

Lampiran 01

DATA PERSENTASE PENDUDUK MISKIN DI INDONESIA

TAHUN	SEMESTER I	SEMESTER II
2012	11,96	11,66
2013	11,37	11,47
2014	11,25	10,96
2015	11,22	11,13
2016	10,86	10,7
2017	10,64	10,12
2018	9,82	9,66
2019	9,41	9,22
2020	9,78	



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TABEL KERJA PERHITUNGAN KOMPONEN *TREND*

NO	TAHUN	SEMESTER	PERSENTASE PENDUDUK MISKIN (Y)	X	X ²	XY
1	2012	I	11,96	-8	64	-95,68
2		II	11,66	-7	49	-81,62
3	2013	I	11,37	-6	36	-68,22
4		II	11,47	-5	25	-57,35
5	2014	I	11,25	-4	16	-45,00
6		II	10,96	-3	9	-32,88
7	2015	I	11,22	-2	4	-22,44
8		II	11,13	-1	1	-11,13
9	2016	I	10,86	0	0	0,00
10		II	10,7	1	1	10,70
11	2017	I	10,64	2	4	21,28
12		II	10,12	3	9	30,36
13	2018	I	9,82	4	16	39,28
14		II	9,66	5	25	48,30
15	2019	I	9,41	6	36	56,46
16		II	9,22	7	49	64,54
17	2020	I	9,78	8	64	78,24
JUMLAH			181,23	0	408	-65,16



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TABEL KERJA PERHITUNGAN KOMPONEN MUSIM

NO	TAHUN	SEMESTER	PERSENTASE PENDUDUK MISKIN (X _t)	TOTAL BERGERAK 2 SEMESTER	MOVING AVERAGE (MA)	INDEKS RATIO
1	2012	I	11,96			
2		II	11,66	23,62	11,81	98,72988992
3	2013	I	11,37	23,03	11,515	98,7407729
4		II	11,47	22,84	11,42	100,4378284
5	2014	I	11,25	22,72	11,36	99,03169014
6		II	10,96	22,21	11,105	98,69428186
7	2015	I	11,22	22,18	11,09	101,1722272
8		II	11,13	22,35	11,175	99,59731544
9	2016	I	10,86	21,99	10,995	98,77216917
10		II	10,7	21,56	10,78	99,25788497
11	2017	I	10,64	21,34	10,67	99,71883786
12		II	10,12	20,76	10,38	97,49518304
13	2018	I	9,82	19,94	9,97	98,49548646
14		II	9,66	19,48	9,74	99,17864476
15	2019	I	9,41	19,07	9,535	98,68904038
16		II	9,22	18,63	9,315	98,98013956
17	2020	I	9,78	19	9,5	102,9473684

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TABEL KERJA PERHITUNGAN KOMPONEN MUSIM (LANJUTAN)

TAHUN	INDEKS RATIO SEMESTER	
	I	II
2012		98,72988992
2013	98,74077	100,4378284
2014	99,03169	98,69428186
2015	101,1722	99,59731544
2016	98,77217	99,25788497
2017	99,71884	97,49518304
2018	98,49549	99,17864476
2019	98,68904	98,98013956
2020	102,9474	-
Rata-Rata	99,69595	99,04639599
Total Rata-Rata	99,37117	
Faktor Koreksi	2,012656135	



