

ภาคผนวก ข
ผลการวิเคราะห์

ผลการวิเคราะห์ปัจจัยที่มีผลกระทบต่อจำนวนกระบือในภาคเหนือ

Dependent Variable: LOG(QN)

Method: Least Squares

Date: 03/12/07 Time: 00:23

Sample(adjusted): 2535 2544

Included observations: 10 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	23.14941	8.900898	2.600795	0.0482
LOG(TN)	-1.228127	0.382569	-3.210211	0.0237
LOG(CIN)	-2.578287	1.730144	-1.490215	0.1964
LOG(QN(-1))	0.172245	0.292446	0.588980	0.5815
LOG(P(-1))	0.399214	0.232733	1.715334	0.1469
R-squared	0.981527	Mean dependent var		12.45847
Adjusted R-squared	0.966749	S.D. dependent var		0.537772
S.E. of regression	0.098062	Akaike info criterion		-1.499571
Sum squared resid	0.048081	Schwarz criterion		-1.348278
Log likelihood	12.49785	F-statistic		66.41635
Durbin-Watson stat	3.363875	Prob(F-statistic)		0.000160

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	47.18968	Probability	0.108699
Obs*R-squared	9.947301	Probability	0.041325

Test Equation:

Dependent Variable: RESID

Method: Least Squares

Date: 03/12/07 Time: 00:25

Presample missing value lagged residuals set to zero.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-16.03653	3.018039	-5.313560	0.1184
LOG(TN)	0.622690	0.098673	6.310648	0.1000
LOG(CIN)	2.373912	0.495359	4.792308	0.1310
LOG(QN(-1))	0.575713	0.102872	5.596416	0.1126
LOG(P(-1))	0.033797	0.069844	0.483897	0.7131
RESID(-1)	-2.081593	0.175989	-11.82795	0.0537
RESID(-2)	-1.442399	0.241869	-5.963550	0.1058
RESID(-3)	-0.654234	0.258220	-2.533631	0.2393
RESID(-4)	0.252168	0.241369	1.044741	0.4861
R-squared	0.994730	Mean dependent var		2.42E-15
Adjusted R-squared	0.952571	S.D. dependent var		0.073091
S.E. of regression	0.015918	Akaike info criterion		-5.945324
Sum squared resid	0.000253	Schwarz criterion		-5.672998
Log likelihood	38.72662	F-statistic		23.59484
Durbin-Watson stat	2.719843	Prob(F-statistic)		0.157965

Dependent Variable: LOG(QN)

Method: Generalized Method of Moments

Date: 03/12/07 Time: 00:29

Sample(adjusted): 2535 2544

Included observations: 10 after adjusting endpoints

No prewhitening

Bandwidth: Fixed (2)

Kernel: Bartlett

Convergence achieved after: 29 weight matrices, 30 total coef iterations

Instrument list: QN C TN CIN QN(-1) P(-1)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	27.25895	2.654431	10.26922	0.0002
LOG(TN)	-1.570258	0.178411	-8.801358	0.0003
LOG(CIN)	-0.745679	0.687451	-1.084702	0.3276
LOG(QN(-1))	0.152554	0.069772	2.386467	0.0405
LOG(P(-1))	0.436410	0.041653	10.47724	0.0001
R-squared	0.961111	Mean dependent var		12.45847
Adjusted R-squared	0.929999	S.D. dependent var		0.537772
S.E. of regression	0.142282	Sum squared resid		0.101221
Durbin-Watson stat	1.525577	J-statistic		0.132276

ผลการวิเคราะห์ปัจจัยที่มีผลกระทบต่อจำนวนกระบือในภาคกลาง

Dependent Variable: LOG(QC)

