



**PROGRAM STUDI STATISTIKA**  
**SK BAN-PT No. 1765/SK/BAN-PT/AK-PPJS/III/2022**  
**FAKULTAS SAINS DAN TEKNOLOGI**  
**UNIVERSITAS PGRI ADI BUANA SURABAYA**

**FORM F.SK05**  
**BUKTI BIMBINGAN SKRIPSI**

Nama Mahasiswa : Siti Fatonah  
NIM : 192400001  
Judul Skripsi : Analisis Regresi Data Panel Untuk Mengetahui Faktor-Faktor Yang Berpengaruh Terhadap Tingkat Pengangguran Terbuka di Provinsi Jawa Barat  
Dosen Pembimbing : 1. Fenny Fitriani, M.Si  
2. Artanti Indrasietianingsih, M.Si

Materi Pembimbingan Proposal	Tanda Tangan Dosen Pembimbing
1. Bimbingan standarisasi data	
2. Bimbingan hasil pengerjaan bab 4	
3. Bimbingan hasil pengerjaan bab 4 dan 5	
4. Bimbingan Revisi bab 4 dan 5	
5. Acc skripsi dan bimbingan artikel skripsi	
6. Bimbingan hasil pengerjaan artikel skripsi	
7. Bimbingan revisi artikel skripsi	
8. Acc artikel skripsi	

Catatan: \*) Coret yang tidak sesuai

***Lembar ini digunakan untuk mendaftar Seminar dan Ujian Skripsi  
(bimbingan skripsi minimal 8 kali)***



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Dosen Pembimbing : 1. Fenny Fitriani, M.Si  
2. Artanti Indrasetianingsih, M.Si

Materi Pembimbingan Proposal	Tanda Tangan Dosen Pembimbing
1. Bimbingan analisis data dan penambahan variabel	
2. Bimbingan hasil pengerjaan bab 4	
3. Bimbingan hasil pengerjaan bab 4 dan 5	
4. bimbingan hasil revisi bab 4 dan 5 (ACC skripsi)	
5. bimbingan hasil pengerjaan artikel (ACC)	
6.	
7.	
8.	

Catatan: \*) Coret yang tidak sesuai

***Lembar ini digunakan untuk mendaftar Seminar dan Ujian Skripsi (bimbingan skripsi minimal 8 kali)***



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FORM F.SK08

PERBAIKAN/REVISI SEMINAR DAN UJIAN SKRIPSI

Nama Mahasiswa : Siti Fatonah  
NIM : 192400001  
Judul Skripsi : Analisis Regresi Data Panel Untuk Mengetahui Faktor-Faktor Yang Berpengaruh Terhadap Tingkat Pengangguran Terbuka di Provinsi Jawa Barat  
Dosen Pembimbing : 1. Fenny Fitriani, M.Si  
2. Artanti Indrasetianingsih, M.Si

Materi Revisi Seminar dan Ujian Skripsi	Tanda Tangan Dosen Penguji
1. perbaiki grafik pada bab 1	
2. pemeriksaan multikolinieritas, sumber dilengkapi	
3. perbaiki simbol pada rumus standar deviasi	
4. perbaiki hipotesis uji white	
5. perbaiki rumus normalitas	
6. perbaiki rumus Z score	

Surabaya, 18 Juli 2023  
Dosen Pembimbing,

Fenny F. M.Si  
NIP/NPP: 1503717/0Y

Catatan: \*) Coret yang tidak sesuai

Lembar ini digunakan untuk bukti perbaikan makalah/jurnal dan hasil ujian skripsi Batas waktu revisi proposal dua minggu terhitung dari waktu ujian proposal

*(Halaman ini sengaja dikosongkan)*

## LAMPIRAN

**Lampiran 1.** Data TPT dan faktor-faktor yang diduga mempengaruhinya di provinsi Jawa Barat tahun 2018-2021

Tahun	Kabupaten/ Kota	Y	X1	X2	X3	X4	X5	X6	X7	X8
2018	Bandung	5,07	2678028,98	77613,22	1653796	1,63	61,79	63,71	66,16	6,65
2019	Bandung	5,51	2893074,71	82547,44	1776063	1,56	65,32	64,52	63,74	5,94
2020	Bandung	8,58	3139275,37	81059,06	1717376	1,49	62,2	65,12	62,99	6,91
2021	Bandung	8,32	3241929,67	83947,15	1824927	0,99	65,12	65,51	64,84	7,15
2018	Bandung Barat	8,55	2683277,45	29888,89	747616	1,03	61,26	59,43	62,42	10,06
2019	Bandung Barat	8,24	2898744,63	31398,35	764951	0,96	61,97	60,21	65,88	9,38
2020	Bandung Barat	12,25	3145427,79	30640,41	747644	0,89	59,91	60,27	67,00	10,49
2021	Bandung Barat	11,65	3248283,28	31701,79	765935	1,24	60,75	60,33	65,42	11,3
2018	Bekasi	9,74	3837939,63	241949,38	1629297	3,74	61,43	65,72	88,8	4,37
2019	Bekasi	9,00	4146126,18	251502,79	1771709	3,66	64,02	65,8	91,19	4,01
2020	Bekasi	11,54	4498961,51	242959,09	1840666	3,59	64,23	66,76	92,07	4,82
2021	Bekasi	10,09	4791843,9	251828,57	1953408	1,93	65,87	67,39	90,35	5,21
2018	Bogor	9,83	3483667,39	148203,35	2622517	2,2	62,75	60,82	62,76	7,14
2019	Bogor	9,11	3763405,88	156876,01	2793841	2,13	65,41	62,27	62,39	6,66
2020	Bogor	14,29	4083670	154113,6	2733670	2,06	62,65	62,33	61,95	7,69
2021	Bogor	12,22	4217206	159582,65	2786372	1,77	62,55	62,39	64,13	8,13
2018	Ciamis	4,64	1604334,37	20878,69	620036	0,56	66,67	63,31	57,62	7,22
2019	Ciamis	5,16	1733162,42	22001,24	633945	0,55	67,39	63,94	120,8	6,65
2020	Ciamis	5,66	1880654,54	21970,41	679192	0,54	71,41	64,72	116,8	7,62
2021	Ciamis	5,06	1880654,54	22774,93	671063	1,45	69,83	65,78	114,29	7,97
2018	Cianjur	10,23	2162366,91	30320,21	1007714	0,18	60,22	56,16	58,66	9,81
2019	Cianjur	9,81	2336004,97	32039,32	1117349	0,11	66	56,51	61,74	9,15
2020	Cianjur	11,05	2534798,99	31790,76	1185595	0,06	69,26	57,24	62,14	10,36
2021	Cianjur	9,32	2534798,99	32897,52	1175885	1,56	67,98	57,3	61,51	11,18
2018	Cirebon	10,64	1873701,81	32161,84	1004732	0,77	61,75	56,01	84,34	10,7
2019	Cirebon	10,35	2024160,07	33668,1	1073047	0,77	65,23	56,37	83,2	9,94

