

Lampiran 1. Langkah-langkah analisis MANOVA dengan SPSS

- Membuka file yang akan dianalisis

	No	jenis ikan	kategori	r	selang waktu	(Log) selang waktu 1999-2002	(Log) selang waktu 2003-2006	(Log) selang waktu 2007-2010
1	1	teri	tinggi	7.86	1999-2002	-0.1886372183	0.1028832199	-1.1951018087
2	2	teri	tinggi	7.86	2003-2006	-0.1886372183	0.1028832199	-1.1951018087
3	3	teri	tinggi	7.86	2007-2010	-0.1886372183	0.1028832199	-1.1951018087
4	4	salar	tinggi	7.60	1999-2002	-0.4062566523	-0.2133594741	-1.4725401516
5	5	salar	tinggi	7.60	2003-2006	-0.4062566523	-0.2133594741	-1.4725401516
6	6	salar	tinggi	7.60	2007-2010	-0.4062566523	-0.2133594741	-1.4725401516
7	7	japuh	tinggi	7.52	1999-2002	-3.9001709370	-0.5199811961	-1.4754368397
8	8	japuh	tinggi	7.52	2003-2006	-3.9001709370	-0.5199811961	-1.4754368397
9	9	japuh	tinggi	7.52	2007-2010	-3.9001709370	-0.5199811961	-1.4754368397
10	10	peperek	tinggi	6.84	1999-2002	-0.4138244520	-0.1520509694	-1.2673483619
11	11	peperek	tinggi	6.84	2003-2006	-0.4138244520	-0.1520509694	-1.2673483619
12	12	peperek	tinggi	6.84	2007-2010	-0.4138244520	-0.1520509694	-1.2673483619
13	13	tembang	tinggi	6.72	1999-2002	-0.2531949943	0.0836989174	-1.0499627184
14	14	tembang	tinggi	6.72	2003-2006	-0.2531949943	0.0836989174	-1.0499627184
15	15	tembang	tinggi	6.72	2007-2010	-0.2531949943	0.0836989174	-1.0499627184
16	16	biji angka	tinggi	6.40	1999-2002	-2.2404163788	-1.4231839501	-2.6711592291
17	17	biji angka	tinggi	6.40	2003-2006	-2.2404163788	-1.4231839501	-2.6711592291
18	18	biji angka	tinggi	6.40	2007-2010	-2.2404163788	-1.4231839501	-2.6711592291
19	19	lemuru	tinggi	6.08	1999-2002	-0.3351525183	0.1150375524	-1.2118091296
20	20	lemuru	tinggi	6.08	2003-2006	-0.3351525183	0.1150375524	-1.2118091296
21	21	lemuru	tinggi	6.08	2007-2010	-0.3351525183	0.1150375524	-1.2118091296
22	22	kembung	tinggi	5.04	1999-2002	-0.1232260665	0.1020596871	-1.0884489815
23	23	kembung	tinggi	5.04	2003-2006	-0.1232260665	0.1020596871	-1.0884489815
24	24	kembung	tinggi	5.04	2007-2010	-0.1232260665	0.1020596871	-1.0884489815
25	25	swanggi	tinggi	4.62	1999-2002	-3.6404699587	-1.8651483469	-1.5292944831
26	26	swanggi	tinggi	4.62	2003-2006	-3.6404699587	-1.8651483469	-1.5292944831

- Mengklik *Analyze \ General Linier Model \ Multivariat*

	No	jenis ikan	kategori	r	selang waktu	(Log) selang waktu 1999-2002	(Log) selang waktu 2003-2006	(Log) selang waktu 2007-2010
1	1	teri	tinggi	7.86	1999-2002	-0.1886372183	0.1028832199	-1.1951018087
2	2	teri	tinggi	7.86	2003-2006	-0.1886372183	0.1028832199	-1.1951018087
3	3	teri	tinggi	7.86	2007-2010	-0.1886372183	0.1028832199	-1.1951018087
4	4	salar	tinggi	7.60	1999-2002	-0.4062566523	-0.2133594741	-1.4725401516
5	5	salar	tinggi	7.60	2003-2006	-0.4062566523	-0.2133594741	-1.4725401516
6	6	salar	tinggi	7.60	2007-2010	-0.4062566523	-0.2133594741	-1.4725401516
7	7	japuh	tinggi	7.52	1999-2002	-3.9001709370	-0.5199811961	-1.4754368397
8	8	japuh	tinggi	7.52	2003-2006	-3.9001709370	-0.5199811961	-1.4754368397
9	9	japuh	tinggi	7.52	2007-2010	-3.9001709370	-0.5199811961	-1.4754368397
10	10	peperek	tinggi	6.84	1999-2002	-0.4138244520	-0.1520509694	-1.2673483619
11	11	peperek	tinggi	6.84	2003-2006	-0.4138244520	-0.1520509694	-1.2673483619
12	12	peperek	tinggi	6.84	2007-2010	-0.4138244520	-0.1520509694	-1.2673483619
13	13	tembang	tinggi	6.72	1999-2002	-0.2531949943	0.0836989174	-1.0499627184
14	14	tembang	tinggi	6.72	2003-2006	-0.2531949943	0.0836989174	-1.0499627184
15	15	tembang	tinggi	6.72	2007-2010	-0.2531949943	0.0836989174	-1.0499627184
16	16	biji angka	tinggi	6.40	1999-2002	-2.2404163788	-1.4231839501	-2.6711592291
17	17	biji angka	tinggi	6.40	2003-2006	-2.2404163788	-1.4231839501	-2.6711592291
18	18	biji angka	tinggi	6.40	2007-2010	-2.2404163788	-1.4231839501	-2.6711592291
19	19	lemuru	tinggi	6.08	1999-2002	-0.3351525183	0.1150375524	-1.2118091296
20	20	lemuru	tinggi	6.08	2003-2006	-0.3351525183	0.1150375524	-1.2118091296
21	21	lemuru	tinggi	6.08	2007-2010	-0.3351525183	0.1150375524	-1.2118091296
22	22	kembung	tinggi	5.04	1999-2002	-0.1232260665	0.1020596871	-1.0884489815
23	23	kembung	tinggi	5.04	2003-2006	-0.1232260665	0.1020596871	-1.0884489815
24	24	kembung	tinggi	5.04	2007-2010	-0.1232260665	0.1020596871	-1.0884489815
25	25	swanggi	tinggi	4.62	1999-2002	-3.6404699587	-1.8651483469	-1.5292944831
26	26	swanggi	tinggi	4.62	2003-2006	-3.6404699587	-1.8651483469	-1.5292944831

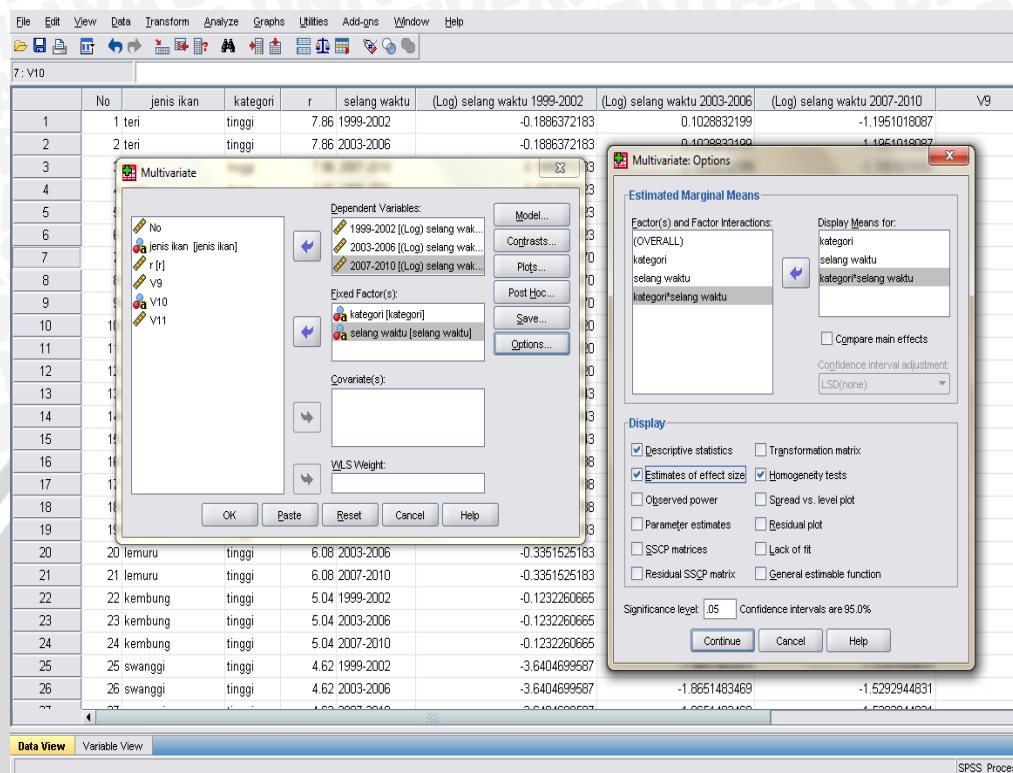
- Memasukkan variabel nilai CPUE 1999-2002, CPUE 2003-2006 dan CPUE 2007-2010 ke dalam kolom *variabel Dependent*

The screenshot shows the SPSS Multivariate dialog box. In the 'Dependent Variables' list, three variables are selected: '1999-2002 (Log) selang waktu', '2003-2006 (Log) selang waktu', and '2007-2010 (Log) selang waktu'. In the 'Fixed Factor(s)' list, three variables are selected: 'V9', 'V10', and 'V11'. The 'Covariate(s)' list is empty. The 'WLS Weight' field is also empty. The background shows a data table with columns: No, jenis ikan, kategori, r, selang waktu, (Log) selang waktu 1999-2002, (Log) selang waktu 2003-2006, and (Log) selang waktu 2007-2010.

