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LAMPIRAN

Lampiran 1. Hasil analisis faktor-faktor produksi menggunakan SPSS

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics: R Square Change	F Change	df1	df2	Sig. F Change	Durbin-Watson
1	.962[a]	.926	.903	104.90203	.926	39.435	7	22	.000	2.207

a. Predictors: (Constant), Kedalaman Pancing, ABK, ES, PK mesin, Ukuran GT, BBM, Biaya Perbekalan

b. Dependent Variable: Produksi

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3037734.688	7	433962.098	39.435	.000[b]
	Residual	242097.613	22	11004.437		
	Total	3279832.301	29			

a. Dependent Variable: Produksi

b. Predictors: (Constant), Kedalaman Pancing, ABK, ES, PK mesin, Ukuran GT, BBM, Biaya Perbekalan

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.	Collinearity Statistics Tolerance	Collinearity Statistics VIF
1	(Constant)	-615.124	135.611		-4.536	.000		
	Ukuran GT	53.464	16.285	.348	3.283	.003	.299	3.343
	PK mesin	-.773	.945	-.077	-.818	.422	.382	2.619
	ABK	28.809	31.763	.131	.907	.374	.162	6.185
	BBM	.485	.109	.519	4.456	.000	.247	4.048
	ES	.288	.205	.088	1.404	.174	.849	1.177
	Biaya Perbekalan	8.378E-5	.000	.121	.967	.344	.213	4.697
	Kedalaman Pancing	2.442	1.452	.139	1.682	.107	.491	2.038

a. Dependent Variable: Produksi

Lampiran 2. Data Faktor Produksi 30 Sampel Nelayan *handline* tuna

No.	Ukuran Gt	Kekuatan Mesin (PK)	ABK	Jumlah BBM (liter)	Es	Biaya perbekalan	kedalaman tali pancing	PRODUKSI TUNA (KG)
1	4	55	5	1200	200	623000	100	858
2	5	55	5	600	300	575000	128	439.5
3	8	90	6	1100	150	891000	128	723.5
4	6	60	5	900	200	741000	100	622.2
5	3	54	6	1360	420	651000	120	962.2
6	5	63	6	1400	200	761000	100	1031.5
7	6	59	7	1500	350	791000	100	1290
8	6	90	5	840	400	649000	100	760
9	8	134	5	750	180	921000	120	519
10	10	150	7	1600	350	801000	80	1454.5
11	9	60	6	800	450	861000	128	462.2
12	7	60	6	450	180	1410000	100	393
13	10	150	7	930	350	1714000	128	853.5
14	9	78	6	500	350	1784000	128	393
15	6	54	4	760	150	1394000	128	580.7
16	7	120	7	1200	200	1504000	128	634.5
17	9	55	5	1200	200	584000	100	794.5
18	6	59	6	1400	350	504500	80	867
19	5	60	6	1200	120	523000	100	628.6
20	5	90	5	1200	250	574500	120	638.5
21	7	60	4	1300	250	514000	128	742.5
22	6	90	5	1200	350	528500	100	656.2
23	3	24	3	450	350	95000	100	133
24	3	24	2	450	150	95000	80	52.5
25	3	24	2	450	150	100000	80	78
26	3	33	3	600	150	100000	80	82
27	4	54	3	900	420	130000	100	420.34
28	4	48	3	900	180	140000	100	482.9
29	4	50	3	450	420	120000	100	231
30	4	48	3	600	300	140000	100	335

Lampiran 3. Hasil analisis efisiensi teknis dengan DEAP 2.1

Results from DEAP Version 2.1
Instruction file = eg1-ins.txt
Data file = eg1-dta.txt
Output orientated DEA
Scale assumption: VRS
Slacks calculated using multi-stage method

EFFICIENCY SUMMARY:

firm	crste	vrste	scale	
1	0.890	0.948	0.939	irs
2	0.802	0.983	0.816	irs
3	0.722	0.724	0.997	irs
4	0.760	0.770	0.987	irs
5	1.000	1.000	1.000	-
6	0.895	0.906	0.987	irs
7	1.000	1.000	1.000	-
8	0.993	1.000	0.993	irs
9	0.754	0.764	0.987	irs
10	1.000	1.000	1.000	-
11	0.630	0.635	0.992	irs
12	0.952	1.000	0.952	irs
13	1.000	1.000	1.000	-
14	0.856	0.891	0.961	irs
15	0.840	0.969	0.867	irs
16	0.580	0.581	0.999	irs
17	0.904	0.973	0.929	irs
18	0.812	0.813	0.998	irs
19	0.652	0.694	0.939	irs
20	0.591	0.597	0.991	irs
21	0.674	0.702	0.961	irs
22	0.608	0.613	0.991	irs
23	0.325	1.000	0.325	irs
24	0.128	0.395	0.325	irs
25	0.191	0.586	0.325	irs
26	0.155	0.304	0.510	irs
27	0.537	0.660	0.813	irs
28	0.617	0.759	0.813	irs
29	0.562	1.000	0.562	irs
30	0.614	0.915	0.671	irs
mean	0.701	0.806	0.854	

