

Feasibility Study of Park and Ride City of Depok

Muhamad Khodam Fauzi, Tedy Murtedjo, Rulhendri Rulhendri

Civil Engineering Study Program Ibn Khaldun University Bogor, INDONESIA

E-mail: fauzikhodam@gmail.com

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ABSTRACT

Depok City is a city in West Java Province, Indonesia. The city is located just south of Jakarta, which is between Jakarta and Bogor. The total population of Tangerang Regency in 2020 is $\pm 2,457,745$ people according to the Central Statistics Agency (BPS) of Depok City. Depok City which has an area of 200.29 km. This research was conducted to determine the feasibility level of the Park and Ride development plan in Depok City. Traffic counting surveys and interviews were carried out on the main road sections which were then processed using Microsoft Excel to determine the parking accumulation until the fluctuation of motorbikes and cars was known. Furthermore, the interview data is processed to determine the amount of public interest in the development of Park and Ride which is reviewed based on gender, age, trip duration, trip intent, parking duration, monthly fuel expenditures, desired parking rates and those who agree to use Park and Ride when the survey was conducted. at 06.00-21.00 WIB on Jalan Jatijajar Terminal area. From the results of processing this data using Microsoft Excel, the characteristics of Park and Ride facilities users and also the number of users of Park and Ride facilities for motorbikes were found to be 421, while for cars of 116 with a plan age until 2021, this proves that there is a need to increase interest in motorbikes. Park and Ride development at Jatijajar Depok Terminal.

Keywords: park and ride; Jatijajar terminal; transportation; motorcycles; terminal.

INTRODUCTION

Depok City is one of the city partners for DKI Jakarta after Tangerang, Bogor and Bekasi which are currently developing quite rapidly as regions with respect to the City, relying on the service and trade sectors. With an area of ± 200.29 km² and a population of 1,809,120 people. With the provision of Park and Ride facilities at Jatijajar Terminal, Depok City is expected to be able to encourage private vehicle users, especially road users who travel commuting and their activity areas are in line with transportation. mass so that they want to park their private vehicles in park and ride facilities and continue the journey to the destination city using mass transportation, and be able to encourage the economy of the Depok City Government. Transportation is one aspect that plays a direct role in the development of an urban area. City development causes a person's mobility to increase, so it is necessary to have transportation infrastructure that can support his movement needs. Transportation has two main roles, namely as a tool for directing development in urban areas and as a means for the movement of people and goods arising from activities in that area.

Travel is carried out in every activity. Activities that support travel are very important to learn. Travel facilities carried out in the study area, allow vehicles and people to always move. The movement of people and goods along with the consequences of the pattern of travel of people and goods as well. Someone will move according to the planning that is done so that the planning will be successful according to the context that is carried out. To determine activities that require travel time. Travel time depends on how fast it is (Syaiful S, Pratama Y, 2019; Syaiful S, Hariyadi D, 2019; Syaiful S et.al, 2020).

Understanding people in making a move will have a big influence on a person's behavior. This behavior depends on the form adapted to the current situation. People will travel with a clear purpose. The purpose of the trip must be carried out as planned. The destination area must also have been determined in advance, so that the trip takes place without significant obstacles. This condition is always a concern for every good activity (Syaiful S, Fadly A, 2020; Syaiful S et.al, 2021; Syaiful S, Rusfana H, 2022; Syaiful S et.al, 2022).

All movement of people is a journey in the future. This condition demands a clear and directed path. This path affects the surface hardness and clear shape in terms of the surface traversed. The journey of people and goods is determined by how much influence is significant. According to this effect, it is related to the road conditions above. So that the better the path traversed, the faster people will reach their destination. Remembering people's journey is very important. The importance of travel is measured by activities that are always well planned (Syaiful S et.al, 2022; Syaiful S, Lasmana L, 2020).

Parking

According to the Directorate General of Land Transportation No.8 of 2009, the meaning of parking is the activity of not moving a vehicle temporarily with the driver not leaving the vehicle. Parking is one element of the means that cannot be separated from the road transportation system as a whole. Parking facilities must be available at the destination (offices, shopping, entertainment or recreation places, etc.) and at home (in the form of a garage or parking setting). If not available, the road space will become a parking space, which means reducing the effective width of the road and thereby reducing the effective width of the road and the capacity of the space concerned. The next consequence is traffic jams (Tamin, 2008). The role of parking facilities in the transportation system can be seen from its function in providing travel destinations from traffic movements. Problems that arise in parking facilities if the parking requirements do not match or exceed the available parking requirements is that vehicles cannot be accommodated so that it will interfere with the smooth flow of traffic on the surrounding roads. The parking pattern on the road is parallel and angular parking patterns. However, on-street parking is not always permitted due to traffic conditions. We can only recommend which one is best applied to road bodies (Warpani, 2002).

