

## Lampiran A-1

### Daftar Perusahaan Sampel

No	Kode Perusahaan	Nama Perusahaan
1	ADES	Akasha Wira International Tbk.
2	BTEK	Bumi Teknokultura Unggul Tbk
3	BUDI	Budi Starch & Sweetener Tbk.
4	CEKA	Wilmar Cahaya Indonesia Tbk.
5	DLTA	Delta Djakarta Tbk.
6	ICBP	Indofood CBP Sukses Makmur Tbk
7	INDF	Indofood Sukses Makmur Tbk.
8	MLBI	Multi Bintang Indonesia Tbk.
9	MYOR	Mayora Indah Tbk.
10	PSDN	Prasidha Aneka Niaga Tbk
11	ROTI	Nippon Indosari Corpindo Tbk.
12	SKBM	Sekar Bumi Tbk.
13	SKLT	Sekar Laut Tbk.
14	STTP	Siantar Top Tbk.
15	ULTJ	Ultra Jaya Milk Industry & Tra

### Daftar Perusahaan Yang Tidak Digunakan Dalam Penelitian

No	Kode Perusahaan	Nama Perusahaan	Keterangan
1	CAMP	Campina Ice Cream Industry Tbk	Baru Masuk Bursa Pada Periode Penelitian
2	CLEO	Sariguna Primatirta Tbk.	Baru Masuk Bursa Pada Periode Penelitian
3	COCO	Wahana Interfood Nusantara Tbk	Baru Masuk Bursa Pada Periode Penelitian
4	FOOD	Sentra Food Indonesia Tbk.	Baru Masuk Bursa Pada Periode Penelitian
5	GOOD	Garudafood Putra Putri Jaya Tb	Baru Masuk Bursa Pada Periode Penelitian
6	HOKI	Buyung Poetra Sembada Tbk.	Baru Masuk Bursa Pada Periode Penelitian
7	KEJU	Mulia Boga Raya Tbk.	Baru Masuk Bursa Pada Periode Penelitian
8	PANI	Pratama Abadi Nusa Industri Tb	Baru Masuk Bursa Pada Periode Penelitian
9	PCAR	Prima Cakrawala Abadi Tbk.	Baru Masuk Bursa Pada Periode Penelitian
10	PSGO	Palma Serasih Tbk.	Baru Masuk Bursa Pada Periode Penelitian
11	AISA	Tiga Pilar Sejahtera Food Tbk.	Laporan Keuangan Tidak Lengkap

No	Kode Perusahaan	Nama Perusahaan	Keterangan
12	MGNA	Magna Investama Mandiri Tbk.	Laporan Keuangan Tidak Lengkap
13	ALTO	Tri Banyan Tirta Tbk.	Tidak Memiliki Kelengkapan Variabel Yang Diteliti
14	IIKP	Inti Agri Resources Tbk	Tidak Memiliki Kelengkapan Variabel Yang Diteliti

## Lampiran A-2

### Daftar Tabel Penelitian

#### Tabel Chi-Square

$\nu$	$\alpha$				
	0.975	0.95	0.9	0.1	0.05
1	0.0010	0.0039	0.0158	2.7055	3.8415
2	0.0506	0.1026	0.2107	4.6052	5.9915
3	0.2158	0.3518	0.5844	6.2514	7.8147
4	0.4844	0.7107	1.0636	7.7794	9.4877
5	0.8312	1.1455	1.6103	9.2364	11.0705
6	1.2373	1.6354	2.2041	10.6446	12.5916
7	1.6899	2.1673	2.8331	12.0170	14.0671
8	2.1797	2.7326	3.4895	13.3616	15.5073
9	2.7004	3.3251	4.1682	14.6837	16.9190
10	3.2470	3.9403	4.8652	15.9872	18.3070
11	3.8157	4.5748	5.5778	17.2750	19.6751
12	4.4038	5.2260	6.3038	18.5493	21.0261
13	5.0088	5.8919	7.0415	19.8119	22.3620
14	5.6287	6.5706	7.7895	21.0641	23.6848
15	6.2621	7.2609	8.5468	22.3071	24.9958
16	6.9077	7.9616	9.3122	23.5418	26.2962
17	7.5642	8.6718	10.0852	24.7690	27.5871
18	8.2307	9.3905	10.8649	25.9894	28.8693
19	8.9065	10.1170	11.6509	27.2036	30.1435
20	9.5908	10.8508	12.4426	28.4120	31.4104

#### Tabel Statistik T

Pr	0.25	0.10	0.05	0.025	0.01	0.005	0.001
df	0.50	0.20	0.10	0.050	0.02	0.010	0.002
1	1.00000	3.07768	6.31375	12.70620	31.82052	63.65674	318.30884
2	0.81650	1.88562	2.91999	4.30265	6.96456	9.92484	22.32712
3	0.76489	1.63774	2.35336	3.18245	4.54070	5.84091	10.21453
4	0.74070	1.53321	2.13185	2.77645	3.74695	4.60409	7.17318
5	0.72669	1.47588	2.01505	2.57058	3.36493	4.03214	5.89343
6	0.71756	1.43976	1.94318	2.44691	3.14267	3.70743	5.20763
7	0.71114	1.41492	1.89458	2.36462	2.99795	3.49948	4.78529
8	0.70639	1.39682	1.85955	2.30600	2.89646	3.35539	4.50079
9	0.70272	1.38303	1.83311	2.26216	2.82144	3.24984	4.29681
10	0.69981	1.37218	1.81246	2.22814	2.76377	3.16927	4.14370
11	0.69745	1.36343	1.79588	2.20099	2.71808	3.10581	4.02470
12	0.69548	1.35622	1.78229	2.17881	2.68100	3.05454	3.92963
13	0.69383	1.35017	1.77093	2.16037	2.65031	3.01228	3.85198
14	0.69242	1.34503	1.76131	2.14479	2.62449	2.97684	3.78739
15	0.69120	1.34061	1.75305	2.13145	2.60248	2.94671	3.73283

<b>Pr</b>	<b>0.25</b>	<b>0.10</b>	<b>0.05</b>	<b>0.025</b>	<b>0.01</b>	<b>0.005</b>	<b>0.001</b>
<b>df</b>	<b>0.50</b>	<b>0.20</b>	<b>0.10</b>	<b>0.050</b>	<b>0.02</b>	<b>0.010</b>	<b>0.002</b>
<b>16</b>	0.69013	1.33676	1.74588	2.11991	2.58349	2.92078	3.68615
<b>17</b>	0.68920	1.33338	1.73961	2.10982	2.56693	2.89823	3.64577
<b>18</b>	0.68836	1.33039	1.73406	2.10092	2.55238	2.87844	3.61048
<b>19</b>	0.68762	1.32773	1.72913	2.09302	2.53948	2.86093	3.57940
<b>20</b>	0.68695	1.32534	1.72472	2.08596	2.52798	2.84534	3.55181