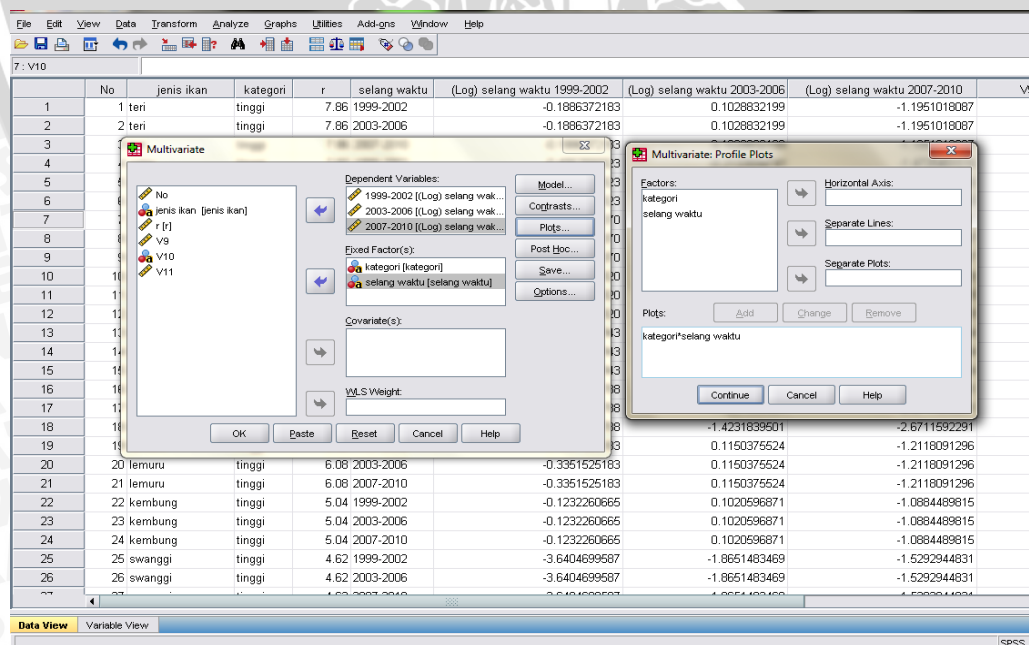
- Masukkan variabel kategori dan selang waktu ke dalam *Fixed factor (s)*

The screenshot shows the SPSS Multivariate dialog box. In the 'Dependent Variables' list, three variables are selected: '1999-2002 (Log) selang waktu', '2003-2006 (Log) selang waktu', and '2007-2010 (Log) selang waktu'. In the 'Fixed Factor(s)' list, two variables are selected: 'kategori [kategori]' and 'selang waktu [selang waktu]'. The 'Covariate(s)' list is empty. The 'WLS Weight' field is also empty. The background shows a data table with columns: No, jenis ikan, kategori, r, selang waktu, (Log) selang waktu 1999-2002, (Log) selang waktu 2003-2006, and (Log) selang waktu 2007-2010.

- Mengklik tombol *option*, pilih *Descriptive*, *Homogeneity test* dan *Estimates of effect size*, klik *Continue*.

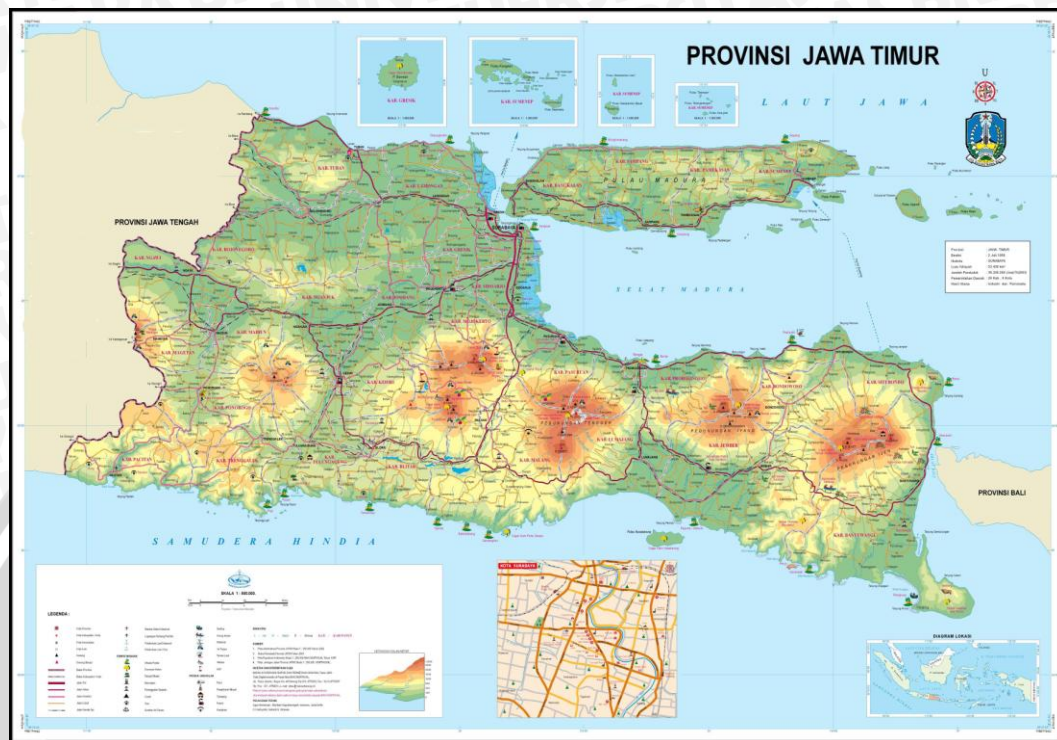


- Mengklik tombol *Plots*, memasukkan variabel kategori dalam *Horizontal Axis* dan variabel selang waktu dalam *Separate Lines*, klik tombol *Add*



- Mengklik *Continue* dan mengklik *Ok*.

Lampiran 2. Peta Propinsi Jawa Timur



Gambar 11. Peta Propinsi Jawa Timur

Lampiran 3. Pengkategorian spesies

	Column1
Mean	3.189534884
Standard Error	0.319711067
Median	2.54
Mode	1.7
Standard Deviation	2.096485669
Sample Variance	4.395252159
Kurtosis	-0.345956802
Skewness	0.810543347
Range	7.26
Minimum	0.6
Maximum	7.86
Sum	137.15
Count	43
Largest(1)	7.86
Smallest(1)	0.6
Confidence Level(95.0%)	0.645203047

Lampiran 4. *Effort* standart

Tabel 9. Standarisasi Alat Tangkap

1999	Alat Tangkap	pukat pantai	payang	dogol	pukat pantai	pukat cincin	jaring insang hanyut	jaring lingkaran	jaring klitik	jaring insang tetap	trammel net	bagan prahu	bagan tancap	serok	jaring angkat lainnya
Standar:	Effort	0	390920	67780	840	304038	715093	2535	110404	264923	0	0	189477	61996	67769
jaring lingkaran	Catch	0	33273	2672	746.26298	41044.14	11951.2322	2443.9185	6094.392	3515.4004	2986.1	774.9173	3084.7439	3395.1	160.800165
	CPUE x	0	0.0851	0.039	0.8884083	0.1349967	0.01671284	0.9640704	0.055201	0.0132695	0	0	0.0162803	0.0548	0.00237277
	FPI	0	0.0883	0.041	0.9215181	0.1400279	0.0173357	1	0.057258	0.0137641	0	0	0.0168871	0.0568	0.0024612
	F standard	0	34513	2772	774.0752	42573.8	12396.6385	2535	6321.522	3646.4147	0	0	3199.7082	3521.7	166.792971
2000	Alat Tangkap	pukat pantai	payang	dogol	pukat pantai	pukat cincin	jaring insang hanyut	jaring lingkaran	jaring klitik	jaring insang tetap	trammel net	bagan prahu	bagan tancap	serok	jaring angkat lainnya
Standar:	Effort	14880	801634	58689	9306	304038	435933	11941	309690	191399	534248	14493	71111	1872	25584
P.pantai	Catch	779.261645	42765	4532	1423.8583	37924.031	14255.0096	1421.6777	6990.517	3097.2247	4231.5	423.7645	3745.3295	67.668	35.0746823
	CPUE x	0.05236973	0.0533	0.077	0.1530043	0.1247345	0.0327	0.1190585	0.022573	0.016182	0.0079	0.029239	0.0526688	0.0361	0.00137096
	FPI	0.34227616	0.3487	0.505	1	0.8152352	0.21371945	0.7781382	0.147529	0.1057619	0.0518	0.191101	0.3442306	0.2363	0.00896028
	F standard	5093.06929	279501	29619	9306	247862.47	93167.3616	9291.7481	45688.36	20242.726	27656	2769.624	24478.585	442.26	229.239805
2001	Alat Tangkap	pukat pantai	payang	dogol	pukat pantai	pukat cincin	jaring insang hanyut	jaring lingkaran	jaring klitik	jaring insang tetap	trammel net	bagan prahu	bagan tancap	serok	jaring angkat lainnya
Standar:	Effort	14850	956729	1E+05	125	306609	257899	11735	378957	243782	532544	14350	76350	9062	19566
P.pantai	Catch	161.078249	33472	9001	317.47687	39429.135	11147.7695	2179.1595	6951.07	4386.306	3815.6	584.0771	4174.8484	0	27.2917379
	CPUE x	0.01084702	0.035	0.089	2.539815	0.1285974	0.04322533	0.1856974	0.018343	0.0179927	0.0072	0.040702	0.0546804	0	0.00139486
	FPI	0.00427079	0.0138	0.035	1	0.0506326	0.01701909	0.0731146	0.007222	0.0070843	0.0028	0.016026	0.0215293	0	0.0005492
	F standard	63.4212532	13179	3544	125	15524.412	4389.20534	857.9993	2736.841	1727.0179	1502.3	229.9684	1643.7608	0	10.7455614

