

DAFTAR LAMPIRAN

Lampiran 1 Surat Tugas Bimbingan



072.4324.03.01

SURAT TUGAS

Nomor : 06/046/F-Stgs/IX/2025

Tentang
PEMBIMBING TESIS
PADA SEMESTER GANJIL TAHUN AKADEMIK 2025/2026
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Dekan Fakultas Ekonomi dan Bisnis, Universitas Mercu Buana, memberikan tugas kepada :

Nama dan gelar dosen : Dr. Lin Oktris, M.Si., CMA

Sebagai Pembimbing Tesis atas nama :

Nama : Metta Ciptaningtyas
NIM : 55524110037
Telp : 8159123111

Surat Tugas ini berlaku sejak tanggal ditetapkan sampai dengan tanggal **28 Februari 2026**. Dosen Pembimbing diwajibkan untuk melaksanakan kegiatan bimbingan pembuatan rancangan usulan / proposal Tesis, penulisan, penyusunan dan pengujian Tesis dengan penuh tanggung jawab, dan memenuhi ketentuan Pedoman Bimbingan Tesis, prosedur administrasi akademik yang ditetapkan dan menjaga kode etik profesional dosen.

Demikian Surat Tugas ini dibuat untuk dapat dilaksanakan dengan penuh tanggungjawab

Dikeluarkan di : J a k a r t a

Pada tanggal : 15 September 2025

Dekan



Dr. Nurul Hidayah, SE., Ak., M.Si

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Lampiran 2 Tabulasi Data

No	KODE	NAMA PERUSAHAAN	TAHUN	Y	X1	X2	Z
1	ABMM	ABM Investama Tbk.	2019	1.045	2.484	0.560	0.283
2	ADRO	Alamtri Resources Indonesia Tb	2019	0.590	0.812	0.439	0.496
3	AKRA	AKR Corporindo Tbk.	2019	0.442	1.127	0.596	0.002
4	ARII	Atlas Resources Tbk.	2019	0.222	6.902	0.397	0.046
5	ARTI	Ratu Prabu Energi Tbk	2019	0.250	1.229	0.331	0.004
6	BBRM	Pelayaran Nasional Bina Buana	2019	0.212	3.250	0.348	0.052
7	BESS	Batulicin Nusantara Maritim Tb	2019	0.487	1.854	0.998	0.943
8	BIPI	Astrindo Nusantara Infrastrukt	2019	0.494	2.449	0.305	0.000
9	BSSR	Baramulti Suksessarana Tbk.	2019	0.513	0.472	0.500	0.145
10	BUMI	Bumi Resources Tbk.	2019	1.748	7.619	0.227	0.300
11	BYAN	Bayan Resources Tbk.	2019	0.498	1.064	0.539	0.075
12	CBRE	Cakra Buana Resources Energi T	2019	0.232	152.106	0.600	0.989
13	CUAN	Petrindo Jaya Kreasi Tbk.	2019	-0.020	1.161	1.000	0.250
14	DEWA	Darma Henwa Tbk	2019	0.308	1.346	0.175	0.900
15	DOID	BUMA Internasional Grup Tbk.	2019	0.663	3.213	0.379	0.010
16	DSSA	Dian Swastatika Sentosa Tbk	2019	0.711	1.270	0.599	0.168
17	DWGL	Dwi Guna Laksana Tbk.	2019	0.426	-19.562	0.515	0.019
18	ELSA	Elnusa Tbk.	2019	0.486	0.903	0.411	0.878
19	ENRG	Energi Mega Persada Tbk.	2019	0.973	5.403	0.153	0.637
20	GEMS	Golden Energy Mines Tbk.	2019	0.585	1.179	0.670	0.079
21	HITS	Humpuss Intermoda Transportasi	2019	0.286	2.239	0.455	0.186
22	HRUM	Harum Energy Tbk.	2019	0.465	0.119	0.833	0.319
23	INDY	Indika Energy Tbk.	2019	1.158	2.458	0.378	0.122
24	INPS	Indah Prakasa Sentosa Tbk.	2019	-1.755	2.398	0.692	0.059
25	ITMG	Indo Tambangraya Megah Tbk.	2019	0.570	0.367	0.651	0.019
26	JSKY	Sky Energy Indonesia Tbk.	2019	0.040	1.415	0.269	0.208
27	KKGI	Resource Alam Indonesia Tbk.	2019	0.576	0.353	0.264	0.121
28	MBAP	Mitrabara Adiperdana Tbk.	2019	0.522	0.322	0.600	0.141
29	MEDC	Medco Energi Internasional Tbk	2019	1.495	3.460	0.500	0.014
30	MYOH	Samindo Resources Tbk.	2019	0.503	0.310	0.590	0.957
31	PGAS	Perusahaan Gas Negara Tbk.	2019	0.846	1.280	0.570	0.324
32	PSSI	IMC Pelita Logistik Tbk.	2019	0.194	0.617	0.454	0.043
33	PTBA	Bukit Asam Tbk.	2019	0.509	0.417	0.659	0.019
34	PTRO	Petrosea Tbk.	2019	0.478	1.592	0.698	0.190
35	RAJA	Rukun Raharja Tbk.	2019	0.550	0.471	0.326	0.446
36	RUIS	Radiant Utama Interinsco Tbk.	2019	0.597	1.890	0.275	0.012
37	SGER	Sumber Global Energy Tbk.	2019	0.516	3.050	0.785	0.037

