



ภาคผนวก

ลิขสิทธิ์มหาวิทยาลัยเชียงใหม่

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ภาคผนวก ก

ผลการทดสอบ Unit root ที่ระดับต่าง ๆ

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1.1 CPI

ผลการทดสอบ Unit Root สำหรับ LNCPI ที่ระดับ level I(0) ของ CPI รูปสมการ None

Null Hypothesis: LNCPI has a unit root
Exogenous: None
Lag Length: 1 (Automatic based on SIC, MAXLAG=13)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.550197	0.1135
Test critical values:		
1% level	-2.580164	
5% level	-1.942924	
10% level	-1.615325	

*MacKinnon (1996) one-sided p-values.

ผลการทดสอบ Unit Root สำหรับ LNCPI ที่ระดับ level I(0) ของ CPI รูปสมการ Intercept

Null Hypothesis: LNCPI has a unit root
Exogenous: Constant
Lag Length: 1 (Automatic based on SIC, MAXLAG=13)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-0.125797	0.9436
Test critical values:		
1% level	-3.473382	
5% level	-2.880336	
10% level	-2.576871	

*MacKinnon (1996) one-sided p-values.

ผลการทดสอบ Unit Root สำหรับ LNCPI ที่ระดับ level I(0) ของ CPI รูปสมการ Trend and Intercept

Null Hypothesis: LNCPI has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 1 (Automatic based on SIC, MAXLAG=13)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.659474	0.7644
Test critical values:		
1% level	-4.019151	
5% level	-3.439461	
10% level	-3.144113	

*MacKinnon (1996) one-sided p-values.

ผลการทดสอบ Unit Root สำหรับ D(LNCPI) ระดับ 1st Difference I(1)
ของ CPI รูปสมการ None

Null Hypothesis: D(LNCPI) has a unit root

Exogenous: None

Lag Length: 0 (Automatic based on SIC, MAXLAG=13)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-6.461968	0.0000
Test critical values:		
1% level	-2.580164	
5% level	-1.942924	
10% level	-1.615325	

*MacKinnon (1996) one-sided p-values.

ผลการทดสอบ Unit Root สำหรับ D(LNCPI) ระดับ 1st Difference I(1) ของ CPI รูปสมการ

Intercept

Null Hypothesis: D(LNCPI) has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic based on SIC, MAXLAG=13)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-7.154857	0.0000
Test critical values:		
1% level	-3.473382	
5% level	-2.880336	
10% level	-2.576871	

*MacKinnon (1996) one-sided p-values.

ผลการทดสอบ Unit Root สำหรับ D(LNCPI) ระดับ 1st Difference I(1) ของ CPI รูปสมการ

Trend and Intercept

Null Hypothesis: D(LNCPI) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on SIC, MAXLAG=13)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-7.141123	0.0000
Test critical values:		
1% level	-4.019151	
5% level	-3.439461	
10% level	-3.144113	

*MacKinnon (1996) one-sided p-values.

1.2 Exc

ผลการทดสอบ Unit Root สำหรับ LNEXC ที่ระดับ level I(0) ของ Exc รูปสมการ Trend and

Intercept

Null Hypothesis: LNEXC has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on SIC, MAXLAG=13)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.897442	0.6511

Test critical values:	1% level	-4.018748
	5% level	-3.439267
	10% level	-3.143999

*MacKinnon (1996) one-sided p-values.

ผลการทดสอบ Unit Root สำหรับ D(LNCPI) ระดับ 1st Difference I(1) ของ Exc รูปสมการ

Trend and Intercept

Null Hypothesis: D(LNEXC) has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 0 (Automatic based on SIC, MAXLAG=13)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-11.75425	0.0000
Test critical values:		
	1% level	-4.019151
	5% level	-3.439461
	10% level	-3.144113

*MacKinnon (1996) one-sided p-values.

1.3 Exp

ผลการทดสอบ Unit Root สำหรับ LNCPI ที่ระดับ level I(0) ของ Exp รูปสมการ Trend and

Intercept

Null Hypothesis: LNEXP01 has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 1 (Automatic based on SIC, MAXLAG=13)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.212475	0.4789
Test critical values:		
	1% level	-4.019151
	5% level	-3.439461
	10% level	-3.144113

*MacKinnon (1996) one-sided p-values.

ผลการทดสอบ Unit Root สำหรับ D(LNCPI) ระดับ 1st Difference I(1) ของ Exp รูปสมการ

Trend and Intercept

Null Hypothesis: D(LNEXP01) has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 0 (Automatic based on SIC, MAXLAG=13)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-18.64270	0.0000
Test critical values:		
	1% level	-4.019151
	5% level	-3.439461
	10% level	-3.144113

*MacKinnon (1996) one-sided p-values.