Method: Least Squares

Date: 03/12/07 Time: 00:43

Sample(adjusted): 2535 2544

Included observations: 10 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	9.398783	8.097530	1.160697	0.2982
LOG(TC)	-0.769869	0.420290	-2.831755	0.0265
LOG(CIC)	-0.515958	1.094352	-0.471473	0.6572
LOG(QC(-1))	0.655366	0.194280	3.373314	0.0198
LOG(P(-1))	0.460380	0.211222	2.179607	0.0812
R-squared	0.984265	Mean dependent var		11.98943
Adjusted R-squared	0.971677	S.D. dependent var		0.468631
S.E. of regression	0.078868	Akaike info criterion		-1.935240
Sum squared resid	0.031100	Schwarz criterion		-1.783948
Log likelihood	14.67620	F-statistic		78.19160
Durbin-Watson stat	3.374136	Prob(F-statistic)		0.000107

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	12.77034	Probability	0.034079
Obs*R-squared	8.948869	Probability	0.011397

Test Equation:

Dependent Variable: RESID

Method: Least Squares

Date: 03/12/07 Time: 00:44

Presample missing value lagged residuals set to zero.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-7.563672	3.809242	-1.985611	0.1413
LOG(TC)	0.338092	0.188464	1.793940	0.1707
LOG(CIC)	1.052017	0.512074	2.054425	0.1322
LOG(QC(-1))	0.277673	0.098726	2.812560	0.0672
LOG(P(-1))	-0.023265	0.115313	-0.201758	0.8530
RESID(-1)	-1.681242	0.385524	-4.360929	0.0223
RESID(-2)	-0.723220	0.383432	-1.886176	0.1557
R-squared	0.894887	Mean dependent var		9.43E-16
Adjusted R-squared	0.684661	S.D. dependent var		0.058784
S.E. of regression	0.033010	Akaike info criterion		-3.787959
Sum squared resid	0.003269	Schwarz criterion		-3.576149
Log likelihood	25.93979	F-statistic		4.256780
Durbin-Watson stat	2.782609	Prob(F-statistic)		0.130995

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Dependent Variable: LOG(QE)

Method: Least Squares

Date: 03/12/07 Time: 00:47

Sample(adjusted): 2535 2544

Included observations: 10 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	10.03205	5.456208	1.838648	0.1254
LOG(TE)	-0.523052	0.181188	-2.886795	0.0343
LOG(CIE)	-0.605842	3.700243	-0.163730	0.8764
LOG(QE(-1))	0.581741	0.197699	2.942562	0.0322
LOG(P(-1))	0.358944	0.171959	2.087376	0.0912
R-squared	0.988614	Mean dependent var		14.62243
Adjusted R-squared	0.979506	S.D. dependent var		0.419843
S.E. of regression	0.060104	Akaike info criterion		-2.478620
Sum squared resid	0.018063	Schwarz criterion		-2.327327
Log likelihood	17.39310	F-statistic		108.5357
Durbin-Watson stat	3.211325	Prob(F-statistic)		0.000048

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	4.577013	Probability	0.122631
Obs*R-squared	7.531682	Probability	0.023148

Test Equation:

Dependent Variable: RESID

Method: Least Squares

Date: 03/12/07 Time: 00:48

Presample missing value lagged residuals set to zero.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-5.995402	4.842186	-1.238160	0.3037
LOG(TE)	0.112651	0.142689	0.789486	0.4875
LOG(CIE)	-2.576827	2.529268	-1.018804	0.3833
LOG(QE(-1))	0.176251	0.167230	1.053939	0.3693
LOG(P(-1))	0.209837	0.135050	1.553773	0.2181
RESID(-1)	-1.336228	0.601977	-2.219733	0.1131
RESID(-2)	-0.284062	0.514404	-0.552216	0.6193
R-squared	0.753168	Mean dependent var		-1.37E-15
Adjusted R-squared	0.259505	S.D. dependent var		0.044799
S.E. of regression	0.038551	Akaike info criterion		-3.477668
Sum squared resid	0.004458	Schwarz criterion		-3.265858
Log likelihood	24.38834	F-statistic		1.525671
Durbin-Watson stat	2.116871	Prob(F-statistic)		0.391607

Dependent Variable: LOG(QE)

Method: Generalized Method of Moments

Date: 03/12/07 Time: 00:49

Sample(adjusted): 2535 2544

Included observations: 10 after adjusting endpoints

No prewhitening

Bandwidth: Fixed (2)