No	KODE	NAMA PERUSAHAAN	TAHUN	Y	X1	X2	Z
38	SHIP	Sillo Maritime Perdana Tbk.	2019	0.363	1.098	0.448	0.000
39	SMRU	SMR Utama Tbk.	2019	0.237	1.165	0.523	0.251
40	SOCI	Soechi Lines Tbk.	2019	0.533	1.051	0.799	0.234
41	SURE	Super Energy Tbk.	2019	0.677	6.358	0.641	0.510
42	TAMU	Pelayaran Tamarin Samudra Tbk.	2019	0.252	1.126	0.800	0.262
43	TCPI	Transcoal Pacific Tbk.	2019	0.252	1.139	0.550	0.166
44	TEBE	Dana Brata Luhur Tbk.	2019	0.528	0.363	0.518	0.527
45	TOBA	TBS Energi Utama Tbk.	2019	0.554	1.403	0.619	0.570
46	TPMA	Trans Power Marine Tbk.	2019	0.315	0.412	0.596	0.035
47	WINS	Wintermar Offshore Marine Tbk.	2019	0.242	0.596	0.350	0.342
48	WOWS	Ginting Jaya Energi Tbk.	2019	0.538	0.366	0.634	0.496
49	ABMM	ABM Investama Tbk.	2020	-0.260	4.114	-61.635	0.269
50	ADMR	Adaro Minerals Indonesia Tbk.	2020	0.511	2.300	0.713	0.211
51	ADRO	Alamtri Resources Indonesia Tb	2020	0.537	0.615	0.439	0.244
52	AKRA	AKR Corporindo Tbk.	2020	0.443	0.770	0.596	0.003
53	APEX	Apexindo Pratama Duta Tbk.	2020	0.236	1.654	0.687	0.156
54	ARII	Atlas Resources Tbk.	2020	0.166	11.788	0.397	0.048
55	ARTI	Ratu Prabu Energi Tbk	2020	0.212	-6.475	0.331	0.825
56	BBRM	Pelayaran Nasional Bina Buana	2020	0.238	4.175	0.348	0.014
57	BESS	Batulicin Nusantara Maritim Tb	2020	0.315	0.958	0.792	0.112
58	BIPI	Astrindo Nusantara Infrastrukt	2020	0.485	2.485	0.305	0.001
59	BOSS	Borneo Olah Sarana Sukses Tbk.	2020	0.248	7.003	0.236	0.749
60	BSSR	Baramulti Suksessarana Tbk.	2020	0.503	0.383	0.500	0.002
61	BUMI	Bumi Resources Tbk.	2020	0.204	24.849	0.218	0.375
62	BYAN	Bayan Resources Tbk.	2020	0.443	0.880	0.540	0.043
63	CBRE	Cakra Buana Resources Energi T	2020	0.171	-125.891	0.600	0.978
64	CUAN	Petrindo Jaya Kreasi Tbk.	2020	0.217	1.431	1.000	0.970
65	DEWA	Darma Henwa Tbk	2020	-5.906	1.044	0.175	0.985
66	DOID	BUMA Internasional Grup Tbk.	2020	0.288	2.695	0.379	0.006
67	DSSA	Dian Swastatika Sentosa Tbk	2020	-9.435	0.825	0.599	0.268
68	DWGL	Dwi Guna Laksana Tbk.	2020	-1.279	-14.392	0.515	0.031
69	ELSA	Elnusa Tbk.	2020	0.528	1.022	0.411	0.888
70	ENRG	Energi Mega Persada Tbk.	2020	0.711	2.981	0.135	0.647
71	GEMS	Golden Energy Mines Tbk.	2020	0.496	1.329	0.670	0.097
72	GTSI	GTS Internasional Tbk.	2020	0.260	1.296	1.000	0.809
73	HITS	Humpuss Intermoda Transportasi	2020	0.276	2.279	0.455	0.195
74	HRUM	Harum Energy Tbk.	2020	0.310	0.097	0.854	0.393
75	INDY	Indika Energy Tbk.	2020	0.207	3.028	0.378	0.244