1.4 IPI

ผลการทดสอบ Unit Root สำหรับ LN CPI ที่ระดับ level I(0) ของ IPI รูปสมการ Trend and Intercept

Null Hypothesis: LN IPI has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 13 (Automatic based on SIC, MAXLAG=13)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.911142	0.1622
Test critical values:		
1% level	-4.024452	
5% level	-3.442006	
10% level	-3.145608	

*MacKinnon (1996) one-sided p-values.

ผลการทดสอบ Unit Root สำหรับ D(LN CPI) ระดับ 2nd Difference I(1) ของ IPI รูปสมการ Trend and Intercept

Null Hypothesis: D(LN IPI,2) has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 11 (Automatic based on SIC, MAXLAG=13)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-9.320757	0.0000
Test critical values:		
1% level	-4.024452	
5% level	-3.442006	
10% level	-3.145608	

*MacKinnon (1996) one-sided p-values.

2. Russia

2.1 CPI

ผลการทดสอบ Unit Root สำหรับ LN CPI ที่ระดับ level I(0) ของ CPI รูปสมการ None

Null Hypothesis: LN CPI has a unit root
Exogenous: None
Lag Length: 3 (Automatic based on SIC, MAXLAG=13)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-0.271958	0.5866
Test critical values:		
1% level	-2.580366	
5% level	-1.942952	
10% level	-1.615307	

*MacKinnon (1996) one-sided p-values.

ผลการทดสอบ Unit Root สำหรับ LNCPPI ที่ระดับ level I(0) ของ CPI รูปสมการ Intercept

Null Hypothesis: LNCPPI has a unit root
Exogenous: Constant
Lag Length: 1 (Automatic based on SIC, MAXLAG=13)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.702746	0.4279
Test critical values:		
1% level	-3.473382	
5% level	-2.880336	
10% level	-2.576871	

*MacKinnon (1996) one-sided p-values.

ผลการทดสอบ Unit Root สำหรับ LNCPPI ที่ระดับ level I(0) ของ CPI รูปสมการ Trend and Intercept

Null Hypothesis: LNCPPI has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 1 (Automatic based on SIC, MAXLAG=13)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.034151	0.9352
Test critical values:		
1% level	-4.019151	
5% level	-3.439461	
10% level	-3.144113	

*MacKinnon (1996) one-sided p-values.

ผลการทดสอบ Unit Root สำหรับ D(LNCPPI) ระดับ 1st Difference I(1) ของ CPI รูปสมการ

None

Null Hypothesis: D(LNCPPI) has a unit root
Exogenous: None
Lag Length: 2 (Automatic based on SIC, MAXLAG=13)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-3.813188	0.0002
Test critical values:		
1% level	-2.580366	
5% level	-1.942952	
10% level	-1.615307	

*MacKinnon (1996) one-sided p-values.

ผลการทดสอบ Unit Root สำหรับ D(LNCPPI) ระดับ 1st Difference I(1) ของ CPI รูปสมการ Intercept

Null Hypothesis: D(LNCPPI) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic based on SIC, MAXLAG=13)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-8.897644	0.0000
Test critical values:		
1% level	-3.473382	
5% level	-2.880336	
10% level	-2.576871	

*MacKinnon (1996) one-sided p-values.

Sample (adjusted): 3 155

Included observations: 153 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LNCPI(-1))	-0.687801	0.077301	-8.897644	0.0000
C	0.008583	0.002478	3.463240	0.0007
R-squared	0.343958	Mean dependent var		-8.50E-06
Adjusted R-squared	0.339613	S.D. dependent var		0.034742
S.E. of regression	0.028233	Akaike info criterion		-4.283686
Sum squared resid	0.120360	Schwarz criterion		-4.244072
Log likelihood	329.7019	Hannan-Quinn criter.		-4.267594
F-statistic	79.16806	Durbin-Watson stat		2.082327
Prob(F-statistic)	0.000000			

ผลการทดสอบ Unit Root สำหรับ D(LNCPI) ระดับ 1st Difference I(1) ของ CPI รูปสมการ

Trend and Intercept

Null Hypothesis: D(LNCPI) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on SIC, MAXLAG=13)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-9.040736	0.0000
Test critical values:		
1% level	-4.019151	
5% level	-3.439461	
10% level	-3.144113	

*MacKinnon (1996) one-sided p-values.