2020	Cirebon	11,52	2196416,06	33304,49	1060362	0,76	63,79	57,09	82,3	11,24
2021	Cirebon	10,38	2269556,75	34128,55	1082691	1,38	64,49	57,75	80,78	12,3
2018	Garut	7,12	1672947,97	37225,15	1109996	0,68	60,06	57,78	71,8	9,27
2019	Garut	7,35	1807285,69	39092,49	1170994	0,61	62,6	57,87	68,58	8,98
2020	Garut	8,95	1961085,7	38598,15	1156180	0,54	61,11	58,15	69,6	9,98
2021	Garut	8,68	1961085,7	39981,19	1200346	1,33	62,76	58,52	69,51	10,65
2018	Indramayu	8,46	1960301,47	58287,98	859123	0,54	64,88	53,88	72,59	11,89
2019	Indramayu	8,35	2117713,61	60153,18	906315	0,54	67,69	53,97	67,43	11,11
2020	Indramayu	9,21	2297931,11	59200	940706	0,53	69,53	55,03	69,79	12,7
2021	Indramayu	8,3	2373073,46	59544,87	954521	1,11	69,86	55,79	71,46	13,04
2018	Karawang	9,12	3919291,19	157317,84	1136301	0,84	64,77	58,03	76,41	8,06
2019	Karawang	9,68	4234010,27	163946,85	1127198	0,77	63,57	59,06	81,57	7,39
2020	Karawang	11,52	4594324,54	157710,59	1162633	0,7	64,9	59,48	81,72	8,26
2021	Karawang	11,83	4798312	166941,49	1161202	1,93	64,19	59,54	79,97	8,95
2018	Kota Bandung	8,05	3091345,56	185084,18	1232747	0,23	61,86	74,82	93,33	3,57
2019	Kota Bandung	8,18	3339580,61	197642,89	1326370	0,17	65,9	75,22	94,9	3,38
2020	Kota Bandung	11,19	3623778,91	193144,95	1314930	0,09	64,71	75,28	95,41	3,99
2021	Kota Bandung	11,46	3742276,48	200414,03	1339128	1,43	65,31	76,11	95,4	4,37
2018	Kota Banjar	5,95	1562730,28	3067,11	92618	0,24	64,93	65,33	86,9	5,7
2019	Kota Banjar	6,16	1688217,52	3221,45	97471	0,16	67,59	65,46	88,72	5,5
2020	Kota Banjar	6,73	1831884,83	3251,7	98212	0,1	67,35	65,52	89,46	6,09
2021	Kota Banjar	6,09	1831884,83	3364,26	94378	1,41	64,07	66,01	87,26	7,11
2018	Kota Bekasi	9,14	3915353,71	65845,09	1452009	2,53	65,23	75,19	115,68	4,11
2019	Kota Bekasi	8,3	4229756,61	69406,53	1496488	2,46	65,66	75,86	107,42	3,81
2020	Kota Bekasi	10,68	4589708,9	67619,24	1509841	2,39	64,74	76,09	105,35	4,38
2021	Kota Bekasi	10,88	4782935,64	69796,94	1544421	1,92	64,76	76,87	103,6	4,74
2018	Kota Bogor	9,74	3557146,66	30413,57	519693	1,46	63,11	71,5	73,49	5,93
2019	Kota Bogor	9,16	3842785,54	32295,73	531597	1,39	63,68	71,62	80,94	5,77
2020	Kota Bogor	12,68	4169806,58	32162,74	514323	1,33	60,81	71,68	82,41	6,68
2021	Kota Bogor	11,79	4169806,58	33372,48	529003	1,73	61,77	72,38	80,96	7,24

2018	Kota Cimahi	8	2678028,45	21192,6	296075	1,12	64,4	74,72	87,08	4,94
2019	Kota Cimahi	8,09	2893074,71	22856,04	293749	1,07	63,26	74,81	103,84	4,39
2020	Kota Cimahi	13,3	3139274,74	22340,56	293754	0,99	62,67	74,87	101,66	5,11
2021	Kota Cimahi	13,07	3241929	23275,78	292252	1,45	61,79	75,29	99,6	5,35
2018	Kota Cirebon	9,07	1893383,54	15817,18	163184	0,94	67,89	69,33	74,78	8,88
2019	Kota Cirebon	9,04	2045422,24	16812,49	152379	0,96	62,71	69,42	87,4	8,41
2020	Kota Cirebon	10,97	2219487,67	16648,44	156500	0,94	63,76	69,48	87,12	9,52
2021	Kota Cirebon	10,53	2271201,73	17154,55	155798	1,12	62,87	70,21	87,01	10,03
2018	Kota Depok	6,66	3584700,29	45978,89	1096952	3,36	62,51	74,78	103,06	2,14
2019	Kota Depok	6,12	3872551,72	49076,58	1176722	3,28	64,96	75,31	105,89	2,07
2020	Kota Depok	9,87	4202105,87	48135,59	1195632	3,21	63,96	76,27	105,14	2,45
2021	Kota Depok	9,76	4339514,73	49946,93	1207111	0,76	62,62	76,89	102,64	2,58
2018	Kota Sukabumi	8,57	2158430,53	8209,92	146230	0,77	59,62	68,99	81,78	7,12
2019	Kota Sukabumi	8,49	2331752,5	8664,02	154907	0,73	62,48	69,32	87,08	6,67
2020	Kota Sukabumi	12,17	2530182,63	8534,72	139657	0,61	55,74	69,38	88,02	7,7
2021	Kota Sukabumi	10,78	2530182,63	8851,05	143914	0,48	56,86	70,42	90,37	8,25
2018	Kota Tasikmalaya	6,89	1931435,35	14859,11	316261	0,2	62,63	67,41	92,42	12,71
2019	Kota Tasikmalaya	6,78	2086529,61	15746,12	333149	0,12	65,26	67,77	79,46	11,6
2020	Kota Tasikmalaya	7,99	2264093,92	15430,02	343285	0,07	66,54	68,46	82,18	12,97
2021	Kota Tasikmalaya	7,66	2264093,28	15981,25	342585	1,62	65,75	69,12	84,75	13,13
2018	Kuningan	9,1	1606030,12	15821,96	481807	0,59	58,53	58,06	79,12	12,22
2019	Kuningan	9,68	1734994,34	16864,15	509531	0,59	61,2	58,21	77,4	11,41
2020	Kuningan	11,22	1882642,36	16882,76	521677	0,58	61,98	59,18	78,03	12,82
2021	Kuningan	11,68	1882642,36	17483,02	542782	1,2	63,82	59,97	79,03	13,1
2018	Majalengka	5	1653514,54	20006,88	612392	0,47	65,64	56,89	75,42	10,79
2019	Majalengka	4,37	1791693,26	21561,72	639995	0,48	67,83	57,55	75,25	10,06
2020	Majalengka	5,84	1944166,36	21754,54	664374	0,47	69,66	58,18	75,14	11,43
2021	Majalengka	5,71	2009000	22788,75	651599	0,79	67,63	58,34	72,5	12,33
2018	Pangandaran	3,59	1558793,94	7308,73	243293	0,53	77,74	58,71	91,24	8,12
2019	Pangandaran	4,52	1714673,33	7742,87	237582	0,53	75,08	59,07	85,83	7,71