**Tabel Statistik F**

<b>Df untuk penyebut (N2)</b>	<b>Df untuk pembilang (n1)</b>				
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>1</b>	161	199	216	225	230
<b>2</b>	18.51	19.00	19.16	19.25	19.30
<b>3</b>	10.13	9.55	9.28	9.12	9.01
<b>4</b>	7.71	6.94	6.59	6.39	6.26
<b>5</b>	6.61	5.79	5.41	5.19	5.05
<b>6</b>	5.99	5.14	4.76	4.53	4.39
<b>7</b>	5.59	4.74	4.35	4.12	3.97
<b>8</b>	5.32	4.46	4.07	3.84	3.69
<b>9</b>	5.12	4.26	3.86	3.63	3.48
<b>10</b>	4.96	4.10	3.71	3.48	3.33
<b>11</b>	4.84	3.98	3.59	3.36	3.20
<b>12</b>	4.75	3.89	3.49	3.26	3.11
<b>13</b>	4.67	3.81	3.41	3.18	3.03
<b>14</b>	4.60	3.74	3.34	3.11	2.96
<b>15</b>	4.54	3.68	3.29	3.06	2.90
<b>16</b>	4.49	3.63	3.24	3.01	2.85
<b>17</b>	4.45	3.59	3.20	2.96	2.81
<b>18</b>	4.41	3.55	3.16	2.93	2.77
<b>19</b>	4.38	3.52	3.13	2.90	2.74
<b>20</b>	4.35	3.49	3.10	2.87	2.71

## Lampiran 4

### Hasil Pengolahan dan Pengujian

#### Pengolahan Data Manajemen Laba

##### 1. Menentukan Besaran Total Accrual

No	Kode>Nama Perusahaan	Tahun	Lab a Bersih	Total Arus Kas Operasi	Tait
1	ADES	2016	55,951,000,000	141,107,000,000	-85,156,000,000
1	ADES	2017	38,242,000,000	87,199,000,000	-48,957,000,000
1	ADES	2018	52,958,000,000	146,588,000,000	-93,630,000,000
4	BTEK	2016	2,246,189,813	138,783,218,372	-136,537,028,559
4	BTEK	2017	-42,843,793,031	-160,428,734,408	117,584,941,377
4	BTEK	2018	76,001,730,866	1,088,089,209,381	-1,012,087,478,515
5	BUDI	2016	38,624,000,000	287,744,000,000	-249,120,000,000
5	BUDI	2017	45,691,000,000	69,285,000,000	-23,594,000,000
5	BUDI	2018	50,467,000,000	26,016,000,000	24,451,000,000
7	CEKA	2016	249,697,013,626	176,087,317,362	73,609,696,264
7	CEKA	2017	107,420,886,839	208,851,008,007	-101,430,121,168
7	CEKA	2018	92,649,656,775	287,259,686,428	-194,610,029,653
10	DLTA	2016	254,509,268,000	259,851,506,000	-5,342,238,000
10	DLTA	2017	279,772,635,000	342,202,126,000	-62,429,491,000
10	DLTA	2018	338,129,985,000	342,493,551,000	-4,363,566,000
14	ICBP	2016	3,631,301,000,000	4,584,964,000,000	-953,663,000,000
14	ICBP	2017	3,543,173,000,000	5,174,368,000,000	-1,631,195,000,000
14	ICBP	2018	4,658,781,000,000	4,653,375,000,000	5,406,000,000
16	INDF	2016	5,266,906,000,000	7,175,603,000,000	-1,908,697,000,000
16	INDF	2017	5,145,063,000,000	6,507,803,000,000	-1,362,740,000,000
16	INDF	2018	4,961,851,000,000	5,935,829,000,000	-973,978,000,000
19	MLBI	2016	982,129,000,000	1,248,469,000,000	-266,340,000,000
19	MLBI	2017	1,322,067,000,000	1,331,611,000,000	-9,544,000,000
19	MLBI	2018	1,224,807,000,000	1,412,515,000,000	-187,708,000,000
20	MYOR	2016	1,388,676,127,665	659,314,197,175	729,361,930,490
20	MYOR	2017	1,630,953,830,893	1,275,530,669,068	355,423,161,825
20	MYOR	2018	1,760,434,280,304	459,273,241,788	1,301,161,038,516
23	PSDN	2016	-36,662,178,272	24,429,296,083	-61,091,474,355
23	PSDN	2017	32,150,564,335	24,864,871,829	57,015,436,164
23	PSDN	2018	-46,599,426,588	17,812,366,089	-64,411,792,677
25	ROTI	2016	279,777,368,831	414,702,426,418	-134,925,057,587
25	ROTI	2017	135,364,021,139	370,617,213,073	-235,253,191,934
25	ROTI	2018	127,171,436,363	295,922,456,326	-168,751,019,963
26	SKBM	2016	22,545,456,050	-33,834,235,357	56,379,691,407
26	SKBM	2017	25,880,464,791	-98,662,799,904	124,543,264,695
26	SKBM	2018	15,954,632,472	-55,800,390,846	71,755,023,318
27	SKLT	2016	20,646,121,074	1,641,040,298	19,005,080,776
27	SKLT	2017	22,970,715,348	2,153,248,753	20,817,466,595
27	SKLT	2018	31,954,131,252	14,653,378,405	17,300,752,847
28	STTP	2016	174,176,717,866	166,186,126,054	7,990,591,812
28	STTP	2017	216,024,079,834	301,239,769,296	-85,215,689,462
28	STTP	2018	255,088,886,019	245,006,975,842	10,081,910,177
29	ULTJ	2016	709,825,635,742	779,108,645,836	-69,283,010,094
29	ULTJ	2017	711,681,000,000	1,072,516,000,000	-360,835,000,000

No	Kode>Nama Perusahaan	Tahun	Laba Bersih	Total Arus Kas Operasi	Tait
29	ULTJ	2018	701,607,000,000	575,823,000,000	125,784,000,000

## 2. Menentukan Besarnya Tait/Tat-1, 1/Tat-1, delta sales/Tat-1, fixed asset/Tat-1

### Tait/Tat-1

No	Kode>Nama Perusahaan	Tahun	Tait	Aset T-1	Tait/Tat-1
1	ADES	2016	-85,156,000,000	653,224,000,000	-0.130363
1	ADES	2017	-48,957,000,000	767,479,000,000	-0.063789
1	ADES	2018	-93,630,000,000	840,236,000,000	-0.111433
4	BTEK	2016	-136,537,028,559	3,198,250,747,295	-0.042691
4	BTEK	2017	117,584,941,377	4,879,715,095,300	0.024097
4	BTEK	2018	-1,012,087,478,515	5,306,055,112,389	-0.190742
5	BUDI	2016	-249,120,000,000	3,265,953,000,000	-0.076278
5	BUDI	2017	-23,594,000,000	2,931,807,000,000	-0.008048
5	BUDI	2018	24,451,000,000	2,939,456,000,000	0.008318
7	CEKA	2016	73,609,696,264	1,485,826,210,015	0.049541
7	CEKA	2017	-101,430,121,168	1,425,964,152,418	-0.071131
7	CEKA	2018	-194,610,029,653	1,392,636,444,501	-0.139742
10	DLTA	2016	-5,342,238,000	1,038,321,916,000	-0.005145
10	DLTA	2017	-62,429,491,000	1,197,796,650,000	-0.052120
10	DLTA	2018	-4,363,566,000	1,340,842,765,000	-0.003254
14	ICBP	2016	-953,663,000,000	26,560,624,000,000	-0.035905
14	ICBP	2017	-1,631,195,000,000	28,901,948,000,000	-0.056439
14	ICBP	2018	5,406,000,000	31,619,514,000,000	0.000171
16	INDF	2016	-1,908,697,000,000	91,831,526,000,000	-0.020785
16	INDF	2017	-1,362,740,000,000	82,174,515,000,000	-0.016583
16	INDF	2018	-973,978,000,000	87,939,488,000,000	-0.011076
19	MLBI	2016	-266,340,000,000	2,100,853,000,000	-0.126777
19	MLBI	2017	-9,544,000,000	2,275,038,000,000	-0.004195
19	MLBI	2018	-187,708,000,000	2,510,078,000,000	-0.074782
20	MYOR	2016	729,361,930,490	11,342,715,686,221	0.064302
20	MYOR	2017	355,423,161,825	12,922,421,859,142	0.027504
20	MYOR	2018	1,301,161,038,516	14,915,849,800,251	0.087233
23	PSDN	2016	-61,091,474,355	620,398,854,182	-0.098471
23	PSDN	2017	57,015,436,164	653,796,725,408	0.087207
23	PSDN	2018	-64,411,792,677	690,979,867,049	-0.093218
25	ROTI	2016	-134,925,057,587	2,706,323,637,034	-0.049855
25	ROTI	2017	-235,253,191,934	2,919,640,858,718	-0.080576
25	ROTI	2018	-168,751,019,963	4,559,573,709,411	-0.037010
26	SKBM	2016	56,379,691,407	764,484,248,710	0.073749
26	SKBM	2017	124,543,264,695	1,001,657,012,004	0.124337
26	SKBM	2018	71,755,023,318	1,623,027,475,045	0.044211
27	SKLT	2016	19,005,080,776	377,110,748,359	0.050397
27	SKLT	2017	20,817,466,595	568,239,939,951	0.036635
27	SKLT	2018	17,300,752,847	636,284,210,210	0.027190
28	STTP	2016	7,990,591,812	1,919,568,037,170	0.004163
28	STTP	2017	-85,215,689,462	2,336,411,494,941	-0.036473
28	STTP	2018	10,081,910,177	2,342,432,443,196	0.004304
29	ULTJ	2016	-69,283,010,094	3,539,995,910,248	-0.019571
29	ULTJ	2017	-360,835,000,000	4,239,199,641,365	-0.085119

