DAFTAR PUSTAKA

aden, d. o. (n.d.). *forecasting the eksponential smoothing methods*. www.unpam.ac.idi

adrianta surijah, e., tesya kirana, c., putu julian dian wahyuni, n., chrisna yudi, p., komang budi astini, n., studi psikologi, p., & ekonomika dan humaniora universitas dhyana pura, f. (2017). *intuisi membedah instagram: analisis isi media sosial pariwisata bali*. http://journal.unnes.ac.id/nju/index.php/intuisi

arumsari, m., tri, a., & dani, r. (2021). peramalan data runtun waktu menggunakan model hybrid time series regression-autoregressive integrated moving average. in *jurnal siger matematika* (vol. 02, issue 01).

ayu wulandari dan rahmat gernowo, r. (2019). *metode autoregressive integrated movingaverage (arima) dan metode adaptive neuro fuzzy inference system (anfis) dalam analisis curah hujan* (vol. 22, issue 1).

fatmawati kalebos. (2016). *faktor-faktor yang mempengaruhi kepuasan wisatawan yang berkunjung ke daerah wisata kepulauan-1-sm*.

febriana, f., darmawan, f., & wibowo, s. t. (2022). komponen pariwisata dan daya dukung kawasan di pulau liwungan. *jurnal kepariwisataan*, *21*(1), 27–36. https://doi.org/10.52352/jpar.v21i1.723

fitria, i., sayekti kuncaraning alam, m., studi matematika, p., & teknologi kalimantan, i. (n.d.). *perbandingan metode arima dan double exponential smoothing pada peramalan harga saham lq45 tiga perusahaan dengan nilai earning per share (eps) tertinggi*.

manajemen, j., aliansi, b., & yuniarti, r. (n.d.-a). *analisa metode single exponential smoothing sebagai peramalan penjualan terhadap penyalur makanan (studi kasus : lokatara dimsum)*.

manajemen, j., aliansi, b., & yuniarti, r. (n.d.-b). *analisa metode single exponential smoothing sebagai peramalan penjualan terhadap penyalur makanan (studi kasus : lokatara dimsum)*.

nurrohman, f., sahara, a., iqbal, m., & sanawiri, b. (2016). analisis motivasi berkunjung wisatawan dan tingkat pengetahuan wisatawan tentang produk industri kreatif sektor kerajinan (studi pada wisatawan domestik di kota batu, jawa timur). in *jurnal administrasi bisnis (jab)|vol* (vol. 35, issue 2).

peramalan jumlah wisatawan mancanegara di kabupaten toba samosir tahun 2018-2020. (n.d.).

sari, e. n., susanto, b., & setiawan, a. (2021). perbandingan hasil peramalan jumlah wisatawan mancanegara dengan metode box-jenkins dan exponential smoothing. *jambura journal of probability and statistics*, *2*(1), 1–13. https://doi.org/10.34312/jjps.v2i1.9181

yuniati, n. (2018). profil dan karakteristik wisatawan nusantara (studi kasus di yogyakarta). *jurnal pariwisata pesona*, *3*(2). https://doi.org/10.26905/jpp.v3i2.2381

LAMPIRAN

Lampiran 1 Jumlah Kunjungan Wisatawan Domestik di Bali tahun 2017 – 2021

Bulan/Tahun	2017	2018	2019	2020	2021
Januari	658.308	743.456	793.527	879.702	282.248
Februari	520.462	655.719	693.113	721.105	240.608
Maret	618.834	762.622	787.616	567.452	305.579
April	705.710	777.287	795.997	175.120	330.593
Mei	646.467	682.521	656.082	101.948	363.959
Juni	659.718	1.156.151	1.287.877	137.395	498.852
Juli	890.368	906.347	935.930	229.112	166.718
Agustus	790.323	770.364	925.360	355.732	202.187
September	832.026	774.144	812.003	283.349	298.950
Oktober	732.720	762.124	853.007	337.304	468.826
November	741.649	806.397	852.626	425.097	513.482
Desember	939.048	960.859	1.152.901	382.841	629.590

Lampiran 2 Tabel hasil Transformasi

No	Transformasi	No	Transformasi	No	Transformasi
1	811,3618182	21	879,8545334	41	319,2929689
2	721,4305233	22	872,9971363	42	370,6683153
3	786,6600282	23	897,9961024	43	478,656453
4	840,0654736	24	980,2341557	44	596,4327288
5	804,0317158	25	890,8013247	45	532,3053635
6	812,2302629	26	831,9332906	46	580,7787875
7	943,5931327	27	887,4773237	47	651,9946319
8	889,0011249	28	892,1866397	48	618,7414646
9	912,1545922	29	809,9888888	49	531,2701761
10	855,9906542	30	1134,846686	50	490,5180934
11	861,1904551	31	967,4347523	51	552,7920043
12	969,0448906	32	961,95634	52	574,9721732
13	862,238946	33	901,1120907	53	603,2901458
14	809,7647807	34	923,5837807	54	706,2945561
15	873,282314	35	923,3774959	55	408,3111559
16	881,6388149	36	1073,732276	56	449,6520877
17	826,1482918	37	937,924304	57	546,7632029
18	1075,244623	38	849,1790153	58	684,7086972
19	952,0225838	39	753,2940993	59	716,5765835
20	877,7038225	40	418,4734161	60	793,4670756