2020	Pangandaran	5,08	1860591,33	7738,97	245619	0,55	76,79	59,33	83,94	8,99
2021	Pangandaran	3,25	1860591,33	8022,78	241542	1,19	74,75	59,72	84,79	9,65
2018	Purwakarta	9,94	3445616,9	44341,65	438515	1,07	63,12	59,42	72,5	7,99
2019	Purwakarta	9,73	3722299,94	46278,21	448735	0,99	63,88	60,01	83,25	7,48
2020	Purwakarta	11,07	4039067,66	45293,24	432428	0,93	60,91	60,61	82,11	8,27
2021	Purwakarta	10,7	4173568,61	46840,15	438371	1,62	61,13	60,67	80,93	8,83
2018	Subang	8,71	2529759,9	27408,2	778386	1,06	64,35	55,24	67,55	8,67
2019	Subang	8,68	2732899,7	28672,9	827714	1,06	67,67	55,31	70,69	8,12
2020	Subang	9,48	2965468	28342,56	824467	1,05	66,7	56,17	71,92	9,31
2021	Subang	9,77	3064218,08	29023,19	846262	1,82	67,78	56,23	71,25	10,03
2018	Sukabumi	7,84	2583556,63	44140,89	1142067	0,29	62,71	56,56	60,98	6,76
2019	Sukabumi	8,05	2791016,23	46628,34	1154199	0,23	62,65	57,34	69,16	6,22
2020	Sukabumi	9,6	3028531,71	46199,31	1146833	0,16	61,56	57,54	70,24	7,09
2021	Sukabumi	9,51	3125444,72	47933,52	1222156	1,57	64,93	57,67	71,28	7,7
2018	Sumedang	7,54	2678028,99	22507,96	560360	0,3	61,93	63,18	46,3	9,76
2019	Sumedang	7,7	2893074,72	23932,73	584647	0,22	63,9	63,57	51,19	9,05
2020	Sumedang	9,89	3139275,37	23665,01	637668	0,18	68,96	64,39	54,57	10,26
2021	Sumedang	9,18	3241929,67	24414,66	639867	1,23	68,51	64,46	52,97	10,71
2018	Tasikmalaya	6,92	1920937,99	23320,61	850644	0,23	64,07	58,43	65,23	9,85
2019	Tasikmalaya	6,31	2075189,31	24586,67	892701	0,16	66,46	58,68	70,82	9,12
2020	Tasikmalaya	7,12	2251787,92	24344,86	944706	0,09	69,54	59,31	72,1	10,34
2021	Tasikmalaya	6,16	2251787,92	25179,48	936109	0,94	68,18	59,77	70,5	11,15



## Lampiran 2. Statistika Deskriptif

	Y	X1	X2	X3	X4	X5	X6	X7	X8
Mean	8.789907	2815537.	54948.09	886659.9	1.071204	64.69000	63.76685	79.83741	8.185741
Median	9.055000	2630793.	31746.28	826090.5	0.940000	64.21000	62.30000	79.71500	8.190000
Maximum	14.29000	4798312.	251828.6	2793841.	3.740000	77.74000	76.89000	120.8000	13.13000
Minimum	3.250000	1558794.	3067.110	92618.00	0.060000	55.74000	53.88000	46.30000	2.070000
Std. Dev.	2.280251	925042.2	60702.75	593456.3	0.833615	3.622918	6.697562	15.15280	2.767942
Skewness	-0.212071	0.508017	1.894724	1.078599	1.328212	0.994137	0.548945	0.447062	-0.192925
Kurtosis	2.621348	2.045286	5.575903	4.478528	4.728621	5.228280	2.032796	2.919570	2.325564
Jarque-Bera	1.454730	8.747120	94.47839	30.77798	45.20125	40.13310	9.633803	3.626666	2.716849
Probability	0.483180	0.012606	0.000000	0.000000	0.000000	0.000000	0.008092	0.163110	0.257065
Sum	949.3100	3.04E+08	5934394.	95759267	115.6900	6986.520	6886.820	8622.440	884.0600
Sum Sq. Dev.	556.3513	9.16E+13	3.94E+11	3.77E+13	74.35574	1404.432	4799.735	24568.00	819.7810
Observations	108	108	108	108	108	108	108	108	108

## Lampiran 3. Output Multikolinearitas (nilai VIF)

Variance Inflation Factors

Date: 05/21/23 Time: 20:11

Sample: 1 108

Included observations: 108

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	0.003975	1.000000	NA
Z_X1	0.010941	2.726911	2.726911
Z_X2	0.010982	2.737243	2.737243
Z_X3	0.011133	2.774824	2.774824
Z_X4	0.007655	1.907986	1.907986
Z_X5	0.004641	1.156836	1.156836
Z_X6	0.011322	2.821969	2.821969
Z_X7	0.008646	2.155049	2.155049
Z_X8	0.010537	2.626299	2.626299

#### Lampiran 4. Output Common Effect Model (CEM)

Dependent Variable: Z\_Y

Method: Panel Least Squares

Date: 05/21/23 Time: 20:05

Sample: 2018 2021

Periods included: 4

Cross-sections included: 27

Total panel (balanced) observations: 108

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	5.74E-16	0.063048	9.11E-15	1.0000
Z_X1	0.703573	0.104599	6.726401	0.0000
Z_X2	0.022415	0.104797	0.213887	0.8311
Z_X3	0.026558	0.105514	0.251700	0.8018
Z_X4	-0.113115	0.087494	-1.292833	0.1991
Z_X5	-0.433228	0.068128	-6.359012	0.0000
Z_X6	0.066296	0.106406	0.623048	0.5347
Z_X7	0.121707	0.092986	1.308870	0.1936
Z_X8	0.487125	0.102651	4.745453	0.0000
Root MSE	0.627319	R-squared		0.602793
Mean dependent var	2.94E-16	Adjusted R-squared		0.570695
S.D. dependent var	1.000000	S.E. of regression		0.655214
Akaike info criterion	2.071944	Sum squared resid		42.50117
Schwarz criterion	2.295455	Log likelihood		-102.8850
Hannan-Quinn criter.	2.162570	F-statistic		18.78003
Durbin-Watson stat	0.785978	Prob(F-statistic)		0.000000

### Lampiran 5. Output Fixed Effect Model (FEM) antar individu

Dependent Variable: Z\_Y

Method: Panel Least Squares

Date: 05/21/23 Time: 20:15

Sample: 2018 2021

Periods included: 4

Cross-sections included: 27

Total panel (balanced) observations: 108

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.17E-15	0.035390	6.14E-14	1.0000
Z_X1	2.347847	0.331736	7.077445	0.0000
Z_X2	-1.733634	1.520742	-1.139993	0.2580
Z_X3	-2.562892	1.199933	-2.135862	0.0360
Z_X4	-0.139111	0.083900	-1.658060	0.1016
Z_X5	0.017346	0.122314	0.141815	0.8876
Z_X6	-1.251969	0.906177	-1.381594	0.1713
Z_X7	0.041545	0.098435	0.422048	0.6742
Z_X8	0.415350	0.267217	1.554354	0.1244

#### Effects Specification

Cross-section fixed (dummy variables)