No	Kode>Nama Perusahaan	Tahun	Tait	Aset T-1	Tait/Tat-1
29	ULTJ	2018	125,784,000,000	5,186,940,000,000	0.024250

### 1/Tat-1

No	Kode>Nama Perusahaan	Tahun	Aset T-1	1/Tat-1
1	ADES	2016	653,224,000,000	0.00000000000071806
1	ADES	2017	767,479,000,000	0.00000000000096309
1	ADES	2018	840,236,000,000	0.00000000000083487
4	BTEK	2016	3,198,250,747,295	0.00000000000074580
4	BTEK	2017	4,879,715,095,300	0.00000000000003765
4	BTEK	2018	5,306,055,112,389	0.00000000000003460
5	BUDI	2016	3,265,953,000,000	0.00000000000003163
5	BUDI	2017	2,931,807,000,000	0.00000000000001089
5	BUDI	2018	2,939,456,000,000	0.00000000000001217
7	CEKA	2016	1,485,826,210,015	0.00000000000001137
7	CEKA	2017	1,425,964,152,418	0.000000000000047600
7	CEKA	2018	1,392,636,444,501	0.000000000000043955
10	DLTA	2016	1,038,321,916,000	0.000000000000039839
10	DLTA	2017	1,197,796,650,000	0.000000000000008816
10	DLTA	2018	1,340,842,765,000	0.000000000000007738
14	ICBP	2016	26,560,624,000,000	0.00000000000006704
14	ICBP	2017	28,901,948,000,000	0.000000000000161187
14	ICBP	2018	31,619,514,000,000	0.000000000000152953
16	INDF	2016	91,831,526,000,000	0.000000000000144722
16	INDF	2017	82,174,515,000,000	0.000000000000036950
16	INDF	2018	87,939,488,000,000	0.000000000000034251
19	MLBI	2016	2,100,853,000,000	0.000000000000021932
19	MLBI	2017	2,275,038,000,000	0.000000000000130807
19	MLBI	2018	2,510,078,000,000	0.000000000000099835
20	MYOR	2016	11,342,715,686,221	0.000000000000061613
20	MYOR	2017	12,922,421,859,142	0.000000000000265174
20	MYOR	2018	14,915,849,800,251	0.000000000000175982
23	PSDN	2016	620,398,854,182	0.000000000000157162
23	PSDN	2017	653,796,725,408	0.000000000000052095
23	PSDN	2018	690,979,867,049	0.000000000000042801
25	ROTI	2016	2,706,323,637,034	0.000000000000042691
25	ROTI	2017	2,919,640,858,718	0.000000000000028249
25	ROTI	2018	4,559,573,709,411	0.000000000000023589
26	SKBM	2016	764,484,248,710	0.00000000000019279
26	SKBM	2017	1,001,657,012,004	0.000000000000071806
26	SKBM	2018	1,623,027,475,045	0.000000000000096309
27	SKLT	2016	377,110,748,359	0.000000000000083487
27	SKLT	2017	568,239,939,951	0.000000000000074580
27	SKLT	2018	636,284,210,210	0.00000000000003765
28	STTP	2016	1,919,568,037,170	0.00000000000003460
28	STTP	2017	2,336,411,494,941	0.00000000000003163
28	STTP	2018	2,342,432,443,196	0.00000000000001089
29	ULTJ	2016	3,539,995,910,248	0.00000000000001217
29	ULTJ	2017	4,239,199,641,365	0.00000000000001137
29	ULTJ	2018	5,186,940,000,000	0.000000000000047600

**delta sales/Tat-1**

No	Kode>Nama Perusahaan	Tahun	Sales	Sales T-1	(Sales- Sales t-t)/ Tat-1
1	ADES	2016	887,663,000,000	669,725,000,000	0.333634
1	ADES	2017	814,490,000,000	887,663,000,000	-0.095342
1	ADES	2018	804,302,000,000	814,490,000,000	-0.012125
4	BTEK	2016	748,088,902,523	1,092,691,701,648	-0.107747
4	BTEK	2017	887,141,290,201	748,088,902,523	0.028496
4	BTEK	2018	890,045,953,988	887,141,290,201	0.000547
5	BUDI	2016	2,467,553,000,000	2,378,805,000,000	0.027174
5	BUDI	2017	2,510,578,000,000	2,467,553,000,000	0.014675
5	BUDI	2018	2,647,193,000,000	2,510,578,000,000	0.046476
7	CEKA	2016	4,115,541,761,173	3,485,733,830,354	0.423877
7	CEKA	2017	4,257,738,486,908	4,115,541,761,173	0.099720
7	CEKA	2018	3,629,327,583,572	4,257,738,486,908	-0.451238
10	DLTA	2016	1,658,618,899,000	1,573,137,749,000	0.082326
10	DLTA	2017	777,308,328,000	1,658,618,899,000	-0.735776
10	DLTA	2018	893,006,350,000	777,308,328,000	0.086288
14	ICBP	2016	34,466,069,000,000	31,741,094,000,000	0.102595
14	ICBP	2017	35,606,593,000,000	34,466,069,000,000	0.039462
14	ICBP	2018	38,413,407,000,000	35,606,593,000,000	0.088768
16	INDF	2016	66,750,317,000,000	64,061,947,000,000	0.029275
16	INDF	2017	70,186,618,000,000	66,750,317,000,000	0.041817
16	INDF	2018	73,394,728,000,000	70,186,618,000,000	0.036481
19	MLBI	2016	3,263,311,000,000	2,696,318,000,000	0.269887
19	MLBI	2017	3,389,736,000,000	3,263,311,000,000	0.055571
19	MLBI	2018	3,649,615,000,000	3,389,736,000,000	0.103534
20	MYOR	2016	18,349,959,898,358	14,818,730,635,847	0.311321
20	MYOR	2017	20,816,673,946,473	18,349,959,898,358	0.190886
20	MYOR	2018	24,060,802,395,725	20,816,673,946,473	0.217495
23	PSDN	2016	932,905,806,441	884,906,826,184	0.077368
23	PSDN	2017	1,399,580,416,996	932,905,806,441	0.713792
23	PSDN	2018	1,334,070,483,011	1,399,580,416,996	-0.094807
25	ROTI	2016	2,521,920,968,213	2,174,501,712,899	0.128373
25	ROTI	2017	2,491,100,179,560	2,521,920,968,213	-0.010556
25	ROTI	2018	2,766,545,866,684	2,491,100,179,560	0.060410
26	SKBM	2016	1,501,115,928,446	1,362,245,580,664	0.181652
26	SKBM	2017	1,841,487,199,828	1,501,115,928,446	0.339808
26	SKBM	2018	1,953,910,957,160	1,841,487,199,828	0.069268
27	SKLT	2016	833,850,372,883	745,107,731,208	0.235322
27	SKLT	2017	914,188,759,779	833,850,372,883	0.141381
27	SKLT	2018	1,045,029,834,378	914,188,759,779	0.205633
28	STTP	2016	2,629,107,367,897	2,544,277,844,656	0.044192
28	STTP	2017	2,825,409,180,889	2,629,107,367,897	0.084019
28	STTP	2018	2,826,957,323,397	2,825,409,180,889	0.000661
29	ULTJ	2016	4,685,987,917,355	4,393,932,684,171	0.082502
29	ULTJ	2017	4,879,559,000,000	4,685,987,917,355	0.045662
29	ULTJ	2018	5,472,882,000,000	4,879,559,000,000	0.114388