Lampiran 3 Tabel Jumlah Kunjungan Wisatawan Domestik setelah *Differencing*

No	Diff	No	Diff	No	Diff
1		21	2,150711	41	-99,1804
2	-89,9313	22	-6,8574	42	51,37535
3	65,2295	23	24,99897	43	107,9881
4	53,40545	24	82,23805	44	117,7763
5	-36,0338	25	-89,4328	45	-64,1274
6	8,198547	26	-58,868	46	48,47342
7	131,3629	27	55,54403	47	71,21584
8	-54,592	28	4,709316	48	-33,2532
9	23,15347	29	-82,1978	49	-87,4713
10	-56,1639	30	324,8578	50	-40,7521
11	5,199801	31	-167,412	51	62,27391
12	107,8544	32	-5,47841	52	22,18017
13	-106,806	33	-60,8442	53	28,31797
14	-52,4742	34	22,47169	54	103,0044
15	63,51753	35	-0,20628	55	-297,983
16	8,356501	36	150,3548	56	41,34093
17	-55,4905	37	-135,808	57	97,11112
18	249,0963	38	-88,7453	58	137,9455
19	-123,222	39	-95,8849	59	31,86789
20	-74,3188	40	-334,821	60	76,89049

Lampiran 4 Hasil Output model ARIMA (1,1,1)

WORKSHEET 1

ARIMA Model: Diff

Estimates at Each Iteration

Iteration	SSE	Parameters	
0	1542124	0,100	0,100
1	1170895	-0,050	0,250
2	1107248	0,037	0,400
3	1033446	0,109	0,550
4	948995	0,161	0,700
5	854864	0,190	0,850
6	766245	0,180	1,000
7	721217	0,030	0,993
8	702999	-0,094	0,987
9	700799	-0,113	0,982
10	700718	-0,116	0,980

Unable to reduce sum of squares any further

Final Estimates of Parameters

Type		Coef	SE Coef	T-Value	P-Value
AR	1	-0,116	0,134	-0,87	0,390
MA	1	0,9798	0,0348	28,15	0,000

Differencing: 1 regular difference

Number of observations: Original series 60, after differencing 58

Residual Sums of Squares

DF	SS	MS
56	690669	12333,4

Back forecasts excluded

Modified Box-Pierce (Ljung-Box) Chi-Square Statistic

Lag	12	24	36	48
Chi-Square	13,05	28,38	37,95	45,56
DF	10	22	34	46
P-Value	0,221	0,163	0,294	0,491

Lampiran 5 Hasil output model ARIMA (0,1,1)

WORKSHEET 1

ARIMA Model: Diff

Estimates at Each Iteration

Iteration	SSE	Parameters
0	1395173	0,100
1	1217732	0,250
2	1078123	0,400
3	964509	0,550
4	867685	0,700
5	780837	0,850
6	755727	1,000
7	722542	0,995
8	711933	0,990
9	709387	0,986
10	709213	0,983

Unable to reduce sum of squares any further

Final Estimates of Parameters

Type		Coef	SE Coef	T-Value	P-Value
MA	1	0,9833	0,0321	30,59	0,000

Differencing: 1 regular difference

Number of observations: Original series 60, after differencing 58

Residual Sums of Squares

DF	SS	MS
57	698959	12262,4

Back forecasts excluded

Modified Box-Pierce (Ljung-Box) Chi-Square Statistic

Lag	12	24	36	48
Chi-Square	14,89	32,18	42,56	50,64
DF	11	23	35	47
P-Value	0,187	0,096	0,178	0,332

Lampiran 6 Hasil Output model ARIMA (1,1,0)

WORKSHEET 1

ARIMA Model: Diff

Estimates at Each Iteration

Iteration	SSE	Parameters
0	1718155	0,100
1	1465479	-0,050
2	1281023	-0,200
3	1164788	-0,350
4	1116775	-0,500
5	1115369	-0,528
6	1115358	-0,530
7	1115358	-0,531

Relative change in each estimate less than 0,001

Final Estimates of Parameters

Type		Coef	SE Coef	T-Value	P-Value
AR	1	-0,531	0,112	-4,73	0,000

Differencing: 1 regular difference

Number of observations: Original series 60, after differencing 58

Residual Sums of Squares

DF	SS	MS
57	1110489	19482,3

Back forecasts excluded

Modified Box-Pierce (Ljung-Box) Chi-Square Statistic

Lag	12	24	36	48
Chi-Square	29,55	57,98	74,70	85,88
DF	11	23	35	47
P-Value	0,002	0,000	0,000	0,000

Lampiran 7 Output Minitab Model ARIMA

WORKSHEET 1

ARIMA Model: Jumlah Kunjungan Wisatawan

Estimates at Each Iteration

Iteration	SSE	Parameters
0	1,69789E+12	0,100
1	1,63917E+12	0,250
2	1,63342E+12	0,302
3	1,63315E+12	0,313
4	1,63313E+12	0,315
5	1,63313E+12	0,316
6	1,63313E+12	0,316