2002	Alat Tangkap	pukat pantai	payang	dogol	pukat pantai	pukat cincin	jaring insang hanyut	jaring lingkaran	jaring klitik	jaring insang tetap	trammel net	bagan prahu	bagan tancap	serok	jaring angkat lainnya
Standar:	Effort	84945	624790	69791	12984	294373	246272	22237	434703	253697	580639	50	86531	7633	19532
bagan perahu	Catch	37.4113559	44570	8463	1128.1236	37415.6	11069.849	12449.339	6028.619	10609.688	3540.4	184.9242	2085.0674	5.6923	11.2101759
	CPUE x	0.00044042	0.0713	0.121	0.0868857	0.1271027	0.04494969	0.559848	0.013868	0.0418203	0.0061	3.698485	0.0240962	0.0007	0.00057394
	FPI	0.00011908	0.0193	0.033	0.0234922	0.0343662	0.01215354	0.1513723	0.00375	0.0113074	0.0016	1	0.0065152	0.0002	0.00015518
	F standard	10.1153197	12051	2288	305.02317	10116.467	2993.07681	3366.0648	1630.024	2868.6581	957.26	50	563.7626	1.5391	3.03101853
2003	Alat Tangkap	pukat pantai	payang	dogol	pukat pantai	pukat cincin	jaring insang hanyut	jaring lingkaran	jaring klitik	jaring insang tetap	trammel net	bagan prahu	bagan tancap	serok	jaring angkat lainnya
Standar:	Effort	0	894663	1E+05	49678	231121	280971	29092	504621	369243	481506	290	86532	10507	235980
bagan perahu	Catch	14.4511246	47630	7917	1984.9747	31521.561	13389.2023	15120.664	7540.977	5815.2669	2548.2	944.1719	2685.9969	389.83	12.2243694
	CPUE x	0	0.0532	0.077	0.0399568	0.1363855	0.04765332	0.5197533	0.014944	0.0157492	0.0053	3.255765	0.0310405	0.0371	5.1803E-05
	FPI	0	0.0164	0.024	0.0122726	0.0418905	0.0146366	0.1596409	0.00459	0.0048373	0.0016	1	0.009534	0.0114	1.5911E-05
	F standard	0	14630	2432	609.67994	9681.7677	4112.45957	4644.2735	2316.192	1786.1445	782.67	290	824.99714	119.74	3.75468411
2004	Alat Tangkap	pukat pantai	payang	dogol	pukat pantai	pukat cincin	jaring insang hanyut	jaring lingkaran	jaring klitik	jaring insang tetap	trammel net	bagan prahu	bagan tancap	serok	jaring angkat lainnya
Standar:	Effort	0	750160	58845	47541	218402	257505	64663	351279	190888	288400	45	92214	16746	4905
bagan perahu	Catch	759.05278	48375	9680	1524.2474	35857.193	13403.1017	15432.092	6820.15	3979.4114	2031.1	369.0288	3540.4863	121.24	1147.57831
	CPUE x	0	0.0645	0.165	0.0320617	0.1641798	0.05204987	0.2386541	0.019415	0.0208468	0.007	8.200639	0.0383942	0.0072	0.23396092
	FPI	0	0.0079	0.02	0.0039097	0.0200204	0.00634705	0.0291019	0.002368	0.0025421	0.0009	1	0.0046819	0.0009	0.0285296
	F standard	0	5898.9	1180	185.86934	4372.4876	1634.39716	1881.8157	831.6607	485.25624	247.67	45	431.73296	14.784	139.937664
2005	Alat Tangkap	pukat pantai	payang	dogol	pukat pantai	pukat cincin	jaring insang hanyut	jaring lingkaran	jaring klitik	jaring insang tetap	trammel net	bagan prahu	bagan tancap	serok	jaring angkat lainnya
Standar:	Effort	0	1E+06	5E+05	58928	216835	378331	57120	830053	539722	1E+06	500	103095	26014	120

Bubu	Catch	0	40354	7050	488.09142	70788.52	15161.2122	0	7319.376	10348.087	6324.8	34.59021	4694.5238	0	42.5739042
	CPUE x	0	0.0349	0.014	0.0082828	0.3264626	0.04007394	0	0.008818	0.019173	0.0055	0.06918	0.0455359	0	0.35478254
	FPI	0	0.0143	0.006	0.0033832	0.1333453	0.0163684	0	0.003602	0.0078313	0.0023	0.028257	0.0185994	0	0.14491272
	F standard	0	16483	2880	199.36341	28913.929	6192.67389	0	2989.636	4226.7285	2583.4	14.12855	1917.502	0	17.3895267
2006	Alat Tangkap	pukat pantai	payang	dogol	pukat pantai	pukat cincin	jaring insang hanyut	jaring lingkaran	jaring klitik	jaring insang tetap	trammel net	bagan prahu	bagan tancap	serok	jaring angkat lainnya
Standar:	Effort	0	629257	4E+05	141294	226207	426458	102144	237403	727754	754967	5000	127461	24729	28593
pukat cincin	Catch	0	53422	9412	9012.1062	43361.81	14097.1757	4015.3482	2138.168	9157.1113	15223	787.5177	6254.048	1899.6	515.295747
	CPUE x	0	0.0849	0.025	0.0637827	0.1916908	0.03305642	0.0393107	0.009006	0.0125827	0.0202	0.157504	0.0490664	0.0768	0.01802174
	FPI	0	0.4429	0.132	0.3327371	1	0.17244654	0.2050732	0.046984	0.0656406	0.1052	0.821654	0.2559661	0.4007	0.09401464
	F standard	0	278686	49101	47013.755	226207	73541.2068	20947.001	11154.25	47770.208	79413	4108.27	32625.701	9909.5	2688.16052
2007	Alat Tangkap	pukat pantai	payang	dogol	pukat pantai	pukat cincin	jaring insang hanyut	jaring lingkaran	jaring klitik	jaring insang tetap	trammel net	bagan prahu	bagan tancap	serok	jaring angkat lainnya
Standar:	Effort	0	576766	2E+05	23566	277244	344202	102145	275777	562784	800181	5000	100045	68018	25004
pukat cincin	Catch	0	51392	11442	279.31703	72248.076	9189.89152	3096.628	5080.262	6581.757	3007.9	7.731339	2041.5294	654.1	426.528362
	CPUE x	0	0.0891	0.05	0.0118525	0.2605938	0.02669912	0.030316	0.018422	0.011695	0.0038	0.001546	0.0204061	0.0096	0.01705841
	FPI	0	0.3419	0.192	0.0454828	1	0.10245493	0.1163343	0.070691	0.0448783	0.0144	0.005934	0.0783062	0.0369	0.06545974
	F standard	0	197211	43909	1071.8482	277244	35265.192	11882.967	19494.94	25256.764	11543	29.66816	7834.1432	2510	1636.7554
2008	Alat Tangkap	pukat pantai	payang	dogol	pukat pantai	pukat cincin	jaring insang hanyut	jaring lingkaran	jaring klitik	jaring insang tetap	trammel net	bagan prahu	bagan tancap	serok	jaring angkat lainnya
Standar:	Effort	0	588175	2E+05	31846	318674	497281	101145	460878	691472	898331	5000	98005	36999	25524
rawai tetap	Catch	4689.93901	70133	9240	1596.1671	53376.026	7929.97822	2347.1644	4487.326	6219.5179	3535.4	886.4833	2335.8421	1158.1	464.527544
	CPUE x	0	0.1192	0.048	0.0501214	0.1674941	0.01594667	0.0232059	0.009736	0.0089946	0.0039	0.177297	0.0238339	0.0313	0.01819964
	FPI	0	0.4411	0.177	0.185421	0.6196336	0.05899368	0.0858488	0.036019	0.033275	0.0146	0.655897	0.088172	0.1158	0.06732837

	F standard	0	259452	34184	5904.9162	197461.13	29336.4371	8683.1817	16600.57	23008.701	13079	3279.487	8641.2953	4284.4	1718.48935
2009	Alat Tangkap	pukat pantai	payang	dogol	pukat pantai	pukat cincin	jaring insang hanyut	jaring lingkaran	jaring klitik	jaring insang tetap	trammel net	bagan prahu	bagan tancap	serok	jaring angkat lainnya
Standar:	Effort	0	1E+06	4E+05	13529	299062	505813	108540	564362	955416	1E+06	5000	129136	19811	471717
rawai tetap	Catch	0	54521	6442	1523.5101	32928.688	24662.4313	3100.7068	2554.081	17071.459	7665.7	206.7417	3406.7304	548.05	1767.08756
	CPUE x	0	0.0401	0.015	0.1126107	0.1101066	0.048758	0.0285674	0.004526	0.0178681	0.0058	0.041348	0.026381	0.0277	0.00374608
	FPI	0	0.105	0.039	0.2951538	0.2885904	0.12779521	0.0748755	0.011862	0.0468324	0.0151	0.108374	0.0691447	0.0725	0.0098185
	F standard	0	142900	16886	3993.1353	86306.423	64640.4806	8126.9838	6694.271	44744.467	20092	541.8721	8929.0747	1436.4	4631.55428
2010	Alat Tangkap	pukat pantai	payang	dogol	pukat pantai	pukat cincin	jaring insang hanyut	jaring lingkaran	jaring klitik	jaring insang tetap	trammel net	bagan prahu	bagan tancap	serok	jaring angkat lainnya
Standar:	Effort	0	927273	5E+05	21770	199150	185142	106765	192583	1197835	1E+06	5000	117633	19832	59637
bagian perahu	Catch	0	44370	23217	613.69942	39460.646	8581.35246	1521.0379	1578.748	17833.081	9087.6	1167.766	942.0322	732.29	421.929544
	CPUE x	0	0.0479	0.046	0.0281901	0.1981453	0.04635011	0.0142466	0.008198	0.0148878	0.0083	0.233553	0.0080082	0.0369	0.00707496
	FPI	0	0.2049	0.197	0.1207012	0.8483948	0.19845631	0.0609994	0.0351	0.0637446	0.0357	1	0.0342887	0.1581	0.03029272
	F standard	0	189979	99406	2627.6641	168957.83	36742.5987	6512.5963	6759.693	76355.534	38910	5000	4033.4797	3135.4	1806.56697

