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# LAMPIRAN



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Lampiran 1 Prediksi Jumlah Penduduk (x1) dan PDRB (x2)

a. Pelabuhan Siwa

Selisih Tahun 2018 ke 2023	Persentase pertumbuhan penduduk tahun 2018 - 2023 (%)	Selisih tahun 2023 ke 2038 (n)	Tahun Prediksi	Jumlah Penduduk Prediksi (X1)
1	0.00%	1	2024	2259553
2	0.49%	2	2025	2258893
3	-1.43%	3	2026	2258234
4	-1.01%	4	2027	2257575
5	-0.74%	5	2028	2256916
6	-0.03%	6	2029	2256258
Rata-rata	-0.45%	7	2030	2255600
		8	2031	2254941
		9	2032	2254283
		10	2033	2253626
		11	2034	2252968
		12	2035	2252311
		13	2036	2251654
		14	2037	2250997
		15	2038	2250340



Selisih Tahun 2018 ke 2023	Persentase pertumbuhan penduduk tahun 2018 - 2023 (%)	Selisih tahun 2023 ke 2038 (n)	Tahun Prediksi	PDRB Prediksi (X2)
1	0.00%	1	2024	157583061
2	4.21%	2	2025	163502046
3	2.42%	3	2026	169643354
4	2.96%	4	2027	176015336
5	3.44%	5	2028	182626657
6	3.76%	6	2029	189486306
Rata-rata	2.80%	7	2030	196603610
		8	2031	203988248
		9	2032	211650260
		10	2033	219600066
		11	2034	227848474
		12	2035	236406702
		13	2036	245286386
		14	2037	254499600
		15	2038	264058871



b. Pelabuhan Tobaku

Selisih Tahun 2018 ke 2023	Persentase pertumbuhan penduduk tahun 2018 - 2023 (%)	Selisih tahun 2023 ke 2038 (n)	Tahun Prediksi	Jumlah Penduduk Prediksi (X1)
1	0.00%	1	2024	731970
2	1.05%	2	2025	724759
3	-2.01%	3	2026	717619
4	-1.07%	4	2027	710550
5	-0.99%	5	2028	703550
Rata-rata	-0.60%	6	2029	696619
		7	2030	689756
		8	2031	682961
		9	2032	676233
		10	2033	669571
		11	2034	662975
		12	2035	656443
		13	2036	649977
		14	2037	643573
		15	2038	637233



Selisih Tahun 2018 ke 2023	Persentase pertumbuhan penduduk tahun 2018 - 2023 (%)	Selisih tahun 2023 ke 2038 (n)	Tahun Prediksi	PDRB Prediksi (X2)
1	0.00%	1	2024	47508568
2	3.09%	2	2025	48997962
3	2.62%	3	2026	50534049
4	2.87%	4	2027	52118291
5	3.14%	5	2028	53752200
Rata-rata	2.34%	6	2029	55437332
		7	2030	57175293
		8	2031	58967739
		9	2032	60816378
		10	2033	62722971
		11	2034	64689337
		12	2035	66717348
		13	2036	68808937
		14	2037	70966098
		15	2038	73190886



Lampiran 2 Analisa Pergerakan Penumpang dan Kendaraan Siwa - Tobaku

1. Penumpang

Metode Regresi Berganda

Tahun	Jumlah Penumpang (Y)	Jumlah Penduduk (X1)	PDRB (X2)
2018	79325	2264173	121734567.18
2019	83176	2286521	132205716.05
2020	64988	2168564	130772604.50
2021	93315	2174469	136774133.06
2022	143961	2181715	144189402.43
2023	134846	2260212	151878350.64

<i>Regression Statistics</i>	
Multiple R	0.8554866
R Square	0.7318572
Adjusted R Square	0.5530954
Standard Error	21408.626
Observations	6

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	2	3752832199	1876416099	4.0940351	0.13885103
	3	1374987788	458329262.7		
	5	5127819987			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
	-354710.35	435044.932	-0.81534188	0.4745899	-1739217.489	1029796.78	-1739217.5	1029796.78
1)	0.0454888	0.181283371	0.250926225	0.818076	-0.531435842	0.62241335	-0.5314358	0.62241335
	0.0025946	0.000907113	2.860313692	0.0645604	-0.000292211	0.00548147	-0.0002922	0.00548147



Metode Regresi Sederhana (X1)

Tahun	Jumlah Penumpang (Y)	Jumlah Penduduk (X1)
2018	79325	2264173
2019	83176	2286521
2020	64988	2168564
2021	93315	2174469
2022	143961	2181715
2023	134846	2260212

Regression Statistics	
Multiple R	0.0244273
R Square	0.0005967
Adjusted R Square	-0.2492541
Standard Error	35793.715
Observations	6

ANOVA					
	df	SS	MS	F	Significance F
Regression	1	3059726.45	3059726.45	0.0023882	0.963366384
Residual	4	5124760260	1281190065		
Total	5	5127819987			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
1)	132633.58	669261.3482	0.198179057	0.8525695	-1725533.811	1990800.98	-1725533.8	1990800.98
	-0.0147117	0.301043414	-0.04886912	0.9633664	-0.85054224	0.82111879	-0.8505422	0.82111879



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Metode Regresi Sederhana (X2)

Tahun	Jumlah Penumpang (Y)	PDRB (X2)
2018	79325	121734567.18
2019	83176	132205716.05
2020	64988	130772604.50
2021	93315	136774133.06
2022	143961	144189402.43
2023	134846	151878350.64

Regression Statistics	
Multiple R	0.85219098
R Square	0.72622947
Adjusted R Square	0.65778683
Standard Error	18733.9666
Observations	6

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	3723973968	3723973968	10.6107762	0.03115663
	4	1403846018	350961504.6		
	5	5127819987			

<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
-250005.82	107700.8262	-2.32129902	0.08102116	-549031.25	49019.609	-549031.2544	49019.60921
0.0025682	0.000788416	3.257418636	0.03115663	0.00037921	0.0047572	0.000379207	0.004757197



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Metode Pertumbuhan

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<b>Tahun</b>	<b>Jumlah Penumpang (Y)</b>	<b>Selisih Tahun 2018 ke 2023</b>	<b>Persentase pertumbuhan penumpang tahun 2018 - 2023 (%)</b>
2018	79325	1	0.00%
2019	83176	2	2.40%
2020	64988	3	-6.43%
2021	93315	4	4.14%
2022	143961	5	12.66%
2023	134846	6	9.25%
Rata-rata			3.67%