RESEARCH METHODS

The research was carried out in July to August 2020. And the location of this research was carried out in the area around Jatijajar Terminal. With an area of land to be built a park and ride 1,786 m².



Figure 1. Location planning

The stages of this research are shown in the form of a flow chart as follows:

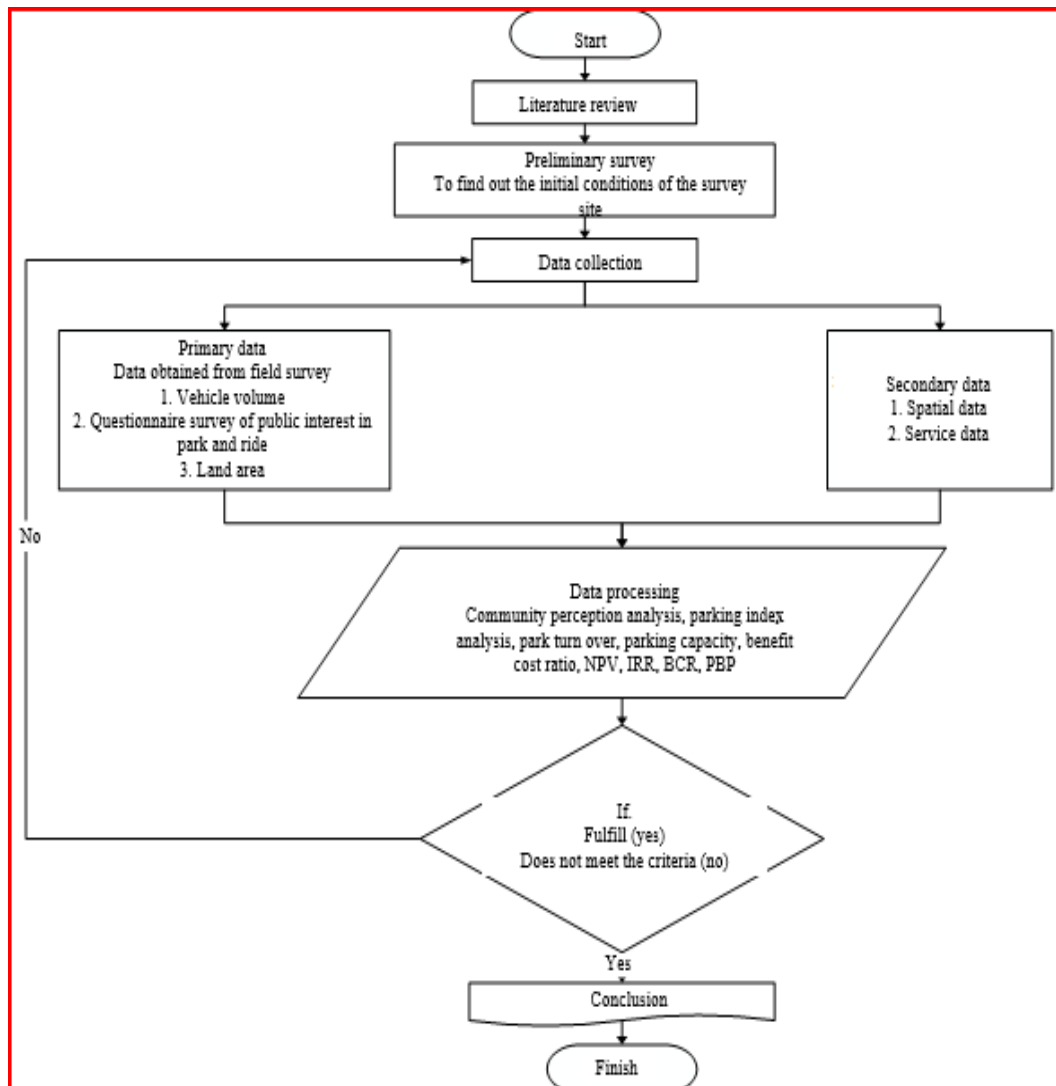


Figure 2. Flowchart research

RESULTS AND DISCUSSION

Parking Characteristics

The parking survey at Jatijajar Terminal was conducted for 12 hours (06:00 - 21: 00) for four-wheeled and 2-wheeled vehicles. The following are the results of the parking survey at the Jatijajar Terminal parking lot:

Table 1. Accumulated parking at Jatijajar Terminal

Execution time	Vehicle amount							Car total	Motorcycle total
	car			Motorcycle					
	accumulated	in	out	accumulated	in	out			
06.00-07.00	12	5	3	26	21	5	12	26	
07.00-08.00	15	7	4	41	20	5	15	41	
08.00-09.00	23	13	5	57	25	9	23	57	

09.00-10.00	27	12	8	81	32	8	27	81
10.00-11.00	37	15	5	104	27	4	37	104
11.00-12.00	40	6	3	110	14	8	40	110
12.00-13.00	39	7	8	110	10	10	39	110
13.00-14.00	46	9	2	120	23	13	46	120
14.00-15.00	46	5	5	127	15	8	46	127
15.00-16.00	48	10	8	138	20	9	48	138
16.00-17.00	49	7	6	137	12	13	49	137
17.00-18.00	55	11	5	141	9	5	55	141
18.00-19.00	54	3	4	135	11	17	54	135
19.00-20.00	45	1	10	127	4	12	45	127
20.00-21.00	45	5	5	117	5	15	45	117
Amount	581	11	81	1571	24	14	581	1571
		6			8	1		
Accumulation total	2152							

Table 2. Parking survey at Jatijajar terminal

Execution time	Total Vehicle Entry					
	Car			Motorcycle		
	accumulated	in	out	Aaccumulated	in	out
06.00-07.00	12	5	3	12	15	13
07.00-08.00	20	10	2	31	28	9
08.00-09.00	23	5	2	34	10	7
09.00-10.00	33	15	5	42	13	5
10.00-11.00	34	3	2	57	25	10
11.00-12.00	37	6	3	81	32	8
12.00-13.00	39	4	2	82	12	11
13.00-14.00	42	7	4	91	23	14
14.00-15.00	50	13	5	95	14	10
15.00-16.00	54	11	7	104	27	18
16.00-17.00	56	5	3	111	20	13
17.00-18.00	59	10	7	113	11	9
18.00-19.00	51	2	10	108	10	15
19.00-20.00	42	3	12	100	12	20
20.00-21.00	33	1	10	90	7	17
amount		100	77		259	179

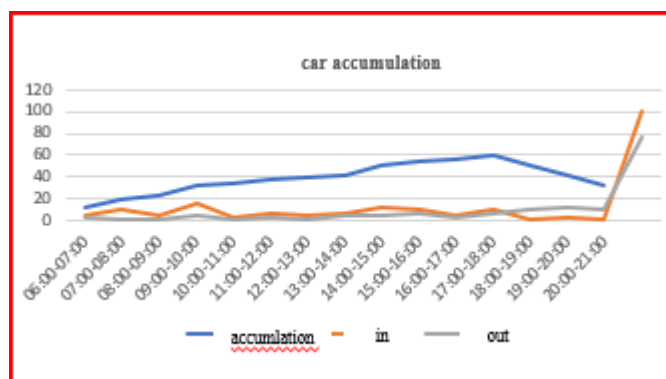


Figure 3. Graph of Accumulated Car Parking at Jatijajar Terminal

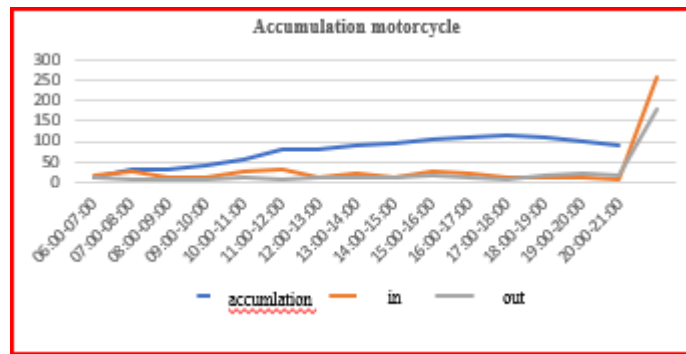


Figure 3. Graph of Accumulated Car Parking at Jatijajar Terminal

Parking Capacity

Table 3. The results of the parking capacity calculation

Allocation	Unit (SRP for passenger cars)	Need for Parking Space
Trading center		
Shops	SRP/100 m ² efektif floor area	3,5 – 7,5
Supermarkets	SRP/100 m ² efektif floor area	3,5 – 7,5
Supermarkets	SRP/100 m ² efektif floor area	3,5 – 7,5
Public service		
Non public service	SRP/100 m ² efektif floor area	1,5 – 3,5
Public service	SRP/100 m ² efektif floor area	1,5 – 3,5
School	SRP /student	0,7 – 1,0
Apartemen /lodging	SRP/room	0,2 – 1,0
Hospital	SRP/beds	0,2 – 1,3
Cinema	SRP/seats	0,1 - 0,4
No	Type of building	Total
1	Terminal parking	935
Apartment Parking Space Needs		
No	SRP	Number of parking spaces (SRP)
1	Public facilities Station coefficient 1,5	14,025
Motorcycle parking capacity		32,164
Car parking capacity		4,9

The highest parking accumulation is at 17: 00-18: 00 as many as 59 vehicles parked at Jatijajar Terminal. That way the parking index or parking turnover rate can be calculated.