Root MSE	0.302370	R-squared	0.907718
Mean dependent var	2.94E-16	Adjusted R-squared	0.864737
S.D. dependent var	1.000000	S.E. of regression	0.367781
Akaike info criterion	1.093818	Sum squared resid	9.874189
Schwarz criterion	1.963027	Log likelihood	-24.06618
Hannan-Quinn criter.	1.446251	F-statistic	21.11919
Durbin-Watson stat	2.084386	Prob(F-statistic)	0.000000

## Lampiran 6. Output Intersep FEM antar individu

	KABUPATEN_KOTA	Effect
1	Bandung	3.681833
2	Bandung_Barat	-2.055186
3	Bekasi	7.549412
4	Bogor	9.228595
5	Ciamis	-0.806924
6	Cianjur	0.357285
7	Cirebon	1.037474
8	Garut	1.529838
9	Indramayu	-0.606152
10	Karawang	0.061926
11	Kota_Bandung	7.254245
12	Kota_Banjar	-2.732080
13	Kota_Bekasi	2.487291
14	Kota_Bogor	-2.314155
15	Kota_Cimahi	-0.582592
16	Kota_Cirebon	-1.045690
17	Kota_Depok	1.058576
18	Kota_Sukabumi	-1.776226
19	Kota_Tasikmalaya	-2.376751
20	Kuningan	-0.932425
21	Majalengka	-2.778467
22	Pangandaran	-4.529516
23	Purwakarta	-4.759046
24	Subang	-2.489270
25	Sukabumi	-0.298364
26	Sumedang	-2.903544
27	Tasikmalaya	-1.260088

**Lampiran 7.** Output Fixed Effect Model (FEM) antar waktu

Dependent Variable: Z\_Y  
 Method: Panel Least Squares  
 Date: 05/21/23 Time: 20:24  
 Sample: 2018 2021  
 Periods included: 4  
 Cross-sections included: 27  
 Total panel (balanced) observations: 108

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	6.24E-16	0.058051	1.08E-14	1.0000
Z_X1	0.527977	0.105641	4.997829	0.0000
Z_X2	0.084787	0.097797	0.866967	0.3881
Z_X3	-0.033100	0.098177	-0.337146	0.7367
Z_X4	-0.051944	0.083932	-0.618885	0.5375
Z_X5	-0.485173	0.064933	-7.471869	0.0000
Z_X6	0.007982	0.100626	0.079324	0.9369
Z_X7	0.042472	0.087845	0.483492	0.6298
Z_X8	0.311028	0.108942	2.854976	0.0053

Effects Specification

Period fixed (dummy variables)

Root MSE	0.568782	R-squared	0.673463
Mean dependent var	2.94E-16	Adjusted R-squared	0.636048
S.D. dependent var	1.000000	S.E. of regression	0.603285
Akaike info criterion	1.931584	Sum squared resid	34.93941
Schwarz criterion	2.229598	Log likelihood	-92.30551
Hannan-Quinn criter.	2.052418	F-statistic	17.99951
Durbin-Watson stat	0.516281	Prob(F-statistic)	0.000000

**Lampiran 8.** Output Intersep FEM Setiap tahun

	DATEID	Effect
1	2018-01-01	-0.330389
2	2019-01-01	-0.223734
3	2020-01-01	0.441649
4	2021-01-01	0.112475

**Lampiran 9.** Output Fixed Effect Model antar individu dan waktu

Dependent Variable: Z\_Y  
 Method: Panel Least Squares  
 Date: 05/21/23 Time: 21:18  
 Sample: 2018 2021  
 Periods included: 4  
 Cross-sections included: 27  
 Total panel (balanced) observations: 108

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.07E-15	0.028885	7.16E-14	1.0000
Z_X1	0.925140	0.480934	1.923630	0.0585
Z_X2	1.738628	1.369293	1.269727	0.2084
Z_X3	-1.387209	1.011130	-1.371939	0.1745
Z_X4	-0.027274	0.074807	-0.364591	0.7165
Z_X5	-0.083309	0.105986	-0.786039	0.4345
Z_X6	-1.524127	0.876633	-1.738614	0.0865
Z_X7	0.031274	0.081976	0.381506	0.7040
Z_X8	-1.755726	0.499714	-3.513460	0.0008

Effects Specification

Cross-section fixed (dummy variables)  
 Period fixed (dummy variables)

Root MSE	0.241672	R-squared	0.941049
Mean dependent var	2.94E-16	Adjusted R-squared	0.909889
S.D. dependent var	1.000000	S.E. of regression	0.300185
Akaike info criterion	0.701229	Sum squared resid	6.307754
Schwarz criterion	1.644942	Log likelihood	0.133625
Hannan-Quinn criter.	1.083870	F-statistic	30.20074
Durbin-Watson stat	2.103710	Prob(F-statistic)	0.000000

### Lampiran 10. Output Intersep FEM antar individu dan waktu

	KABUPATEN_KOTA	Effect
1	Bandung	-0.499464
2	Bandung_Barat	1.258040
3	Bekasi	-5.942153
4	Bogor	0.645853
5	Ciamis	-0.497562
6	Cianjur	1.904267
7	Cirebon	2.784255
8	Garut	1.351875
9	Indramayu	1.027185
10	Karawang	-4.347622
11	Kota_Bandung	-3.419347
12	Kota_Banjar	-1.319178
13	Kota_Bekasi	0.200184
14	Kota_Bogor	0.245181
15	Kota_Cimahi	0.585815
16	Kota_Cirebon	2.547800
17	Kota_Depok	-1.646145
18	Kota_Sukabumi	1.225476
19	Kota_Tasikmalaya	3.663953
20	Kuningan	3.439943
21	Majalengka	0.363588
22	Pangandaran	-1.666413
23	Purwakarta	-2.018310
24	Subang	-0.461689
25	Sukabumi	-1.477689
26	Sumedang	1.186430
27	Tasikmalaya	0.865729

	DATEID	Effect
1	2018-01-01	-0.458178
2	2019-01-01	-0.891458
3	2020-01-01	0.612369
4	2021-01-01	0.737267

**Lampiran 11. Output Random Effect Model (REM)**

Dependent Variable: Z\_Y  
 Method: Panel EGLS (Cross-section random effects)  
 Date: 05/21/23 Time: 21:24  
 Sample: 2018 2021  
 Periods included: 4  
 Cross-sections included: 27  
 Total panel (balanced) observations: 108  
 Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	4.49E-16	0.112571	3.99E-15	1.0000
Z_X1	1.061653	0.134654	7.884274	0.0000
Z_X2	-0.099706	0.178570	-0.558358	0.5779
Z_X3	-0.012145	0.172309	-0.070483	0.9440
Z_X4	-0.150621	0.065475	-2.300442	0.0235
Z_X5	-0.265570	0.066881	-3.970808	0.0001
Z_X6	0.084465	0.157740	0.535470	0.5935
Z_X7	0.103182	0.084887	1.215519	0.2271
Z_X8	0.611397	0.117477	5.204395	0.0000

Effects Specification		S.D.	Rho
Cross-section random		0.555279	0.6951
Idiosyncratic random		0.367781	0.3049