No	KODE	NAMA PERUSAHAAN	TAHUN	Y	X1	X2	Z
76	INPS	Indah Prakasa Sentosa Tbk.	2020	-0.003	2.680	0.734	0.110
77	ITMG	Indo Tambangraya Megah Tbk.	2020	0.729	0.369	0.651	0.097
78	JSKY	Sky Energy Indonesia Tbk.	2020	0.160	1.134	0.227	0.053
79	KKGI	Resource Alam Indonesia Tbk.	2020	0.323	0.290	0.264	0.202
80	MAHA	Mandiri Herindo Adiperkasa Tbk	2020	0.488	0.561	0.460	0.203
81	MBAP	Mitrabara Adiperdana Tbk.	2020	0.515	0.758	0.600	0.181
82	MEDC	Medco Energi Internasional Tbk	2020	-0.486	3.863	0.515	0.033
83	MYOH	Samindo Resources Tbk.	2020	0.473	0.171	0.590	0.000
84	PGAS	Perusahaan Gas Negara Tbk.	2020	0.020	1.549	0.570	0.395
85	PSSI	IMC Pelita Logistik Tbk.	2020	0.057	0.553	0.456	0.021
86	PTBA	Bukit Asam Tbk.	2020	0.505	0.420	0.659	0.052
87	PTRO	Petrosea Tbk.	2020	0.335	1.289	0.698	0.467
88	RAJA	Rukun Raharja Tbk.	2020	0.687	0.352	0.326	0.089
89	RGAS	Kian Santang Muliatama Tbk.	2020	0.556	5.367	0.700	0.025
90	RMKE	RMK Energy Tbk.	2020	0.432	1.167	0.960	0.461
91	RUIS	Radiant Utama Interinsco Tbk.	2020	0.677	1.947	0.275	0.010
92	SGER	Sumber Global Energy Tbk.	2020	0.567	1.911	0.549	0.002
93	SHIP	Sillo Maritime Perdana Tbk.	2020	0.374	1.183	0.448	0.037
94	SICO	Sigma Energy Compressindo Tbk.	2020	0.614	1.077	0.700	0.349
95	SMRU	SMR Utama Tbk.	2020	0.310	1.881	0.523	0.504
96	SOCI	Soechi Lines Tbk.	2020	0.375	0.827	0.799	0.420
97	SURE	Super Energy Tbk.	2020	0.489	0.810	0.641	0.017
98	TAMU	Pelayaran Tamarin Samudra Tbk.	2020	-0.502	1.040	0.800	0.332
99	TCPI	Transcoal Pacific Tbk.	2020	0.253	0.923	0.550	0.187
100	TEBE	Dana Brata Luhur Tbk.	2020	0.028	0.273	0.393	0.540
101	TOBA	TBS Energi Utama Tbk.	2020	0.399	1.653	0.619	0.603
102	TPMA	Trans Power Marine Tbk.	2020	0.436	0.347	0.596	0.028
103	WINS	Wintermar Offshore Marine Tbk.	2020	0.241	0.569	0.350	0.363
104	ABMM	ABM Investama Tbk.	2021	0.495	1.905	0.536	0.311
105	ADMR	Adaro Minerals Indonesia Tbk.	2021	0.474	2.901	0.685	0.386
106	ADRO	Alamtri Resources Indonesia Tb	2021	0.558	0.702	0.439	0.484
107	AKRA	AKR Corporindo Tbk.	2021	0.436	1.081	0.596	0.002
108	APEX	Apexindo Pratama Duta Tbk.	2021	0.734	1.726	0.687	0.057
109	ARII	Atlas Resources Tbk.	2021	-0.580	8.453	0.348	0.072
110	BIPI	Astrindo Nusantara Infrastrukt	2021	0.486	1.350	0.276	0.001
111	BOSS	Borneo Olah Sarana Sukses Tbk.	2021	0.250	-7.711	0.151	0.468
112	BSSR	Baramulti Suksessarana Tbk.	2021	0.473	0.723	0.500	0.312
113	BUMI	Bumi Resources Tbk.	2021	0.483	5.534	0.200	0.305