Level of Use of Parking Areas

Parking index

The highest parking accumulation is at 17: 00-18: 00 as many as 59 vehicles parked at Jatijajar Terminal, Depok City. Thus the parking index or parking turnover rate can be calculated as follows:

$$\text{Car Parking Index} = \frac{\text{Number of Vehicles}}{\text{Highest accumulation}} \times 100 = \frac{59}{35} = 1.694$$

$$\text{Motorcycle Parking Index} = \frac{\text{Number of Vehicles}}{\text{Highest accumulation}}$$

$$= \frac{259}{113} = 2.292$$

Turn over

Turn Over or the level of parking land use is obtained by comparing the number of parking vehicles with the parking capacity provided. The following is the Turn Over of four-wheeled vehicles and motorbikes:

$$\begin{aligned} (\text{Turn Over Mobil} = \text{Number of Parking Vehicles}) / (\text{Parking Capacity}) &= \frac{100}{4,9} \\ &= 20,408 \end{aligned}$$

$$\begin{aligned} (\text{Turn Over Motor} = \text{Number of Parking Vehicles}) / (\text{Parking Capacity}) &= \frac{259}{32,164} \\ &= 8,052 \end{aligned}$$

Table 4. Parking and turnover index

Parking index	
Motorcycle	Car
2.292	1.694
Turn over	
Motorcycle	Car
8,052	20,408

Interview

An interview survey was conducted to determine the number of demands and also to determine the characteristics of park and ride users at Jatijajar Terminal. The survey was carried out by conducting direct interviews with parking users who were carrying out activities in the terminal environment located in the parking lot. Interviews were conducted between 6:00 am and 8:00 am within a few working days.

Survey results on the number of potential park and ride users

Based on the desired parking rates

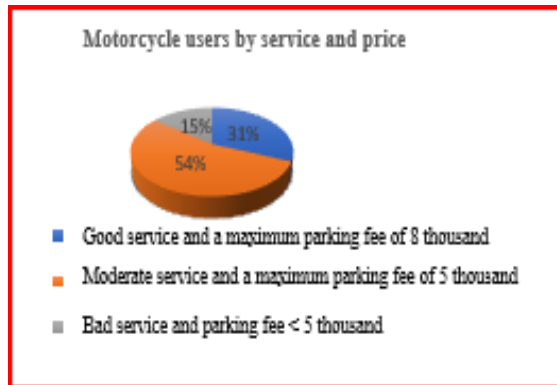


Figure 4. Diagram of motorbike users based on desired parking rates



Figure 5. Diagram of car users based on desired parking rates

Based on the number of Park and Ride users using motorbikes

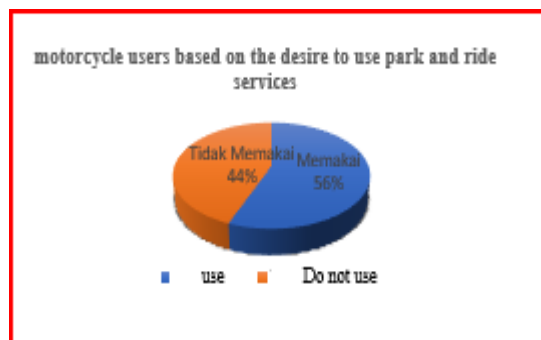


Figure 6. Diagram of motorcycle users based on the desire to use park and ride services

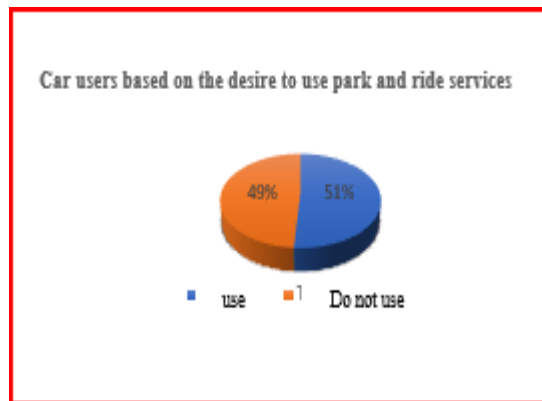


Figure 7. Diagram of car users based on their desire to use park and ride services

Demand Park and Ride

In the interview results for motorbikes, it was found that the number of people who wanted to use the park and ride facilities was 56%. Meanwhile, for cars, people who want to use park and ride facilities are 51%.