Lanjutan

1999	rawai tuna	rawai hanyut lain	rawai tetap	huhate	pancing yang lain	pancing tonda	sero	jermal	bubu	perangkap lainnya	alat pengumpul kerang	alt pengumpul rpt laut	muro ami	lainnya	total
Standar:	32030	0	5314	382339	234202	0	2E+05	0	2409	338735	0	0	0	558690	3899633
jaring lingkar	335.415	44.82057	967.1551	2891.1	4845.45	178.202946	222.4	2.7	8.087	807.9684	0	0	0	1568.46	124013.8
	0.01047	0	0.182001	0.0076	0.02069	0	0.001	0	0.003	0.002385	0	0	0	0.00281	2.501192889
	0.01086	0	0.188784	0.0078	0.02146	0	0.001	0	0.003	0.002474	0	0	0	0.00291	2.594408979
	347.916	0	1003.2	2998.9	5026.04	0	230.7	0	8.388	838.0803	0	0	0	1626.91	124500.2887
2000	rawai tuna	rawai hanyut lain	rawai tetap	huhate	pancing yang lain	pancing tonda	sero	jermal	bubu	perangkap lainnya	alat pengumpul kerang	alat pengumpul rumput laut	muro ami	lainnya	
Standar:	1960	136711	48129	0	810943	86367	63348	24720	52909	244655	469697	507	0	174504	4899268
P.pantai	19.9797	905.5757	615.1968	0	4636.07	4037.57896	39.55	0	642.2	1946	0	0	0	187.971	134721.8
	0.01019	0.006624	0.012782	0	0.00572	0.04674909	6E-04	0	0.012	0.007954	0	0	0	0.00108	0.882392798
	0.06662	0.043293	0.083542	0	0.03736	0.30554099	0.004	0	0.079	0.051986	0	0	0	0.00704	5.767110053
	130.582	5918.628	4020.781	0	30300.3	26388.6585	258.5	0	4197	12718.59	0	0	0	1228.54	880509.7329
2001	rawai tuna	rawai hanyut lain	rawai tetap	huhate	pancing yang lain	pancing tonda	sero	jermal	bubu	perangkap lainnya	alat pengumpul kerang	alat pengumpul rumput laut	muro ami	lainnya	
Standar:	1200	37273	514	636	527813	76562	62694	0	9568	244795	305786	26	0	139660	4329973
P.pantai	12.2042	1762.926	924.9654	0	10885	7646.17736	38.01	0	432.9	1517.83	0	0	0	193.74	139061.5
	0.01017	0.047298	1.799544	0	0.02062	0.09986909	6E-04	0	0.045	0.0062	0	0	0	0.00139	5.203606776
	0.004	0.018622	0.708533	0	0.00812	0.0393214	2E-04	0	0.018	0.002441	0	0	0	0.00055	2.048813324
	4.80517	694.116	364.1861	0	4285.76	3010.52534	14.97	0	170.4	597.6144	0	0	0	76.2812	54752.61032
2002	rawai tuna	rawai hanyut lain	rawai tetap	huhate	pancing yang lain	pancing tonda	sero	jermal	bubu	perangkap lainnya	alat pengumpul kerang	alat pengumpul rumput laut	muro ami	lainnya	

Standar:	113	37910	1004	0	292138	15435	67365	0	78662	198306	319238	0	0	191818	3940166
bagian perahu	171.666	1122.196	3028.502	13.093	4735.7	6473.59341	24.12	0	361.4	833.1471	4.353346603	26.81609111	0.42152	207.646	154601.6
	1.51917	0.029602	3.016436	0	0.01621	0.41941	4E-04	0	0.005	0.004201	1.36367E-05	0	0	0.00108	9.808582917
	0.41075	0.008004	0.815587	0	0.00438	0.1134005	1E-04	0	0.001	0.001136	3.6871E-06	0	0	0.00029	2.652054431
	46.4152	303.4206	818.8493	0	1280.44	1750.33664	6.52	0	97.72	225.2671	1.177062196	0	0	56.1436	41790.43018
2003	rawai tuna	rawai hanyut lain	rawai tetap	huhate	pancing yang lain	pancing tonda	sero	jermal	bubu	perangkap lainnya	alat pengumpul kerang	alat pengumpul rumput laut	muro ami	lainnya	
Standar:	0	19222	12284	0	489424	12005	79028	0	8083	190596	211305	0	0	187165	4486237
bagian perahu	174.745	644.5334	903.0866	0	6220.53	5250.03451	33.82	30.57	1274	1214.246	0	0	0	651.413	153912.2002
	0	0.033531	0.073517	0	0.01271	0.43732066	4E-04	0	0.158	0.006371	0	0	0	0.00348	4.958846263
	0	0.010299	0.022581	0	0.0039	0.13432193	1E-04	0	0.048	0.001957	0	0	0	0.00107	1.523097069
	0	197.9668	277.3808	0	1910.62	1612.5348	10.39	0	391.3	372.9525	0	0	0	200.08	47206.24215
2004	rawai tuna	rawai hanyut lain	rawai tetap	huhate	pancing yang lain	pancing tonda	sero	jermal	bubu	perangkap lainnya	alat pengumpul kerang	alat pengumpul rumput laut	muro ami	lainnya	
Standar:	0	18884	5106	0	435739	127475	51245	0	7877	167104	350672	161375	0	123399	3790469
bagian perahu	0	874.5695	904.3673	2243.4	3872.96	5868.25759	9.77	373.6	1279	1752.581	60.87471956	0	0	1524.78	161803.4
	0	0.046313	0.177119	0	0.00889	0.04603458	2E-04	0	0.162	0.010488	0.000173594	0	0	0.01236	9.707398769
	0	0.005647	0.021598	0	0.00108	0.00561354	2E-05	0	0.02	0.001279	2.11684E-05	0	0	0.00151	1.183736823
	0	106.6465	110.2801	0	472.276	715.585376	1.191	0	156	213.7127	7.42316751	0	0	185.935	19318.89722
2005	rawai tuna	rawai hanyut lain	rawai tetap	huhate	pancing yang lain	pancing tonda	sero	jermal	bubu	perangkap lainnya	alat pengumpul kerang	alat pengumpul rumput laut	muro ami	lainnya	
Standar:	0	1220	354750	0	892756	122515	15840	0	540	6914	324962	0	0	630981	7362192
bubu	0	124.3525	1437.687	0	6483.16	5790.26023	0	0	1322	42.08084	0	0	0	5257.25	183062.6
	0	0.101928	0.004053	0	0.00726	0.04726164	0	0	2.448	0.006086	0	0	0	0.00833	3.549992373

	0	0.041633	0.001655	0	0.00297	0.01930426	0	0	1	0.002486	0	0	0	0.0034	1.450012359
	0	50.79242	587.2305	0	2648.08	2365.06111	0	0	540	17.18813	0	0	0	2147.35	74772.84587
2006	rawai tuna	rawai hanyut lain	rawai tetap	huhate	pancing yang lain	pancing tonda	sero	jermal	bubu	perangkap lainnya	alat pengumpul kerang	alat pengumpul rumput laut	muro ami	lainnya	
Standar:	0	24118	45318	0	376987	138846	0	0	20648	5760	335436	0	0	730840	5479952
pukat cincin	20.6979	466.0635	3413.03	0	5186.57	2735.21722	0	0	410	611.3314	0	0	0	3084.3	185221.8724
	0	0.019324	0.075313	0	0.01376	0.01969965	0	0	0.02	0.106134	0	0	0	0.00422	1.039592172
	0	0.10081	0.392887	0	0.07177	0.10276781	0	0	0.104	0.553672	0	0	0	0.02202	5.423275173
	0	2431.329	17804.87	0	27056.9	14268.8989	0	0	2139	3189.153	0	0	0	16090	966145.1467
2007	rawai tuna	rawai hanyut lain	rawai tetap	huhate	pancing yang lain	pancing tonda	sero	jermal	bubu	perangkap lainnya	alat pengumpul kerang	alat pengumpul rumput laut	muro ami	lainnya	
Standar:	0	24119	45388	0	523459	147266	0	0	7E+05	8516	252490	0	0	227114	5274579
pukat cincin	0	536.548	4723.009	0	5854.77	2506.62259	0	0	1307	52.11412	0	0	0	3953.04	184381.2
	0	0.022246	0.104059	0	0.01118	0.01702105	0	0	0.002	0.00612	0	0	0	0.01741	0.731199238
	0	0.085366	0.399313	0	0.04292	0.06531641	0	0	0.008	0.023483	0	0	0	0.06679	2.805896182
	0	2058.943	18124.02	0	22467	9618.88687	0	0	5015	199.9822	0	0	0	15169.3	707542.4561
2008	rawai tuna	rawai hanyut lain	rawai tetap	huhate	pancing yang lain	pancing tonda	sero	jermal	bubu	perangkap lainnya	alat pengumpul kerang	alat pengumpul rumput laut	muro ami	lainnya	
Standar:	0	25210	44258	0	654030	152880	13232	0	1E+06	22438	269672	0	0	185211	6404737
rawai tetap	0	2876.29	11963.45	0	2989.2	1933.13275	0	0	1030	67.30483	0	0	0	3865.85	193125.1
	0	0.114093	0.270312	0	0.00457	0.01264477	0	0	9E-04	0.003	0	0	0	0.02087	1.123660448
	0	0.42208	1	0	0.01691	0.04677851	0	0	0.003	0.011097	0	0	0	0.07722	4.156908531
	0	10640.65	44258	0	11058.4	7151.49852	0	0	3811	248.9898	0	0	0	14301.5	697103.5862

