	138	,000
	Transportasi Online	,320	126	,000	,725	126	,000
Kenyamanan Penumpang di Dalam Kendaraan	Transportasi Konvensiona	,386	138	,000	,687	138	,000
	Transportasi Online	,339	126	,000	,710	126	,000
Keselamatan dan Keamanan Penumpang di Dalam Kendaraan	Transportasi Konvensiona	,300	138	,000	,763	138	,000
	Transportasi Online	,282	126	,000	,764	126	,000
Tarif	Transportasi Konvensiona	,318	138	,000	,743	138	,000
	Transportasi Online	,320	126	,000	,710	126	,000
Keamanan Penumpang	Transportasi Konvensiona	,309	138	,000	,716	138	,000
	Transportasi Online	,294	126	,000	,779	126	,000
Kebersihan dan Kelayakan Kendaraan	Transportasi Konvensiona	,313	138	,000	,706	138	,000
	Transportasi Online	,300	126	,000	,738	126	,000
Keramaahan dan Kesopanan Pengemudi	Transportasi Konvensiona	,308	138	,000	,776	138	,000
	Transportasi Online	,458	126	,000	,176	126	,000

a. Lilliefors Significance Correction

Source: Analysis Results, 2024

Based on the Kolmogorov-smirnov normality test from 264 data, there is a lot of data >50, the results of the data are not normally distributed, so for the bivareiate test use a nonparametric test, namely the Mann Whitney test.

Analysis Bivariate

Tabel 5. Analisis Bivariate – Mann Whitney Test

Variable	Means of Transportation		p
	Conventional (mean±SD)	Online (mean±SD)	
x1. Vehicle operating time	2.67 ± 0.77	4.31 ± 0.70	**0.000**
x2. Mileage	2.94 ± 0.59	4.54 ± 0.50	**0.000**
x3. Vehicle waiting time	2.51 ± 0.71	4.40 ± 0.52	**0.000**
x4. Travel time	2.38 ± 0.77	4.56 ± 0.53	**0.000**
x5. Travel speed	2.26 ± 0.85	4.42 ± 0.61	**0.000**
x6. Accuracy of arrival and departure schedules	2.37 ± 0.91	4.54 ± 0.59	**0.000**
x7. Displacement rate	2.20 ± 0.80	4.37 ± 0.67	**0.000**
x8. Ease of public access to schedule and route information	3.01 ± 0.44	4.38 ± 0.53	**0.000**
x9. Discipline and skills of the driver	2.52 ± 0.74	4.44 ± 0.58	**0.000**
x10. Passenger comfort in the vehicle	2.92 ± 0.53	4.39 ± 0.55	**0.000**
x11. Safety and security of Passengers in the vehicle	2.71 ± 0.63	4.34 ± 0.65	**0.000**
x12. Tariff	2.69 ± 0.68	4.45 ± 0.56	**0.000**
x13. Passenger safety and security at bus stops	2.56 ± 0.59	4.24 ± 0.65	**0.000**
x14. Cleanliness and feasibility of the vehicle	2.73 ± 0.64	4.39 ± 0.59	**0.000**
x15. Friendliness and Courtesy of the Driver	2.62 ± 0.78	4.78 ± 2.59	**0.000**

$\alpha = 0.05$

Source: Analysis results, 2024

The table above is a mann whitney test conducted to see the difference between conventional transportation and online transportation. It is said to be significantly different if the value of p<0.05. Based on the results of the Mann Whitney test, significant differences were obtained in each variable x1, x2, x3, x4, x5, x6, x7, x8, x9, x10, x11, x12, x13, x14, and x15 based on conventional and online transportation.

Analysis Multivariate

Table 6. Multivariate Analysis Table – Binomial logistic regression

Variable	B-Coefficient	p	OR(95% CI)
x1. Vehicle operating time	-0.70	0.401	0.49(0.09 – 2.57)
x2. Mileage	1.28	0.238	3.62(0.43 – 30.71)
x3. Vehicle waiting time	2.32	**0.033**	10.21(1.20 – 86.43)
x4. Travel time	0.39	0.718	1.48(0.18 – 12.50)
x5. Travel speed	-0.15	0.858	0.86(0.17 – 4.37)
x6. Accuracy of arrival and departure schedules	0.95	0.297	2.59(0.43 – 15.46)
x7. Displacement rate	0.77	0.345	2.16(0.44 – 10.72)
x8. Ease of public access to schedule and route information	-0.19	0.878	0.83(0.08 – 8.94)
x9. Discipline and skills of the driver	0.99	0.338	2.69(0.36 – 20.36)
x10. Passenger comfort in the vehicle	1.72	0.195	5.58(0.42 – 75.13)
x11. Safety and security of Passengers in the vehicle	1.85	**0.041**	6.33(1.08 – 37.12)
x12. Tariff	-1.85	0.083	0.16(0.02 – 1.27)
x13. Passenger safety and security at bus stops	1.49	0.102	4.43(0.75 – 26.37)
x14. Cleanliness and feasibility of the vehicle	-1.25	0.225	0.29(0.04 – 2.15)
x15. Friendliness and Courtesy of the Driver	-0.19	0.967	0.98(0.39 – 2.46)
Nagelkerke R2= 94.9%			
-2Loglikehood =37.670			
Hosmer and Lemeshow Test = 1.000			

$\alpha = 0.05$

Source: Analysis results, 2024

Based on the results of logistic regression, the value of Pseduo R2 with Nagelkerke R2 was 94.9%, meaning that the ability of the independent variable in the model to explain the dependent variable was 94.9% and there were 5.1% factors outside the model that explained the dependent variable. A Hosmer and Lemeshow value of 1,000 > means that the model is feasible or can be used to explain the relationship between dependent and independent variables.