**fixed asset/Tat-1**

No	Kode>Nama Perusahaan	Tahun	Fixed Asset	Fixed Asset/ Tat-1
1	ADES	2016	374,177,000,000	0.333634
1	ADES	2017	478,184,000,000	-0.095342



No	Kode>Nama Perusahaan	Tahun	Fixed Asset	Fixed Asset/ Tat-1
1	ADES	2018	447,249,000,000	0.572816
4	BTEK	2016	3,061,460,288,642	0.623058
4	BTEK	2017	3,037,773,442,344	0.532290
4	BTEK	2018	1,660,649,783,142	0.957230
5	BUDI	2016	1,771,780,000,000	0.622531
5	BUDI	2017	1,863,833,000,000	0.312973
5	BUDI	2018	1,871,467,000,000	0.542500
7	CEKA	2016	215,976,492,549	0.635728
7	CEKA	2017	212,312,805,803	0.636671
7	CEKA	2018	200,024,117,988	0.145358
10	DLTA	2016	96,275,498,000	0.148891
10	DLTA	2017	89,978,944,000	0.143630
10	DLTA	2018	90,191,394,000	0.092722
14	ICBP	2016	7,114,288,000,000	0.075120
14	ICBP	2017	8,120,254,000,000	0.067265
14	ICBP	2018	10,741,622,000,000	0.267851
16	INDF	2016	25,701,913,000,000	0.280959
16	INDF	2017	29,787,303,000,000	0.339715
16	INDF	2018	42,388,236,000,000	0.279881
19	MLBI	2016	1,278,015,000,000	0.362488
19	MLBI	2017	1,364,086,000,000	0.482016
19	MLBI	2018	1,524,061,000,000	0.608331
20	MYOR	2016	3,859,420,029,792	0.599588
20	MYOR	2017	3,988,757,428,380	0.607177
20	MYOR	2018	4,258,300,525,120	0.340255
23	PSDN	2016	282,157,452,287	0.308669
23	PSDN	2017	269,910,638,722	0.285488
23	PSDN	2018	268,384,275,903	0.454800
25	ROTI	2016	1,842,722,492,525	0.412836
25	ROTI	2017	1,993,663,314,016	0.388411
25	ROTI	2018	2,222,133,112,899	0.680895
26	SKBM	2016	436,018,707,335	0.682845
26	SKBM	2017	485,558,490,029	0.487355
26	SKBM	2018	582,660,258,194	0.570344
27	SKLT	2016	299,674,475,232	0.484755
27	SKLT	2017	311,810,228,981	0.358996
27	SKLT	2018	323,244,348,971	0.794659
28	STTP	2016	1,133,722,474,056	0.548730
28	STTP	2017	1,125,768,977,479	0.508019
28	STTP	2018	1,096,143,561,950	0.590613
29	ULTJ	2016	1,042,072,476,333	0.481837
29	ULTJ	2017	1,336,398,000,000	0.467951
29	ULTJ	2018	1,453,135,000,000	0.294371

### 3. Menentukan $\beta_1$ , $\beta_2$ , $\beta_3$

Dependent Variable: YB

Method: Least Squares

Date: 05/28/20 Time: 18:04

Sample: 1 45

Included observations: 45

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.024767	0.023036	-1.075137	0.2886
X1B	1.84E+09	1.59E+10	0.116098	0.9081
X2B	0.152671	0.045119	3.383755	0.0016
X3B	-0.025359	0.048075	-0.527495	0.6007
R-squared	0.223847	Mean dependent var		-0.022310
Adjusted R-squared	0.167056	S.D. dependent var		0.067166
S.E. of regression	0.061300	Akaike info criterion		-2.661386
Sum squared resid	0.154065	Schwarz criterion		-2.500793
Log likelihood	63.88118	Hannan-Quinn criter.		-2.601518
F-statistic	3.941551	Durbin-Watson stat		1.684617
Prob(F-statistic)	0.014677			

**4. Menentukan NDA dengan menjumlahkan perkalian antara  $\beta_1 \times 1/\text{Tat-1}$ ,  $\beta_2 \times (\text{delta sales} - \text{delta receivable})/\text{aset t-1}$ ,  $\beta_3 \times \text{Aktiva Tetap}/\text{Tat-1}$**

**Menghitung pertumbuhan piutang**

No	Kode>Nama Perusahaan	Thn	Receivabe	Receivable t-1	dreceivable
1	ADES	2016	152,608,000,000	125,381,000,000	27,227,000,000
1	ADES	2017	140,594,000,000	152,608,000,000	-12,014,000,000
1	ADES	2018	131,862,000,000	140,594,000,000	- 8,732,000,000
4	BTEK	2016	316,321,369,828	55,326,806,390	260,994,563,438
4	BTEK	2017	386,568,782,604	316,321,369,828	70,247,412,776
4	BTEK	2018	162,007,997,625	386,568,782,604	-224,560,784,979
5	BUDI	2016	338,623,000,000	919,096,000,000	-580,473,000,000
5	BUDI	2017	448,159,000,000	338,623,000,000	109,536,000,000
5	BUDI	2018	627,380,000,000	448,159,000,000	179,221,000,000
7	CEKA	2016	282,360,634,308	260,193,339,065	22,167,295,243
7	CEKA	2017	289,906,617,201	282,360,634,308	7,545,982,893
7	CEKA	2018	289,946,271,219	289,906,617,201	39,654,018
10	DLTA	2016	148,407,346,000	148,289,344,000	118,002,000
10	DLTA	2017	146,029,615,000	148,407,346,000	- 2,377,731,000
10	DLTA	2018	157,118,125,000	146,029,615,000	11,088,510,000
14	ICBP	2016	3,721,206,000,000	3,197,834,000,000	523,372,000,000
14	ICBP	2017	3,871,252,000,000	3,721,206,000,000	150,046,000,000
14	ICBP	2018	4,128,191,000,000	3,871,252,000,000	256,939,000,000
16	INDF	2016	4,616,846,000,000	4,255,814,000,000	361,032,000,000