No	KODE	NAMA PERUSAHAAN	TAHUN	Y	X1	X2	Z
114	BYAN	Bayan Resources Tbk.	2021	0.472	0.306	0.552	0.181
115	CBRE	Cakra Buana Resources Energi T	2021	0.464	64.614	1.000	1.000
116	CNKO	Exploitasi Energi Indonesia Tb	2021	0.221	-1.985	0.096	0.226
117	CUAN	Petrindo Jaya Kreasi Tbk.	2021	0.616	0.663	1.000	0.013
118	DEWA	Darma Henwa Tbk	2021	1.136	1.080	0.175	0.985
119	DOID	BUMA Internasional Grup Tbk.	2021	1.215	5.158	0.379	0.006
120	DSSA	Dian Swastatika Sentosa Tbk	2021	0.551	0.720	0.599	0.326
121	ELSA	Elnusa Tbk.	2021	0.713	0.915	0.511	0.903
122	ENRG	Energi Mega Persada Tbk.	2021	0.945	1.370	0.458	0.587
123	GEMS	Golden Energy Mines Tbk.	2021	0.482	1.621	0.625	0.079
124	GTSI	GTS Internasional Tbk.	2021	0.244	1.678	0.848	0.683
125	HITS	Humpuss Intermoda Transportasi	2021	0.230	2.519	0.455	0.305
126	HRUM	Harum Energy Tbk.	2021	0.478	0.343	0.827	0.596
127	IATA	MNC Energy Investments Tbk.	2021	0.711	2.759	0.076	0.487
128	INDY	Indika Energy Tbk.	2021	0.837	3.177	0.378	0.158
129	INPS	Indah Prakasa Sentosa Tbk.	2021	0.137	3.433	0.735	0.119
130	ITMG	Indo Tambangraya Megah Tbk.	2021	0.485	0.387	0.651	0.060
131	JSKY	Sky Energy Indonesia Tbk.	2021	0.372	2.041	0.111	0.200
132	KKGI	Resource Alam Indonesia Tbk.	2021	0.573	0.336	0.264	0.146
133	LEAD	Logindo Samudramakmur Tbk.	2021	0.137	2.882	0.324	0.006
134	MAHA	Mandiri Herindo Adiperkasa Tbk	2021	0.401	0.457	0.460	0.165
135	MBAP	Mitrabara Adiperdana Tbk.	2021	0.470	0.691	0.600	0.028
136	MEDC	Medco Energi Internasional Tbk	2021	1.077	3.624	0.515	0.030
137	MYOH	Samindo Resources Tbk.	2021	0.471	0.166	0.590	0.000
138	PGAS	Perusahaan Gas Negara Tbk.	2021	0.471	1.286	0.570	0.311
139	PSSI	IMC Pelita Logistik Tbk.	2021	0.347	0.406	0.438	0.067
140	PTBA	Bukit Asam Tbk.	2021	0.474	0.489	0.659	0.004
141	PTRO	Petrosea Tbk.	2021	0.429	1.047	0.698	0.347
142	RAJA	Rukun Raharja Tbk.	2021	0.520	0.963	0.327	0.022
143	RGAS	Kian Santang Muliatama Tbk.	2021	0.468	2.337	0.300	0.619
144	RMKE	RMK Energy Tbk.	2021	0.472	0.745	0.768	0.837
145	RUIS	Radiant Utama Interinsco Tbk.	2021	0.688	1.679	0.275	0.012
146	SGER	Sumber Global Energy Tbk.	2021	0.527	1.849	0.544	0.042
147	SHIP	Sillo Maritime Perdana Tbk.	2021	0.389	1.157	0.448	0.009
148	SICO	Sigma Energy Compressindo Tbk.	2021	0.655	0.622	0.900	0.163
149	SMRU	SMR Utama Tbk.	2021	0.292	3.857	0.523	0.578
150	SOCI	Soechi Lines Tbk.	2021	0.547	0.712	0.799	0.456
151	TAMU	Pelayaran Tamarin Samudra Tbk.	2021	0.244	0.974	0.800	0.452