2009	rawai tuna	rawai hanyut lain	rawai tetap	huhate	pancing yang lain	pancing tonda	sero	jermal	bubu	perangkap lainnya	alat pengumpul kerang	alat pengumpul rumput laut	muro ami	lainnya	
Standar:	0	24121	22500	0	711849	224067	0	0	2E+06	178085	185648	0	0	624391	10045559
rawai tetap	0	4671.073	8584.477	0	7913.24	5177.37899	0	0	4617	196.021	0	0	0	414.665	187972.7
	0	0.193652	0.381532	0	0.01112	0.02310639	0	0	0.002	0.001101	0	0	0	0.00066	1.095886771
	0	0.507563	1	0	0.02914	0.06056207	0	0	0.006	0.002885	0	0	0	0.00174	2.872330252
	0	12242.93	22500	0	20740.7	13569.9624	0	0	12102	513.773	0	0	0	1086.84	492678.3378
2010	rawai tuna	rawai hanyut lain	rawai tetap	huhate	pancing yang lain	pancing tonda	sero	jermal	bubu	perangkap lainnya	alat pengumpul kerang	alat pengumpul rumput laut	muro ami	lainnya	
Standar:	0	30649	117556	0	1143960	614404	0	0	3E+05	345724	364897	0	0	787109	8295976
bagan perahu	0	1517.871	5967.427	0	7708.32	2877.58883	0	0	1943	7.609007	461.6074722	0	0	1387.29	171398
	0	0.049524	0.050762	0	0.00674	0.00468355	0	0	0.007	2.2E-05	0.001265035	0	0	0.00176	0.819819183
	0	0.212047	0.217348	0	0.02885	0.02005344	0	0	0.031	9.42E-05	0.005416474	0	0	0.00755	3.510202781
	0	6499.039	25550.61	0	33004.6	12320.9123	0	0	8320	32.57933	1976.455132	0	0	5939.95	733871.259

Keterangan :



: Alat tangkap yang standar



: upaya penangkapan (effort) hasil standarisasi

Lampiran 5. CPUE tahun 1999-2010 perairan utara Jawa Timur

Tabel 10. CPUE tahun 1999-2010 perairan utara Jawa Timur

No	jenis ikan	produksi ikan/tahun (ton)											
		1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
1	sebelah	0.000195983	3.69104E-05	0.000520523	0.015369547	0.012600029	0.024442389	0.007181752	0.000262072	0.000656498	0.000907039	0.002057732	0.001333749
2	lidah	0.001312447	0.000244177	0.003672884	0.01030858	0.007905734	0.014384879	0.002198659	0.000106402	0.000156457	0.000238559	0.000787735	0.000573125
3	nomei	0	5.33782E-06	4.93127E-05	7.41797E-05	6.35509E-05	0.000196699	5.88449E-05	1.00399E-05	0.000145292	0	0	0.001695529
4	peperok	0.046355716	0.006572443	0.110581029	0.222125017	0.182240729	0.359844556	0.149407179	0.013117905	0.014188689	0.012040391	0.017455811	0.010347183
5	manyung	0.051454499	0.008509616	0.154814537	0.155703111	0.14303405	0.345822017	0.092058821	0.007070884	0.011291619	0.012525255	0.023561417	0.014147168
6	beloso	0.011232906	0.002221441	0.038860248	0.059793594	0.054814785	0.12903428	0.030258311	0.002738719	0.005629062	0.00768824	0.013527487	0.004498609
7	biji angka	0.000333333	0.000162179	0.002604442	0.002648932	0.006655899	0.023774649	0.00659464	0.000716041	0.0007266	0.000470805	0.000735368	0.00019949
8	gerot-gerot	0.000111646	4.92896E-05	0.000343363	0.008925488	0.006742752	0.015958468	0.007823696	0.000617713	0.000756986	0.000491892	0.000727249	0.000712659
9	bambangan	0.015470647	0.002280497	0.082657246	0.072822892	0.108362788	0.230411703	0.039919572	0.003132863	0.003770516	0.006946457	0.015921544	0.004490978
10	kerapu	0.000896383	0.000684376	0.035612914	0.006058803	0.011949691	0.030948972	0.019972491	0.00189309	0.002784144	0.003463474	0.005599597	0.014201537
11	lencam	9.63853E-06	6.81423E-07	1.09584E-05	0.00524522	0.00220098	0.005088282	0.00633385	0.000663254	0.001429455	0.001400222	0.003458849	0.005396723
12	kakap	0.002714853	0.001115604	0.021759693	0.013572485	0.018883096	0.037445202	0.017063681	0.001897644	0.004724522	0.003439087	0.005646889	0.002067801
13	kurisi	0.017668232	0.003020523	0.050130943	0.075883402	0.068063033	0.209126844	0.050153234	0.004005609	0.007815079	0.010778025	0.018867889	0.013368421
14	suanggi	5.46183E-05	4.31568E-06	6.94031E-05	0.000100501	0.000135575	0.004917465	0.007966796	0.000621335	0.00651339	0.010934817	0.004993725	0.007118142
15	ekor kuning	0.020649751	0.004667751	0.064404235	0.194300465	0.190207896	0.383510503	0.138914065	0.008092573	0.009057266	0.019796341	0.02875852	0.008500401
16	gulama	0.013080291	0.002084929	0.036584557	0.05708484	0.055306245	0.136068843	0.045032391	0.003101501	0.004493582	0.004249153	0.006516422	0.004423664
17	cucut	0.010673068	0.001944215	0.029437866	0.037410479	0.041253019	0.110151215	0.030422809	0.002584808	0.003384391	0.004548678	0.003800857	0.003040179
18	pari	0.016992732	0.003315466	0.056143442	0.063622221	0.071672725	0.151954843	0.039646746	0.004824223	0.005518679	0.005829406	0.008583897	0.003647234
19	bawal hitam	0.00584095	0.001166029	0.01945478	0.019272355	0.016336823	0.045830773	0.009115609	0.001419352	0.002031256	0.002247729	0.004462344	0.003222636
20	bawal putih	0.007044964	0.003144088	0.021251955	0.023251735	0.028519533	0.083270799	0.014100038	0.001233769	0.001427052	0.00142131	0.002017341	0.001714606
21	alu-alu	6.02408E-05	4.76996E-06	7.67087E-05	0.000122038	0.000904541	0.003861504	0.000980302	0.000202247	0.000592897	0.001374688	0.000596332	0.000353059
22	layang	0.200422828	0.031810892	0.428189631	0.535065083	0.37621084	0.938097025	0.212535712	0.017683161	0.020530358	0.026767041	0.034721843	0.018307434
23	selar	0.040007136	0.0058624	0.085263515	0.261279914	0.200007448	0.345853075	0.059020089	0.006963136	0.009152949	0.007950181	0.010418562	0.006165114
24	kuwe	4.89959E-05	3.8614E-06	6.20975E-05	0.002601074	0.004270622	0.01455052	0.023223671	0.00080578	0.002987948	0.003203685	0.00368151	0.001747854
25	tetengkek	4.73894E-05	3.74783E-06	6.02711E-05	8.13583E-05	0.003033497	0.005569676	0.001529967	0.000142318	0.000436016	0.000870602	0.000489366	0.000481011
26	daun bambu	0.002655416	0.000419303	0.006231666	0.007049461	0.00725116	0.022666925	0.001880362	6.91407E-05	0.000153065	0.000109023	0.000139036	0.001220105
27	sunglir	0.000597589	4.20211E-06	6.75767E-05	9.57157E-05	0.000135575	0.000522804	6.15197E-05	1.53186E-05	7.61792E-05	5.33637E-05	6.35303E-05	3.65187E-05
28	ikan terbang	6.18472E-05	8.29065E-06	0.000133327	0.000134002	0.000139812	0.016269045	0.001810818	0.000149874	0.001166149	0.001233963	0.000158521	0.000239552
29	belanak	0.027089897	0.003602572	0.058587161	0.081693344	0.07598995	0.177924235	0.045643575	0.0035977	0.004846635	0.004771457	0.005302851	0.003253023
30	kuro	5.94376E-05	4.65639E-06	7.48823E-05	0.00010768	0.000203363	0.002303444	0.001880362	8.45629E-05	7.08085E-05	0.00030555	0.000217383	0.000122365