Demand park and ride for motorbikes

The data obtained for motorbikes are:

- Total Vehicle Volume = 431 vehicles
- Error Percentage = 44%
- Percentage of desire = 56%

$$\text{Demand Park and Ride} = 56\% \times 431 = 241$$

$$\begin{aligned} \text{Demand maximum} &= 241 + (241 \times 44\%) \\ &= 347 \text{ vehicles} \end{aligned}$$

$$\begin{aligned} \text{Demand minimum} &= 241 - (241 \times 44\%) \\ &= 134 \text{ vehicles} \end{aligned}$$

From the calculation above, the maximum demand is selected. Therefore, it can be concluded that the number of park and ride demand for motorbike users in 2021 is 347 vehicles.

Demand park and ride for cars

The data obtained for the car are:

- Total Vehicle Volume = 127 vehicles
- Error Percentage = 49%
- Percentage of desire = 51%

$$\text{Demand Park and Ride} = 51\% \times 127 = 64$$

$$\begin{aligned} \text{Demand maximum} &= 64 + (64 \times 49\%) \\ &= 95 \text{ vehicles} \end{aligned}$$

$$\begin{aligned} \text{Demand minimum} &= 64 - (64 \times 49\%) \\ &= 32 \text{ vehicles} \end{aligned}$$

From the calculation above, the maximum demand is selected. Therefore, it can be concluded that the number of park and ride demand for car users in 2021 is 95 vehicles.

Estimated Income Scenarios.

Table 5. Estimated annual revenue for scenario 1

No	Type	Volume	Unit price (Rp)	Time	Unit	Income
1	Motorcycle parking	347	Rp 5.000	360	day	Rp 624.600.000
2	Car parking	95	Rp 15.000	360	day	Rp 513.000.000
3	Retail land lease	1	Rp 50.000.000	1	year	Rp 50.000.000
4	Rental food court area	3	Rp 50.000.000	1	year	Rp 150.000.000
Total						Rp 1.337.600.000

Table 6. Estimated annual revenue for scenario 2

No	type	Volume	Unit price (Rp)	time	unit	income
1	Motorcycle parking	347	Rp 3.000	360	day	Rp 374.760.000
2	Car parking	59	Rp 10.000	360	day	Rp 342.000.000
3	Retail land lease	1	Rp 50.000.000	1	year	Rp 50.000.000
4	Rental food court area	3	Rp 50.000.000	1	year	Rp 150.000.000
Total						Rp 916.760.000

Estimated Operating Costs

Table 7. Estimated annual expenditure

No	Operational Costs	Volume	Unit price (Rp)	Time	Unit	Expences/year
1	Officer Salary	8	Rp 4.200.000	12	month	Rp 403.200.000
2	Electricity Usage	132	Rp 1.645	4320	hours	Rp 937.771.085
3	Allocation of Care	1320	Rp 60.000	1	year	Rp 79.200.000
Total						Rp 1.420.171.085

Table 8. Estimated expenditures for park and ride development

1	Land area	1786				m2
	Building coverage area				0,80	

2	Building area	1428	m2
	Motorcycle parking	378,00	m2
	Car park	1.050,00	m2
3	Number of towers	1,00	towers
4	Number of towers/units	1,00	unit
5	Number of units/floors	1,00	floors
6	Total GFA	1.428,00	m2
7	Number of units	1,00	unit
8	Unit size Avr	2.560,00	m2
9	Motorcycle/floors	347,00	Unit
	Car/floors	95,00	Unit
10	Total number of vehicles	442,00	pax
11	Land value	12.000,00	per m2
12	Project development stage	2,00	year
13	Project age	25,00	year
14	Building costs	4.000.000	/m2
15	Total development costs	5.715.200.000	Rp