No	KODE	NAMA PERUSAHAAN	TAHUN	Y	X1	X2	Z
152	TCPI	Transcoal Pacific Tbk.	2021	0.260	0.849	0.550	0.223
153	TEBE	Dana Brata Luhur Tbk.	2021	0.434	0.215	0.393	0.737
154	TOBA	TBS Energi Utama Tbk.	2021	0.491	1.422	0.619	0.001
155	TPMA	Trans Power Marine Tbk.	2021	0.364	0.288	0.577	0.022
156	WINS	Wintermar Offshore Marine Tbk.	2021	1.089	0.274	0.342	0.334
157	ABMM	ABM Investama Tbk.	2022	0.430	2.211	0.536	0.357
158	ADMR	Adaro Minerals Indonesia Tbk.	2022	0.453	1.260	0.685	0.323
159	ADRO	Alamtri Resources Indonesia Tb	2022	0.588	0.652	0.439	0.448
160	AKRA	AKR Corporindo Tbk.	2022	0.400	1.067	0.596	0.001
161	ALII	Ancara Logistics Indonesia Tbk	2022	0.189	3.040	0.510	0.970
162	APEX	Apexindo Pratama Duta Tbk.	2022	0.430	2.960	0.646	0.159
163	ARII	Atlas Resources Tbk.	2022	-0.052	5.389	0.318	0.065
164	BBRM	Pelayaran Nasional Bina Buana	2022	0.360	0.323	0.707	0.118
165	BIPI	Astrindo Nusantara Infrastrukt	2022	0.431	1.108	0.276	0.008
166	BOSS	Borneo Olah Sarana Sukses Tbk.	2022	0.185	-18.751	0.151	0.083
167	BSSR	Baramulti Suksessarana Tbk.	2022	0.443	0.836	0.500	0.109
168	BUMI	Bumi Resources Tbk.	2022	0.387	0.592	0.458	0.457
169	BYAN	Bayan Resources Tbk.	2022	0.439	0.977	0.609	0.037
170	CBRE	Cakra Buana Resources Energi T	2022	0.270	0.423	0.730	0.256
171	CNKO	Exploitasi Energi Indonesia Tb	2022	-0.194	-1.705	0.096	0.061
172	CUAN	Petrindo Jaya Kreasi Tbk.	2022	0.463	0.365	1.000	0.308
173	DEWA	Darma Henwa Tbk	2022	0.222	1.156	0.175	0.958
174	DOID	BUMA Internasional Grup Tbk.	2022	0.512	5.132	0.379	0.028
175	DSSA	Dian Swastatika Sentosa Tbk	2022	0.408	1.149	0.599	0.108
176	ELSA	Elnusa Tbk.	2022	0.393	1.146	0.511	0.944
177	ENRG	Energi Mega Persada Tbk.	2022	0.745	1.319	0.480	0.526
178	GEMS	Golden Energy Mines Tbk.	2022	0.446	1.023	0.625	0.072
179	GTSI	GTS Internasional Tbk.	2022	0.236	1.173	0.848	0.963
180	HITS	Humpuss Intermoda Transportasi	2022	0.258	1.882	0.455	0.305
181	HRUM	Harum Energy Tbk.	2022	0.425	0.289	0.810	0.285
182	IATA	MNC Energy Investments Tbk.	2022	0.496	1.392	0.441	0.439
183	INDY	Indika Energy Tbk.	2022	0.714	1.682	0.378	0.157
184	INPS	Indah Prakasa Sentosa Tbk.	2022	0.209	15.047	0.732	0.123
185	ITMG	Indo Tambangraya Megah Tbk.	2022	0.444	0.354	0.651	0.002
186	KKGI	Resource Alam Indonesia Tbk.	2022	0.547	0.384	0.264	0.057
187	MAHA	Mandiri Herindo Adiperkasa Tbk	2022	0.351	0.413	0.460	0.195
188	MBAP	Mitrabara Adiperdana Tbk.	2022	0.442	0.225	0.600	0.019
189	MBSS	Mitrabahtera Segara Sejati Tbk	2022	0.302	0.134	0.825	0.109