31	julung2	6.58633E-05	5.45139E-06	0.002461983	0.000117252	0.000256322	0.002919421	0.004561816	0.000254931	0.000291431	0.000330941	0.000547213	0.000264897
32	Teri	0.097003791	0.015353493	0.256669041	0.278657098	0.234958334	0.892494007	0.130229094	0.009629609	0.013143664	0.014154711	0.022326738	0.014186276
33	japuh	3.21284E-05	4.54282E-06	3.65279E-05	5.26436E-05	0.013671921	0.147782763	0.132340824	0.008212741	0.009643944	0.008240813	0.009428667	0.006149444
34	tembang	0.079380539	0.011885388	0.164972956	0.30198062	0.282591865	0.624859683	0.283233836	0.021862554	0.021558	0.020082094	0.02569019	0.021802462
35	lemuru	0.050811127	0.006823775	0.149185581	0.255398185	0.225288003	0.818348989	0.240311838	0.019330636	0.024005768	0.015376911	0.01713613	0.004884372
36	golok-golok	0.000692368	0.000109255	0.001276651	0.001926278	0.001559116	0.002702018	0.057147751	0.001330131	0.006686242	0.011467593	0.000235042	0.000250589
37	tetrubuk	0.000448995	3.58883E-05	0.000577141	0.000909299	0.001114259	0.005621439	0.001154162	5.1338E-05	5.38484E-05	3.61496E-05	0.000124219	0.000590022
38	kembung	0.108993322	0.013325236	0.241709024	0.388935934	0.334174026	0.71309971	0.201158587	0.016477855	0.021904127	0.019150239	0.022629572	0.017889923
39	temnggiri papan	0.000314859	2.50991E-05	0.000403634	0.002967186	0.000508407	0.009042959	0.017914257	0.001389957	0.001810068	0.00157638	0.002126946	0.002304083
40	tenggiri	0.04144649	0.004024941	0.06060533	0.086180017	0.080105932	0.221705201	0.07939647	0.006728596	0.008748026	0.00803037	0.01039928	0.008217518
41	Layur	0.02566741	0.005218909	0.081544971	0.11192036	0.104770043	0.267520446	0.065333878	0.005953143	0.008021285	0.007209545	0.009165412	0.006839074
42	cakalang	0.004199187	0.001898105	0.050454215	0.052930778	0.043610758	0.111522929	0.013458094	0.001477935	0.002969998	0.002632177	0.021220742	0.003215823
43	tongkol	0.093892955	0.011339682	0.222206757	0.285670665	0.242715782	0.687974052	0.159219565	0.011189623	0.015356958	0.012694957	0.017232542	0.010323609
	jumlah	0.996092469	0.153004328	2.539814982	3.699449834	3.260420508	8.375395249	2.448249734	0.191712084	0.2607069	0.277039315	0.381532301	0.23354396

Keterangan:

 : CPUE terendah

 : CPUE tertinggi

Lampiran 6. Bahan analisis *intrinsic rate* dari waktu ke waktuTabel 11. Bahan analisis *intrinsic rate* dari waktu ke waktu

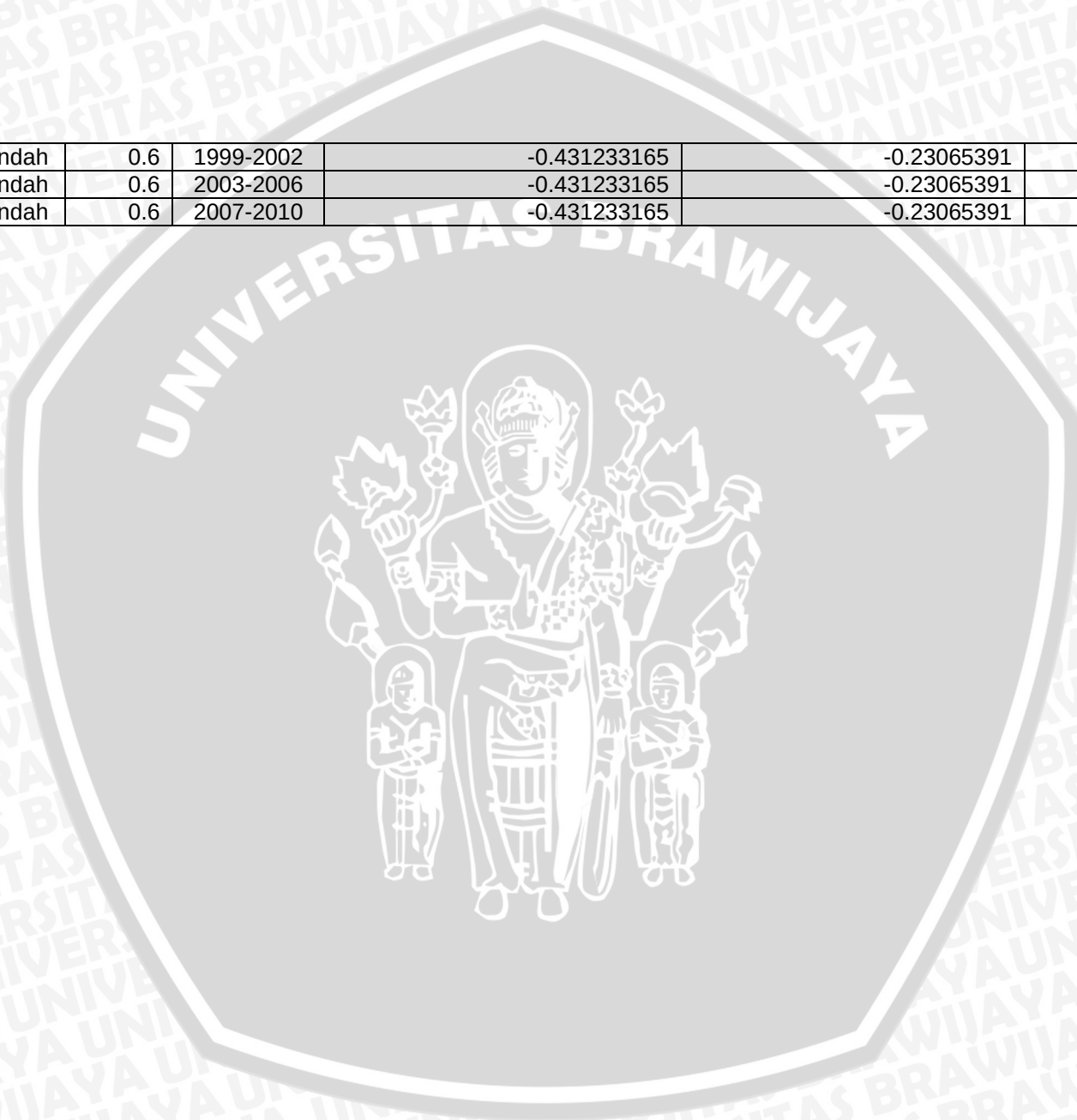
No	jenis ikan	Kategori	R-max	selang waktu	(Log) selang waktu 1999-2002	(Log) selang waktu 2003-2006	(Log) selang waktu 2007-2010
1	Teri	Tinggi	7.86	1999-2002	-0.188637218	0.10288322	-1.195101809
2	Teri	Tinggi	7.86	2003-2006	-0.188637218	0.10288322	-1.195101809
3	Teri	Tinggi	7.86	2007-2010	-0.188637218	0.10288322	-1.195101809
4	Selar	Tinggi	7.6	1999-2002	-0.406256652	-0.213359474	-1.472540152
5	Selar	Tinggi	7.6	2003-2006	-0.406256652	-0.213359474	-1.472540152
6	Selar	Tinggi	7.6	2007-2010	-0.406256652	-0.213359474	-1.472540152
7	Japuh	Tinggi	7.52	1999-2002	-3.900170937	-0.519981196	-1.47543684
8	Japuh	Tinggi	7.52	2003-2006	-3.900170937	-0.519981196	-1.47543684
9	Japuh	Tinggi	7.52	2007-2010	-3.900170937	-0.519981196	-1.47543684
10	peperek	Tinggi	6.84	1999-2002	-0.413824452	-0.152050969	-1.267348362
11	peperek	Tinggi	6.84	2003-2006	-0.413824452	-0.152050969	-1.267348362
12	peperek	Tinggi	6.84	2007-2010	-0.413824452	-0.152050969	-1.267348362
13	tembang	Tinggi	6.72	1999-2002	-0.253194994	0.083698917	-1.049962718
14	tembang	Tinggi	6.72	2003-2006	-0.253194994	0.083698917	-1.049962718
15	tembang	Tinggi	6.72	2007-2010	-0.253194994	0.083698917	-1.049962718
16	biji angka	Tinggi	6.4	1999-2002	-2.240416379	-1.42318395	-2.671159229
17	biji angka	Tinggi	6.4	2003-2006	-2.240416379	-1.42318395	-2.671159229
18	biji angka	Tinggi	6.4	2007-2010	-2.240416379	-1.42318395	-2.671159229
19	lemuru	Tinggi	6.08	1999-2002	-0.335152518	0.115037552	-1.21180913
20	lemuru	Tinggi	6.08	2003-2006	-0.335152518	0.115037552	-1.21180913
21	lemuru	Tinggi	6.08	2007-2010	-0.335152518	0.115037552	-1.21180913
22	kembung	Tinggi	5.04	1999-2002	-0.123226067	0.102059687	-1.088448981
23	kembung	Tinggi	5.04	2003-2006	-0.123226067	0.102059687	-1.088448981
24	kembung	Tinggi	5.04	2007-2010	-0.123226067	0.102059687	-1.088448981
25	swanggi	Tinggi	4.62	1999-2002	-3.640469959	-1.865148347	-1.529294483
26	swanggi	Tinggi	4.62	2003-2006	-3.640469959	-1.865148347	-1.529294483
27	swanggi	Tinggi	4.62	2007-2010	-3.640469959	-1.865148347	-1.529294483