Tahun	Hasil Kotor	Biaya Kotor	Ner Benefit	Df=10% (Discount Factor)	NPV at Df=10%	Disc. Benefit (manfaat Dominan)	Disc. Costs (dominan biaya)	Cash Flow	By Back Analisis (analisis Pengembalian)
0	-	Rp (5.715.200.000)	Rp (5.715.200.000)	1	Rp (5.715.200.000)	-	Rp 5.715.200.000	Rp (5.715.200.000)	Rp (5.715.200.000)
1	Rp 1.337.600.000	Rp 1.420.171.085	Rp (82.571.085)	0,909090909	Rp (75.064.623)	Rp 1.216.000.000	Rp 1.291.064.623	Rp (75.064.623)	Rp (5.790.264.623)
2	Rp 1.484.040.000	Rp 1.469.735.056	Rp 14.304.944	0,826446281	Rp 11.822.268	Rp 1.236.479.339	Rp 1.214.657.071	Rp 11.822.268	Rp (5.778.442.354)
3	Rp 1.637.802.000	Rp 1.521.028.809	Rp 116.773.191	0,751314801	Rp 87.733.427	Rp 1.230.504.884	Rp 1.142.771.457	Rp 87.733.427	Rp (5.690.708.928)
4	Rp 1.799.252.100	Rp 1.574.112.715	Rp 225.139.385	0,683013455	Rp 153.773.230	Rp 1.228.913.394	Rp 1.075.140.164	Rp 153.773.230	Rp (5.536.935.698)
5	Rp 1.968.774.705	Rp 1.629.049.248	Rp 339.725.457	0,620921323	Rp 210.942.780	Rp 1.222.454.195	Rp 1.011.511.415	Rp 210.942.780	Rp (5.325.992.918)
6	Rp 2.146.773.440	Rp 1.685.903.067	Rp 460.870.373	0,56447393	Rp 260.149.311	Rp 1.211.797.641	Rp 951.648.330	Rp 260.149.311	Rp (5.065.843.607)
7	Rp 2.339.672.112	Rp 1.744.741.084	Rp 588.931.028	0,513158118	Rp 302.214.738	Rp 1.197.542.790	Rp 895.328.052	Rp 302.214.738	Rp (4.763.628.869)
8	Rp 2.529.915.718	Rp 1.805.632.548	Rp 724.283.170	0,46650738	Rp 337.883.444	Rp 1.180.124.354	Rp 842.340.910	Rp 337.883.444	Rp (4.435.745.425)
9	Rp 2.735.971.504	Rp 1.868.649.124	Rp 867.322.380	0,424097618	Rp 367.829.356	Rp 1.160.318.899	Rp 792.489.643	Rp 367.829.356	Rp (4.057.916.069)
10	Rp 2.952.330.079	Rp 1.933.864.978	Rp 1.018.465.101	0,385543289	Rp 392.662.305	Rp 1.138.251.090	Rp 745.588.665	Rp 392.662.305	Rp (3.665.253.604)
11	Rp 3.179.506.583	Rp 2.001.356.866	Rp 1.178.149.717	0,350493899	Rp 412.934.288	Rp 1.114.397.661	Rp 701.463.372	Rp 412.934.288	Rp (3.252.319.396)
12	Rp 3.418.041.912	Rp 2.071.204.221	Rp 1.346.837.691	0,318630818	Rp 429.143.995	Rp 1.089.093.489	Rp 659.949.494	Rp 429.143.995	Rp (2.823.175.401)
13	Rp 3.668.504.008	Rp 2.143.489.248	Rp 1.525.014.760	0,28966438	Rp 441.742.454	Rp 1.062.634.938	Rp 620.892.483	Rp 441.742.454	Rp (2.381.432.946)
14	Rp 3.931.489.208	Rp 2.218.297.023	Rp 1.713.192.185	0,263331254	Rp 451.137.047	Rp 1.035.283.984	Rp 584.146.937	Rp 451.137.047	Rp (1.930.295.899)
15	Rp 4.207.623.668	Rp 2.295.715.589	Rp 1.911.908.080	0,239392049	Rp 457.695.593	Rp 1.007.271.653	Rp 549.576.060	Rp 457.695.593	Rp (1.472.600.306)
16	Rp 4.497.564.852	Rp 2.375.836.063	Rp 2.121.728.789	0,217629136	Rp 461.750.003	Rp 978.801.152	Rp 517.051.149	Rp 461.750.003	Rp (1.010.850.303)
17	Rp 4.802.003.094	Rp 2.458.752.741	Rp 2.343.250.353	0,197844669	Rp 463.599.590	Rp 950.050.712	Rp 486.451.122	Rp 463.599.590	Rp (547.250.713)
18	Rp 5.121.663.249	Rp 2.544.563.212	Rp 2.577.100.037	0,17985879	Rp 463.514.094	Rp 921.176.154	Rp 457.662.060	Rp 463.514.094	Rp (83.736.619)
19	Rp 5.457.306.412	Rp 2.633.368.468	Rp 2.823.937.943	0,163507991	Rp 461.736.419	Rp 892.313.207	Rp 430.576.787	Rp 461.736.419	Rp 377.999.801
20	Rp 5.809.731.732	Rp 2.725.273.028	Rp 3.084.458.704	0,148643628	Rp 458.485.132	Rp 863.579.603	Rp 405.094.470	Rp 458.485.132	Rp 836.484.933
21	Rp 6.179.778.319	Rp 2.820.385.056	Rp 3.359.393.262	0,135130571	Rp 453.956.730	Rp 835.076.972	Rp 381.120.243	Rp 453.956.730	Rp 1.290.441.662
22	Rp 6.568.327.235	Rp 2.918.816.495	Rp 3.649.510.740	0,122845974	Rp 448.327.700	Rp 806.892.554	Rp 358.564.854	Rp 448.327.700	Rp 1.738.769.362
23	Rp 6.976.303.597	Rp 3.020.683.191	Rp 3.955.620.406	0,111678158	Rp 441.756.400	Rp 779.100.734	Rp 337.344.334	Rp 441.756.400	Rp 2.180.535.761
24	Rp 7.404.678.776	Rp 3.126.105.034	Rp 4.278.573.742	0,101525598	Rp 434.384.758	Rp 751.764.441	Rp 317.379.683	Rp 434.384.758	Rp 2.614.910.520
25	Rp 7.854.472.715	Rp 3.235.206.100	Rp 4.619.266.616	0,092295998	Rp 426.339.823	Rp 724.936.399	Rp 298.596.576	Rp 426.339.823	Rp 3.041.250.342