16	INDF	2017	5,039,733,000,000	4,616,846,000,000	422,887,000,000
16	INDF	2018	5,401,971,000,000	5,039,733,000,000	362,238,000,000
19	MLBI	2016	289,580,000,000	209,771,000,000	79,809,000,000
19	MLBI	2017	572,397,000,000	289,580,000,000	282,817,000,000
19	MLBI	2018	605,643,000,000	572,397,000,000	33,246,000,000
20	MYOR	2016	4,364,284,552,253	3,368,430,940,065	995,853,612,188
20	MYOR	2017	5,744,121,818,525	4,364,284,552,253	1,379,837,266,272
20	MYOR	2018	5,572,866,721,797	5,744,121,818,525	-171,255,096,728
23	PSDN	2016	64,745,242,474	45,024,629,144	19,720,613,330
23	PSDN	2017	94,365,538,924	64,745,242,474	29,620,296,450
23	PSDN	2018	92,099,462,989	94,365,538,924	- 2,266,075,935
25	ROTI	2016	280,381,386,519	248,671,775,050	31,709,611,469
25	ROTI	2017	324,917,530,235	280,381,386,519	44,536,143,716
25	ROTI	2018	412,949,853,861	324,917,530,235	88,032,323,626
26	SKBM	2016	158,097,017,422	94,300,351,510	63,796,665,912
26	SKBM	2017	200,512,105,090	158,097,017,422	42,415,087,668
26	SKBM	2018	245,715,957,629	200,512,105,090	45,203,852,539
27	SKLT	2016	109,858,436,107	88,088,524,441	21,769,911,666
27	SKLT	2017	120,296,300,417	109,858,436,107	10,437,864,310
27	SKLT	2018	169,035,452,486	120,296,300,417	48,739,152,069
28	STTP	2016	361,142,451,690	259,526,887,337	101,615,564,353
28	STTP	2017	370,294,715,115	361,142,451,690	9,152,263,425
28	STTP	2018	422,375,898,115	370,294,715,115	52,081,183,000
29	ULTJ	2016	462,422,864,328	448,129,204,430	14,293,659,898
29	ULTJ	2017	504,629,000,000	462,422,864,328	42,206,135,672
29	ULTJ	2018	530,498,000,000	504,629,000,000	25,869,000,000

### Menghitung non discretionary accruals

No	Kode>Nama Perusahaan	Thn	1/Tat-1	(delta sales-delta receivable)/aset t-1	Aktiva Tetap/Tat-1	NDA
1	ADES	2016	1.53087E-12	0.291953	0.572816	0.032871
1	ADES	2017	1.30297E-12	-0.079688	0.623058	- 0.025562
1	ADES	2018	1.19014E-12	-0.001733	0.532290	- 0.011567
4	BTEK	2016	3.12671E-13	-0.189353	0.957230	- 0.052606
4	BTEK	2017	2.0493E-13	0.014100	0.622531	- 0.013256

4	BTEK	2018	1.88464E-13	0.042869	0.312973	- 0.001044
5	BUDI	2016	3.06189E-13	0.204908	0.542500	0.018091
5	BUDI	2017	3.41087E-13	-0.022686	0.635728	- 0.018956
5	BUDI	2018	3.40199E-13	-0.014495	0.636671	- 0.017731
7	CEKA	2016	6.73026E-13	0.408958	0.145358	0.059992
7	CEKA	2017	7.0128E-13	0.094428	0.148891	0.011934
7	CEKA	2018	7.18062E-13	-0.451267	0.143630	- 0.071213
10	DLTA	2016	9.63092E-13	0.082213	0.092722	0.011977
10	DLTA	2017	8.34866E-13	-0.733791	0.075120	- 0.112393
10	DLTA	2018	7.458E-13	0.078018	0.067265	0.011581
14	ICBP	2016	3.76497E-14	0.082890	0.267851	0.005932
14	ICBP	2017	3.45997E-14	0.034270	0.280959	- 0.001829
14	ICBP	2018	3.1626E-14	0.080642	0.339715	0.003755
16	INDF	2016	1.08895E-14	0.025344	0.279881	- 0.003208
16	INDF	2017	1.21692E-14	0.036671	0.362488	- 0.003571
16	INDF	2018	1.13715E-14	0.032362	0.482016	- 0.007262
19	MLBI	2016	4.75997E-13	0.231898	0.608331	0.020856
19	MLBI	2017	4.39553E-13	-0.068743	0.599588	- 0.024889
19	MLBI	2018	3.98394E-13	0.090289	0.607177	- 0.000878
20	MYOR	2016	8.81623E-14	0.223525	0.340255	0.025660
20	MYOR	2017	7.73849E-14	0.084108	0.308669	0.005156
20	MYOR	2018	6.70428E-14	0.228977	0.285488	0.027842
23	PSDN	2016	1.61187E-12	0.045581	0.454800	- 0.001601
23	PSDN	2017	1.52953E-12	0.668487	0.412836	0.094411
23	PSDN	2018	1.44722E-12	-0.091528	0.388411	- 0.021153
25	ROTI	2016	3.69505E-13	0.116656	0.680895	0.001225
25	ROTI	2017	3.42508E-13	-0.025810	0.682845	- 0.020625
25	ROTI	2018	2.19319E-13	0.041103	0.487355	- 0.005679
26	SKBM	2016	1.30807E-12	0.098202	0.570344	0.002942
26	SKBM	2017	9.98346E-13	0.297463	0.484755	0.034963
26	SKBM	2018	6.16133E-13	0.041416	0.358996	- 0.001644
27	SKLT	2016	2.65174E-12	0.177594	0.794659	0.011854
27	SKLT	2017	1.75982E-12	0.123012	0.548730	0.008112
27	SKLT	2018	1.57162E-12	0.129033	0.508019	0.009716

28	STTP	2016	5.20951E-13	-0.008745	0.590613	- 0.015351
28	STTP	2017	4.28007E-13	0.080101	0.481837	0.000800
28	STTP	2018	4.26907E-13	-0.021573	0.467951	- 0.014373
29	ULTJ	2016	2.82486E-13	0.078464	0.294371	0.005035
29	ULTJ	2017	2.35894E-13	0.035706	0.315248	- 0.002108
29	ULTJ	2018	1.92792E-13	0.109401	0.280153	0.009954

### 5. Menentukan Discretionary Accrual

No	Kode>Nama Perusahaan	Thn	NDA	Tait/Tat-1	Manajemen Laba
1	ADES	2016	0.032871	-0.130363	0.163234
1	ADES	2017	- 0.025562	-0.063789	0.038227
1	ADES	2018	- 0.011567	-0.111433	0.099866
4	BTEK	2016	- 0.052606	-0.042691	-0.009915
4	BTEK	2017	- 0.013256	0.024097	-0.037353
4	BTEK	2018	- 0.001044	-0.190742	0.189698
5	BUDI	2016	0.018091	-0.076278	0.094369
5	BUDI	2017	- 0.018956	-0.008048	-0.010908
5	BUDI	2018	- 0.017731	0.008318	-0.026049
7	CEKA	2016	0.059992	0.049541	0.010450
7	CEKA	2017	0.011934	-0.071131	0.083065
7	CEKA	2018	- 0.071213	-0.139742	0.068529
10	DLTA	2016	0.011977	-0.005145	0.017122
10	DLTA	2017	- 0.112393	-0.052120	-0.060273
10	DLTA	2018	0.011581	-0.003254	0.014836
14	ICBP	2016	0.005932	-0.035905	0.041837
14	ICBP	2017	- 0.001829	-0.056439	0.054610
14	ICBP	2018	0.003755	0.000171	0.003584
16	INDF	2016	- 0.003208	-0.020785	0.017577
16	INDF	2017	- 0.003571	-0.016583	0.013012
16	INDF	2018	- 0.007262	-0.011076	0.003814
19	MLBI	2016	0.020856	-0.126777	0.147633