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## 2. Kendaraan Roda 2

### Metode Regresi Berganda

Tahun	Jumlah Roda 2 (Y)	Jumlah Penduduk (X1)	PDRB (X2)
2018	7553	2264173	121734567.18
2019	9256	2286521	132205716.05
2020	6551	2168564	130645639.01
2021	9920	2174469	136774133.06
2022	10813	2181715	144189402.43
2023	12112	2260212	151878350.64

Regression Statistics	
Multiple R	0.92616397
R Square	0.8577797
Adjusted R Square	0.76296617
Standard Error	1001.66937
Observations	6

ANOVA					
				Significance	
	df	SS	MS	F	F
Regression	2	18154496.9	9077248.45	9.0470175	0.05363427
Residual	3	3010024.598	1003341.53		
	5	21164521.5			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
	-37493.922	20331.93716	-1.84409	0.1623758	-102199.22	27211.37649	-102199.22	27211.37649
1)	0.01019958	0.008479372	1.20286928	0.3153007	-0.01678557	0.037184723	-0.0167856	0.037184723
	0.00017757	4.23767E-05	4.1902721	0.0247838	4.2708E-05	0.000312431	4.2708E-05	0.000312431



Metode Regresi Sederhana (X1)

Tahun	Jumlah Roda 2 (Y)	Jumlah Penduduk (X1)
2018	7553	2264173
2019	9256	2286521
2020	6551	2168564
2021	9920	2174469
2022	10813	2181715
2023	12112	2260212

Regression Statistics	
Multiple R	0.15935389
R Square	0.02539366
Adjusted R Square	-0.2182579
Standard Error	2270.85209
Observations	6

ANOVA

	df	SS	MS	F	Significance F
Regression	1	537444.6952	537444.695	0.1042212	0.76299246
	4	20627076.8	5156769.2		
	5	21164521.5			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
	-4336.6565	42459.78688	-0.1021356	0.9235643	-122223.924	113550.611	-122223.92	113550.611
1)	0.0061658	0.019099025	0.32283309	0.7629925	-0.0468616	0.059193192	-0.0468616	0.059193192



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Metode Regresi Sederhana (X2)

Tahun	Jumlah Roda 2 (Y)	PDRB (X2)
2018	7553	121734567.18
2019	9256	132205716.05
2020	6551	130645639.01
2021	9920	136774133.06
2022	10813	144189402.43
2023	12112	151878350.64

Regression Statistics	
Multiple R	0.888362038
R Square	0.78918711
Adjusted R Square	0.736483888
Standard Error	1056.143212
Observations	6

ANOVA

	df	SS	MS	F	Significance				
					F				
Regression	1	16702767.56	16702767.56	14.97417187	0.017998878				
	4	4461753.936	1115438.484						
	5	21164521.5							
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%	
	-14035.84587	6063.277006	-2.31489438	0.081592563	-30870.2016	2798.509893	-30870.201	2798.509893	
	0.000171783	4.43924E-05	3.869647512	0.017998878	4.85299E-05	0.000295036	4.853E-05	0.000295036	



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Metode Pertumbuhan

Tahun	Jumlah Roda 2 (Y)	Selisih Tahun 2018 ke 2023	Persentase pertumbuhan Roda 2 tahun 2018 - 2023 (%)
2018	7553	1	0.00%
2019	9256	2	10.70%
2020	6551	3	-4.63%
2021	9920	4	7.05%
2022	10813	5	7.44%
2023	12112	6	8.19%
Rata-rata			4.79%



### 3. Kendaraan Roda 4

#### Metode Regresi Berganda

Tahun	Jumlah Roda 4 (Y)	Jumlah Penduduk (X1)	PDRB (X2)
2018	5670	2264173	121734567.18
2019	7575	2286521	132205716.05
2020	9937	2168564	130645639.01
2021	15689	2174469	136774133.06
2022	17423	2181715	144189402.43
2023	15705	2260212	151878350.64

<i>Regression Statistics</i>	
Multiple R	0.963004775
R Square	0.927378197
Adjusted R Square	0.878963662
Standard Error	1708.979496
Observations	6

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	2	111888336.1	55944168	19.15495408	0.019570438
Residual	3	8761832.755	2920610.92		
Total	5	120650168.8			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
	51514.22595	34688.95492	1.48503251	0.234207465	-58881.5105	161909.9624	-58881.5105	161909.9624
1)	-0.04064786	0.014466923	-2.8097099	0.067308935	-0.08668806	0.005392349	-0.08668806	0.005392349
	0.000373096	7.23002E-05	5.16038003	0.01411309	0.000143005	0.000603188	0.000143005	0.000603188



Metode Regresi Sederhana (X1)

Tahun	Jumlah Roda 4 (Y)	Jumlah Penduduk (X1)
2018	5670	2264173
2019	7575	2286521
2020	9937	2168564
2021	15689	2174469
2022	17423	2181715
2023	15705	2260212

Regression Statistics	
Multiple R	0.531742638
R Square	0.282750233
Adjusted R Square	0.103437791
Standard Error	4651.244604
Observations	6

ANOVA

	df	SS	MS	F	Significance F
Regression	1	34113863.36	34113863.4	1.57685786	0.27756122
	4	86536305.47	21634076.4		
	5	120650168.8			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
	121181.7894	86967.73152	1.39341095	0.235931251	-120279.34	362642.9219	-120279.343	362642.9219
1)	-0.04912333	0.039119341	-1.25573	0.27756122	-0.1577360	0.059489372	-0.15773603	0.059489372



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Metode Regresi Sederhana (X2)

Tahun	Jumlah Roda 4 (Y)	PDRB (X2)
2018	5670	121734567.18
2019	7575	132205716.05
2020	9937	130645639.01
2021	15689	136774133.06
2022	17423	144189402.43
2023	15705	151878350.64

Regression Statistics	
Multiple R	0.85806448
R Square	0.73627466
Adjusted R Square	0.67034333
Standard Error	2820.39478
Observations	6

ANOVA					
	df	SS	MS	F	Significance F
Regression	1	88831662.05	88831662	11.16729489	0.028788841
Residual	4	31818506.79	7954626.7		
	5	120650168.8			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
	-41972.0566	16191.77646	-2.59218355	0.06054443	-86927.63512	2983.521881	-86927.635	2983.52188
	0.00039616	0.000118548	3.34175027	0.028788841	6.7016E-05	0.000725302	6.7016E-05	0.0007253



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Metode Pertumbuhan

Tahun	Jumlah Roda 4 (Y)	Selisih Tahun 2018 ke 2023	Persentase pertumbuhan Roda 4 tahun 2018 - 2023 (%)
2018	5670	1	0.00%
2019	7575	2	15.58%
2020	9937	3	20.57%
2021	15689	4	28.97%
2022	17423	5	25.17%
2023	15705	6	18.51%
Rata-rata			18.13%



