

H1 INTERRUPTED TIME SERIES MODEL
MO 2010-2016 ED Data

The AUTOREG Procedure

Dependent Variable	TCC
	Trend-Cycle Component

H1 INTERRUPTED TIME SERIES MODEL

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The AUTOREG Procedure

Ordinary Least Squares Estimates			
SSE	45700.3402	DFE	68
MSE	672.06383	Root MSE	25.92419
SBC	686.063846	AIC	676.957182
MAE	21.1387264	AICC	677.554197
MAPE	2.82553685	HQC	680.582572
Durbin-Watson	0.0954	Total R-Square	0.7046

Parameter Estimates					
Variable	DF	Estimate	Standard Error	t Value	Approx Pr > t
Intercept	1	825.6530	7.5666	109.12	<.0001
PRESLOPE	1	-1.9415	0.1796	-10.81	<.0001
INTERVENTION	1	40.7278	19.9091	2.05	0.0447
POSTSLOPE	1	13.7528	3.3468	4.11	0.0001

Estimates of Autocorrelations																								
Lag	Covariance	Correlation	-1	9	8	7	6	5	4	3	2	1	0	1	2	3	4	5	6	7	8	9	1	
0	634.7	1.000000													*****									
1	590.3	0.930073													*****									
2	533.6	0.840704													*****									
3	478.7	0.754173													*****									
4	423.0	0.666419													*****									
5	354.9	0.559151													*****									
6	273.3	0.430608													*****									

Preliminary MSE	78.2772
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Estimates of Autoregressive Parameters			
Lag	Coefficient	Standard Error	t Value
1	-1.002835	0.052139	-19.23
6	0.130128	0.052139	2.50

Expected Autocorrelations	
Lag	Autocorr
0	1.0000
1	0.9341
2	0.8525
3	0.7565
4	0.6477
5	0.5280
6	0.3993

Coefficients for First NLAG Observations						
	1	2	3	4	5	6
1	0.3393890623	0	0	0	0	0
2	-0.888227814	0.9508593927	0	0	0	0
3	0.1519568746	-1.04144636	0.9629249589	0	0	0
4	0.1420197624	3.031875E-16	-1.030300747	0.9733417126	0	0
5	0.1354614603	-2.02689E-16	7.19725E-16	-1.020465588	0.9827226957	0
6	0.1316160576	-9.16825E-16	-1.03718E-16	6.044632E-16	-1.011434728	0.9914971927

Algorithm converged.

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Maximum Likelihood Estimates			
SSE	1496.6576	DFE	66
MSE	22.67663	Root MSE	4.76200
SBC	453.104274	AIC	439.444278
MAE	3.69784899	AICC	440.736585
MAPE	0.49294142	HQC	444.882363
Log Likelihood	-213.72214	Transformed Regression R-Square	0.2371
Durbin-Watson	0.9332	Total R-Square	0.9903
		Observations	72

Parameter Estimates					
Variable	DF	Estimate	Standard Error	t Value	Approx Pr > t
Intercept	1	774.3864	34.7435	22.29	<.0001
PRESLOPE	1	-0.4899	0.8432	-0.58	0.5632
INTERVENTION	1	-2.9420	4.9135	-0.60	0.5514
POSTSLOPE	1	12.4270	2.9358	4.23	<.0001
ARI	1	-1.1199	0.0305	-36.70	<.0001
AR6	1	0.1572	0.0299	5.25	<.0001

Expected Autocorrelations	
Lag	Autocorr
0	1.0000
1	0.9869
2	0.9647
3	0.9335
4	0.8937
5	0.8457
6	0.7898