19	MLBI	2017	- 0.024889	-0.004195	-0.020694
19	MLBI	2018	- 0.000878	-0.074782	0.073904
20	MYOR	2016	0.025660	0.064302	-0.038642
20	MYOR	2017	0.005156	0.027504	-0.022348
20	MYOR	2018	0.027842	0.087233	-0.059391
23	PSDN	2016	- 0.001601	-0.098471	0.096871
23	PSDN	2017	0.094411	0.087207	0.007204
23	PSDN	2018	- 0.021153	-0.093218	0.072065
25	ROTI	2016	0.001225	-0.049855	0.051080
25	ROTI	2017	- 0.020625	-0.080576	0.059951
25	ROTI	2018	- 0.005679	-0.037010	0.031331
26	SKBM	2016	0.002942	0.073749	-0.070806
26	SKBM	2017	0.034963	0.124337	-0.089374
26	SKBM	2018	- 0.001644	0.044211	-0.045855
27	SKLT	2016	0.011854	0.050397	-0.038543
27	SKLT	2017	0.008112	0.036635	-0.028523
27	SKLT	2018	0.009716	0.027190	-0.017474
28	STTP	2016	- 0.015351	0.004163	-0.019514
28	STTP	2017	0.000800	-0.036473	0.037273
28	STTP	2018	- 0.014373	0.004304	-0.018677
29	ULTJ	2016	0.005035	-0.019571	0.024607
29	ULTJ	2017	- 0.002108	-0.085119	0.083011
29	ULTJ	2018	0.009954	0.024250	-0.014297

### Beban Pajak

No	Kode>Nama Perusahaan	Tahun	Beban Pajak	Ln(Beban Pajak)
1	ADES	2016	5,685,000,000	22.461097
1	ADES	2017	12,853,000,000	23.276843
1	ADES	2018	17,102,000,000	23.562461
4	BTEK	2016	91,854,523	18.335717

4	BTEK	2017	1,739,913,359	21.277101
4	BTEK	2018	1,716,400,752	21.263495
5	BUDI	2016	14,208,000,000	23.377071
5	BUDI	2017	15,325,000,000	23.452751
5	BUDI	2018	21,314,000,000	23.782630
7	CEKA	2016	36,130,823,829	24.310412
7	CEKA	2017	35,775,052,527	24.300517
7	CEKA	2018	30,745,155,584	24.148998
10	DLTA	2016	72,538,386,000	25.007382
10	DLTA	2017	89,240,218,000	25.214598
10	DLTA	2018	103,118,133,000	25.359141
14	ICBP	2016	1,357,953,000,000	27.937000
14	ICBP	2017	1,663,388,000,000	28.139878
14	ICBP	2018	1,788,004,000,000	28.212121
16	INDF	2016	2,532,747,000,000	28.560326
16	INDF	2017	2,513,491,000,000	28.552694
16	INDF	2018	2,485,115,000,000	28.541340
19	MLBI	2016	338,057,000,000	26.546480
19	MLBI	2017	457,953,000,000	26.850032
19	MLBI	2018	447,105,000,000	26.826059
20	MYOR	2016	457,007,141,573	26.847965
20	MYOR	2017	555,930,772,581	27.043910
20	MYOR	2018	621,507,918,551	27.155414
23	PSDN	2016	26,351,813,680	23.994803
23	PSDN	2017	21,411,258,208	23.787183
23	PSDN	2018	24,837,844,983	23.935634
25	ROTI	2016	89,639,472,867	25.219062
25	ROTI	2017	50,783,313,391	24.650834
25	ROTI	2018	59,764,888,552	24.813684
26	SKBM	2016	8,264,494,258	22.835234
26	SKBM	2017	5,880,557,363	22.494917
26	SKBM	2018	4,932,821,175	22.319177

27	SKLT	2016	4,520,085,462	22.231797
27	SKLT	2017	4,399,850,008	22.204836
27	SKLT	2018	7,613,548,091	22.753195
28	STTP	2016	43,569,590,674	24.497625
28	STTP	2017	72,521,739,769	25.007152
28	STTP	2018	69,605,764,156	24.966113
29	ULTJ	2016	222,657,146,910	26.128899
29	ULTJ	2017	314,550,000,000	26.474409
29	ULTJ	2018	247,411,000,000	26.234317

### Kompensasi Manajerial

No	Kode>Nama Perusahaan	Tahun	Laba Bersih	Aset T	Kompensasi Manajerial
1	ADES	2016	55,951,000,000	767,479,000,000	22.461097
1	ADES	2017	38,242,000,000	840,236,000,000	23.276843
1	ADES	2018	52,958,000,000	881,275,000,000	23.562461
4	BTEK	2016	2,246,189,813	4,879,715,095,300	18.335717
4	BTEK	2017	-42,843,793,031	5,306,055,112,389	21.277101
4	BTEK	2018	76,001,730,866	5,165,236,468,705	21.263495
5	BUDI	2016	38,624,000,000	2,931,807,000,000	23.377071
5	BUDI	2017	45,691,000,000	2,939,456,000,000	23.452751
5	BUDI	2018	50,467,000,000	3,392,980,000,000	23.782630
7	CEKA	2016	249,697,013,626	1,425,964,152,418	24.310412
7	CEKA	2017	107,420,886,839	1,392,636,444,501	24.300517
7	CEKA	2018	92,649,656,775	1,168,956,042,706	24.148998
10	DLTA	2016	254,509,268,000	1,197,796,650,000	25.007382
10	DLTA	2017	279,772,635,000	1,340,842,765,000	25.214598
10	DLTA	2018	338,129,985,000	1,523,517,170,000	25.359141
14	ICBP	2016	3,631,301,000,000	28,901,948,000,000	27.937000
14	ICBP	2017	3,543,173,000,000	31,619,514,000,000	28.139878
14	ICBP	2018	4,658,781,000,000	34,367,153,000,000	28.212121
16	INDF	2016	5,266,906,000,000	82,174,515,000,000	28.560326
16	INDF	2017	5,145,063,000,000	87,939,488,000,000	28.552694
16	INDF	2018	4,961,851,000,000	96,537,796,000,000	28.541340
19	MLBI	2016	982,129,000,000	2,275,038,000,000	26.546480