4. Kendaraan Roda > 4

Metode Regresi Berganda

Tahun	Jumlah Kendaraan > Roda 4 (Y)	Jumlah Penduduk (X1)	PDRB (X2)
2018	3306	2264173	121734567.18
2019	3965	2286521	132205716.05
2020	3710	2168564	130645639.01
2021	3934	2174469	136774133.06
2022	2648	2181715	144189402.43
2023	4197	2260212	151878350.64

<i>Regression Statistics</i>	
Multiple R	0.3788127
R Square	0.1434991
Adjusted R Square	-0.4275015
Standard Error	676.2425
Observations	6

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	2	229851.592	114925.796	0.251311639	0.792668751
	3	1371911.74	457303.914		
	5	1601763.33			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
	-6068.6426	13726.4054	-0.44211448	0.688336808	-49752.19089	37614.90571	-49752.191	37614.9057
1)	0.003784	0.00572456	0.66100474	0.555838545	-0.014434132	0.022002049	-0.0144341	0.02200205
	0.00000943	2.8609E-05	0.3296983	0.763306978	-8.16147E-05	0.000100479	-8.161E-05	0.00010048



Metode Regresi Sederhana (X1)

Tahun	Jumlah Kendaraan > Roda 4 (Y)	Jumlah Penduduk (X1)
2018	3306	2264173
2019	3965	2286521
2020	3710	2168564
2021	3934	2174469
2022	2648	2181715
2023	4197	2260212

<i>Regression Statistics</i>	
Multiple R	0.335357925
R Square	0.112464938
Adjusted R Square	-0.10941883
Standard Error	596.1587708
Observations	6

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	180142.213	180142.213	0.506864201	0.515821117
Residual	4	1421621.12	355405.28		
	5	1601763.33			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
	-4307.35104	11146.8178	-0.3864198	0.718861034	-35255.87862	26641.17655	-35255.879	26641.1765
1)	0.003569687	0.005014	0.71194396	0.515821117	-0.010351408	0.017490781	-0.0103514	0.01749078



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Metode Regresi Sederhana (X2)

Tahun	Jumlah Kendaraan > Roda 4 (Y)	PDRB (X2)
2018	3306	121734567.18
2019	3965	132205716.05
2020	3710	130645639.01
2021	3934	136774133.06
2022	2648	144189402.43
2023	4197	151878350.64

Regression Statistics	
Multiple R	0.13695339
R Square	0.01875623
Adjusted R Square	-0.2265547
Standard Error	626.841345
Observations	6

ANOVA					
	df	SS	MS	F	Significance F
Regression	1	30043.04451	30043.04451	0.07645901	0.795854275
	4	1571720.289	392930.0722		
	5	1601763.333			

Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
2634.1091	3598.671727	0.731967043	0.504765026	-7357.40539	12625.6236	-7357.40539	12625.6236
0.00000729	2.63477E-05	0.276512225	0.795854275	-6.58676E-05	8.04385E-05	-6.58676E-05	8.0438E-05



Optimization Software:  
www.balesio.com

Metode Pertumbuhan

Tahun	Jumlah Kendaraan > Roda 4 (Y)	Selisih Tahun 2018 ke 2023	Persentase pertumbuhan Kendaraan > Roda 4 tahun 2018 - 2023 (%)
2018	3306	1	0.00%
2019	3965	2	9.51%
2020	3710	3	3.92%
2021	3934	4	4.44%
2022	2648	5	-4.34%
2023	4197	6	4.06%
Rata-rata			2.93%



Lampiran 3 Analisa Pergerakan Penumpang dan Kendaraan Tobaku - Siwa

1. Penumpang

Metode Regresi Berganda

Tahun	Jumlah Penumpang (Y)	Jumlah Penduduk (X1)	PDRB (X2)
2018	79353	776768	39476213.43
2019	84727	793180	41949936.92
2021	86491	730867	42659004.87
2022	94579	744035	44198560.46
2023	110986	739253	46064447.53

Regression Statistics	
Multiple R	0.9454288
R Square	0.8938356
Adjusted R Square	0.7876711
Standard Error	5677.8682
Observations	5

ANOVA					
	df	SS	MS	F	Significance F
Regression	2	542849182.7	271424591.3	8.4193503	0.106164434
Residual	2	64476374.15	32238187.07		
Total	4	607325556.8			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
	-144816.67	153378.3649	-0.94417923	0.4447421	-804750.5068	515117.174	-804750.51	515117.174
1)	0.0323448	0.137827202	0.234676557	0.8362972	-0.560677772	0.6253674	-0.5606778	0.6253674
	0.0049351	0.001494305	3.302586185	0.080736	-0.001494404	0.01136454	-0.0014944	0.01136454



Metode Regresi Sederhana (X1)

Tahun	Jumlah Penumpang (Y)	Jumlah Penduduk (X1)
2018	79353	776768
2019	84727	793180
2021	86491	730867
2022	94579	744035
2023	110986	739253

Regression Statistics	
Multiple R	0.5611273
R Square	0.3148638
Adjusted R Square	0.0864851
Standard Error	11777.107
Observations	5

ANOVA					
	df	SS	MS	F	Significance F
Regression	1	191224841.9	191224841.9	1.3786915	0.325050196
Residual	3	416100714.9	138700238.3		
Total	4	607325556.8			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
	286732.42	166587.333	1.721213827	0.1836942	-243422.8214	816887.663	-243422.8	816887.663
1)	-0.2583244	0.220004652	-1.17417695	0.3250502	-0.958477382	0.4418286	-0.958477	0.4418286



Optimization Software:  
www.balesio.com



Metode Regresi Sederhana (X2)

Tahun	Jumlah Penumpang (Y)	PDRB (X2)
2018	79353	39476213.43
2019	84727	41949936.92
2021	86491	42659004.87
2022	94579	44198560.46
2023	110986	46064447.53

<i>Regression Statistics</i>	
Multiple R	0.94388144
R Square	0.89091216
Adjusted R Square	0.85454955
Standard Error	4699.35565
Observations	5

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	541073726.2	541073726.2	24.5007747	0.01582354
Residual	3	66251830.61	22083943.54		
Total	4	607325556.8			

<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
-110737.5	40856.47522	-2.71040279	0.07313957	-240761.04	19286.034	-240761.0432	19286.03401
0.00471114	0.000951778	4.949825729	0.01582354	0.00168215	0.0077401	0.001682153	0.00774012



Metode Pertumbuhan

Tahun	Jumlah Penumpang (Y)	Selisih Tahun 2018 ke 2023	Persentase pertumbuhan penumpang tahun 2018 - 2023 (%)
2018	79353	1	0.00%
2019	84727	2	3.33%
2021	86491	3	2.91%
2022	94579	4	4.49%
2023	110986	5	6.94%
Rata-rata			3.53%