Note: crste = technical efficiency from CRS DEA
vrste = technical efficiency from VRS DEA
scale = scale efficiency = crste/vrste
Note also that all subsequent tables refer to VRS results

SUMMARY OF OUTPUT SLACKS:

firm	output: 1
1	0.000
2	0.000
3	0.000
4	0.000
5	0.000
6	0.000
7	0.000
8	0.000
9	0.000
10	0.000
11	0.000
12	0.000
13	0.000
14	0.000
15	0.000
16	0.000
17	0.000
18	0.000
19	0.000
20	0.000
21	0.000
22	0.000
23	0.000
24	0.000
25	0.000
26	0.000
27	0.000
28	0.000
29	0.000
30	0.000
mean	0.000

SUMMARY OF INPUT SLACKS:

firm	input: 1	2
1	0.000	0.000
2	0.000	0.000
3	0.000	0.000
4	0.000	0.000
5	0.000	0.000
6	0.000	0.000
7	0.000	0.000
8	0.000	0.000
9	0.000	0.000
10	0.000	0.000
11	0.000	0.000
12	0.000	0.000
13	0.000	0.000

14	1.687	0.000
15	0.000	0.000
16	0.000	0.000
17	0.000	0.000
18	0.000	0.000
19	0.000	0.000
20	0.000	0.000
21	0.000	0.000
22	0.000	0.000
23	0.000	0.000
24	0.000	0.000
25	0.000	0.000
26	0.000	0.000
27	0.000	0.000
28	0.000	0.000
29	0.000	0.000
30	0.000	0.000
mean	0.056	0.000

SUMMARY OF OUTPUT TARGETS:

firm	output: 1
1	905.507
2	446.923
3	999.608
4	808.182
5	962.200
6	1137.905
7	1290.000
8	760.000
9	678.991
10	1454.500
11	728.391
12	393.000
13	853.500
14	440.969
15	599.125
16	1092.502
17	816.407
18	1066.113
19	905.507
20	1070.140
21	1057.602
22	1070.140
23	133.000
24	133.000
25	133.000
26	269.681
27	636.489
28	636.489

29	231.000
30	366.163

SUMMARY OF INPUT TARGETS:

firm input:	1	2
1	4.000	1200.000
2	5.000	600.000
3	8.000	1100.000
4	6.000	900.000
5	3.000	1360.000
6	5.000	1400.000
7	6.000	1500.000
8	6.000	840.000
9	8.000	750.000
10	10.000	1600.000
11	9.000	800.000
12	7.000	450.000
13	10.000	930.000
14	7.313	500.000
15	5.000	760.000
16	9.000	1200.000
17	3.000	1200.000
18	4.000	1400.000
19	4.000	1200.000
20	7.000	1200.000
21	5.000	1300.000
22	7.000	1200.000
23	3.000	450.000
24	3.000	450.000
25	3.000	450.000
26	3.000	600.000
27	4.000	900.000
28	4.000	900.000
29	4.000	450.000
30	4.000	600.000

Lampiran 4. Hasil pengolahan data Linear Goal Programing dengan Software LINDO

Z = 43605X1 +251039X2
fungsi kendala
X1 X2 Ketersedian Faktor Produksi

11.693X1+ 4.717X2 <=77731138
0.0011X1+ 0.0004X2 <=7310
0.2526X1+0.0691X2 <=1644102

LP OPTIMUM FOUND AT STEP 1

OBJECTIVE FUNCTION VALUE

1) 0.4136855E+13

VARIABLE	VALUE	REDUCED COST
X1	0.000000	578697.125000
X2	16478935.000000	0.000000

ROW	SLACK OR SURPLUS	DUAL PRICES
2)	0.000000	53220.054688
3)	718.426208	0.000000
4)	505407.593750	3028214.5

NO. ITERATIONS= 1

Lampiran 5. Proyeksi perbaikan input GT kapal

Kapal	Aktual	Target	Selisih	Persentase
			Kapasitas Berlebih	
1	4	4	0	0
2	5	5	0	0
3	8	8	0	0
4	6	6	0	0
5	3	3	0	0
6	5	5	0	0
7	6	6	0	0
8	6	6	0	0
9	8	8	0	0
10	10	10	0	0
11	9	9	0	0
12	7	7	0	0
13	10	10	0	0
14	9	7,313	-1,687	18,74
15	6	6	0	0
16	7	7	0	0
17	9	9	0	0
18	6	6	0	0
19	5	5	0	0
20	5	5	0	0
21	7	7	0	0
22	6	6	0	0
23	3	3	0	0
24	3	3	0	0
25	3	3	0	0
26	3	3	0	0
27	4	4	0	0
28	4	4	0	0
29	4	4	0	0
30	4	4	0	0