Figure 7. Economic Feasibility Analysis Table Scenario 1

Tahun	Hasil Kotor	Biaya Kotor	Ner Benefit	Df=10% (Discount Factor)	NPV at Df=10%	Disc. Benefit (manfaat Dominan)	Disc. Costs (dominan biaya)	Cash Flow	By Back Analisis (analisis Pengembalian)
0	-	Rp (5.715.200.000)	Rp (5.715.200.000)	1	Rp (5.715.200.000)	-	Rp 5.715.200.000	Rp (5.715.200.000)	Rp (5.715.200.000)
1	Rp 916.760.000	Rp 1.420.171.085	Rp (503.411.085)	0,909090909	Rp (457.646.441)	Rp 833.418.182	Rp 1.291.064.623	Rp (457.646.441)	Rp (6.172.846.441)
2	Rp 1.042.158.000	Rp 1.469.735.056	Rp (427.577.056)	0,826446281	Rp (353.369.467)	Rp 861.287.603	Rp 1.214.657.071	Rp (353.369.467)	Rp (6.526.215.908)
3	Rp 1.173.825.900	Rp 1.521.028.809	Rp (347.202.909)	0,751314801	Rp (260.858.685)	Rp 881.912.772	Rp 1.142.771.457	Rp (260.858.685)	Rp (6.768.074.593)
4	Rp 1.312.077.195	Rp 1.574.112.715	Rp (262.035.520)	0,683013455	Rp (178.973.786)	Rp 896.166.379	Rp 1.075.140.164	Rp (178.973.786)	Rp (6.966.048.378)
5	Rp 1.457.241.055	Rp 1.629.049.248	Rp (171.808.194)	0,620921323	Rp (106.679.371)	Rp 904.832.044	Rp 1.011.511.415	Rp (106.679.371)	Rp (7.072.727.749)
6	Rp 1.609.663.107	Rp 1.685.903.067	Rp (76.239.960)	0,56447393	Rp (49.035.470)	Rp 908.612.860	Rp 951.648.330	Rp (49.035.470)	Rp (7.115.763.219)
7	Rp 1.769.706.263	Rp 1.744.741.084	Rp 24.965.179	0,513158118	Rp 12.811.084	Rp 908.139.136	Rp 895.328.052	Rp 12.811.084	Rp (7.102.952.135)
8	Rp 1.937.751.576	Rp 1.805.632.548	Rp 132.119.028	0,46650738	Rp 61.634.502	Rp 903.975.411	Rp 842.340.910	Rp 61.634.502	Rp (7.043.317.633)
9	Rp 2.114.199.155	Rp 1.868.649.124	Rp 245.550.031	0,424097618	Rp 104.137.183	Rp 896.626.826	Rp 792.489.643	Rp 104.137.183	Rp (6.937.180.450)
10	Rp 2.299.469.113	Rp 1.933.864.978	Rp 365.604.134	0,385543289	Rp 140.956.211	Rp 886.544.886	Rp 745.588.665	Rp 140.956.211	Rp (6.796.214.229)
11	Rp 2.494.002.568	Rp 2.001.356.866	Rp 492.645.702	0,350493899	Rp 172.669.313	Rp 874.132.685	Rp 701.463.372	Rp 172.669.313	Rp (6.623.554.916)
12	Rp 2.698.262.697	Rp 2.071.204.221	Rp 627.058.476	0,318630818	Rp 199.800.155	Rp 859.749.649	Rp 659.949.494	Rp 199.800.155	Rp (6.423.754.761)
13	Rp 2.912.735.831	Rp 2.143.489.248	Rp 769.246.583	0,28966438	Rp 222.823.334	Rp 843.715.818	Rp 620.892.483	Rp 222.823.334	Rp (6.200.931.426)
14	Rp 3.137.932.623	Rp 2.218.297.023	Rp 919.635.600	0,263331254	Rp 242.168.796	Rp 826.315.734	Rp 584.146.937	Rp 242.168.796	Rp (5.958.762.630)
15	Rp 3.374.389.254	Rp 2.295.715.589	Rp 1.078.673.665	0,239392049	Rp 258.225.899	Rp 807.801.959	Rp 549.576.060	Rp 258.225.899	Rp (5.700.536.731)
16	Rp 3.622.668.717	Rp 2.375.836.063	Rp 1.246.832.654	0,217629136	Rp 271.347.113	Rp 788.398.262	Rp 517.051.149	Rp 271.347.113	Rp (5.429.189.818)