## 2. Kendaraan Roda 2

### Metode Regresi Berganda

Tahun	Jumlah Roda 2 (Y)	Jumlah Penduduk (X1)	PDRB (X2)
2018	6396	776768	39476213.43
2019	7752	793180	41949936.92
2021	8534	730867	42659004.87
2022	10035	744035	44198560.46
2023	11779	739253	46064447.53

<i>Regression Statistics</i>	
Multiple R	0.99100759
R Square	0.98209604
Adjusted R Square	0.96419209
Standard Error	393.442474
Observations	5

### ANOVA

	df	SS	MS	Significance	
				F	F
Regression	2	16982337.24	8491168.62	54.85358	0.01790396
Residual	2	309593.9608	154796.98		
	4	17291931.2			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
	-22836.639	10628.20788	-2.148682	0.1646913	-68566.1263	22892.849	-68566.126	22892.849
1)	-0.0038147	0.009550605	-0.3994153	0.7282029	-0.04490759	0.037278278	-0.0449076	0.037278278
	0.00080762	0.000103546	7.79956566	0.0160438	0.00036209	0.001253141	0.00036209	0.001253141



Metode Regresi Sederhana (X1)

Tahun	Jumlah Roda 2 (Y)	Jumlah Penduduk (X1)
2018	6396	776768
2019	7752	793180
2021	8534	730867
2022	10035	744035
2023	11779	739253

Regression Statistics	
Multiple R	0.66149384
R Square	0.4375741
Adjusted R Square	0.2500988
Standard Error	1800.85709
Observations	5

ANOVA					
	df	SS	MS	F	Significance F
Regression	1	7569480.022	7569480.02	2.334036	0.2240263
Residual	3	9729258.778	3243086.26		
Total	4	17298738.8			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
1)	-0.0513956	0.03364128	-1.5277552	0.2240263	-0.15845721	0.055665926	-0.1584572	0.055665926



Optimization Software:  
www.balesio.com

Metode Regresi Sederhana (X2)

Tahun	Jumlah Roda 2 (Y)	PDRB (X2)
2018	6396	39476213.43
2019	7752	41949936.92
2021	8534	42659004.87
2022	10035	44198560.46
2023	11779	46064447.53

Regression Statistics	
Multiple R	0.990286048
R Square	0.980666458
Adjusted R Square	0.974221944
Standard Error	333.8891527
Observations	5

ANOVA					
	df	SS	MS	F	Significance F
Regression	1	16964292.9	16964292.9	152.1707363	0.001147609
Residual	3	334445.8989	111481.9663		
Total	4	17298738.8			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
	-26862.25143	2902.851988	-9.25374478	0.00267027	-36100.42201	-17624.0808	-36100.422	-17624.081
	0.000834191	6.76238E-05	12.33575034	0.001147609	0.000618982	0.0010494	0.00061898	0.0010494



Optimization Software:  
[www.balesio.com](http://www.balesio.com)

## Metode Pertumbuhan

<b>Tahun</b>	<b>Jumlah Roda 2 (Y)</b>	<b>Selisih Tahun 2018 ke 2023</b>	<b>Persentase pertumbuhan Roda 2 tahun 2018 - 2023 (%)</b>
2018	6396	1	0.00%
2019	7752	2	10.09%
2021	8534	3	10.09%
2022	10035	4	11.92%
2023	11779	5	12.99%
Rata-rata			9.02%



### 3. Kendaraan Roda 4

#### Metode Regresi Berganda

Tahun	Jumlah Roda 4 (Y)	Jumlah Penduduk (X1)	PDRB (X2)
2018	4736	776768	39476213.43
2019	6166	793180	41949936.92
2021	14130	730867	42659004.87
2022	16088	744035	44198560.46
2023	14352	739253	46064447.53

Regression Statistics	
Multiple R	0.958156595
R Square	0.918064061
Adjusted R Square	0.836128122
Standard Error	2117.834799
Observations	5

ANOVA					
	df	SS	MS	F	Significance F
Regression	2	100510794.7	50255397.4	11.20465661	0.081935939
Residual	2	8970448.472	4485224.24		
Total	4	109481243.2			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
	67674.91541	57209.85909	1.182924	0.358404205	-178479.241	313829.0718	-178479.241	313829.0718
1)	-0.12465679	0.051409303	-2.4247905	0.13618272	-0.34585316	0.09653959	-0.34585316	0.09653959
	0.000880864	0.000557373	1.58038475	0.254802059	-0.00151732	0.003279046	-0.00151739	0.003279046



Metode Regresi Sederhana (X1)

Tahun	Jumlah Roda 4 (Y)	Jumlah Penduduk (X1)
2018	4736	776768
2019	6166	793180
2021	14130	730867
2022	16088	744035
2023	14352	739253

<i>Regression Statistics</i>	
Multiple R	0.903184259
R Square	0.815741806
Adjusted R Square	0.754322408
Standard Error	2593.120139
Observations	5

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	89308427.04	89308427	13.28150115	0.035632246
Residual	3	20172816.16	6724272.05		
	4	109481243.2			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
	144702.3881	36679.71983	3.94502436	0.029039741	27971.14927	261433.627	27971.14927	261433.627
1)	-0.17653852	0.048441312	-3.6443794	0.035632246	-0.33070039	-0.02237664	-0.33070039	-0.0223766



Optimization Software:  
www.balesio.com



Metode Regresi Sederhana (X2)

Tahun	Jumlah Roda 4 (Y)	PDRB (X2)
2018	4736	39476213.43
2019	6166	41949936.92
2021	14130	42659004.87
2022	16088	44198560.46
2023	14352	46064447.53

<i>Regression Statistics</i>	
Multiple R	0.8229146
R Square	0.6771884
Adjusted R Square	0.5695846
Standard Error	3432.2885
Observations	5

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	74139430.83	74139430.8	6.293347104	0.087040579
Residual	3	35341812.37	11780604.1		
Total	4	109481243.2			

<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
-63666.0453	29840.51838	-2.13354354	0.1225993	-158631.8928	31299.80215	-158631.89	31299.8022
0.0017439	0.000695154	2.50865444	0.087040579	-0.000468389	0.003956194	-0.0004684	0.00395619



Optimization Software:  
[www.balesio.com](http://www.balesio.com)

Metode Pertumbuhan

Tahun	Jumlah Roda 4 (Y)	Selisih Tahun 2018 ke 2023	Persentase pertumbuhan Roda 4 tahun 2018 - 2023 (%)
2018	4736	1	0.00%
2019	6166	2	14.10%
2021	14130	3	43.96%
2022	16088	4	35.76%
2023	14352	5	24.82%
Rata-rata			23.73%