In the logistic regression test, the variable is said to have a significant effect on the determination of transportation even if the value of p<0.05. Based on the value of the p factor that has a significant effect on the determination of means of transportation are x3 and x10.

Variable x3. The waiting time has a value of p= 0.033 meaning the variable x3. Waiting time has a significant effect on the determination of means of

transportation and the odd ratio value = 10.21 indicates every addition of one unit x3 value. Waiting time, the tendency of a person to choose online transportation over conventional transportation increased by 10.21 times. Based on the results of passenger interviews, waiting time is very influential, because in Bekasi Regency conventional vehicles often stop temporarily or with the term ngetem. So that the waiting time for conventional vehicles is very long and erratic, while on online vehicles the waiting time is very fast and can be seen through the application so that passengers can see where the vehicle is positioned.

Variable x11. Safety and Security of passengers in the vehicle has a value of p = 0.041, meaning that the variable x11 Safety and Security of passengers in the vehicle has a significant effect on the determination of means of transportation and the value of odd ratio = 5.58 indicates every addition to the value of one unit x11. Safety and Security of passengers in vehicles, the tendency of a person to choose online transportation over conventional transportation increased by 5.58 times. Based on the results of passenger interviews, the safety and security of passengers in the vehicle is very influential, because in conventional vehicles conventional transport drivers often stop carelessly and drive at high speed and are not private, besides that many conventional vehicles are in unroadworthy conditions because of the age of the vehicle so that it can endanger passengers while in online vehicles drivers are more careful when driving and the condition of the vehicle is still very decent so that passengers feel safe in the vehicle. In addition, if the driver is not careful while driving or the condition of the vehicle is not suitable, passengers can report it through the application.

In x1, x2, x4, x5, x6, x7, x8, x9, x11, x12, x13, x14, and x15 did not have a significant effect in determining the determination of conventional or online means of transportation. This indicates that the 13 variables that do not affect cannot be determined by passengers in choosing online or conventional vehicles. And Logistic Regression Equation ***(odds)= – 0.70 x1 + 1.28 x2 + 2.32 x3 + 0.39 x4 – 0.15 x5 + 0.95 x6 + 0.77 x7 – 0.19 x8 + 0.99 x9 + 1.72 x10 + 1.85 x11 – 0.85 x12 + 1.49 x13 – 1.25 x14 – 0.19 x15 + Constant.***

Comparative Analysis of the Performance of Conventional Transportation and Online Transportation

Based on the results of the survey interviews with 132 respondents, an assessment of transportation from passengers was obtained. The following is a table of interview survey results.

Table 7. Comparison of Performance of Conventional Transportation and Online Transportation Based on the Results of Interview Surveys

Variable	Conventional	Online
x1. Vehicle operating time	3	4
x2. Mileage	3	5
x3. Vehicle waiting time	2	4
x4. Travel time	2	5
x5. Travel speed	2	4

x6. Accuracy of arrival and departure schedules	2	5
x7. Displacement rate	2	4
x8. Ease of public access to schedule and route information	3	4
x9. Driver discipline and skills	2	4
x10. Passenger comfort in the vehicle	3	4
x11. Safety and security of Passengers in the vehicle	3	4
x12. Tariff	3	4
x13. Passenger safety and security at bus stops	3	4
x14. Cleanliness and feasibility of the vehicle	3	4
x15. Friendliness and Courtesy of the Driver	3	5
Average	**3**	**4**

Source: Analysis Results, 2024

Based on the table above from 15 variables, the respondents' best assessment of online transportation compared to conventional transportation was obtained. The average assessment of the 15 variables by the respondents for Conventional Transportation received a score of 3 things, indicating that Conventional Transportation is quite good, but from the average value there are 5 variables that get a score of 2 or bad, including waiting time, travel time, travel speed, Accuracy of arrival and departure schedules, and Driver discipline and skills. While online transportation has an average value of 4 variables, this indicates that online transportation is better than conventional transportation.

CONCLUSION

Based on the results of analysis and problem solving, the following conclusions can be drawn: 1. The performance of existing urban transportation in Bekasi Regency is still not good judging from the performance of urban public transportation services in Bekasi Regency, loading factors, frequencies, travel times, waiting times, and headways are still not meeting the applicable standards according to the laws governing service performance and Based on the results of field observations, it was found that most of the public transportation facilities are still operating but do not renew their cards urban transportation supervision.

2. Because there is an overlap of routes. Therefore, route arrangement is needed, namely the change of routes from previously 10 urban transportation routes to 9 urban public transportation routes, where there are routes that are combined and added and cut routes. 3. The fare based on vehicle operating costs is obtained a flat fare of Rp. 3000.00 per passenger or Rp. 700.00 per km. 4. In order to improve public transportation services desired by passengers, it is based on quadrant 1, namely room temperature regulation, fare, ease of reaching the route, stopping time, number of operating vehicles, and vehicle age.

5. The results of the Linear Regression Statistical Analysis obtained the Log(odds) equation = – 0.70 x1 + 1.28 x2 + 2.32 x3 + 0.39 x4 – 0.15 x5 + 0.95 x6 + 0.77 x7 – 0.19 x8 + 0.99 x9 + 1.72 x10 + 1.85 x11 – 0.85 x12 + 1.49 x13 – 1.25 x14 – 0.19 x15 + Constant. Because users prefer online transportation over conventional transportation Based on a multivariate analysis on the significance value, it can be seen that there are 2 prominent influencing factors, namely x3 (Vehicle

waiting time) and x11 (Safety and Security of passengers in the vehicle).

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