**TABEL KERJA PERHITUNGAN KOMPONEN SIKLUS MODEL
DEKOMPOSISI MULTIPLIKATIF**

t	TAHUN	SEMESTER	PERSENTASE PENDUDUK MISKIN (X_t)	MOVING AVERAGE (MA)	TREND (T_t)	SIKLUS $\left(\frac{MA}{T_t} \times 100\%\right)$
1	2012	I	11,96			
2		II	11,66	11,81	11,77853	100,2672
3	2013	I	11,37	11,515	11,61882	99,1064
4		II	11,47	11,42	11,45912	99,6586
5	2014	I	11,25	11,36	11,29941	100,5362
6		II	10,96	11,105	11,13971	99,6884
7	2015	I	11,22	11,09	10,98	101,0018
8		II	11,13	11,175	10,82029	103,2782
9	2016	I	10,86	10,995	10,66059	103,1369
10		II	10,7	10,78	10,50088	102,658
11	2017	I	10,64	10,67	10,34118	103,1797
12		II	10,12	10,38	10,18147	101,9499
13	2018	I	9,82	9,97	10,02176	99,4835
14		II	9,66	9,74	9,862059	98,7623
15	2019	I	9,41	9,535	9,702353	98,2751
16		II	9,22	9,315	9,542647	97,6144
17	2020	I	9,78	9,5	9,382941	101,2476

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**TABEL KERJA PERHITUNGAN KOMPONEN SIKLUS MODEL
DEKOMPOSISI ADITIF**

t	TAHUN	SEMESTER	PERSENTASE PENDUDUK MISKIN (X_t)	MOVING AVERAGE (MA)	TREND (T_t)	SIKLUS ($MA - T_t$) $\times 100\%$
1	2012	I	11,96			
2		II	11,66	11,81	11,77853	3.147058824
3	2013	I	11,37	11,515	11,61882	-10.38235294
4		II	11,47	11,42	11,45912	-3.911764706
5	2014	I	11,25	11,36	11,29941	6.058823529
6		II	10,96	11,105	11,13971	-3.470588235
7	2015	I	11,22	11,09	10,98	11
8		II	11,13	11,175	10,82029	35.47058824
9	2016	I	10,86	10,995	10,66059	33.44117647
10		II	10,7	10,78	10,50088	27.91176471
11	2017	I	10,64	10,67	10,34118	32.88235294
12		II	10,12	10,38	10,18147	19.85294118
13	2018	I	9,82	9,97	10,02176	-5.176470588
14		II	9,66	9,74	9,862059	-12.20588235
15	2019	I	9,41	9,535	9,702353	-16.73529412
16		II	9,22	9,315	9,542647	-22.76470588
17	2020	I	9,78	9,5	9,382941	11.70588235

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TABEL KERJA PERHITUNGAN MODEL DEKOMPOSISI ADITIF

Periode (t)	X_t	Forecasting(F_t)	$e = X_t - F_t$	e^2	$\frac{X_t - F_t}{X_t}$	$\left \frac{X_t - F_t}{X_t} \right $
1	11,96	12,58591163	-0,6259116	0,391765375	-0,05233374	0,052333749
2	11,66	12,3896766	-0,7296766	0,532427941	-0,06257946	0,062579468
3	11,37	12,26649987	-0,8964998	0,803712017	-0,07884783	0,078847834
4	11,47	12,07026484	-0,6002648	0,360317873	-0,05233346	0,052333464
5	11,25	11,94708811	-0,6970881	0,485931827	-0,06196338	0,061963387
6	10,96	11,75085307	-0,7908530	0,62544858	-0,07215812	0,072158127
7	11,22	11,62767634	-0,4076763	0,166199999	-0,03633479	0,03633479
8	11,13	11,43144131	-0,3014413	0,090866861	-0,02708367	0,027083675
9	10,86	11,30826458	-0,4482645	0,20094113	-0,04127666	0,041276664
10	10,7	11,11202954	-0,4120295	0,169768343	-0,03850743	0,038507434
11	10,64	10,98885281	-0,3488528	0,121698284	-0,03278691	0,032786918
12	10,12	10,79261778	-0,6726177	0,452414674	-0,06646420	0,066464207
13	9,82	10,66944105	-0,8494410	0,721550092	-0,08650112	0,086501125
14	9,66	10,47320601	-0,8132060	0,661304018	-0,08418281	0,084182817
15	9,41	10,35002928	-0,9400292	0,883655051	-0,09989684	0,099896842
16	9,22	10,15379425	-0,9337942	0,871971696	-0,10127920	0,101279203
17	9,78	10,03061752	-0,2506175	0,06280914	-0,02562551	0,025625513
Jumlah			-10,718	7,6028		1,0201