No	KODE	NAMA PERUSAHAAN	TAHUN	Y	X1	X2	Z
190	MEDC	Medco Energi Internasional Tbk	2022	0.706	2.967	0.515	0.096
191	MKAP	Multikarya Asia Pasifik Raya T	2022	2.189	0.800	0.699	0.089
192	MYOH	Samindo Resources Tbk.	2022	0.466	0.140	0.590	0.004
193	PGAS	Perusahaan Gas Negara Tbk.	2022	0.480	1.090	0.570	0.482
194	PSSI	IMC Pelita Logistik Tbk.	2022	0.316	0.230	0.438	0.002
195	PTBA	Bukit Asam Tbk.	2022	0.431	0.569	0.659	0.008
196	PTRO	Petrosea Tbk.	2022	0.399	1.001	0.898	0.154
197	RAJA	Rukun Raharja Tbk.	2022	0.388	0.958	0.321	0.015
198	RGAS	Kian Santang Muliatama Tbk.	2022	0.447	0.180	0.300	0.698
199	RMKE	RMK Energy Tbk.	2022	0.436	0.390	0.768	0.648
200	RMKO	Royaltama Mulia Kontraktorindo	2022	0.459	0.985	1.000	0.999
201	RUIS	Radiant Utama Interinsco Tbk.	2022	0.702	1.420	0.275	0.012
202	SGER	Sumber Global Energy Tbk.	2022	0.429	0.878	0.544	0.012
203	SHIP	Sillo Maritime Perdana Tbk.	2022	0.333	1.203	0.448	0.002
204	SMRU	SMR Utama Tbk.	2022	0.453	3.796	0.523	0.422
205	SOCI	Soechi Lines Tbk.	2022	0.482	0.695	0.799	0.029
206	TAMU	Pelayaran Tamarin Samudra Tbk.	2022	0.219	1.043	0.800	0.362
207	TCPI	Transcoal Pacific Tbk.	2022	0.229	0.705	0.550	0.255
208	TEBE	Dana Brata Luhur Tbk.	2022	0.445	0.235	0.393	0.744
209	TOBA	TBS Energi Utama Tbk.	2022	0.401	1.123	0.619	0.001
210	TPMA	Trans Power Marine Tbk.	2022	0.270	0.209	0.577	0.006
211	WINS	Wintermar Offshore Marine Tbk.	2022	0.310	0.217	0.341	0.265
212	AADI	Adaro Andalan Indonesia Tbk.	2023	0.396	0.474	1.000	0.193
213	ABMM	ABM Investama Tbk.	2023	0.370	1.842	0.536	0.553
214	ADMR	Adaro Minerals Indonesia Tbk.	2023	0.438	0.633	0.685	0.450
215	ADRO	Alamtri Resources Indonesia Tb	2023	0.412	0.414	0.439	0.397
216	AKRA	AKR Corporindo Tbk.	2023	0.381	1.154	0.602	0.001
217	ALII	Ancara Logistics Indonesia Tbk	2023	0.278	2.024	0.411	0.964
218	APEX	Apexindo Pratama Duta Tbk.	2023	-1.058	2.961	0.671	0.151
219	ARII	Atlas Resources Tbk.	2023	-0.553	6.428	0.318	0.103
220	BBRM	Pelayaran Nasional Bina Buana	2023	0.251	0.169	0.707	0.277
221	BIPI	Astrindo Nusantara Infrastrukt	2023	0.883	2.063	0.230	0.037
222	BOAT	Newport Marine Services Tbk.	2023	0.866	1.016	0.400	0.023
223	BSSR	Baramulti Suksessarana Tbk.	2023	0.484	0.684	0.500	0.176
224	BUMI	Bumi Resources Tbk.	2023	0.826	0.515	0.458	0.538
225	BYAN	Bayan Resources Tbk.	2023	0.436	0.741	0.611	0.071
226	CBRE	Cakra Buana Resources Energi T	2023	0.582	1.092	0.611	0.224
227	DEWA	Darma Henwa Tbk	2023	0.135	1.474	0.175	0.970

No	KODE	NAMA PERUSAHAAN	TAHUN	Y	X1	X2	Z
228	DOID	BUMA Internasional Grup Tbk.	2023	0.624	5.877	0.379	0.028
229	DSSA	Dian Swastatika Sentosa Tbk	2023	0.487	0.780	0.599	0.132
230	ELSA	Elnusa Tbk.	2023	0.406	1.174	0.511	0.928
231	ENRG	Energi Mega Persada Tbk.	2023	0.547	1.339	0.438	0.496
232	GEMS	Golden Energy Mines Tbk.	2023	0.446	0.979	0.510	0.062
233	GTSI	GTS Internasional Tbk.	2023	0.231	0.750	0.848	0.685
234	HITS	Humpuss Intermoda Transportasi	2023	0.264	1.522	0.455	0.367
235	HRUM	Harum Energy Tbk.	2023	0.476	0.390	0.810	0.061
236	IATA	MNC Energy Investments Tbk.	2023	0.393	1.380	0.441	0.568
237	INDY	Indika Energy Tbk.	2023	0.587	1.261	0.378	0.613
238	INPS	Indah Prakasa Sentosa Tbk.	2023	1.182	13.035	0.732	0.131
239	ITMG	Indo Tambangraya Megah Tbk.	2023	0.444	0.223	0.651	0.087
240	KKGI	Resource Alam Indonesia Tbk.	2023	0.535	0.439	0.356	0.000
241	KOPI	Mitra Energi Persada Tbk.	2023	0.873	2.438	0.729	0.108
242	MAHA	Mandiri Herindo Adiperkasa Tbk	2023	0.464	0.413	0.345	0.114
243	MBAP	Mitrabara Adiperdana Tbk.	2023	0.514	0.328	0.600	0.183
244	MEDC	Medco Energi Internasional Tbk	2023	0.687	2.683	0.515	0.087
245	MKAP	Multikarya Asia Pasifik Raya T	2023	0.377	0.767	0.950	0.201
246	PGAS	Perusahaan Gas Negara Tbk.	2023	0.501	0.864	0.570	0.324
247	PSSI	IMC Pelita Logistik Tbk.	2023	0.331	0.209	0.438	0.002
248	PTBA	Bukit Asam Tbk.	2023	0.448	0.798	0.659	0.005
249	PTRO	Petrosea Tbk.	2023	0.445	2.089	0.689	0.117
250	RAJA	Rukun Raharja Tbk.	2023	0.552	1.127	0.339	0.147
251	RATU	Raharja Energi Cepu Tbk.	2023	0.475	1.088	1.000	0.046
252	RGAS	Kian Santang Muliatama Tbk.	2023	0.446	0.056	0.173	0.302
253	RMKE	RMK Energy Tbk.	2023	0.439	0.514	0.768	0.523
254	RMKO	Royaltama Mulia Kontraktorindo	2023	0.369	1.173	0.800	0.975
255	RUIS	Radiant Utama Interinsco Tbk.	2023	0.772	1.442	0.240	0.011
256	SGER	Sumber Global Energy Tbk.	2023	0.410	2.050	0.501	0.006
257	SHIP	Sillo Maritime Perdana Tbk.	2023	0.341	1.211	0.448	0.000
258	SMMT	Golden Eagle Energy Tbk.	2023	0.306	0.261	0.731	0.794
259	SOCI	Soechi Lines Tbk.	2023	0.401	0.580	0.667	0.000
260	TAMU	Pelayaran Tamarin Samudra Tbk.	2023	0.296	1.167	0.800	0.357
261	TCPI	Transcoal Pacific Tbk.	2023	0.225	0.674	0.550	0.096
262	TEBE	Dana Brata Luhur Tbk.	2023	0.476	0.059	0.393	0.727
263	TOBA	TBS Energi Utama Tbk.	2023	0.585	1.237	0.615	0.000
264	TPMA	Trans Power Marine Tbk.	2023	0.259	0.269	0.569	0.025
265	WINS	Wintermar Offshore Marine Tbk.	2023	0.228	0.203	0.340	0.272