4. Kendaraan Roda > 4

Metode Regresi Berganda

Tahun	Jumlah Kendaraan > Roda 4 (Y)	Jumlah Penduduk (X1)	PDRB (X2)
2018	2847	776768	39476213.43
2019	3202	793180	41949936.92
2021	3110	730867	42659004.87
2022	3382	744035	44198560.46
2023	3477	739253	46064447.53

Regression Statistics	
Multiple R	0.987130878
R Square	0.974427371
Adjusted R Square	0.948854742
Standard Error	55.68389881
Observations	5

ANOVA					
	df	SS	MS	F	Significance F
Regression	2	236299.807	118149.903	38.10430982	0.025572629
Residual	2	6201.39317	3100.69659		
	4	242501.2			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
	-3638.21946	1504.20987	-2.41869139	0.136735766	-10110.31215	2833.873241	-10110.312	2833.87324
1)	0.002585088	0.0013517	1.91247611	0.195953348	-0.003230794	0.008400969	-0.0032308	0.00840097
	0.000113959	1.4655E-05	7.7761451	0.016138308	5.09038E-05	0.000177014	5.0904E-05	0.00017701



Metode Regresi Sederhana (X1)

Tahun	Jumlah Kendaraan > Roda 4 (Y)	Jumlah Penduduk (X1)
2018	2847	776768
2019	3202	793180
2021	3110	730867
2022	3382	744035
2023	3477	739253

<i>Regression Statistics</i>	
Multiple R	0.448618969
R Square	0.201258979
Adjusted R Square	-0.06498803
Standard Error	254.0968687
Observations	5

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	48805.544	48805.544	0.755910767	0.448585018
Residual	3	193695.656	64565.2187		
Total	4	242501.2			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
	6326.950931	3594.20368	1.76032064	0.176578667	-5111.409298	17765.31116	-5111.4093	17765.3112
1)	-0.00412694	0.00474671	-0.8694313	0.448585018	-0.019233082	0.010979208	-0.0192331	0.01097921



Optimization Software:  
[www.balesio.com](http://www.balesio.com)

Metode Regresi Sederhana (X2)

Tahun	Jumlah Kendaraan > Roda 4 (Y)	PDRB (X2)
2018	2847	39476213.43
2019	3202	41949936.92
2021	3110	42659004.87
2022	3382	44198560.46
2023	3477	46064447.53

Regression Statistics	
Multiple R	0.96315139
R Square	0.9276606
Adjusted R Square	0.90354746
Standard Error	76.4687128
Observations	5

ANOVA					
	df	SS	MS	F	Significance F
Regression	1	224958.8079	224958.8079	38.47117422	0.008444043
Residual	3	17542.39213	5847.464042		
Total	4	242501.2			

Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
-914.51772	664.8234997	-1.375579709	0.262665773	-3030.28281	1201.247374	-3030.28281	1201.24737
9.6061E-05	1.54875E-05	6.20251354	0.008444043	4.67733E-05	0.00014535	4.67733E-05	0.00014535



Optimization Software:  
www.balesio.com

Metode Pertumbuhan

Tahun	Jumlah > Roda 4 (Y)	Selisih Tahun 2018 ke 2023	Persentase pertumbuhan > Roda 4 tahun 2018 - 2023 (%)
2018	2847	1	0.00%
2019	3202	2	6.05%
2021	3110	3	2.99%
2022	3382	4	4.40%
2023	3477	5	4.08%
Rata-rata			3.50%



Lampiran 4 Rekapitulasi Hasil Prediksi Permintaan Penumpang dan Kendaraan

a. Pelabuhan Siwa

PERMINTAAN PENUMPANG					
Tahun Prediksi	Regresi Berganda	Regresi Sederhana (x1)	Regresi Sederhana (x2)	Pertumbuhan	
2024	156215	99396	154667	147314	
2025	171515	99405	169867	160934	
2026	187391	99415	185638	175813	
2027	203864	99425	202002	192069	
2028	220958	99434	218979	209827	
2029	238694	99444	236595	229227	
2030	257098	99454	254872	250421	
2031	276194	99463	273836	273574	
2032	296009	99473	293512	298868	
2033	316569	99483	313927	326501	
2034	337902	99492	335109	356689	
	360038	99502	357087	389667	
	383007	99512	379890	425695	
	406839	99521	403549	465054	
	431568	99531	428097	508052	



PERMINTAAN JENIS KENDARAAN RODA 2				
Tahun Prediksi	Regresi Berganda	Regresi Sederhana (x1)	Regresi Sederhana (x2)	Pertumbuhan
2024	13535	9595	13037	13104
2025	14579	9591	14054	14177
2026	15663	9587	15109	15338
2027	16787	9583	16204	16594
2028	17955	9579	17339	17953
2029	19166	9575	18518	19423
2030	20423	9571	19741	21013
2031	21728	9567	21009	22734
2032	23082	9563	22326	24596
2033	24487	9559	23691	26610
2034	25945	9555	25109	28789
2035	27457	9551	26579	31146
2036	29028	9547	28104	33697
2037	30657	9543	29687	36456
	32348	9538	31329	39442





PERMINTAAN JENIS KENDARAAN RODA 4

Tahun Prediksi	Regresi Berganda	Regresi Sederhana (x1)	Regresi Sederhana (x2)	Pertumbuhan
2024	18458	10193	20462	18611
2025	20693	10225	22807	22056
2026	23011	10257	25241	26138
2027	25415	10290	27765	30975
2028	27909	10322	30385	36707
2029	30495	10354	33102	43500
2030	33177	10387	35922	51551
2031	35959	10419	38848	61091
2032	38844	10451	41884	72397
2033	41837	10484	45033	85795
2034	44941	10516	48302	101673
2035	48161	10548	51692	120489
	51501	10581	55210	142787
	54965	10613	58861	169213
	58558	10645	62648	200528



PERMINTAAN JENIS KENDARAAN RODA > 4

Tahun Prediksi	Regresi Berganda	Regresi Sederhana (x1)	Regresi Sederhana (x2)	Pertumbuhan
2024	3968	3759	3783	4367
2025	4021	3757	3826	4544
2026	4077	3755	3871	4729
2027	4134	3752	3917	4921
2028	4194	3750	3965	5120
2029	4256	3747	4015	5328
2030	4321	3745	4067	5544
2031	4388	3743	4121	5769
2032	4458	3740	4177	6003
2033	4530	3738	4235	6247
2034	4606	3736	4295	6500
2035	4684	3733	4358	6764
	4765	3731	4422	7039
	4849	3729	4489	7324
	4937	3726	4559	7621



b. Pelabuhan Tobaku

PERMINTAAN PENUMPANG				
Tahun Prediksi	Regresi Berganda	Regresi Sederhana (x1)	Regresi Sederhana (x2)	Pertumbuhan
2024	111398	97647	113080	118689
2025	118466	99509	120097	126926
2026	125764	101354	127333	135735
2027	133301	103180	134797	145155
2028	141083	104988	142494	155229
2029	149118	106779	150433	166002
2030	157414	108552	158621	177523
2031	165980	110307	167065	189844
2032	174823	112045	175775	203019
2033	183952	113766	184757	217109
2034	193376	115470	194020	232177
2035	203105	117157	203575	248290
	213146	118828	213428	265522
	223512	120482	223591	283950
	234210	122120	234072	303657