19	MLBI	2017	1,322,067,000,000	2,510,078,000,000	26.850032
19	MLBI	2018	1,224,807,000,000	2,889,501,000,000	26.826059
20	MYOR	2016	1,388,676,127,665	12,922,421,859,142	26.847965
20	MYOR	2017	1,630,953,830,893	14,915,849,800,251	27.043910
20	MYOR	2018	1,760,434,280,304	17,591,706,426,634	27.155414
23	PSDN	2016	-36,662,178,272	653,796,725,408	23.994803
23	PSDN	2017	32,150,564,335	690,979,867,049	23.787183
23	PSDN	2018	-46,599,426,588	697,657,400,651	23.935634
25	ROTI	2016	279,777,368,831	2,919,640,858,718	25.219062
25	ROTI	2017	135,364,021,139	4,559,573,709,411	24.650834
25	ROTI	2018	127,171,436,363	4,393,810,380,883	24.813684
26	SKBM	2016	22,545,456,050	1,001,657,012,004	22.835234
26	SKBM	2017	25,880,464,791	1,623,027,475,045	22.494917
26	SKBM	2018	15,954,632,472	1,771,365,972,009	22.319177
27	SKLT	2016	20,646,121,074	568,239,939,951	22.231797
27	SKLT	2017	22,970,715,348	636,284,210,210	22.204836
27	SKLT	2018	31,954,131,252	747,293,725,435	22.753195
28	STTP	2016	174,176,717,866	2,336,411,494,941	24.497625
28	STTP	2017	216,024,079,834	2,342,432,443,196	25.007152
28	STTP	2018	255,088,886,019	2,631,189,810,030	24.966113
29	ULTJ	2016	709,825,635,742	4,239,199,641,365	26.128899
29	ULTJ	2017	711,681,000,000	5,186,940,000,000	26.474409
29	ULTJ	2018	701,607,000,000	5,555,871,000,000	26.234317

### Struktur Kepemilikan

No	Kode>Nama Perusahaan	Tahun	Kepemilikan Institusional	Total Saham Beredar	Struktur Kepemilikan
1	ADES	2016	539,896,713	589,896,800	0.915239
1	ADES	2017	539,896,713	589,896,800	0.915239
1	ADES	2018	539,896,713	589,896,800	0.915239
4	BTEK	2016	4,250,000,000	5,784,687,047	0.734698
4	BTEK	2017	4,250,000,000	5,784,687,047	0.734698
4	BTEK	2018	21,990,288,400	46,277,496,376	0.475183

No	Kode>Nama Perusahaan	Tahun	Kepemilikan Institusional	Total Saham Beredar	Struktur Kepemilikan
5	BUDI	2016	2,402,568,831	4,498,997,362	0.534023
5	BUDI	2017	2,402,568,831	4,498,997,362	0.534023
5	BUDI	2018	2,402,568,831	4,498,997,362	0.534023
7	CEKA	2016	547,471,000	595,000,000	0.920119
7	CEKA	2017	547,471,000	595,000,000	0.920119
7	CEKA	2018	547,471,000	595,000,000	0.920119
10	DLTA	2016	653,907,150	800,659,050	0.816711
10	DLTA	2017	653,907,150	800,659,050	0.816711
10	DLTA	2018	653,907,150	800,659,050	0.816711
14	ICBP	2016	9,391,678,000	11,661,908,000	0.805329
14	ICBP	2017	9,391,678,000	11,661,908,000	0.805329
14	ICBP	2018	9,391,678,000	11,661,908,000	0.805329
16	INDF	2016	4,396,103,450	8,780,426,500	0.500671
16	INDF	2017	4,396,103,450	8,780,426,500	0.500671
16	INDF	2018	4,396,103,450	8,780,426,500	0.500671
19	MLBI	2016	1,723,151,000	2,107,000,000	0.817822
19	MLBI	2017	1,723,151,000	2,107,000,000	0.817822
19	MLBI	2018	1,723,151,000	2,107,000,000	0.817822
20	MYOR	2016	13,207,471,425	22,358,699,725	0.590708
20	MYOR	2017	13,207,471,425	22,358,699,725	0.590708
20	MYOR	2018	13,207,471,425	22,358,699,725	0.590708
23	PSDN	2016	1,059,527,210	1,440,000,000	0.735783
23	PSDN	2017	947,660,545	1,440,000,000	0.658098
23	PSDN	2018	947,660,545	1,440,000,000	0.658098
25	ROTI	2016	3,511,223,500	5,061,800,000	0.693671
25	ROTI	2017	4,348,028,207	6,186,488,888	0.702826
25	ROTI	2018	4,523,028,207	6,186,488,888	0.731114
26	SKBM	2016	755,074,606	936,530,894	0.806246
26	SKBM	2017	1,429,025,322	1,726,003,217	0.827939
26	SKBM	2018	1,429,025,322	1,726,003,217	0.827939
27	SKLT	2016	577,115,000	690,740,500	0.835502
27	SKLT	2017	580,615,000	690,740,500	0.840569

<b>No</b>	<b>Kode&gt;Nama Perusahaan</b>	<b>Tahun</b>	<b>Kepemilikan Institusional</b>	<b>Total Saham Beredar</b>	<b>Struktur Kepemilikan</b>
27	SKLT	2018	580,615,000	690,740,500	0.840569
28	STTP	2016	743,600,500	1,310,000,000	0.567634
28	STTP	2017	743,600,500	1,310,000,000	0.567634
28	STTP	2018	743,600,500	1,310,000,000	0.567634
29	ULTJ	2016	1,071,348,565	2,888,382,000	0.370917
29	ULTJ	2017	4,258,588,260	11,553,528,000	0.368596
29	ULTJ	2018	4,193,338,260	11,553,528,000	0.362949

## Lampiran A-4

### Hasil Pengujian Statistik Deskriptif

Date: 05/30/20  
Time: 14:00  
Sample: 2016 2018

	Y	X1	X2	X3
Mean	0.021558	24.77538	0.097458	0.702448
Median	0.013012	24.65083	0.072902	0.734698
Maximum	0.189698	28.56033	0.526704	0.920119
Minimum	-0.089374	18.33572	-0.066794	0.362949
Std. Dev.	0.061789	2.264170	0.117883	0.163935
Skewness	0.679881	-0.227874	1.980133	-0.470503
Kurtosis	3.198229	2.975505	7.263348	2.099289
Jarque-Bera Probability	3.540459 0.170294	0.390576 0.822598	63.48719 0.000000	3.181451 0.203778
Sum	0.970124	1114.892	4.385614	31.61016
Sum Sq. Dev.	0.167985	225.5645	0.611442	1.182493
Observations	45	45	45	45

### Hasil Pengujian Estimasi Regresi Data Panel

#### Model Chow

Redundant Fixed Effects Tests  
Equation: Untitled  
Test cross-section fixed effects

Effects Test	Statistic	d.f.	Prob.
Cross-section F	4.939804	(14,27)	0.0002
Cross-section Chi-square	57.156665	14	0.0000

Cross-section fixed effects test equation:  
Dependent Variable: Y  
Method: Panel Least Squares  
Date: 05/30/20 Time: 14:31  
Sample: 2016 2018  
Periods included: 3

Cross-sections included: 15  
 Total panel (balanced) observations: 45

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.042457	0.150745	0.281648	0.7796
X1	-0.001115	0.005271	-0.211456	0.8336
X2	0.054234	0.098229	0.552121	0.5839
X3	0.002036	0.065455	0.031103	0.9753
R-squared	0.008809	Mean dependent var		0.021558
Adjusted R-squared	-0.063717	S.D. dependent var		0.061789
S.E. of regression	0.063727	Akaike info criterion		-2.583738
Sum squared resid	0.166505	Schwarz criterion		-2.423146
Log likelihood	62.13411	Hannan-Quinn criter.		-2.523871
F-statistic	0.121463	Durbin-Watson stat		1.580065
Prob(F-statistic)	0.946940			

### Model 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	20.766749	3	0.0001

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
X1	-0.843499	-0.069559	0.036710	0.0001
X2	-0.695298	-0.008079	0.054901	0.0034
X3	-0.013784	-0.000038	0.000240	0.3745