17	Rp 3.883.362.153	Rp 2.458.752.741	Rp 1.424.609.411	0,197844669	Rp 281.851.377	Rp 768.302.499	Rp 486.451.122	Rp 281.851.377	Rp (5.147.338.241)
18	Rp 4.157.090.260	Rp 2.544.563.212	Rp 1.612.527.048	0,17985879	Rp 290.027.164	Rp 747.689.224	Rp 457.662.060	Rp 290.027.164	Rp (4.857.311.077)
19	Rp 4.444.504.773	Rp 2.633.368.468	Rp 1.811.136.305	0,163507991	Rp 296.135.258	Rp 726.712.046	Rp 430.576.787	Rp 296.135.258	Rp (4.561.175.819)
20	Rp 4.746.290.012	Rp 2.725.273.028	Rp 2.021.016.984	0,148643628	Rp 300.411.297	Rp 705.505.767	Rp 405.094.470	Rp 300.411.297	Rp (4.260.754.522)
21	Rp 5.063.164.513	Rp 2.820.385.056	Rp 2.242.779.456	0,135130571	Rp 303.068.068	Rp 684.188.311	Rp 381.120.243	Rp 303.068.068	Rp (3.957.696.454)
22	Rp 5.395.882.738	Rp 2.918.816.495	Rp 2.477.066.243	0,122845974	Rp 304.273.113	Rp 662.862.468	Rp 358.564.854	Rp 304.273.113	Rp (3.653.398.839)
23	Rp 5.745.236.875	Rp 3.020.683.191	Rp 2.724.553.685	0,111678158	Rp 304.273.136	Rp 641.617.470	Rp 337.344.334	Rp 304.273.136	Rp (3.349.125.703)
24	Rp 6.112.058.719	Rp 3.126.105.034	Rp 2.985.953.685	0,101525598	Rp 303.150.733	Rp 620.530.416	Rp 317.379.683	Rp 303.150.733	Rp (3.045.974.969)
25	Rp 6.497.221.655	Rp 3.235.206.100	Rp 3.262.015.555	0,092295998	Rp 301.070.982	Rp 599.667.558	Rp 298.596.576	Rp 301.070.982	Rp (2.744.903.888)

Figure 8. Economic Feasibility Analysis Table Scenario 2

IRR	2,9%
NPV	Rp8.756.450.343,09
BCR	1,13

Figure 9. IRR, NPV, and BCR Scenario 1

IRR	-2,7%
NPV	Rp2.970.296.012,25
BCR	0,88

Figure 10. IRR, NPV, and BCR Scenario 2

In accordance with the investment criteria, namely:

$$NPV \geq 1$$

$$IRR \geq \text{Loan interest rate at the bank}$$

$$BCR \geq 1$$

So from the results of the economic analysis for the first scenario meet the above criteria with an IRR of 2.9%, NPV more than 1 and a BCR of 1.13

CONCLUSION

Based on the results and discussion that have been described, the following conclusions can be drawn, From the results of the analysis using stated preference, it is found that the probability percentage of people who will use Park and Ride in Jatijajar Terminal, Depok City is as follows, percentage of motorcyclists: 56%, percentage of motorists: 51%. From the results of the projected increase in vehicles in Depok City, namely motorbikes by 5% and cars by 3% as well as data on potential Park and Ride users obtained from the interview survey, the maximum demand for Park and Ride is 347 motorbikes and as many as cars. 95 units. Payback analysis exists in the 19th year after development. For motorbike parking rates, IDR 5,000 and IDR 15,000 for car parking

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