

Lampiran 1. Data Angka Pengangguran di Provinsi Bali

DATA ANGKA PENGANGGURAN DI PROVINSI BALI

Kabupaten/Kota	Jumlah Pengangguran Kabupaten/Kota												
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Kab. Jembrana	5254	5988	3170	3594	5368	3055	4863	4314	2299	-	1100	2247	2041
Kab. Tabanan	5570	7335	7132	2661	7021	5814	2113	6027	4641	-	4499	3936	3486
Kab. Badung	10699	7508	7661	3940	7075	5445	2635	1558	1150	-	1653	1590	1438
Kab. Gianyar	7370	7525	7954	6470	5562	4907	5991	3859	5577	-	3100	4978	4313
Kab. Klungkung	7165	4295	4005	3809	2230	2059	2114	1998	1471	-	984	1517	1633
Kab. Bangli	1930	3633	1985	863	1130	1286	1083	976	2373	-	686	1175	1045
Kab. Karangasem	7551	7807	7836	6524	6448	3167	3408	5045	5306	-	1732	2534	1526
Kab. Buleleng	14282	10526	8927	11206	11256	11265	7577	9381	7184	-	8833	6945	10480
Kota Denpasar	17756	14931	17800	29724	19626	11232	12036	10968	17209	-	13556	9563	11589
Provinsi Bali	77577	69548	66470	68791	65716	48230	41820	44126	47210	46484	36143	34485	37551

UNDIKSHA

Lampiran 2. Weighed Moving Average 3

PERHITUNGAN DENGAN WMA 3

NO	TAHUN	DATA	FORECAST	ERROR	ERROR ²	ERROR (%)
	T	X _t	F _t	X _t - F _t	(X _t -F _t) ²	(X _t -F _t)/A _t *100/
1	2007	77577	-	-	-	-
2	2008	69548	-	-	-	-
3	2009	66470	-	-	-	-
4	2010	68791	69347	-556	309321	0,81
5	2011	65716	68144	-2428	5892756	3,69
6	2012	48230	66867	-18637	347325344	38,64
7	2013	41820	57486	-15666	245407890	37,46
8	2014	44126	47939	-3813	14541511	8,64
9	2015	47210	44041	3169	10040448	6,71
10	2016	46484	45284	1200	1440800	2,58
11	2017	36143	46333	-10190	103836100	28,19
12	2018	34485	41435	-6950	48295550	20,15
13	2019	37551	37038	514	263682	1,37
	Jumlah			-53356	777353404	148,25

Lampiran 3. Weighed Moving Average 4

PERHITUNGAN DENGAN WMA 4

NO	TAHUN	DATA	FORECAST	ERROR	ERROR ²	ERROR (%)
	T	X _t	F _t	X _t - F _t	(X _t -F _t) ²	/ (X _t -F _t)/A _t *100/
1	2007	77577	-	-	-	-
2	2008	69548	-	-	-	-
3	2009	66470	-	-	-	-
4	2010	68791	-	-	-	-
5	2011	65716	68144	-3409	11619236	5,19
6	2012	48230	66867	-18943	358818306	39,28
7	2013	41820	57486	-17592	309478464	42,07
8	2014	44126	47939	-7093	50314905	16,08
9	2015	47210	44041	796	633616	1,69
10	2016	46484	45284	1175	1381095	2,53
11	2017	36143	46333	-9621	92559793	26,62
12	2018	34485	41435	-7772	60403984	22,54
13	2019	37551	37038	-1104	1218154	2,94
	Jumlah			-63562	886427552	159

Lampiran 4. Weighed Moving Average 5

PERHITUNGAN DENGAN WMA 5

NO	TAHUN	DATA	FORECAST	ERROR	ERROR ²	ERROR (%)
	T	X _t	F _t	X _t - F _t	(X _t -F _t) ²	/(X _t -F _t)/A _t *100/
1	2007	77577	-	-	-	-
2	2008	69548	-	-	-	-
3	2009	66470	-	-	-	-
4	2010	68791	-	-	-	-
5	2011	65716	-	-	-	-
6	2012	48230	67988	-19758	390397005	40,97
7	2013	41820	60858	-19038	362458136	45,52
8	2014	44126	53548	-9422	88774084	21,35
9	2015	47210	48855	-1645	2705586	3,48
10	2016	46484	46679	-195	38155	0,42
11	2017	36143	45701	-9558	91346443	26,44
12	2018	34485	42557	-8072	65155031	23,41
13	2019	37551	39666	-2115	4474635	5,63
	Jumlah			-69804	1005349077	167

Lampiran 5. Perhitungan Pengujian Akurasi WMA 3

PERHITUNGAN PENGUJIAN AKURASI WMA 3

1. MSE (Mean Square Error)

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

$$MSE = \frac{777353404}{10}$$

$$MSE = 77735340$$

2. RMSE (Root Mean Square Error)

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

$$RMSE = \sqrt{\frac{777353404}{10}}$$

$$RMSE = 8816,76$$

3. MAD (Mean Absolut Deviation)

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

$$MAD/MAE = \left| \frac{-53356}{10} \right|$$

$$MAD/MAE = 5335,6$$

4. MAPE (Mean Absolute Percentage Error)

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

$$MAPE = \frac{148,25}{10}$$

$$MAPE = 14,3\%$$

Lampiran 6. Perhitungan Pengujian Akurasi WMA 4

PERHITUNGAN PENGUJIAN AKURASI WMA 4

1. MSE (Mean Square Error)

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

$$MSE = \frac{886427552}{9}$$

$$MSE = 98491950$$

2. RMSE (Root Mean Square Error)

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

$$RMSE = \sqrt{\frac{886427552}{9}}$$

$$RMSE = 9924,31$$

3. MAD (Mean Absolut Deviation)

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

$$MAD / MAE = \left| \frac{-63562}{9} \right|$$

$$MAD / MAE = 7062$$

4. MAPE (Mean Absolute Percentage Error)

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

$$MAPE = \frac{159}{9}$$

$$MAPE = 17,66\%$$

Lampiran 7. Perhitungan Pengujian Akurasi WMA 5

PERHITUNGAN PENGUJIAN AKURASI WMA 5

1. MSE (Mean Square Error)

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

$$MSE = \frac{1005349077}{8}$$

$$MSE = 125668635$$

2. RMSE (Root Mean Square Error)

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

$$RMSE = \sqrt{\frac{1005349077}{8}}$$

$$RMSE = 11210,2$$

3. MAD (Mean Absolut Deviation)

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

$$MAD / MAE = \left| \frac{-69804}{8} \right|$$

$$MAD / MAE = 8725$$

4. MAPE (Mean Absolute Percentage Error)

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

$$MAPE = \frac{167}{8}$$

$$MAPE = 20,90\%$$