Lampiran 3 Daftar Sampel

No	Kode	Nama Perusahaan
1	ABMM	ABM Investama Tbk.
2	ADRO	Alamtri Resources Indonesia Tb
3	AIMS	Artha Mahiya Investama Tbk.
4	AKRA	AKR Corporindo Tbk.
5	APEX	Apexindo Pratama Duta Tbk.
6	ARII	Atlas Resources Tbk.
7	ARTI	Ratu Prabu Energi Tbk
8	BBRM	Pelayaran Nasional Bina Buana
9	BIPI	Astrindo Nusantara Infrastrukt
10	BSSR	Baramulti Suksessarana Tbk.
11	BULL	Buana Lintas Lautan Tbk.
12	BUMI	Bumi Resources Tbk.
13	BYAN	Bayan Resources Tbk.
14	CNKO	Exploitasi Energi Indonesia Tb
15	DEWA	Darma Henwa Tbk
16	DOID	BUMA Internasional Grup Tbk.
17	DSSA	Dian Swastatika Sentosa Tbk
18	ELSA	Elnusa Tbk.
19	ENRG	Energi Mega Persada Tbk.
20	GEMS	Golden Energy Mines Tbk.
21	GTBO	Garda Tujuh Buana Tbk
22	HITS	Humpuss Intermoda Transportasi
23	HRUM	Harum Energy Tbk.
24	IATA	MNC Energy Investments Tbk.
25	INDY	Indika Energy Tbk.
26	ITMA	Sumber Energi Andalan Tbk.
27	ITMG	Indo Tambangraya Megah Tbk.
28	KKGI	Resource Alam Indonesia Tbk.
29	KOPI	Mitra Energi Persada Tbk.
30	LEAD	Logindo Samudramakmur Tbk.
31	MBAP	Mitrabara Adiperdana Tbk.
32	MBSS	Mitrabahtera Segara Sejati Tbk
33	MEDC	Medco Energi Internasional Tbk
34	MTFN	Capitalinc Investment Tbk.
35	MYOH	Samindo Resources Tbk.
36	PGAS	Perusahaan Gas Negara Tbk.
37	PKPK	Perdana Karya Perkasa Tbk