Lampiran 6. Komposisi jenis tangkapan 30 unit sampel pancing ulur tuna di perairan Sulawesi Barat

Kapal	Komposisi	Kg	%	Kapal	Komposisi	Kg	%
1	Madidihang	858	46,9	10	Madidihang	1.395,5	31,6
	Cakalang	693	37,8		Cakalang	2.315	52,4
	Tongkol	280	15,3		Tongkol	390	8,8
2	Madidihang	439,5	82,2		Tuna Mata Besar	59	1,3
	Cakalang	45	8,4		Marlin	160	3,6
	Tongkol	50	9,4		Lemadang	100	2,3
3	Madidihang	620	43,3	11	Madidihang	401,7	38,9
	Tuna Mata Besar	103,5	7,2		Tuna Mata Besar	60,5	5,9
	Cakalang	620	43,3		Cakalang	450	43,6
	Tongkol	90	6,3		Tongkol	120	11,6
4	Madidihang	622,2	64,7	12	Madidihang	393	35,8
	Cakalang	325,0	33,8		Cakalnag	640	58,3
5	Madidihang	962,2	48,7		Tongkol	65	5,9
	Cakalang	850	43,1	13	Madidihang	701,5	82,2
	Marlin	162	8,2		Tuna Mata Besar	152	17,8
6	Madidihang	838,5	22,7	14	Madidihang	393	80,5
	Tuna Mata Besar	193	5,2		Lemadang	95	19,5
	Cakalang	1.970	53,3	15	Cakalang	250	24,2
	Tongkol	575	15,6		Tongkol	185	17,9
	Lemadang	120	3,2		Madidihang	598,7	57,9
7	Madidihang	941,5	40,1	16	Madidihang	634,5	64,1
	Tuna Mata Besar	348,5	14,8		Cakalang	355	35,9
	Cakalang	735	31,3	17	Madidihang	794,5	81,1
	Tongkol	195	8,3		Cakalang	185	18,9
	Lemadang	130	5,5	18	Madidihang	867	100,0
8	Madidihang	760	50,8	19	Madidihang	628,6	88,1
	Cakalang	88	5,9		Cakalang	85	11,9
	Tongkol	202	13,5	20	Madidihang	638	89,9
	Lemadang	41,5	2,8		Cakalang	72	10,1
	Yuwana Tuna	325	21,7	21	Tuna Mata Besar	39	5,3
	Tuna Mata Besar	78.5	5,3		Madidihang	703,5	94,7
9	Madidihang	519	49,3	22	Madidihang	656,2	100,0
	Cakalng	73	6,9				
	Yuwana Tuna	460	43,7				

Kapal	Komposisi	Kg	%
23	Madidihang	52,5	10,3
	Cakalang	293,6	57,7
	Tongkol	163	32,0
24	Madidihang	78	12,4
	Tongkol	144	22,8
	Cakalang	212	33,6
	Yuwana tuna	197,4	31,3
25	Madidihang	82	16,1

	Cakalang	137	27,0
	Tongkol	161	31,7
	Yuwana tuna	128	25,2
26	Madidihang	133	28,3
	Cakalang	134	28,5
	Tongkol	104	22,1
	Yuwana tuna	99	21,1
27	Madidihang	420,34	100
28	Madidihang	482,9	100
29	Madidihang	231	100
30	Madidihang	335	100

Lampiran 7. Ketersediaan input produksi BBM dan Kapal (unit) tahun 2022 di Sulawesi Barat

Kabupaten	**Kebutuhan BBM/ tahun (liter)**			**Jumlah BBM (liter)**	**Jumlah Kapal (unit)**
	1 - 4 GT	**4 - 5 GT**	**5 - 10 GT**		
Mamuju	8.284.527,46	9.521.005	1.411.200	19.216.732	2.475
Majene	1.694.932	29.716.964	2.646.000	34.057.895	2.298
Polewali Mandar	2.160.529	16.489.861	957.600	19.607.990	1.592
Pasangkayu	2.122.941	1.052.920	37.800	3.213.661	612
Mamuju Tengah	1.199.370	397.690	37.800	1.634.860	333
Total	15.462.298	57.178.439	5.090.400	77.731.138	7.310

Lampiran 8. Produksi tuna (ton) menurut armada pancing tuna tahun 2022

Kabupaten	PTM	MT_0005	KM_0005	KM_0005_0010	Total
Majene	-	-	881,444	172,456	1.053,9
Mamuju	39,378	2.240,421	62,991	296,885	2.639,675
Mamuju Tengah	-	227,92	29,494	29,039	286,453
Mamuju Utara	-	23,194	303,423	101,24	427,857
Polewali Mandar	-	613,4	1.790,897	479,5	2.883,797
Total	39,378	3.104,935	3.068,249	916,441	7.291,682

Lampiran 9. Ukuran kecil, sedang dan besar ikan tuna yang tertangkap

Lampiran 10. Dokumentasi kegiatan penelitian