Cross-section random effects test equation:  
 Dependent Variable: Y  
 Method: Panel Least Squares  
 Date: 05/28/20 Time: 21:25  
 Sample: 2016 2018  
 Periods included: 3  
 Cross-sections included: 15

Total panel (balanced) observations: 45

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.023329	0.496841	2.059670	0.0492
X1	-0.843499	0.207945	-4.056352	0.0004
X2	-0.695298	0.262294	-2.650839	0.0133
X3	-0.013784	0.016781	-0.821386	0.4186

#### Effects Specification

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

R-squared	0.721684	Mean dependent var	0.021558
Adjusted R-squared	0.546447	S.D. dependent var	0.061789
S.E. of regression	0.041612	Akaike info criterion	-3.231664
Sum squared resid	0.046753	Schwarz criterion	-2.508999
Log likelihood	90.71244	Hannan-Quinn criter.	-2.962262
F-statistic	4.118345	Durbin-Watson stat	2.988521
Prob(F-statistic)	0.000535		

### Model Lagrange Multiplier

Lagrange multiplier (LM) test for panel data

Date: 05/30/20 Time: 15:05

Sample: 2016 2018

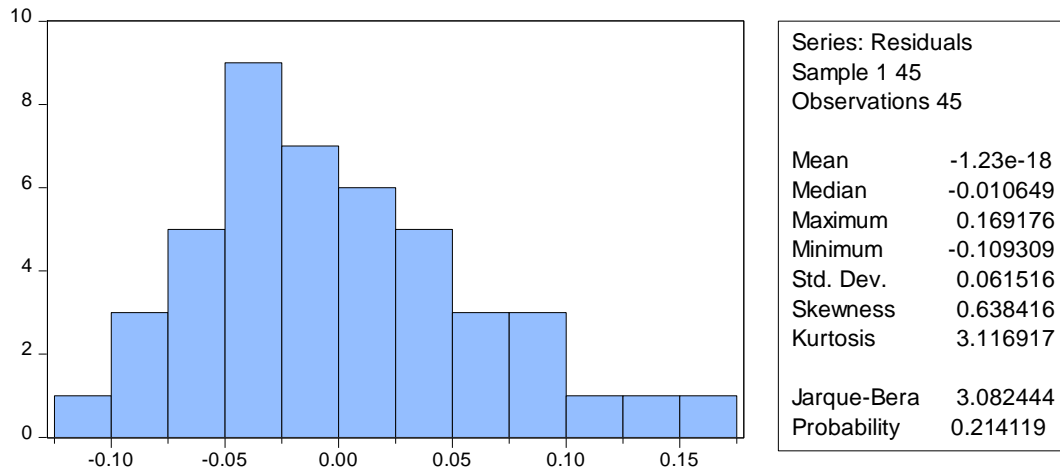
Total panel observations: 45

Probability in ()

Null (no rand. effect) Alternative	Cross-section One-sided	Period One-sided	Both
Breusch-Pagan	2.461085 (0.1167)	0.480859 (0.4880)	2.941944 (0.0863)
Honda	1.568785 (0.0583)	-0.693440 (0.7560)	0.618962 (0.2680)
SLM	2.283891 (0.0112)	-0.395413 (0.6537)	-- --

## Hasil Pengujian Asumsi Klasik

### Normalitas



### Heteroskedastisitas

#### Heteroskedasticity Test: White

F-statistic	1.436087	Prob. F(9,35)	0.2108
Obs*R-squared	12.13600	Prob. Chi-Square(9)	0.2058
Scaled explained SS	10.66331	Prob. Chi-Square(9)	0.2995

#### Test Equation:

Dependent Variable: RESID<sup>2</sup>

Method: Least Squares

Date: 05/30/20 Time: 16:28

Sample: 1 45

Included observations: 45

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.201379	0.187776	1.072446	0.2909
X1 <sup>2</sup>	9.02E-05	0.000243	0.371104	0.7128
X1*X2	-0.005668	0.021561	-0.262888	0.7942
X1*X3	0.005418	0.005085	1.065462	0.2940
X1	-0.008645	0.013649	-0.633400	0.5306
X2 <sup>2</sup>	0.057596	0.129665	0.444187	0.6596
X2*X3	0.063499	0.167390	0.379348	0.7067
X2	0.073543	0.613056	0.119962	0.9052
X3 <sup>2</sup>	0.075336	0.040533	1.858639	0.0715
X3	-0.243252	0.134983	-1.802089	0.0801
R-squared	0.269689	Mean dependent var		0.003700
Adjusted R-squared	0.081895	S.D. dependent var		0.005444

S.E. of regression	0.005217	Akaike info criterion	-7.480788
Sum squared resid	0.000952	Schwarz criterion	-7.079307
Log likelihood	178.3177	Hannan-Quinn criter.	-7.331120
F-statistic	1.436087	Durbin-Watson stat	1.701372
Prob(F-statistic)	0.210788		

### Multikolinearitas

Variance Inflation Factors

Date: 05/30/20 Time: 16:52

Sample: 1 45

Included observations: 45

Variable	Coefficient Variance	Uncentered VIF	Centered VIF	Tolerance
C	0.022724	251.8011	NA	
X1	2.78E-05	190.5176	1.543194	0.648007
X2	0.009649	2.468257	1.452749	0.688350
X3	0.004284	24.67292	1.247512	0.801596

### Autokorelasi

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	0.322682	Prob. F(2,39)	0.7261
Obs*R-squared	0.732528	Prob. Chi-Square(2)	0.6933

Test Equation:

Dependent Variable: RESID

Method: Least Squares

Date: 05/30/20 Time: 17:22

Sample: 1 45

Included observations: 45

Presample missing value lagged residuals set to zero.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.007509	0.153722	-0.048845	0.9613
X1	0.000197	0.005372	0.036738	0.9709
X2	-0.007531	0.100513	-0.074925	0.9407
X3	0.004658	0.066826	0.069698	0.9448
RESID(-1)	0.123053	0.161713	0.760936	0.4513
RESID(-2)	0.025083	0.163406	0.153502	0.8788



R-squared	0.016278	Mean dependent var	-1.23E-18
Adjusted R-squared	-0.109840	S.D. dependent var	0.061516
S.E. of regression	0.064806	Akaike info criterion	-2.511261
Sum squared resid	0.163794	Schwarz criterion	-2.270373
Log likelihood	62.50338	Hannan-Quinn criter.	-2.421461
F-statistic	0.129073	Durbin-Watson stat	1.865481
Prob(F-statistic)	0.984870		

### Hasil Pengujian Hipotesis, Koefisien Determinasi dan Regresi Data Panel

Dependent Variable: Y  
 Method: Panel Least Squares  
 Date: 05/28/20 Time: 21:23  
 Sample: 2016 2018  
 Periods included: 3  
 Cross-sections included: 15  
 Total panel (balanced) observations: 45

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.023329	0.496841	2.059670	0.0492
X1	-0.843499	0.207945	-4.056352	0.0004
X2	-0.695298	0.262294	-2.650839	0.0133
X3	-0.013784	0.016781	-0.821386	0.4186

#### Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.721684	Mean dependent var	0.021558
Adjusted R-squared	0.546447	S.D. dependent var	0.061789
S.E. of regression	0.041612	Akaike info criterion	-3.231664
Sum squared resid	0.046753	Schwarz criterion	-2.508999
Log likelihood	90.71244	Hannan-Quinn criter.	-2.962262
F-statistic	4.118345	Durbin-Watson stat	2.988521
Prob(F-statistic)	0.000535		