Weighted Statistics			
Root MSE	0.383861	R-squared	0.559862
Mean dependent var	6.58E-17	Adjusted R-squared	0.524295
S.D. dependent var	0.581299	S.E. of regression	0.400930
Sum squared resid	15.91373	F-statistic	15.74115
Durbin-Watson stat	1.801932	Prob(F-statistic)	0.000000

Unweighted Statistics			
R-squared	0.536282	Mean dependent var	2.94E-16
Sum squared resid	49.61783	Durbin-Watson stat	0.577926



### Lampiran 12. Output uji Chow

Redundant Fixed Effects Tests

Equation: Untitled

Test cross-section and period fixed effects

Effects Test	Statistic	d.f.	Prob.
Cross-section F	12.220710	(26,70)	0.0000
Cross-section Chi-square	184.878268	26	0.0000
Period F	13.192782	(3,70)	0.0000
Period Chi-square	48.399609	3	0.0000
Cross-Section/Period F	13.850163	(29,70)	0.0000
Cross-Section/Period Chi-square	206.037210	29	0.0000

### Lampiran 13. Output uji Hausman

Correlated Random Effects - Hausman Test

Equation: Untitled

Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	26.650372	8	0.0008

#### Lampiran 14. Output Uji Serentak (Uji F dan Uji t)

Dependent Variable: Z\_Y  
Method: Panel Least Squares  
Date: 05/21/23 Time: 21:18  
Sample: 2018 2021  
Periods included: 4  
Cross-sections included: 27  
Total panel (balanced) observations: 108

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.07E-15	0.028885	7.16E-14	1.0000
Z_X1	0.925140	0.480934	1.923630	0.0585
Z_X2	1.738628	1.369293	1.269727	0.2084
Z_X3	-1.387209	1.011130	-1.371939	0.1745
Z_X4	-0.027274	0.074807	-0.364591	0.7165
Z_X5	-0.083309	0.105986	-0.786039	0.4345
Z_X6	-1.524127	0.876633	-1.738614	0.0865
Z_X7	0.031274	0.081976	0.381506	0.7040
Z_X8	-1.755726	0.499714	-3.513460	0.0008

#### Effects Specification

Cross-section fixed (dummy variables)  
Period fixed (dummy variables)

Root MSE	0.241672	R-squared	0.941049
Mean dependent var	2.94E-16	Adjusted R-squared	0.909889
S.D. dependent var	1.000000	S.E. of regression	0.300185
Akaike info criterion	0.701229	Sum squared resid	6.307754
Schwarz criterion	1.644942	Log likelihood	0.133625
Hannan-Quinn criter.	1.083870	F-statistic	30.20074
Durbin-Watson stat	2.103710	Prob(F-statistic)	0.000000

**Lampiran 15.** Output uji white (Asumsi Residual Identik)

Heteroskedasticity Test: White  
 Null hypothesis: Homoskedasticity

F-statistic	1.065468	Prob. F(44,63)	0.4036
Obs*R-squared	46.07823	Prob. Chi-Square(44)	0.3863
Scaled explained SS	40.55943	Prob. Chi-Square(44)	0.6199

Berikut langkah-langkah melakukan uji white secara manual:

1. melakukan regresi linier berganda dan didapatkan output sebagai berikut:

Dependent Variable: Z\_Y  
 Method: Least Squares  
 Date: 07/25/23 Time: 10:22  
 Sample: 1 108  
 Included observations: 108

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	5.65E-16	0.063048	8.96E-15	1.0000
Z_X1	0.703573	0.104599	6.726401	0.0000
Z_X2	0.022415	0.104797	0.213887	0.8311
Z_X3	0.026558	0.105514	0.251700	0.8018
Z_X4	-0.113115	0.087494	-1.292833	0.1991
Z_X5	-0.433228	0.068128	-6.359012	0.0000
Z_X6	0.066296	0.106406	0.623048	0.5347
Z_X7	0.121707	0.092986	1.308870	0.1936
Z_X8	0.487125	0.102651	4.745453	0.0000
R-squared	0.602793	Mean dependent var	3.10E-16	
Adjusted R-squared	0.570695	S.D. dependent var	1.000000	
S.E. of regression	0.655214	Akaike info criterion	2.071944	
Sum squared resid	42.50117	Schwarz criterion	2.295455	
Log likelihood	-102.8850	Hannan-Quinn criter.	2.162570	
F-statistic	18.78003	Durbin-Watson stat	1.014509	
Prob(F-statistic)	0.000000			

2. Berdasarkan regresi linier berganda didapatkan nilai residual, kemudian nilai residual yang dikuadratkan dijadikan variabel dependen dan diregresikan dengan variabel independen terdiri dari variabel independen awal, variabel independen yang dikuadratkan dan variabel independen dikali dengan variabel independen selanjutnya. Didapatkan hasil regresinya adalah sebagai berikut:

Test Equation:

Dependent Variable: RESID^2

Method: Least Squares

Date: 07/31/23 Time: 13:58

Sample: 1 108

Included observations: 108

Variable	Coefficien t	Std. Error	t-Statistic	Prob.
C	0.294014	0.533712	0.550886	0.5837
Z_X1^2	-0.361264	0.241937	-1.493212	0.1404
Z_X1*Z_X2	0.917597	0.494184	1.856792	0.0680
Z_X1*Z_X3	0.109602	0.319036	0.343542	0.7323
Z_X1*Z_X4	0.063468	0.216996	0.292485	0.7709
Z_X1*Z_X5	-0.170911	0.194956	-0.876662	0.3840
Z_X1*Z_X6	0.158216	0.353938	0.447016	0.6564
Z_X1*Z_X7	0.319634	0.352911	0.905708	0.3685
Z_X1*Z_X8	0.011783	0.332392	0.035449	0.9718
Z_X2	0.434263	0.272855	1.591551	0.1165
Z_X2^2	-0.423476	0.848855	-0.498879	0.6196
Z_X2*Z_X3	-0.461151	0.988480	-0.466525	0.6424
Z_X2*Z_X4	-0.011049	0.162829	-0.067857	0.9461
Z_X2*Z_X5	0.130724	0.311739	0.419337	0.6764
Z_X2*Z_X6	0.360819	0.526023	0.685939	0.4953
Z_X2*Z_X7	-0.725605	1.180036	-0.614901	0.5408
Z_X2*Z_X8	-0.920187	0.760014	-1.210751	0.2305
Z_X3	-0.052296	0.725772	-0.072056	0.9428
Z_X3^2	0.006884	0.543272	0.012672	0.9899
Z_X3*Z_X4	0.088488	0.261583	0.338277	0.7363
Z_X3*Z_X5	-0.345983	0.238328	-1.451711	0.1515
Z_X3*Z_X6	-0.527281	0.518180	-1.017563	0.3128
Z_X3*Z_X7	-0.209829	0.460467	-0.455687	0.6502
Z_X3*Z_X8	0.045488	0.396128	0.114832	0.9089