PERMINTAAN JENIS KENDARAAN RODA 2

Tahun Prediksi	Regresi Berganda	Regresi Sederhana (x1)	Regresi Sederhana (x2)	Pertumbuhan
2024	12758	10176	12769	13309
2025	13989	10547	14011	15038
2026	15257	10914	15293	16991
2027	16564	11277	16614	19199
2028	17911	11637	17977	21692
2029	19299	11993	19383	24510
2030	20730	12346	20833	27694
2031	22204	12695	22328	31292
2032	23723	13041	23870	35356
2033	25289	13383	25461	39949
2034	26903	13722	27101	45139
2035	28567	14058	28793	51002
2036	30281	14391	30537	57627
2037	32049	14720	32337	65113
2038	33871	15046	34193	73571



PERMINTAAN JENIS KENDARAAN RODA 4

Tahun Prediksi	Regresi Berganda	Regresi Sederhana (x1)	Regresi Sederhana (x2)	Pertumbuhan
2024	18283	15481	19184	17915
2025	20494	16754	21782	22362
2026	22737	18015	24460	27913
2027	25014	19263	27223	34843
2028	27326	20498	30072	43492
2029	29675	21722	33011	54289
2030	32061	22934	36042	67766
2031	34488	24133	39168	84589
2032	36955	25321	42392	105588
2033	39465	26497	45717	131800
2034	42020	27661	49146	164518
2035	44621	28815	52682	205359
	47269	29956	56330	256339
	49968	31087	60092	319974
	52719	32206	63972	399406



PERMINTAAN JENIS KENDARAAN RODA > 4

Tahun Prediksi	Regresi Berganda	Regresi Sederhana (x1)	Regresi Sederhana (x2)	Pertumbuhan
2024	3668	3306	3649	3619
2025	3819	3336	3792	3766
2026	3976	3365	3940	3920
2027	4138	3395	4092	4080
2028	4306	3423	4249	4246
2029	4480	3452	4411	4420
2030	4661	3480	4578	4600
2031	4847	3508	4750	4788
2032	5041	3536	4928	4983
2033	5241	3564	5111	5186
2034	5448	3591	5300	5398
2035	5662	3618	5494	5618
2036	5884	3644	5695	5847
	6113	3671	5903	6085
	6350	3697	6116	6334



## Lampiran 5 Pemilihan alternatif armada tahun 2028

## a. Kecepatan 9 knot

F	Jenis Muatan	Jumlah Permintaan/thn	N	Kapasitas	Sisa Muatan
		(SUP)		(SUP)	(SUP)
589	Penumpang Dewasa	186872	1	317.22	-0.000239
			2	158.61	-0.000239
			3	105.74	-0.006130
			4	79.31	-0.000239
			5	63.44	0.011543
589	Penumpang Anak-anak	28520	1	48.41	-0.001725
			2	24.21	-0.001725
			3	16.14	-0.007616
			4	12.10	0.010057
			5	9.68	-0.001725
589	Golongan II	55261	1	93.81	-0.001535
			2	46.90	-0.001535
			3	31.27	0.004356
			4	23.45	0.010247
			5	18.76	0.010247
589	Golongan IV A	530236	1	900.09	0.000227
			2	450.05	0.000227
			3	300.03	-0.005664
			4	225.02	0.000227
			5	180.02	-0.005664
589	Golongan IV B	96882	1	164.46	0.000062
			2	82.23	0.000062
			3	54.82	0.000062
			4	41.12	0.000062
			5	32.89	0.005953
589	Golongan IV C	166421	1	282.50	-0.001955
			2	141.25	-0.001955
			3	94.17	-0.001955
			4	70.63	0.009827
			5	56.50	-0.001955



589	Golongan VI B	212071	1	360.00	-0.002224
			2	180.00	0.003667
			3	120.00	0.003667
			4	90.00	0.003667
			5	72.00	-0.014006
589	Golongan VII	64844	1	110.07	-0.000703
			2	55.04	-0.000703
			3	36.69	-0.006594
			4	27.52	-0.000703
			5	22.01	-0.012485

## b. Kecepatan 10 knot

F	Jenis Muatan	Jumlah Permintaan/thn (SUP)	N (Unit)	Kapasitas	Sisa Muatan
				(SUP)	(SUP)
604	Penumpang Dewasa	186872	1	309.20	0.002179
			2	154.60	0.002179
			3	103.07	-0.003865
			4	77.30	-0.009909
			5	61.84	-0.003865
604	Penumpang Anak-anak	28520	1	48.41	-0.001725
			2	24.21	-0.001725
			3	16.14	-0.007616
			4	12.10	0.010057
			5	9.68	-0.001725
604	Golongan II	55261	1	91.43	0.002221
			2	45.72	0.002221
			3	30.48	0.002221
			4	22.86	0.002221
			5	18.29	-0.003823
530236			1	877.32	-0.000839
			2	438.66	0.005205
			3	292.44	-0.006883
			4	219.33	-0.006883
			5	175.46	0.005205





604	Golongan IV B	96882	1	160.30	-0.001190
			2	80.15	-0.001190
			3	53.43	-0.007234
			4	40.08	0.010897
			5	32.06	-0.001190
604	Golongan V B	166421	1	275.36	-0.001358
			2	137.68	0.004686
			3	91.79	-0.007401
			4	68.84	0.004686
			5	55.07	-0.013445
604	Golongan VI B	212071	1	350.89	-0.000270
			2	175.45	-0.000270
			3	116.96	0.005774
			4	87.72	-0.000270
			5	70.18	-0.012357
604	Golongan VII	64844	1	110.07	-0.000703
			2	55.04	-0.000703
			3	36.69	-0.006594
			4	27.52	-0.000703
			5	22.01	-0.012485

## c. Kecepatan 11 knot

F	Jenis Muatan	Jumlah	N	Kapasitas	Sisa Muatan
		Permintaan/thn (SUP)		(Unit)	(SUP)
617	Penumpang Dewasa	186872	1	302.63	0.000884
			2	151.32	0.000884
			3	100.88	-0.005291
			4	75.66	-0.011466
			5	60.53	-0.011466
	Penumpang anak	28520	1	46.19	0.000581
			2	23.09	-0.005594
			3	15.40	0.006755
			4	11.55	0.006755
			5	9.24	0.012930