Kernel: Bartlett

Convergence achieved after: 96 weight matrices, 97 total coef
iterations

Instrument list: QE C TE CIE QE(-1) P(-1)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	10.14255	2.082829	4.869603	0.0046
LOG(TE)	-0.619103	0.096698	-6.402464	0.0014
LOG(CIE)	-9.717216	2.751007	-3.532240	0.0167
LOG(QE(-1))	0.487873	0.076529	6.375007	0.0014
LOG(P(-1))	0.661432	0.128294	5.155583	0.0036
R-squared	0.971465	Mean dependent var		14.62243
Adjusted R-squared	0.948636	S.D. dependent var		0.419843
S.E. of regression	0.095151	Sum squared resid		0.045269
Durbin-Watson stat	3.311068	J-statistic		0.144305

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Dependent Variable: LOG(QS)

Method: Least Squares

Date: 03/12/07 Time: 00:38

Sample(adjusted): 2535 2544

Included observations: 10 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	15.21271	11.12472	1.367469	0.2297
LOG(TS)	-0.648721	0.422991	-1.533653	0.1857
LOG(CIS)	-1.919087	1.274755	-1.505456	0.1925
LOG(QS(-1))	0.414660	0.400388	1.035645	0.3478
LOG(P(-1))	-0.124849	0.228996	-0.545203	0.6090
R-squared	0.984055	Mean dependent var		11.03184
Adjusted R-squared	0.971299	S.D. dependent var		0.274685
S.E. of regression	0.046535	Akaike info criterion		-2.990351
Sum squared resid	0.010828	Schwarz criterion		-2.839059
Log likelihood	19.95176	F-statistic		77.14446
Durbin-Watson stat	2.789094	Prob(F-statistic)		0.000111

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	6.047678	Probability	0.294908
Obs*R-squared	9.603028	Probability	0.047673

Test Equation:

Dependent Variable: RESID

Method: Least Squares

Date: 03/12/07 Time: 00:40

Presample missing value lagged residuals set to zero.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.011864	6.124157	0.491801	0.7090
LOG(TS)	0.207875	0.219669	0.946311	0.5176
LOG(CIS)	-4.798221	1.491017	-3.218087	0.1918
LOG(QS(-1))	-0.365300	0.242717	-1.505047	0.3733
LOG(P(-1))	-0.118217	0.141685	-0.834362	0.5573
RESID(-1)	-2.455904	0.528062	-4.650783	0.1348
RESID(-2)	-2.130261	0.536839	-3.968153	0.1572
RESID(-3)	-2.836133	0.763333	-3.715461	0.1674
RESID(-4)	-0.767381	0.298549	-2.570369	0.2362
R-squared	0.960303	Mean dependent var		4.24E-15
Adjusted R-squared	0.642725	S.D. dependent var		0.034685
S.E. of regression	0.020732	Akaike info criterion		-5.416827
Sum squared resid	0.000430	Schwarz criterion		-5.144500
Log likelihood	36.08413	F-statistic		3.023839
Durbin-Watson stat	3.482564	Prob(F-statistic)		0.418947

Dependent Variable: LOG(QS)

Method: Generalized Method of Moments

Date: 03/12/07 Time: 00:40

Sample(adjusted): 2535 2544

Included observations: 10 after adjusting endpoints

No prewhitening

Bandwidth: Fixed (2)

Kernel: Bartlett

Convergence achieved after: 54 weight matrices, 55 total coef
iterations

Instrument list: QS C TS CIS QS(-1) P(-1)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	17.17301	7.861314	2.184496	0.0807
LOG(TS)	-0.699474	0.288463	-2.424831	0.0498
LOG(CIS)	-2.389609	0.497258	-4.805568	0.0049
LOG(QS(-1))	0.313827	0.288689	1.087077	0.3266
LOG(P(-1))	-0.150251	0.146057	-1.028717	0.3508
R-squared	0.982121	Mean dependent var		11.03184
Adjusted R-squared	0.967818	S.D. dependent var		0.274685
S.E. of regression	0.049277	Sum squared resid		0.012141
Durbin-Watson stat	2.397842	J-statistic		0.142271