Z_X3	-0.484573	0.375211	-1.291469	0.2013
Z_X4^2	-0.128702	0.157401	-0.817670	0.4166
Z_X4*Z_X5	-0.078197	0.158674	-0.492818	0.6239
Z_X4*Z_X6	-0.011361	0.213890	-0.053117	0.9578
Z_X4*Z_X7	0.058127	0.210106	0.276658	0.7829
Z_X4*Z_X8	-0.146025	0.168969	-0.864216	0.3907
Z_X4	-0.016200	0.128455	-0.126114	0.9000
Z_X5^2	-0.112849	0.059588	-1.893829	0.0628
Z_X5*Z_X6	-0.112172	0.206215	-0.543956	0.5884
Z_X5*Z_X7	-0.222392	0.142994	-1.555259	0.1249
Z_X5*Z_X8	-0.015776	0.168551	-0.093599	0.9257
Z_X5	-0.190862	0.145139	-1.315028	0.1933
Z_X6^2	-0.166801	0.334233	-0.499055	0.6195
Z_X6*Z_X7	-0.025644	0.333391	-0.076919	0.9389
Z_X6*Z_X8	-0.246802	0.266097	-0.927489	0.3572
Z_X6	-0.085722	0.288282	-0.297355	0.7672
Z_X7^2	0.230053	0.115505	1.991708	0.0507
Z_X7*Z_X8	0.179467	0.259951	0.690389	0.4925
Z_X7	-0.081308	0.367706	-0.221121	0.8257
Z_X8^2	-0.098485	0.158030	-0.623204	0.5354
Z_X8	-0.040777	0.292078	-0.139609	0.8894
<hr/>				
R-squared	0.426650	Mean dependent var	0.393529	
Adjusted R-squared	0.026216	S.D. dependent var	0.572267	
S.E. of regression	0.564716	Akaike info criterion	1.989349	
Sum squared resid	20.09096	Schwarz criterion	3.106904	
Log likelihood	-62.42485	Hannan-Quinn criter.	2.442477	
F-statistic	1.065468	Durbin-Watson stat	2.081993	
Prob(F-statistic)	0.403595			

3. Untuk mendapatkan nilai yang digunakan pada uji white maka dihitung menggunakan rumus jumlah observasi dikali dengan nilai R-square seperti berikut ini:

$$W = n \times R^2$$

$$W = 108 \times 0.426650 = 46,0782$$

**Lampiran 16.** Output Nilai Durbin-Watson (Asumsi Residual Independen)

Dependent Variable: Z\_Y  
 Method: Panel Least Squares  
 Date: 05/21/23 Time: 21:18  
 Sample: 2018 2021  
 Periods included: 4  
 Cross-sections included: 27  
 Total panel (balanced) observations: 108

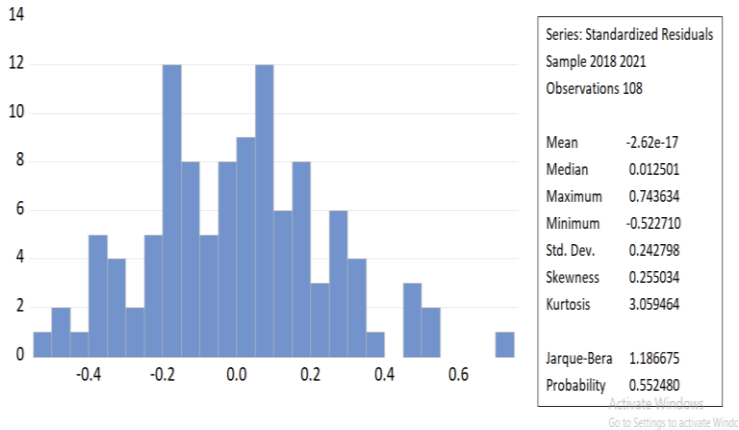
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.07E-15	0.028885	7.16E-14	1.0000
Z_X1	0.925140	0.480934	1.923630	0.0585
Z_X2	1.738628	1.369293	1.269727	0.2084
Z_X3	-1.387209	1.011130	-1.371939	0.1745
Z_X4	-0.027274	0.074807	-0.364591	0.7165
Z_X5	-0.083309	0.105986	-0.786039	0.4345
Z_X6	-1.524127	0.876633	-1.738614	0.0865
Z_X7	0.031274	0.081976	0.381506	0.7040
Z_X8	-1.755726	0.499714	-3.513460	0.0008

Effects Specification

Cross-section fixed (dummy variables)  
 Period fixed (dummy variables)

Root MSE	0.241672	R-squared	0.941049
Mean dependent var	2.94E-16	Adjusted R-squared	0.909889
S.D. dependent var	1.000000	S.E. of regression	0.300185
Akaike info criterion	0.701229	Sum squared resid	6.307754
Schwarz criterion	1.644942	Log likelihood	0.133625
Hannan-Quinn criter.	1.083870	F-statistic	30.20074
<b>Durbin-Watson stat</b>	2.103710	Prob(F-statistic)	0.000000

**Lampiran 17. Output Jarque-Bera (Aaumsi Residual Normalitas)**



**Lampiran 18. Model FEM efek individu dan waktu tahun 2018**

<b>Model FEM efek individu dan waktu tahun 2018</b>	
$Y_{Kab.Bandung\ 2018}$	$= 21,6413 + 0,000001X_1 + 0,00003 X_2 - 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5 - 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{Kab.Bandung\ Barat\ 2018}$	$= 23,3988 + 0,000001X_1 + 0,00003 X_2 - 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5 - 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{Kab.Bekasi\ 2018}$	$= 16,1986 + 0,000001X_1 + 0,00003 X_2 - 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5 - 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{Kab.Bogor\ 2018}$	$= 22,7866 + 0,000001X_1 + 0,00003 X_2 - 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5 - 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{Kab.Ciamis\ 2018}$	$= 21,6432 + 0,000001X_1 + 0,00003 X_2 - 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5 - 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$

$Y_{Kab.Cianjur\ 2018} = 24,0450 + 0,000001X_1 + 0,00003 X_2$ $- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5$ $- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{Kab.Cirebon\ 2018} = 24,9250 + 0,000001X_1 + 0,00003 X_2$ $- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5$ $- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{Kab.Garut\ 2018} = 23,4926 + 0,000001X_1 + 0,00003 X_2$ $- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5$ $- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{Kab.Indramayu\ 2018}$ $= 23,1679 + 0,000001X_1 + 0,00003 X_2$ $- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5$ $- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{Kab.Karawang\ 2018}$ $= 17,7931 + 0,000001X_1 + 0,00003 X_2$ $- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5$ $- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{Kota\ Bandung\ 2018}$ $= 18,7214 + 0,000001X_1 + 0,00003 X_2$ $- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5$ $- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{Kota\ Banjar\ 2018} = 20,8215 + 0,000001X_1 + 0,00003 X_2$ $- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5$ $- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{Kota\ Bekasi\ 2018} = 22,3409 + 0,000001X_1 + 0,00003 X_2$ $- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5$ $- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{Kota\ Bogor\ 2018} = 22,3859 + 0,000001X_1 + 0,00003 X_2$ $- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5$ $- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{Kota\ Cimahi\ 2018} = 22,7265 + 0,000001X_1 + 0,00003 X_2$ $- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5$ $- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{Kota\ Cirebon\ 2018} = 24,6885 + 0,000001X_1 + 0,00003 X_2$ $- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5$ $- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{Kota\ Depok\ 2018} = 20,4946 + 0,000001X_1 + 0,00003 X_2$ $- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5$ $- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$