617	Golongan II	55261	1	89.49	-0.000172
			2	44.75	-0.000172
			3	29.83	-0.006347
			4	22.37	-0.000172
			5	17.90	0.012178
617	Golongan IV A	530236	1	858.69	-0.000630
			2	429.35	-0.000630
			3	286.23	0.005545
			4	214.67	0.011720
			5	171.74	0.011720
617	Golongan IV B	96882	1	156.90	-0.001702
			2	78.45	0.004473
			3	52.30	-0.001702
			4	39.22	0.004473
			5	31.38	-0.001702
617	Golongan V B	166421	1	269.51	-0.000845
			2	134.76	-0.000845
			3	89.84	-0.007020
			4	67.38	0.011504
			5	53.90	-0.000845
617	Golongan VI B	212071	1	343.44	-0.001962
			2	171.72	0.004213
			3	114.48	0.004213
			4	85.86	-0.008137
			5	68.69	-0.008137
617	Golongan VII	64844	1	105.01	0.002423
			2	52.51	-0.003752
			3	35.00	-0.003752
			4	26.25	0.008598
			5	21.00	0.014773



Kapasitas yang dipilih yaitu sisa muatan terkecil, sehingga diperoleh:

### 1. Penumpang

Kecepatan (Vs) knot	PENUMPANG (SUP)	
	Dewasa	Anak-anak
10	309	47

### 2. Kendaraan

Kecepatan (Vs) knot	KENDARAAN (SUP)											
	Gol I	Gol II	Gol III	Gol IVA	Gol IVB	Gol VA	Gol VB	Gol VIA	Gol VIB	Gol VII	Gol VIII	Gol IX
10	0	91	0	877	160	0	275	0	351	107	0	0



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## Lampiran 6 Pemilihan alternatif armada tahun 2038

## a. Kecepatan 9 knot

F	Jenis Muatan	Jumlah Permintaan/thn		N	Kapasitas	Sisa Muatan
		(SUP)	(Unit)			
589	Penumpang Dewasa	407602		1	691.92	-0.000416
				2	345.96	0.005475
				3	230.64	-0.000416
				4	172.98	-0.006306
				5	138.38	0.005475
				6	115.32	0.017257
				7	98.85	-0.006306
				8	86.49	-0.006306
				9	76.88	0.017257
				10	69.19	0.005475
589	Penumpang Anak-anak	62208		1	105.60	-0.002348
				2	52.80	0.003543
				3	35.20	0.003543
				4	26.40	-0.008239
				5	21.12	0.009434
				6	17.60	0.003543
				7	15.09	-0.008239
				8	13.20	0.015325
				9	11.73	0.021216
				10	10.56	-0.020021
589	Penumpang Anak-anak II	149921		1	254.50	-0.000703
				2	127.25	0.005188
				3	84.83	-0.000703
				4	63.62	0.005188
				5	50.90	-0.012484
				6	42.42	0.016970
				7	36.36	-0.012484
				8	31.81	0.005188
				9	28.28	-0.018375
				10	25.45	0.016970



			1	5746.48	-0.001397
			2	2873.24	0.004494
			3	1915.49	-0.007288
			4	1436.62	0.004494
589	Golongan IV A	3385199	5	1149.30	0.010385
			6	957.75	-0.007288
			7	820.93	0.004494
			8	718.31	0.004494
			9	638.50	0.010385
			10	574.65	-0.019070
			1	1049.97	0.000954
			2	524.98	-0.004937
			3	349.99	0.006845
			4	262.49	0.006845
589	Golongan IV B	618527	5	209.99	-0.004937
			6	174.99	0.006845
			7	150.00	0.006845
			8	131.25	0.006845
			9	116.66	0.006845
			10	105.00	-0.004937
			1	93.98	0.000518
			2	46.99	-0.005373
			3	31.33	0.006409
			4	23.49	-0.005373
589	Golongan V A	55360	5	18.80	-0.011264
			6	15.66	0.006409
			7	13.43	-0.011264
			8	11.75	0.018191
			9	10.44	0.006409
			10	9.40	0.018191
			1	1803.60	0.002646
			2	901.80	0.002646
			3	601.20	0.008537
			4	450.90	0.002646
			5	360.72	0.008537
			6	300.60	-0.009135



			7	257.66	-0.003245
			8	225.45	0.002646
			9	200.40	0.026210
			10	180.36	-0.020917
			1	535.85	0.002918
			2	267.92	0.002918
			3	178.62	0.002918
			4	133.96	0.002918
589	Golongan VI B	315663	5	107.17	-0.008864
			6	89.31	0.002918
			7	76.55	0.008809
			8	66.98	0.002918
			9	59.54	-0.014755
			10	53.58	-0.008864
			1	163.84	0.002437
			2	81.92	0.002437
			3	54.61	-0.003454
			4	40.96	-0.009345
589	Golongan VII	96518	5	32.77	-0.009345
			6	27.31	0.014219
			7	23.41	0.002437
			8	20.48	0.014219
			9	18.20	-0.021127
			10	16.38	-0.009345



## b. Kecepatan 10 knot

F	Jenis Muatan	Jumlah	N	Kapasitas	Sisa Muatan
		Permintaan/thn		(SUP)	(SUP)
604	Penumpang Dewasa	407602	1	674.41	-0.001405
			2	337.21	-0.001405
			3	224.80	-0.001405
			4	168.60	0.010683
			5	134.88	0.004639
			6	112.40	-0.001405
			7	96.34	0.010683
			8	84.30	-0.013492
			9	74.93	-0.001405
			10	67.44	-0.025580
604	Penumpang Anak-anak	62208	1	102.93	-0.002917
			2	51.46	-0.002917
			3	34.31	0.003127
			4	25.73	0.009171
			5	20.59	-0.015004
			6	17.15	-0.015004
			7	14.70	-0.021048
			8	12.87	0.009171
			9	11.44	0.021259
			10	10.29	-0.015004
604	Golongan II	149921	1	248.06	-0.001591
			2	124.03	0.004453
			3	82.69	-0.001591
			4	62.01	-0.007635
			5	49.61	0.004453
			6	41.34	0.016540
			7	35.44	-0.007635
			8	31.01	0.016540
			9	27.56	0.016540
			10	24.81	0.004453