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**TABEL KERJA PERHITUNGAN MODEL DEKOMPOSISI
MULTIPLIKATIF**

Periode (t)	X_t	Forecasting(F_t)	$e = X_t - F_t$	e^2	$\frac{X_t - F_t}{X_t}$	$\left \frac{X_t - F_t}{X_t} \right $
1	11,96	21,226	-9,266	85,8648	-0,774776	0,774776
2	11,66	20,714	-9,054	81,9696	-0,776476	0,776476
3	11,37	20,581	-9,211	84,8365	-0,810085	0,810085
4	11,47	20,074	-8,604	74,0274	-0,750123	0,750123
5	11,25	19,935	-8,685	75,4295	-0,772002	0,772002
6	10,96	19,434	-8,474	71,8108	-0,773186	0,773186
7	11,22	19,289	-8,069	65,1146	-0,719195	0,719195
8	11,13	18,794	-7,664	58,742	-0,688619	0,688619
9	10,86	18,644	-7,784	60,5861	-0,716732	0,716732
10	10,7	18,155	-7,455	55,5702	-0,696686	0,696686
11	10,64	17,998	-7,358	54,141	-0,691547	0,691547
12	10,12	17,515	-7,395	54,6823	-0,730706	0,730706
13	9,82	17,352	-7,532	56,7371	-0,767047	0,767047
14	9,66	16,875	-7,215	52,0556	-0,74689	0,74689
15	9,41	16,707	-7,297	53,2425	-0,775425	0,775425
16	9,22	16,235	-7,015	49,2125	-0,760864	0,760864
17	9,78	16,061	-6,281	39,4521	-0,642239	0,642239
Jumlah			-134,36	1073,475		12,592



**PERHITUNGAN PENGUJIAN AKURASI MODEL DEKOMPOSISI
ADITIF**

1. **MSE (Mean Square Error)**

$$MSE = \frac{\sum_{i=1}^n (X_t - F_t)^2}{n}$$

$$MSE = \frac{7,6028}{17}$$

$$MSE = 0,4472$$

2. **RMSE (Root Mean Square Error)**

$$RMSE = \sqrt{\frac{\sum_{i=1}^n (X_t - F_t)^2}{n}}$$

$$RMSE = \sqrt{\frac{7,6028}{17}}$$

$$RMSE = 0,668$$

3. **MAD (Mean Absolut Deviation)**

$$MAD / MAE = \frac{\sum_{i=1}^n |X_t - F_t|}{n}$$

$$MAD / MAE = \frac{10,718}{17}$$

$$MAD / MAE = 0,63$$

4. **MAPE (Mean Absolute Percentage Error)**

$$MAPE = \frac{\sum_{i=1}^n \left| \frac{X_t - F_t}{X_t} \right|}{n} \times 100$$

$$MAPE = \frac{1,0201}{17} \times 100$$

$$MAPE = 6\%$$

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**PERHITUNGAN PENGUJIAN AKURASI MODEL DEKOMPOSISI
MULTIPLIKATIF**

1. **MSE (Mean Square Error)**

$$MSE = \frac{\sum_{i=1}^n (X_t - F_t)^2}{n}$$

$$MSE = \frac{1073,475}{17}$$

$$MSE = 63,145$$

2. **RMSE (Root Mean Square Error)**

$$RMSE = \sqrt{\frac{\sum_{i=1}^n (X_t - F_t)^2}{n}}$$

$$RMSE = \sqrt{\frac{1073,475}{17}}$$

$$RMSE = 7,946$$

3. **MAD (Mean Absolut Deviation)**

$$MAD / MAE = \left| \frac{\sum_{i=1}^n (X_t - F_t)}{n} \right|$$

$$MAD / MAE = \frac{134,36}{17}$$

$$MAD / MAE = 7,90$$

4. **MAPE (Mean Absolute Percentage Error)**

$$MAPE = \frac{\sum_{i=1}^n \left| \frac{X_t - F_t}{X_t} \right|}{n} \times 100$$

$$MAPE = \frac{12,592}{17} \times 100$$

$$MAPE = 74,074\%$$