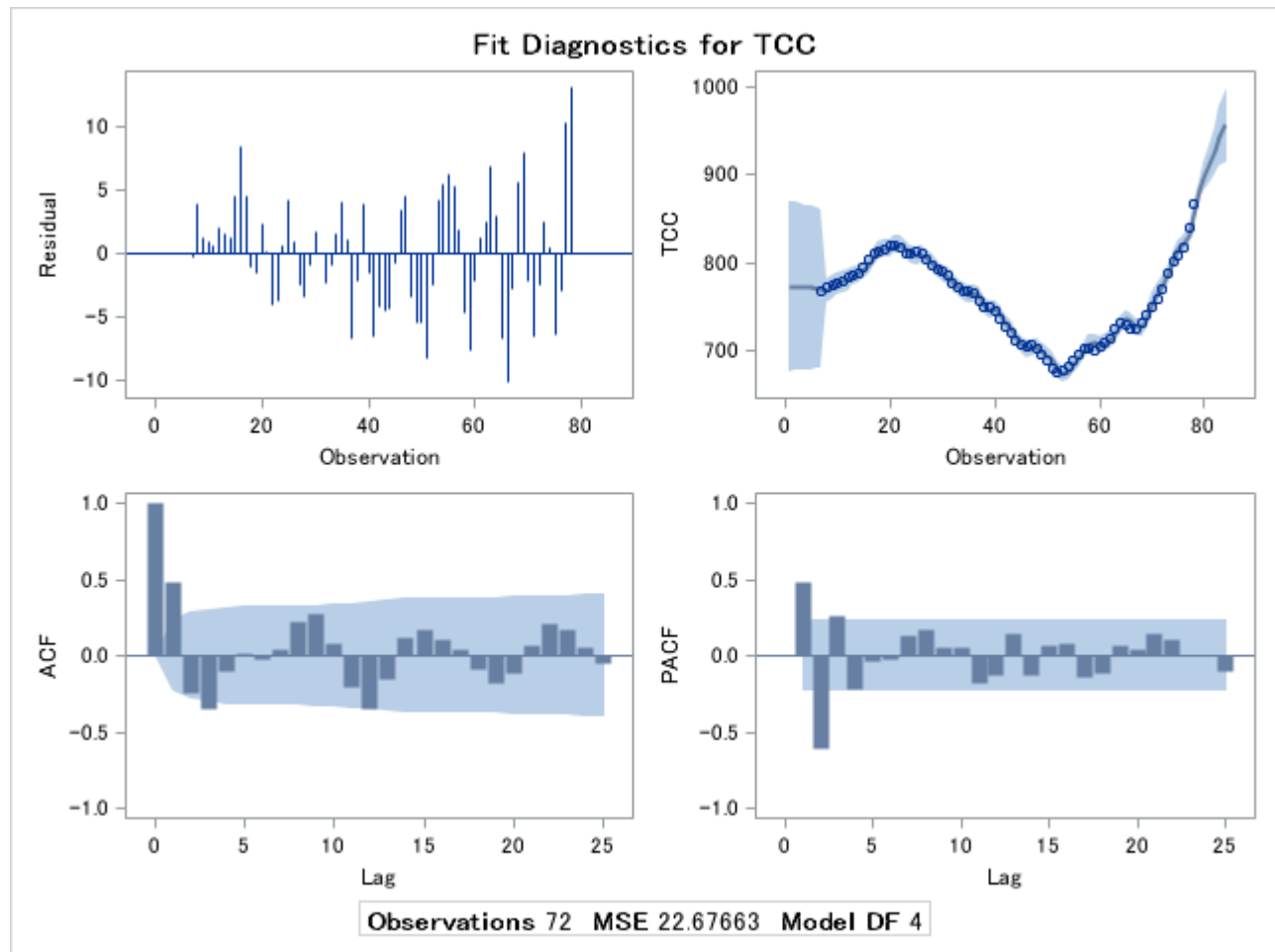
Coefficients for First NLAG Observations						
	1	2	3	4	5	6
1	0.1378427321	0	0	0	0	0
2	-0.842968146	0.854163868	0	0	0	0
3	0.3264822531	-1.224649678	0.9144323786	0	0	0
4	0.2529345492	-1.90184E-14	-1.180328841	0.9487689188	0	0
5	0.2081485506	1.582196E-14	-2.34764E-14	-1.152909488	0.9713332489	0
6	0.1782963118	2.476459E-15	9.680389E-15	-2.25643E-14	-1.13396405	0.9875615703

Autoregressive parameters assumed given					
Variable	DF	Estimate	Standard Error	t Value	Approx Pr > t
Intercept	1	774.3864	30.4713	25.41	<.0001

Autoregressive parameters assumed given					
Variable	DF	Estimate	Standard Error	t Value	Approx Pr > t
PRESLOPE	1	-0.4899	0.6920	-0.71	0.4815
INTERVENTION	1	-2.9420	4.8990	-0.60	0.5502
POSTSLOPE	1	12.4270	2.8434	4.37	<.0001

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H2 INTERRUPTED TIME SERIES MODEL
MO 2010-2016 ED Data

The AUTOREG Procedure

Dependent Variable	TCC
	Trend-Cycle Component

H2 INTERRUPTED TIME SERIES MODEL MO 2010–2016 ED Data

The AUTOREG Procedure

Ordinary Least Squares Estimates			
SSE	508.773559	DFE	68
MSE	7.48196	Root MSE	2.73532
SBC	362.218072	AIC	353.111407
MAE	2.08388951	AICC	353.708422
MAPE	3.49816928	HQC	356.736797
Durbin-Watson	0.3947	Total R-Square	0.9356