$Y_{Kota\ Sukabumi\ 2018}$ $= 23,3662 + 0,000001X_1 + 0,00003 X_2$ $- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5$ $- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{Kota\ Tasikmalaya\ 2018}$ $= 25,8047 + 0,000001X_1 + 0,00003 X_2$ $- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5$ $- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{Kab.Kuningan\ 2018}$ $= 25,5807 + 0,000001X_1 + 0,00003 X_2$ $- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5$ $- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{Kab.Majalengka\ 2018}$ $= 22,5043 + 0,000001X_1 + 0,00003 X_2$ $- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5$ $- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{Kab.Pangandaran\ 2018}$ $= 20,4743 + 0,000001X_1 + 0,00003 X_2$ $- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5$ $- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{Kab.Purwakarta\ 2018}$ $= 20,1224 + 0,000001X_1 + 0,00003 X_2$ $- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5$ $- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{Kab.Subang\ 2018}$ $= 21,6790 + 0,000001X_1 + 0,00003 X_2$ $- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5$ $- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{Kab.Sukabumi\ 2018}$ $= 20,6630 + 0,000001X_1 + 0,00003 X_2$ $- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5$ $- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{Kab.Sumedang\ 2018}$ $= 23,3271 + 0,000001X_1 + 0,00003 X_2$ $- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5$ $- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{Kab.Tasikmalaya\ 2018}$ $= 23,0064 + 0,000001X_1 + 0,00003 X_2$ $- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5$ $- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$

**Lampiran 19. Model FEM efek individu dan waktu tahun 2019**

<b>Model FEM efek individu dan waktu tahun 2019</b>	
$Y_{Kab.Bandung}$ 2019	$= 21,2080 + 0,000001X_1 + 0,00003 X_2$ $- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5$ $- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{Kab.Bandung Barat}$ 2019	$= 22,9655 + 0,000001X_1 + 0,00003 X_2$ $- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5$ $- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{Kab.Bekasi}$ 2019	$= 15,7653 + 0,000001X_1 + 0,00003 X_2$ $- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5$ $- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{Kab.Bogor}$ 2019	$= 22,3533 + 0,000001X_1 + 0,00003 X_2$ $- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5$ $- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{Kab.Ciamis}$ 2019	$= 21,2099 + 0,000001X_1 + 0,00003 X_2$ $- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5$ $- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{Kab.Cianjur}$ 2019	$= 23,6117 + 0,000001X_1 + 0,00003 X_2$ $- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5$ $- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{Kab.Cirebon}$ 2019	$= 24,4917 + 0,000001X_1 + 0,00003 X_2$ $- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5$ $- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{Kab.Garut}$ 2019	$= 23,0593 + 0,000001X_1 + 0,00003 X_2$ $- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5$ $- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{Kab.Indramayu}$ 2019	$= 22,7346 + 0,000001X_1 + 0,00003 X_2$ $- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5$ $- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{Kab.Karawang}$ 2019	$= 17,3598 + 0,000001X_1 + 0,00003 X_2$ $- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5$ $- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$

$Y_{Kota Bandung 2019} = 18,2881 + 0,000001X_1 + 0,00003 X_2 - 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5 - 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{Kota Banjar 2019} = 20,3883 + 0,000001X_1 + 0,00003 X_2 - 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5 - 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{Kota Bekasi 2019} = 21,9076 + 0,000001X_1 + 0,00003 X_2 - 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5 - 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{Kota Bogor 2019} = 21,9526 + 0,000001X_1 + 0,00003 X_2 - 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5 - 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{Kota Cimahi 2019} = 22,2933 + 0,000001X_1 + 0,00003 X_2 - 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5 - 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{Kota Cirebon 2019} = 24,2552 + 0,000001X_1 + 0,00003 X_2 - 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5 - 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{Kota Depok 2019} = 20,0613 + 0,000001X_1 + 0,00003 X_2 - 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5 - 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{Kota Sukabumi 2019} = 22,9329 + 0,000001X_1 + 0,00003 X_2 - 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5 - 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{Kota Tasikmalaya 2019} = 25,3714 + 0,000001X_1 + 0,00003 X_2 - 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5 - 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{Kab.Kuningan 2019} = 25,1474 + 0,000001X_1 + 0,00003 X_2 - 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5 - 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{Kab.Majalengka 2019} = 22,0710 + 0,000001X_1 + 0,00003 X_2 - 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5 - 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$

$ \begin{aligned} Y_{Kab.Pangandaran} 2019 &= 20,0410 + 0,000001X_1 + 0,00003 X_2 \\ &- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5 \\ &- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8 \end{aligned} $
$ \begin{aligned} Y_{Kab.Purwakarta} 2019 &= 19,6891 + 0,000001X_1 + 0,00003 X_2 \\ &- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5 \\ &- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8 \end{aligned} $
$ \begin{aligned} Y_{Kab.Subang} 2019 &= 21,2457 + 0,000001X_1 + 0,00003 X_2 \\ &- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5 \\ &- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8 \end{aligned} $
$ \begin{aligned} Y_{Kab.Sukabumi} 2019 &= 20,2297 + 0,000001X_1 + 0,00003 X_2 \\ &- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5 \\ &- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8 \end{aligned} $
$ \begin{aligned} Y_{Kab.Sumedang} 2019 &= 22,8939 + 0,000001X_1 + 0,00003 X_2 \\ &- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5 \\ &- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8 \end{aligned} $
$ \begin{aligned} Y_{Kab.Tasikmalaya} 2019 &= 22,5732 + 0,000001X_1 + 0,00003 X_2 \\ &- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5 \\ &- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8 \end{aligned} $

**Lampiran 20. Model FEM efek individu dan waktu tahun 2020**

<b>Model FEM efek individu dan waktu tahun 2020</b>
$ \begin{aligned} Y_{Kab.Bandung} 2020 &= 22,7118 + 0,000001X_1 + 0,00003 X_2 \\ &- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5 \\ &- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8 \end{aligned} $
$ \begin{aligned} Y_{Kab.Bandung Barat} 2020 &= 24,4693 + 0,000001X_1 + 0,00003 X_2 \\ &- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5 \\ &- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8 \end{aligned} $

$Y_{Kab.Bekasi\ 2020} = 17,2691 + 0,000001X_1 + 0,00003 X_2$ $- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5$ $- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{Kab.Bogor\ 2020} = 23,8571 + 0,000001X_1 + 0,00003 X_2$ $- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5$ $- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{Kab.Ciamis\ 2020} = 22,7137 + 0,000001X_1 + 0,00003 X_2$ $- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5$ $- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{Kab.Cianjur\ 2020} = 25,1155 + 0,000001X_1 + 0,00003 X_2$ $- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5$ $- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{Kab.Cirebon\ 2020} = 25,9955 + 0,000001X_1 + 0,00003 X_2$ $- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5$ $- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{Kab.Garut\ 2020} = 24,5631 + 0,000001X_1 + 0,00003 X_2$ $- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5$ $- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{Kab.Indramayu\ 2020}$ $= 24,2384 + 0,000001X_1 + 0,00003 X_2$ $- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5$ $- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{Kab.Karawang\ 2020}$ $= 18,8636 + 0,000001X_1 + 0,00003 X_2$ $- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5$ $- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{Kota\ Bandung\ 2020}$ $= 19,7919 + 0,000001X_1 + 0,00003 X_2$ $- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5$ $- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{Kota\ Banjar\ 2020} = 21,8921 + 0,000001X_1 + 0,00003 X_2$ $- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5$ $- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{Kota\ Bekasi\ 2020} = 23,4114 + 0,000001X_1 + 0,00003 X_2$ $- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5$ $- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{Kota\ Bogor\ 2020} = 23,4564 + 0,000001X_1 + 0,00003 X_2$ $- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5$ $- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$