28	tetrubuk	Tinggi	4.53	1999-2002	-2.705241991	-2.100113921	-3.09461487
29	tetrubuk	Tinggi	4.53	2003-2006	-2.705241991	-2.100113921	-3.09461487
30	tetrubuk	Tinggi	4.53	2007-2010	-2.705241991	-2.100113921	-3.09461487
31	layang	Tinggi	4.34	1999-2002	0.077545379	0.188795431	-0.998583576
32	layang	Tinggi	4.34	2003-2006	0.077545379	0.188795431	-0.998583576
33	layang	Tinggi	4.34	2007-2010	0.077545379	0.188795431	-0.998583576
34	gulama	Tinggi	4.22	1999-2002	-0.963232951	-0.620678199	-1.705912657
35	gulama	Tinggi	4.22	2003-2006	-0.963232951	-0.620678199	-1.705912657
36	gulama	Tinggi	4.22	2007-2010	-0.963232951	-0.620678199	-1.705912657
37	ikan terbang	Tinggi	4.14	1999-2002	-3.471768689	-1.73590153	-2.553123576
38	ikan terbang	Tinggi	4.14	2003-2006	-3.471768689	-1.73590153	-2.553123576
39	ikan terbang	Tinggi	4.14	2007-2010	-3.471768689	-1.73590153	-2.553123576
40	tetengkek	Tinggi	3.98	1999-2002	-3.714967311	-1.988198769	-2.642637923
41	tetengkek	Tinggi	3.98	2003-2006	-3.714967311	-1.988198769	-2.642637923
42	tetengkek	Tinggi	3.98	2007-2010	-3.714967311	-1.988198769	-2.642637923
43	beloso	Tinggi	3.94	1999-2002	-0.950362667	-0.663848394	-1.503853909
44	beloso	Tinggi	3.94	2003-2006	-0.950362667	-0.663848394	-1.503853909
45	beloso	Tinggi	3.94	2007-2010	-0.950362667	-0.663848394	-1.503853909
46	bawal hitam	Medium	3.68	1999-2002	-1.339759721	-1.13845032	-1.922124866
47	bawal hitam	Medium	3.68	2003-2006	-1.339759721	-1.13845032	-1.922124866
48	bawal hitam	Medium	3.68	2007-2010	-1.339759721	-1.13845032	-1.922124866
49	sebelah	Medium	3.58	1999-2002	-1.792555089	-1.35177429	-2.304954851
50	sebelah	Medium	3.58	2003-2006	-1.792555089	-1.35177429	-2.304954851
51	sebelah	Medium	3.58	2007-2010	-1.792555089	-1.35177429	-2.304954851
52	nomei	Medium	3.44	1999-2002	-3.889982993	-3.482627252	-2.73498844
53	nomei	Medium	3.44	2003-2006	-3.889982993	-3.482627252	-2.73498844
54	nomei	Medium	3.44	2007-2010	-3.889982993	-3.482627252	-2.73498844
55	Kurisi	Medium	3.16	1999-2002	-0.833560709	-0.479714704	-1.293884897
56	Kurisi	Medium	3.16	2003-2006	-0.833560709	-0.479714704	-1.293884897
57	Kurisi	Medium	3.16	2007-2010	-0.833560709	-0.479714704	-1.293884897
58	lencam	Medium	3.1	1999-2002	-2.278478076	-1.845078198	-1.932362029
59	lencam	Medium	3.1	2003-2006	-2.278478076	-1.845078198	-1.932362029
60	lencam	Medium	3.1	2007-2010	-2.278478076	-1.845078198	-1.932362029

61	sunglir	Medium	2.58	1999-2002	-3.116291448	-3.133583869	-3.639043249
62	sunglir	Medium	2.58	2003-2006	-3.116291448	-3.133583869	-3.639043249
63	sunglir	Medium	2.58	2007-2010	-3.116291448	-3.133583869	-3.639043249
64	Pari	Medium	2.54	1999-2002	-0.8536429	-0.571705556	-1.627470639
65	Pari	Medium	2.54	2003-2006	-0.8536429	-0.571705556	-1.627470639
66	Pari	Medium	2.54	2007-2010	-0.8536429	-0.571705556	-1.627470639
67	kerapu	Rendah	2.44	1999-2002	-1.363989016	-1.1886647	-1.584213079
68	kerapu	Rendah	2.44	2003-2006	-1.363989016	-1.1886647	-1.584213079
69	kerapu	Rendah	2.44	2007-2010	-1.363989016	-1.1886647	-1.584213079
70	julung-julung	Rendah	2.36	1999-2002	-2.576664163	-2.097317898	-2.843304897
71	julung-julung	Rendah	2.36	2003-2006	-2.576664163	-2.097317898	-2.843304897
72	julung-julung	Rendah	2.36	2007-2010	-2.576664163	-2.097317898	-2.843304897
73	cakalang	Rendah	2.26	1999-2002	-0.960656143	-0.769373014	-1.522318274
74	cakalang	Rendah	2.26	2003-2006	-0.960656143	-0.769373014	-1.522318274
75	cakalang	Rendah	2.26	2007-2010	-0.960656143	-0.769373014	-1.522318274
76	tongkol	Rendah	2.04	1999-2002	-0.212461559	0.041826377	-1.254862209
77	tongkol	Rendah	2.04	2003-2006	-0.212461559	0.041826377	-1.254862209
78	tongkol	Rendah	2.04	2007-2010	-0.212461559	0.041826377	-1.254862209
79	ekor kuning	Rendah	2	1999-2002	-0.54664771	-0.14223039	-1.179716236
80	ekor kuning	Rendah	2	2003-2006	-0.54664771	-0.14223039	-1.179716236
81	ekor kuning	Rendah	2	2007-2010	-0.54664771	-0.14223039	-1.179716236
82	belanak	Rendah	1.86	1999-2002	-0.767072531	-0.518334605	-1.740550265
83	belanak	Rendah	1.86	2003-2006	-0.767072531	-0.518334605	-1.740550265
84	belanak	Rendah	1.86	2007-2010	-0.767072531	-0.518334605	-1.740550265
85	tenggiri	Rendah	1.72	1999-2002	-0.716118338	-0.411239695	-1.451055703
86	tenggiri	Rendah	1.72	2003-2006	-0.716118338	-0.411239695	-1.451055703
87	tenggiri	Rendah	1.72	2007-2010	-0.716118338	-0.411239695	-1.451055703
88	bawal putih	Rendah	1.7	1999-2002	-1.262070311	-0.895771972	-2.181753778
89	bawal putih	Rendah	1.7	2003-2006	-1.262070311	-0.895771972	-2.181753778
90	bawal putih	Rendah	1.7	2007-2010	-1.262070311	-0.895771972	-2.181753778
91	Kuwe	Rendah	1.7	1999-2002	-2.566065597	-1.368043164	-1.934756648
92	Kuwe	Rendah	1.7	2003-2006	-2.566065597	-1.368043164	-1.934756648
93	Kuwe	Rendah	1.7	2007-2010	-2.566065597	-1.368043164	-1.934756648

94	Lidah	Rendah	1.66	1999-2002	-1.808602423	-1.609141254	-2.755506157
95	Lidah	Rendah	1.66	2003-2006	-1.808602423	-1.609141254	-2.755506157
96	Lidah	Rendah	1.66	2007-2010	-1.808602423	-1.609141254	-2.755506157
97	Cucut	Rendah	1.62	1999-2002	-1.099820686	-0.734211173	-1.830498819
98	Cucut	Rendah	1.62	2003-2006	-1.099820686	-0.734211173	-1.830498819
99	Cucut	Rendah	1.62	2007-2010	-1.099820686	-0.734211173	-1.830498819
100	gerot-gerot	Rendah	1.5	1999-2002	-2.025498117	-1.506644728	-2.5704436
101	gerot-gerot	Rendah	1.5	2003-2006	-2.025498117	-1.506644728	-2.5704436
102	gerot-gerot	Rendah	1.5	2007-2010	-2.025498117	-1.506644728	-2.5704436
103	bambangan	Rendah	1.32	1999-2002	-0.761373678	-0.41813345	-1.506827925
104	bambangan	Rendah	1.32	2003-2006	-0.761373678	-0.41813345	-1.506827925
105	bambangan	Rendah	1.32	2007-2010	-0.761373678	-0.41813345	-1.506827925
106	daun bambu	Rendah	1.12	1999-2002	-1.786327014	-1.49665082	-2.790155636
107	daun bambu	Rendah	1.12	2003-2006	-1.786327014	-1.49665082	-2.790155636
108	daun bambu	Rendah	1.12	2007-2010	-1.786327014	-1.49665082	-2.790155636
109	kakap	Rendah	1	1999-2002	-1.407128095	-1.123264878	-1.799195997
110	kakap	Rendah	1	2003-2006	-1.407128095	-1.123264878	-1.799195997
111	kakap	Rendah	1	2007-2010	-1.407128095	-1.123264878	-1.799195997
112	golok-golok	Rendah	1	1999-2002	-2.397445954	-1.202462297	-1.729566557
113	golok-golok	Rendah	1	2003-2006	-2.397445954	-1.202462297	-1.729566557
114	golok-golok	Rendah	1	2007-2010	-2.397445954	-1.202462297	-1.729566557
115	tenggiri papan	Rendah	0.88	1999-2002	-2.430535027	-1.539770177	-2.106933443
116	tenggiri papan	Rendah	0.88	2003-2006	-2.430535027	-1.539770177	-2.106933443
117	tenggiri papan	Rendah	0.88	2007-2010	-2.430535027	-1.539770177	-2.106933443
118	alu-alu	Rendah	0.86	1999-2002	-3.578796006	-2.225585598	-2.535066995
119	alu-alu	Rendah	0.86	2003-2006	-3.578796006	-2.225585598	-2.535066995
120	alu-alu	Rendah	0.86	2007-2010	-3.578796006	-2.225585598	-2.535066995
121	Layur	Rendah	0.84	1999-2002	-0.649070732	-0.353030482	-1.505354082
122	Layur	Rendah	0.84	2003-2006	-0.649070732	-0.353030482	-1.505354082
123	Layur	Rendah	0.84	2007-2010	-0.649070732	-0.353030482	-1.505354082
124	Kuro	Rendah	0.76	1999-2002	-3.607908316	-2.349524232	-3.145022687
125	Kuro	Rendah	0.76	2003-2006	-3.607908316	-2.349524232	-3.145022687
126	Kuro	Rendah	0.76	2007-2010	-3.607908316	-2.349524232	-3.145022687