Parameter Estimates					
Variable	DF	Estimate	Standard Error	t Value	Approx Pr > t
Intercept	1	56.6971	0.7984	71.02	<.0001
PRESLOPE	1	0.0385	0.0190	2.03	0.0460
INTERVENTION	1	10.7008	2.1006	5.09	<.0001
POSTSLOPE	1	3.4361	0.3531	9.73	<.0001

Estimates of Autocorrelations			
Lag	Covariance	Correlation	
0	7.0663	1.000000	*****
1	5.6200	0.795328	*****

Preliminary MSE	2.5965
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Estimates of Autoregressive Parameters			
Lag	Coefficient	Standard Error	t Value
1	-0.795328	0.074057	-10.74

Expected Autocorrelations	
Lag	Autocorr
0	1.0000
1	0.7953

Coefficients for First NLAG Observations	
	1
1	0.6061799425

Algorithm converged.

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Maximum Likelihood Estimates			
SSE	56.0552847	DFE	67
MSE	0.83665	Root MSE	0.91468
SBC	210.810029	AIC	199.426698
MAE	0.61975711	AICC	200.335789
MAPE	0.99849874	HQC	203.958436
Log Likelihood	–94.713349	Transformed Regression R-Square	0.7029
Durbin–Watson	0.7242	Total R-Square	0.9929
		Observations	72

Parameter Estimates					
Variable	DF	Estimate	Standard Error	t Value	Approx Pr > t
Intercept	1	51.3070	5.0835	10.09	<.0001
PRESLOPE	1	0.2492	0.1164	2.14	0.0360
INTERVENTION	1	–1.1765	0.9806	–1.20	0.2345
POSTSLOPE	1	3.4831	0.3409	10.22	<.0001
ARI	1	–0.9777	0.0292	–33.51	<.0001

Expected Autocorrelations	
Lag	Autocorr
0	1.0000
1	0.9777

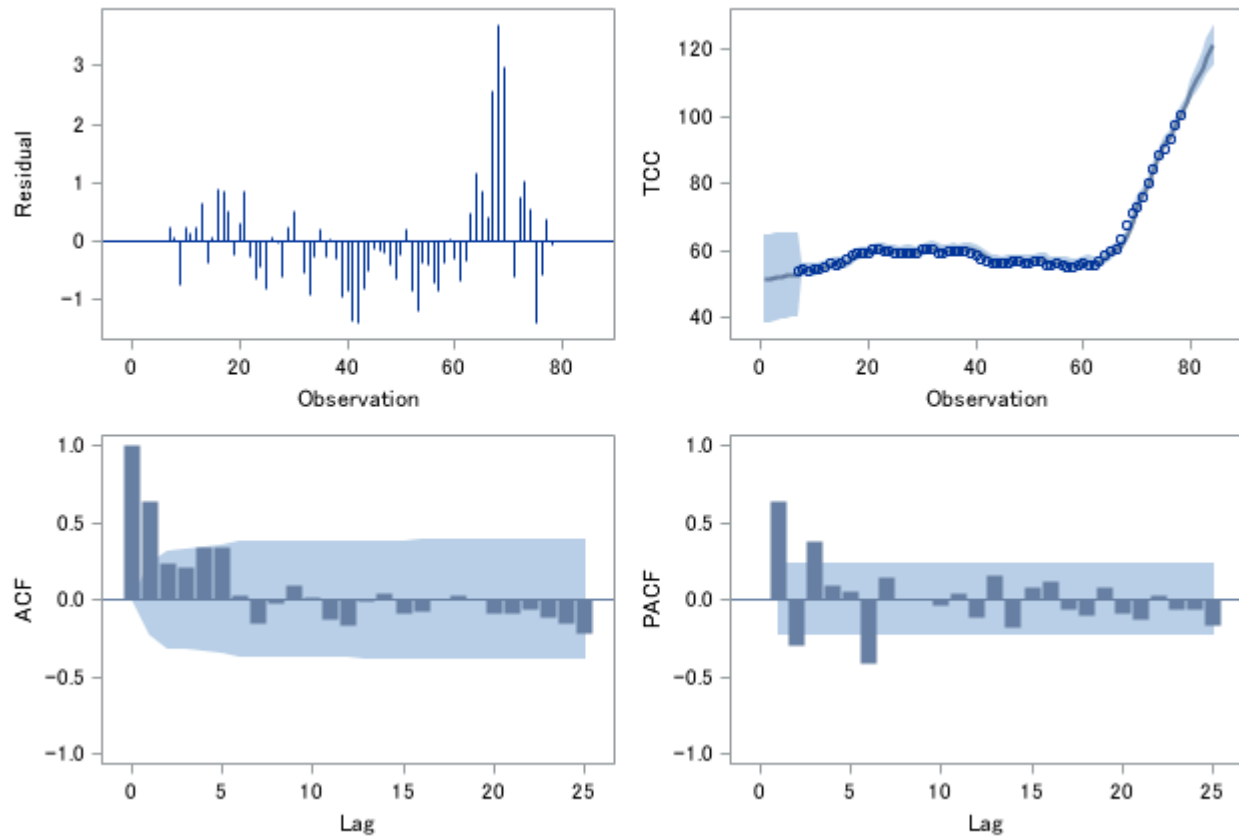
Coefficients for First NLAG Observations	
	1
1	0.2098061273