$Y_{\text{Kota Cimahi } 2020} = 23,7971 + 0,000001X_1 + 0,00003 X_2 - 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5 - 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{\text{Kota Cirebon } 2020} = 25,7591 + 0,000001X_1 + 0,00003 X_2 - 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5 - 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{\text{Kota Depok } 2020} = 21,5651 + 0,000001X_1 + 0,00003 X_2 - 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5 - 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{\text{Kota Sukabumi } 2020} = 24,4367 + 0,000001X_1 + 0,00003 X_2 - 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5 - 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{\text{Kota Tasikmalaya } 2020} = 26,8752 + 0,000001X_1 + 0,00003 X_2 - 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5 - 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{\text{Kab.Kuningan } 2020} = 26,6512 + 0,000001X_1 + 0,00003 X_2 - 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5 - 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{\text{Kab.Majalengka } 2020} = 23,5749 + 0,000001X_1 + 0,00003 X_2 - 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5 - 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{\text{Kab.Pangandaran } 2020} = 21,5448 + 0,000001X_1 + 0,00003 X_2 - 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5 - 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{\text{Kab.Purwakarta } 2020} = 21,1930 + 0,000001X_1 + 0,00003 X_2 - 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5 - 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{\text{Kab.Subang } 2020} = 22,7496 + 0,000001X_1 + 0,00003 X_2 - 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5 - 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$

$Y_{Kab.Sukabumi\ 2020}$ $= 21,7336 + 0,000001X_1 + 0,00003 X_2$ $- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5$ $- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{Kab.Sumedang\ 2020}$ $= 24,3977 + 0,000001X_1 + 0,00003 X_2$ $- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5$ $- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{Kab.Tasikmalaya\ 2020}$ $= 24,0770 + 0,000001X_1 + 0,00003 X_2$ $- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5$ $- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$

**Lampiran 21.** Model FEM efek individu dan waktu tahun 2021

<b>Model FEM efek individu dan waktu tahun 2021</b>
$Y_{Kab.Bandung\ 2021} = 22,8367 + 0,000001X_1 + 0,00003 X_2$ $- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5$ $- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{Kab.Bandung\ Barat\ 2021}$ $= 24,5942 + 0,000001X_1 + 0,00003 X_2$ $- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5$ $- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{Kab.Bekasi\ 2021} = 17,3940 + 0,000001X_1 + 0,00003 X_2$ $- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5$ $- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{Kab.Bogor\ 2021} = 23,9820 + 0,000001X_1 + 0,00003 X_2$ $- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5$ $- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{Kab.Ciamis\ 2021} = 22,8386 + 0,000001X_1 + 0,00003 X_2$ $- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5$ $- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{Kab.Cianjur\ 2021} = 25,2404 + 0,000001X_1 + 0,00003 X_2$ $- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5$ $- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{Kab.Cirebon\ 2021} = 26,1204 + 0,000001X_1 + 0,00003 X_2$ $- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5$ $- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$

$Y_{Kab.Garut\ 2021} = 24,6880 + 0,000001X_1 + 0,00003 X_2$ $- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5$ $- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{Kab.Indramayu\ 2021}$ $= 24,3633 + 0,000001X_1 + 0,00003 X_2$ $- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5$ $- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{Kab.Karawang\ 2021}$ $= 18,9885 + 0,000001X_1 + 0,00003 X_2$ $- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5$ $- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{Kota\ Bandung\ 2021}$ $= 19,9168 + 0,000001X_1 + 0,00003 X_2$ $- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5$ $- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{Kota\ Banjar\ 2021} = 22,0170 + 0,000001X_1 + 0,00003 X_2$ $- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5$ $- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{Kota\ Bekasi\ 2021} = 23,5363 + 0,000001X_1 + 0,00003 X_2$ $- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5$ $- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{Kota\ Bogor\ 2021} = 23,5813 + 0,000001X_1 + 0,00003 X_2$ $- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5$ $- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{Kota\ Cimahi\ 2021} = 23,9220 + 0,000001X_1 + 0,00003 X_2$ $- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5$ $- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{Kota\ Cirebon\ 2021} = 25,8840 + 0,000001X_1 + 0,00003 X_2$ $- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5$ $- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{Kota\ Depok\ 2021} = 21,6900 + 0,000001X_1 + 0,00003 X_2$ $- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5$ $- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$
$Y_{Kota\ Sukabumi\ 2021}$ $= 24,5616 + 0,000001X_1 + 0,00003 X_2$ $- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5$ $- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8$



$ \begin{aligned} Y_{Kota\ Tasikmalaya\ 2021} &= 27,0001 + 0,000001X_1 + 0,00003 X_2 \\ &- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5 \\ &- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8 \end{aligned} $
$ \begin{aligned} Y_{Kab.Kuningan\ 2021} &= 26,7761 + 0,000001X_1 + 0,00003 X_2 \\ &- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5 \\ &- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8 \end{aligned} $
$ \begin{aligned} Y_{Kab.Majalengka\ 2021} &= 23,6997 + 0,000001X_1 + 0,00003 X_2 \\ &- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5 \\ &- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8 \end{aligned} $
$ \begin{aligned} Y_{Kab.Pangandaran\ 2021} &= 21,6697 + 0,000001X_1 + 0,00003 X_2 \\ &- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5 \\ &- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8 \end{aligned} $
$ \begin{aligned} Y_{Kab.Purwakarta\ 2021} &= 21,3179 + 0,000001X_1 + 0,00003 X_2 \\ &- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5 \\ &- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8 \end{aligned} $
$ \begin{aligned} Y_{Kab.Subang\ 2021} &= 22,8745 + 0,000001X_1 + 0,00003 X_2 \\ &- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5 \\ &- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8 \end{aligned} $
$ \begin{aligned} Y_{Kab.Sukabumi\ 2021} &= 21,8585 + 0,000001X_1 + 0,00003 X_2 \\ &- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5 \\ &- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8 \end{aligned} $
$ \begin{aligned} Y_{Kab.Sumedang\ 2021} &= 24,5226 + 0,000001X_1 + 0,00003 X_2 \\ &- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5 \\ &- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8 \end{aligned} $
$ \begin{aligned} Y_{Kab.Tasikmalaya\ 2021} &= 24,2019 + 0,000001X_1 + 0,00003 X_2 \\ &- 0,000002X_3 - 0,0327 X_4 - 0,0230 X_5 \\ &- 0,2276X_6 + 0,0021 X_7 - 0,6343 X_8 \end{aligned} $