Relative change in each estimate less than 0,001

Final Estimates of Parameters

Type		Coef	SE Coef	T-Value	P-Value
MA	1	0,316	0,126	2,50	0,015

Differencing: 1 regular difference

Number of observations: Original series 60, after differencing 59

Residual Sums of Squares

DF	SS	MS
58	1,63215E+12	2,81405E+10

Back forecasts excluded

Modified Box-Pierce (Ljung-Box) Chi-Square Statistic

Lag	12	24	36	48
Chi-Square	21,57	36,16	45,75	49,35
DF	11	23	35	47
P-Value	0,028	0,040	0,105	0,380

Forecasts from period 60

		95% Limits		
Period	Forecast	Lower	Upper	Actual
61	582287	253428	911146	

Lampiran 8 Hasil Peramalan *Single Eksponential Smoothing*

α 0,2	α 0,9
0,8	0,1
#N/A	#N/A
658 308	658 308
630738,8	534246,6
628357,8	610375,3
643828,3	696176,5
644356	651438
647428,4	658890
696016,3	867220,2
714877,7	798012,7
738307,3	828624,7
737189,9	742310,5
738081,7	741715,1
778275	919314,7
771311,2	761041,9
748192,7	666251,3
751078,6	752984,9
756320,3	774856,8
741560,4	691754,6
824478,5	1109711
840852,2	926683,4
826754,6	785995,9
816232,5	775329,2
805410,8	763444,5
805608	802101,8
836658,2	944983,3
828032	808672,6
800848,2	703769
798201,7	779231,3
797760,8	794320,4
769425	669905,8
873115,4	1226080
885678,3	964945
893614,7	929318,5
877292,3	823734,5
872435,3	850079,8
868473,4	852371,4
925358,9	1122848
916227,5	904016,6
877203	739396,2
815252,8	584646,4
687226,3	216072,6

570170,6	113360,5
483615,5	134991,5
432714,8	219700
417318,2	342128,8
390524,4	289227
379880,3	332496,3
388923,6	415836,9
387707,1	386140,6
366615,3	292637,3
341413,8	245810,9
334246,9	299602,2
333516,1	327493,9
339604,7	360312,5
371454,1	484998
330506,9	198546
304842,9	201822,9
303664,3	289237,3
336696,7	450867,1
372053,7	507220,5

Lampiran 9 MSE 0,2 pada metode *Eksponential Smoothing*

WORKSHEET 1

Single Exponential Smoothing for kunjungan wisata

Method

Data	kunjungan wisata
Length	60

Smoothing Constant

α	0,2

Accuracy Measures

MAPE	3,96023E+01
MAD	1,26501E+05
MSD	3,66008E+10

Forecasts

Period	Forecast	Lower	Upper
61	423561	113639	733483

Lampiran 10 MSE 0,9 pada metode *Eksponential Smoothing*

WORKSHEET 1

Single Exponential Smoothing for kunjungan wisata

Method

Data	kunjungan wisata
Length	60

Smoothing Constant

α	0,9

Accuracy Measures

MAPE	2,54275E+01
MAD	1,21604E+05
MSD	2,83001E+10

Forecasts

Period	Forecast	Lower	Upper
61	617353	319429	915277

Lampiran 11 Hasil peramalan periode selanjutnya menggunakan metode ARIMA

WORKSHEET 1

ARIMA Model: Jumlah Kunjungan Wisatawan

Estimates at Each Iteration

Iteration	SSE	Parameters
0	1,69789E+12	0,100
1	1,63917E+12	0,250
2	1,63342E+12	0,302
3	1,63315E+12	0,313
4	1,63313E+12	0,315
5	1,63313E+12	0,316
6	1,63313E+12	0,316

Relative change in each estimate less than 0,001

Final Estimates of Parameters

Type		Coef	SE Coef	T-Value	P-Value
MA	1	0,316	0,126	2,50	0,015

Differencing: 1 regular difference

Number of observations: Original series 60, after differencing 59

Residual Sums of Squares

DF	SS	MS
58	1,63215E+12	2,81405E+10

Back forecasts excluded

Modified Box-Pierce (Ljung-Box) Chi-Square Statistic

Lag	12	24	36	48
Chi-Square	21,57	36,16	45,75	49,35
DF	11	23	35	47
P-Value	0,028	0,040	0,105	0,380

Forecasts from period 60

		95% Limits		
Period	Forecast	Lower	Upper	Actual
61	582287	253428	911146	

Lampiran 12 Hasil peramalan periode selanjutnya menggunakan metode *Eksponential Smoothing*

WORKSHEET 1

Single Exponential Smoothing for kunjungan wisata

Method

Data	kunjungan wisata
Length	60

Smoothing Constant

α	0,9

Accuracy Measures

MAPE	2,54275E+01
MAD	1,21604E+05
MSD	2,83001E+10

Forecasts

Period	Forecast	Lower	Upper
61	617353	319429	915277