Autoregressive parameters assumed given					
Variable	DF	Estimate	Standard Error	t Value	Approx Pr > t
Intercept	1	51.3070	4.6807	10.96	<.0001
PRESLOPE	1	0.2492	0.0861	2.89	0.0051
INTERVENTION	1	–1.1765	0.9805	–1.20	0.2344
POSTSLOPE	1	3.4831	0.3124	11.15	<.0001

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The AUTOREG Procedure

Fit Diagnostics for TCC



Observations 72 MSE 0.836646 Model DF 4

H3 INTERRUPTED TIME SERIES MODEL
MO 2010-2016 ED Data

The AUTOREG Procedure

Dependent Variable	TCC
	Trend-Cycle Component

H3 INTERRUPTED TIME SERIES MODEL MO 2010–2016 ED Data

The AUTOREG Procedure

Ordinary Least Squares Estimates			
SSE	8440.90624	DFE	68
MSE	124.13097	Root MSE	11.14141
SBC	564.45469	AIC	555.348025
MAE	8.87841985	AICC	555.94504
MAPE	11.5909092	HQC	558.973415
Durbin-Watson	0.1357	Total R-Square	0.8964

Parameter Estimates					
Variable	DF	Estimate	Standard Error	t Value	Approx Pr > t
Intercept	1	49.1021	3.2519	15.10	<.0001
PRESLOPE	1	0.7292	0.0772	9.45	<.0001
INTERVENTION	1	25.7247	8.5563	3.01	0.0037
POSTSLOPE	1	7.5792	1.4383	5.27	<.0001

Estimates of Autocorrelations			
Lag	Covariance	Correlation	-1 9 8 7 6 5 4 3 2 1 0 1 2 3 4 5 6 7 8 9 1
0	117.2	1.000000	*****
1	109.2	0.931285	*****

Preliminary MSE	15.5579
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Estimates of Autoregressive Parameters			
Lag	Coefficient	Standard Error	t Value
1	-0.931285	0.044505	-20.93

Expected Autocorrelations	
Lag	Autocorr
0	1.0000
1	0.9313

Coefficients for First NLAG Observations	
	1
1	0.3642904577

Algorithm converged.

H3 INTERRUPTED TIME SERIES MODEL MO 2010–2016 ED Data

The AUTOREG Procedure

Maximum Likelihood Estimates			
SSE	307.578037	DFE	67
MSE	4.59072	Root MSE	2.14260
SBC	333.845767	AIC	322.462437
MAE	1.65276391	AICC	323.371528
MAPE	1.97325204	HQC	326.994174
Log Likelihood	-156.23122	Transformed Regression R-Square	0.6973
Durbin-Watson	0.6424	Total R-Square	0.9962
		Observations	72

Parameter Estimates					
Variable	DF	Estimate	Standard Error	t Value	Approx Pr > t
Intercept	1	45.4373	14.9488	3.04	0.0034
PRESLOPE	1	1.1281	0.3285	3.43	0.0010
INTERVENTION	1	-3.0480	2.2884	-1.33	0.1874
POSTSLOPE	1	7.6685	0.7766	9.87	<.0001
ARI	1	-0.9861	0.0223	-44.25	<.0001

Expected Autocorrelations	
Lag	Autocorr
0	1.0000
1	0.9861

Coefficients for First NLAG Observations	
	1
1	0.16639576

Autoregressive parameters assumed given					
Variable	DF	Estimate	Standard Error	t Value	Approx Pr > t
Intercept	1	45.4373	13.7073	3.31	0.0015
PRESLOPE	1	1.1281	0.2239	5.04	<.0001
INTERVENTION	1	-3.0480	2.2880	-1.33	0.1873
POSTSLOPE	1	7.6685	0.7417	10.34	<.0001

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