No	Kode	Nama Perusahaan
38	PTBA	Bukit Asam Tbk.
39	PTIS	Indo Straits Tbk.
40	PTRO	Petrosea Tbk.
41	RAJA	Rukun Raharja Tbk.
42	RUIS	Radiant Utama Interinsco Tbk.
43	SMMT	Golden Eagle Energy Tbk.
44	SMRU	SMR Utama Tbk.
45	SOCI	Soechi Lines Tbk.
46	TOBA	TBS Energi Utama Tbk.
47	TPMA	Trans Power Marine Tbk.
48	WINS	Wintermar Offshore Marine Tbk.
49	SHIP	Sillo Maritime Perdana Tbk.
50	TAMU	Pelayaran Tamarin Samudra Tbk.
51	FIRE	Alfa Energi Investama Tbk.
52	PSSI	IMC Pelita Logistik Tbk.
53	DWGL	Dwi Guna Laksana Tbk.
54	BOSS	Borneo Olah Sarana Sukses Tbk.
55	JSKY	Sky Energy Indonesia Tbk.
56	INPS	Indah Prakasa Sentosa Tbk.
57	TCPI	Transcoal Pacific Tbk.
58	SURE	Super Energy Tbk.
59	WOWS	Ginting Jaya Energi Tbk.
60	TEBE	Dana Brata Luhur Tbk.
61	BESS	Batulicin Nusantara Maritim Tb
62	SGER	Sumber Global Energy Tbk.
63	UNIQ	Ulima Nitra Tbk.
64	MCOL	Prima Andalan Mandiri Tbk.
65	GTSI	GTS Internasional Tbk.
66	RMKE	RMK Energy Tbk.
67	BSML	Bintang Samudera Mandiri Lines
68	ADMR	Adaro Minerals Indonesia Tbk.
69	SEMA	Semacom Integrated Tbk.
70	SICO	Sigma Energy Compressindo Tbk.
71	COAL	Black Diamond Resources Tbk.
72	SUNI	Sunindo Pratama Tbk.
73	CBRE	Cakra Buana Resources Energi T
74	HILL	Hillcon Tbk.
75	CUAN	Petrindo Jaya Kreasi Tbk.

No	Kode	Nama Perusahaan
76	MAHA	Mandiri Herindo Adiperkasa Tbk
77	RMKO	Royaltama Mulia Kontraktorindo
78	RGAS	Kian Santang Muliatama Tbk.
79	HUMI	Humpuss Maritim Internasional

Lampiran 4 Pengolahan Data Melalui STATA

Analisis Deskriptif

Variable	Obs	Mean	Std. dev.	Min	Max
Y	265	.3615767	.7966584	-9.435344	2.188975
X1	265	1.702352	13.1486	-125.8909	152.1058
X2	265	.3007578	3.824548	-61.63533	1
Z	265	.2725296	.2871484	7.13e-06	1

Uji Chow

Fixed-effects (within) regression
Group variable: ID

Number of obs = 265
Number of groups = 53

R-squared:
Within = 0.0196
Between = 0.0019
Overall = 0.0072

Obs per group:
min = 5
avg = 5.0
max = 5

corr(u_i, Xb) = -0.1679

F(4, 208) = 1.04
Prob > F = 0.3865

Y	Coefficient	Std. err.	t	P> t	[95% conf. interval]	
X1	.0374637	.0238928	1.57	0.118	-.0096394	.0845669
X2	.092835	.10795	0.86	0.391	-.1199813	.3056513
ZX1	-.0380538	.0247692	-1.54	0.126	-.0868847	.0107771
ZX2	-.2910981	.3958606	-0.74	0.463	-1.071511	.4893152
_cons	.3216967	.0546533	5.89	0.000	.2139514	.429442
sigma_u	.3703922					
sigma_e	.79566202					
rho	.17810723	(fraction of variance due to u_i)				

F test that all u_i=0: F(52, 208) = 1.05 Prob > F = 0.3929

Uji Langrange Multiplier

Breusch and Pagan Lagrangian multiplier test for random effects

$$Y[ID,t] = Xb + u[ID] + e[ID,t]$$

Estimated results:

	Var	SD = sqrt(Var)
Y	.6346646	.7966584
e	.6330781	.795662
u	.0110789	.1052562

Test: $\text{Var}(u) = 0$

chibar2(01) = 0.02
Prob > chibar2 = 0.4495

Uji Multikolinearitas



```
. correlate X1 X2 Z  
(obs=265)
```

	X1	X2	Z
X1	1.0000		
X2	-0.0094	1.0000	
Z	0.0644	0.0034	1.0000

Uji Heteroskedastisitas

Breusch-Pagan/Cook-Weisberg test for heteroskedasticity

Assumption: Normal error terms

Variable: Fitted values of Y

H0: Constant variance

chi2(1) = 1.09
Prob > chi2 = 0.2958

Uji Hipotesis

Y	Coefficient std. err.	t	P>t	[95% conf.	interval]	Keputusan
X1	0.018	2.470	0.014	0.004	0.032	Diterima
X2	0.252	6.650	0.000	0.177	0.327	Diterima
M1	2.401	3.940	0.000	0.000	0.000	Diterima
M2	-0.386	-3.530	0.000	0.000	0.000	Diterima
_cons	0.444	9.830	0.000	0.355	0.533	

Y	Coefficient std. err.	t	P>t	[95% conf.	interval]	Keputusan
X1	.0178668	2.49	0.013	0.003757	0.031977	Diterima
X2	.2526256	6.71	0.000	0.178473	0.326779	Diterima
_cons	.4451466	9.93	0.000	0.35686	0.533434	