			1	5601.11	0.000925
			2	2800.56	-0.005119
			3	1867.04	0.000925
			4	1400.28	-0.005119
604	Golongan IV A	3385199	5	1120.22	0.013012
			6	933.52	-0.017207
			7	800.16	0.006969
			8	700.14	0.019056
			9	622.35	0.000925
			10	560.11	-0.017207
			1	1023.41	0.002397
			2	511.70	-0.003647
			3	341.14	-0.003647
			4	255.85	-0.003647
604	Golongan IV B	618527	5	204.68	-0.009691
			6	170.57	-0.003647
			7	146.20	0.002397
			8	127.93	0.020528
			9	113.71	-0.003647
			10	102.34	0.020528
			1	91.60	0.000967
			2	45.80	-0.005077
			3	30.53	0.007011
			4	22.90	0.007011
604	Golongan V A	55360	5	18.32	0.013055
			6	15.27	0.007011
			7	13.09	-0.005077
			8	11.45	-0.017164
			9	10.18	0.007011
			10	9.16	-0.017164
			1	1757.98	-0.002666
			2	878.99	-0.002666
			3	585.99	0.003377
			4	439.49	-0.002666
			5	351.60	-0.008710
			6	293.00	-0.014754





			7	251.14	0.003377
			8	219.75	-0.002666
			9	195.33	0.003377
			10	175.80	0.021509
			1	522.29	0.002913
			2	261.15	-0.003131
			3	174.10	-0.003131
			4	130.57	0.008957
604	Golongan VI B	315663	5	104.46	0.002913
			6	87.05	-0.003131
			7	74.61	-0.003131
			8	65.29	0.008957
			9	58.03	0.015001
			10	52.23	-0.027306
			1	159.70	-0.000315
			2	79.85	-0.000315
			3	53.23	-0.000315
			4	39.92	0.011772
604	Golongan VII	96518	5	31.94	-0.006359
			6	26.62	-0.000315
			7	22.81	-0.006359
			8	19.96	0.011772
			9	17.74	-0.000315
			10	15.97	0.023860



## c. Kecepatan 11 knot

F	Jenis Muatan	Jumlah Permintaan/thn		N	Kapasitas	Sisa Muatan
		(SUP)	(Unit)		(SUP)	(SUP)
617	Penumpang Dewasa	407602		1	660.09	-0.000569
				2	330.05	-0.000569
				3	220.03	-0.000569
				4	165.02	0.011781
				5	132.02	-0.012918
				6	110.02	-0.000569
				7	94.30	0.005606
				8	82.51	0.011781
				9	73.34	0.017956
				10	66.01	-0.012918
617	Penumpang Anak-anak	62208		1	100.74	0.002209
				2	50.37	-0.003966
				3	33.58	-0.003966
				4	25.19	0.008384
				5	20.15	0.014559
				6	16.79	-0.003966
				7	14.39	-0.016315
				8	12.59	0.008384
				9	11.19	-0.003966
				10	10.07	-0.016315
617	Golongan II	149921		1	242.79	-0.000669
				2	121.40	-0.000669
				3	80.93	-0.000669
				4	60.70	-0.000669
				5	48.56	-0.000669
				6	40.47	-0.000669
				7	34.68	-0.019194
				8	30.35	-0.000669
				9	26.98	-0.019194
				10	24.28	-0.000669



			1	5482.18	-0.002697
			2	2741.09	0.003477
			3	1827.39	-0.008872
			4	1370.54	-0.008872
			5	1096.44	0.009652
617	Golongan IV A	3385199	6	913.70	-0.008872
			7	783.17	-0.002697
			8	685.27	-0.008872
			9	609.13	-0.027397
			10	548.22	-0.021222
			1	1001.68	0.000266
			2	500.84	-0.005909
			3	333.89	-0.005909
			4	250.42	-0.005909
			5	200.34	0.000266
617	Golongan IV B	618527	6	166.95	-0.005909
			7	143.10	0.006441
			8	125.21	0.018791
			9	111.30	0.012616
			10	100.17	-0.030608
			1	89.65	0.000791
			2	44.83	0.000791
			3	29.88	0.000791
			4	22.41	-0.011559
			5	17.93	-0.005384
617	Golongan V A	55360	6	14.94	0.000791
			7	12.81	-0.011559
			8	11.21	-0.011559
			9	9.96	-0.017734
			10	8.97	0.025490
			1	1720.65	0.001198
			2	860.32	-0.004977
			3	573.55	0.007372
			4	430.16	-0.004977
			5	344.13	0.007372
			6	286.77	0.007372



			7	245.81	0.001198
			8	215.08	0.019722
			9	191.18	-0.011152
			10	172.06	0.007372
			1	511.20	-0.002705
			2	255.60	-0.002705
			3	170.40	0.003470
			4	127.80	0.009645
617	Golongan VI B	315663	5	102.24	-0.015055
			6	85.20	-0.015055
			7	73.03	-0.021229
			8	63.90	0.009645
			9	56.80	-0.015055
			10	51.12	-0.015055
			1	156.31	-0.002114
			2	78.15	0.004061
			3	52.10	0.004061
			4	39.08	-0.008289
617	Golongan VII	96518	5	31.26	0.010236
			6	26.05	0.004061
			7	22.33	-0.002114
			8	19.54	-0.008289
			9	17.37	0.022586
			10	15.63	-0.020639

Kapasitas yang dipilih yaitu sisa muatan terkecil, sehingga diperoleh:

### 1. Penumpang

Kecepatan (Vs) knot	PENUMPANG (SUP)	
	Dewasa	Anak-anak
10	225	34



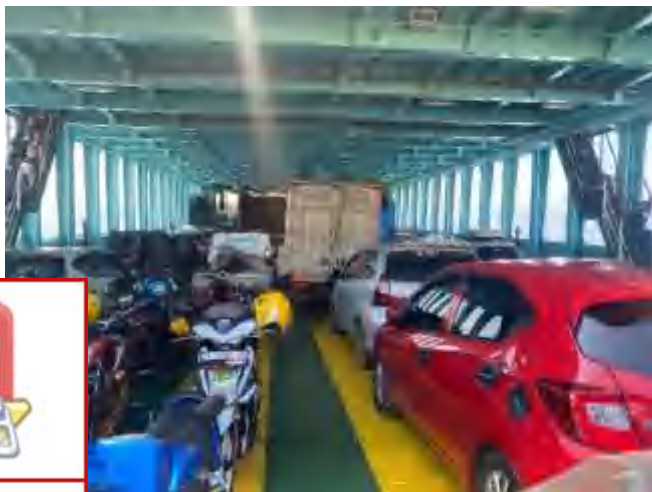
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KENDARAAN (SUP)									
Gol III	Gol IVA	Gol IVB	Gol VA	Gol VB	Gol VIA	Gol VIB	Gol VII	Gol VIII	Gol IX
0	1867	341	31	586	0	174	53	0	0

Lampiran 7 Dokumentasi penelitian



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