127	manyung	Rendah	0.6	1999-2002	-0.431233165	-0.23065391	-1.210945138
128	manyung	Rendah	0.6	2003-2006	-0.431233165	-0.23065391	-1.210945138
129	manyung	Rendah	0.6	2007-2010	-0.431233165	-0.23065391	-1.210945138



Lampiran 7. Hasil *output* SPSS analisis MANOVA *intrinsic rate* dari waktu ke waktu

General Linear Model

Between-Subjects Factors		
		N
Kategori	medium	21
	rendah	63
	tinggi	45
selang waktu	1999-2002	43
	2003-2006	43
	2007-2010	43

Box's Test of Equality of Covariance Matrices^a

Box's M	127.927
F	2.334
df1	48
df2	5.772E3
Sig.	.000

Tests the null hypothesis that the observed covariance matrices of the dependent variables are equal across groups.

a. Design: Intercept + kategori + v3 + kategori * v3

Multivariate Tests^c

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Intercept	Pillai's Trace	.896	3.396E2 ^a	3.000	118.000	.000	.896
	Wilks' Lambda	.104	3.396E2 ^a	3.000	118.000	.000	.896
	Hotelling's Trace	8.634	3.396E2 ^a	3.000	118.000	.000	.896
	Roy's Largest Root	8.634	3.396E2 ^a	3.000	118.000	.000	.896
Kategori	Pillai's Trace	.377	9.221	6.000	238.000	.000	.189
	Wilks' Lambda	.633	10.110 ^a	6.000	236.000	.000	.204
	Hotelling's Trace	.564	11.003	6.000	234.000	.000	.220
	Roy's Largest Root	.534	21.200 ^b	3.000	119.000	.000	.348
v3	Pillai's Trace	.000	.000	6.000	238.000	1.000	.000

Kategori * v3	Wilks' Lambda	1.000	.000 ^a	6.000	236.000	1.000	.000
	Hotelling's Trace	.000	.000	6.000	234.000	1.000	.000
	Roy's Largest Root	.000	.000 ^b	3.000	119.000	1.000	.000
	Pillai's Trace	.000	.000	12.000	360.000	1.000	.000
	Wilks' Lambda	1.000	.000	12.000	312.490	1.000	.000
	Hotelling's Trace	.000	.000	12.000	350.000	1.000	.000
	Roy's Largest Root	.000	.000 ^b	4.000	120.000	1.000	.000

a. Exact statistic

b. The statistic is an upper bound on F that yields a lower bound on the significance level.

c. Design: Intercept + kategori + v3 + kategori * v3

Levene's Test of Equality of Error Variances^a

	F	df1	df2	Sig.
cpue 1999-2002	3.594	8	120	.001
cpue 2003-2006	1.578	8	120	.138
cpue 2007-2010	.158	8	120	.996

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + kategori + v3 + kategori * v3

Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	cpue 1999-2002	3.638 ^a	8	.455	.299	.965	.020
	cpue 2003-2006	14.393 ^b	8	1.799	2.508	.015	.143
	cpue 2007-2010	4.061 ^c	8	.508	1.167	.325	.072
Intercept	cpue 1999-2002	174.475	1	174.475	114.635	.000	.489
	cpue 2003-2006	355.286	1	355.286	495.208	.000	.805
	cpue 2007-2010	114.588	1	114.588	263.352	.000	.687
Kategori	cpue 1999-2002	3.638	2	1.819	1.195	.306	.020
	cpue 2003-2006	14.393	2	7.197	10.031	.000	.143
	cpue 2007-2010	4.061	2	2.031	4.667	.011	.072
v3	cpue 1999-2002	.000	2	.000	.000	1.000	.000
	cpue 2003-2006	.000	2	.000	.000	1.000	.000
	cpue 2007-2010	.000	2	.000	.000	1.000	.000
Kategori * v3	cpue 1999-2002	.000	4	.000	.000	1.000	.000

	cpue 2003-2006	.000	4	.000	.000	1.000	.000
	cpue 2007-2010	.000	4	.000	.000	1.000	.000
Error	cpue 1999-2002	182.641	120	1.522			
	cpue 2003-2006	86.094	120	.717			
	cpue 2007-2010	52.214	120	.435			
Total	cpue 1999-2002	426.765	129				
	cpue 2003-2006	594.747	129				
	cpue 2007-2010	209.784	129				
Corrected Total	cpue 1999-2002	186.279	128				
	cpue 2003-2006	100.487	128				
	cpue 2007-2010	56.275	128				

a. R Squared = .020 (Adjusted R Squared = -.046)

b. R Squared = .143 (Adjusted R Squared = .086)

c. R Squared = .072 (Adjusted R Squared = .010)

Estimated Marginal Means

1. Kategori

Dependent Variable		Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
cpue 1999-2002	medium	.985	.269	.452	1.518
	rendah	1.431	.155	1.123	1.738
	tinggi	1.451	.184	1.087	1.816
cpue 2003-2006	medium	1.285	.185	.919	1.651
	rendah	1.946	.107	1.735	2.157
	tinggi	2.287	.126	2.037	2.537
cpue 2007-2010	medium	.792	.144	.507	1.077
	rendah	1.039	.083	.875	1.204
	tinggi	1.303	.098	1.108	1.497

2. selang waktu

Dependent Variable	selang waktu	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
cpue 1999-2002	1999-2002	1.289	.209	.876	1.702
	2003-2006	1.289	.209	.876	1.702
	2007-2010	1.289	.209	.876	1.702
cpue 2003-2006	1999-2002	1.839	.143	1.556	2.123
	2003-2006	1.839	.143	1.556	2.123
	2007-2010	1.839	.143	1.556	2.123
cpue 2007-2010	1999-2002	1.045	.111	.824	1.265
	2003-2006	1.045	.111	.824	1.265
	2007-2010	1.045	.111	.824	1.265

3. Kategori * selang waktu

Dependent Variable	Kategori	selang waktu	Mean	Std. Error	95% Confidence Interval	
					Lower Bound	Upper Bound
cpue 1999-2002	medium	1999-2002	.985	.466	.062	1.908
		2003-2006	.985	.466	.062	1.908
		2007-2010	.985	.466	.062	1.908
	rendah	1999-2002	1.431	.269	.898	1.964
		2003-2006	1.431	.269	.898	1.964
		2007-2010	1.431	.269	.898	1.964
	tinggi	1999-2002	1.451	.319	.821	2.082
		2003-2006	1.451	.319	.821	2.082
		2007-2010	1.451	.319	.821	2.082
cpue 2003-2006	medium	1999-2002	1.285	.320	.651	1.919
		2003-2006	1.285	.320	.651	1.919
		2007-2010	1.285	.320	.651	1.919
	rendah	1999-2002	1.946	.185	1.580	2.312
		2003-2006	1.946	.185	1.580	2.312
		2007-2010	1.946	.185	1.580	2.312
	tinggi	1999-2002	2.287	.219	1.854	2.720
		2003-2006	2.287	.219	1.854	2.720

cpue 2007-2010	medium	2007-2010	2.287	.219	1.854	2.720
		1999-2002	.792	.249	.299	1.286
		2003-2006	.792	.249	.299	1.286
		2007-2010	.792	.249	.299	1.286
	rendah	1999-2002	1.039	.144	.754	1.324
		2003-2006	1.039	.144	.754	1.324
		2007-2010	1.039	.144	.754	1.324
	tinggi	1999-2002	1.303	.170	.965	1.640
		2003-2006	1.303	.170	.965	1.640
		2007-2010	1.303	.170	.965	1.640



Lampiran 8. Hasil Analisis

Tabel 12. Hasil analisis intrinsic rate terhadap selang waktu

R-max	dependent variable	cpue	std. error	95% Confidence Interval		up	down	up 1	down 2
				Lower Bound	Upper Bound				
Tinggi	1999-2002	28.27318214	1.527244121	12.22499627	65.38839034	31.32767038	25.21869389	3.054488242	3.054488242
	2003-2006	193.7911779	1.337416557	108.9769712	344.6142815	196.466011	191.1163448	2.674833113	2.674833113
	2007-2010	20.07604263	1.254100235	12.82292491	31.43179034	22.58424309	17.56784216	2.508200469	2.508200469
Medium	1999-2002	9.662828824	1.858721927	2.831903604	32.97084715	13.38027268	5.945384971	3.717443853	3.717443853
	2003-2006	19.28835324	1.530507689	8.304886347	44.79779193	22.34936861	16.22733786	3.061015377	3.061015377
	2007-2010	6.196796437	1.392976127	3.214909662	11.94443705	8.982748692	3.410844182	2.785952255	2.785952255
Rendah	1999-2002	26.95822196	1.43031278	13.27237501	54.75626862	29.81884752	24.0975964	2.86062556	2.86062556
	2003-2006	88.26731883	1.278541516	54.2640231	143.5779938	90.82440186	85.7102358	2.557083032	2.557083032
	2007-2010	10.94310499	1.210893419	7.491980368	15.98396432	13.36489183	8.521318155	2.421786837	2.421786837