2.2. exc

ผลการทดสอบ Unit Root สำหรับ LNCPI ที่ระดับ level I(0) ของ exc รูปสมการ Trend and Intercept

Null Hypothesis: LNEXC has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 1 (Automatic based on SIC, MAXLAG=13)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.478343	0.8330
Test critical values:		
1% level	-4.019151	
5% level	-3.439461	
10% level	-3.144113	

*MacKinnon (1996) one-sided p-values.

ผลการทดสอบ Unit Root สำหรับ D(LNCPPI) ระดับ 1st Difference I(1) ของ exc รูปสมการ

Trend and Intercept

Null Hypothesis: D(LNEXC) has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 0 (Automatic based on SIC, MAXLAG=13)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-8.234942	0.0000
Test critical values:		
1% level	-4.019151	
5% level	-3.439461	
10% level	-3.144113	

*MacKinnon (1996) one-sided p-values.

2.3 Exp

ผลการทดสอบ Unit Root สำหรับ LNCPPI ที่ระดับ level I(0) ของ Exp รูปสมการ Trend and Intercept

Null Hypothesis: LNEXC has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 1 (Automatic based on SIC, MAXLAG=13)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.478343	0.8330
Test critical values:		
1% level	-4.019151	
5% level	-3.439461	
10% level	-3.144113	

*MacKinnon (1996) one-sided p-values.

ผลการทดสอบ Unit Root สำหรับ D(LNCPPI) ระดับ 1st Difference I(1) ของ Exp รูปสมการ

Intercept

Null Hypothesis: D(LNEXC) has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 0 (Automatic based on SIC, MAXLAG=13)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-8.234942	0.0000
Test critical values:		
1% level	-4.019151	
5% level	-3.439461	
10% level	-3.144113	

*MacKinnon (1996) one-sided p-values.

ผลการทดสอบ Unit Root สำหรับ D(LNCPPI) ระดับ 1st Difference I(1) ของ Exp รูปสมการ

Trend and Intercept

Null Hypothesis: D(LNEXC) has a unit root
 Exogenous: Constant, Linear Trend
 Lag Length: 0 (Automatic based on SIC, MAXLAG=13)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-8.234942	0.0000
Test critical values:		
1% level	-4.019151	
5% level	-3.439461	
10% level	-3.144113	

*MacKinnon (1996) one-sided p-values.

2.4 IPI

ผลการทดสอบ Unit Root สำหรับ LNCPPI ที่ระดับ level I(0) ของ IPI รูปสมการ Intercept

Null Hypothesis: LNIPi has a unit root
 Exogenous: Constant, Linear Trend
 Lag Length: 0 (Automatic based on SIC, MAXLAG=13)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.429062	0.3632
Test critical values:		
1% level	-4.018748	
5% level	-3.439267	
10% level	-3.143999	

*MacKinnon (1996) one-sided p-values.

ผลการทดสอบ Unit Root สำหรับ D(LNCPPI) ระดับ 1st Difference I(1) ของ IPI รูปสมการ

Intercept

Null Hypothesis: D(LNIPi) has a unit root
 Exogenous: Constant, Linear Trend
 Lag Length: 0 (Automatic based on SIC, MAXLAG=13)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-13.19462	0.0000
Test critical values:		
1% level	-4.019151	
5% level	-3.439461	
10% level	-3.144113	

*MacKinnon (1996) one-sided p-values.

ผลการทดสอบ Unit Root สำหรับ D(LNCPPI) ระดับ 1st Difference I(1) ของ IPI รูปสมการ

Trend and Intercept

Null Hypothesis: D(LNIPi) has a unit root
 Exogenous: Constant, Linear Trend
 Lag Length: 0 (Automatic based on SIC, MAXLAG=13)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-13.19462	0.0000
Test critical values:		
1% level	-4.019151	
5% level	-3.439461	
10% level	-3.144113	

*MacKinnon (1996) one-sided p-values.

3. India

3.1 CPI

ผลการทดสอบ Unit Root สำหรับ LNCPI ที่ระดับ level I(0) ของ CPI รูปสมการ None

Null Hypothesis: LNCPI has a unit root
Exogenous: None
Lag Length: 1 (Automatic based on SIC, MAXLAG=13)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-0.525352	0.4878
Test critical values:		
1% level	-2.580164	
5% level	-1.942924	
10% level	-1.615325	

*MacKinnon (1996) one-sided p-values.

ผลการทดสอบ Unit Root สำหรับ LNCPI ที่ระดับ level I(0) ของ CPI รูปสมการ Intercept

Null Hypothesis: LNCPI has a unit root
Exogenous: Constant
Lag Length: 1 (Automatic based on SIC, MAXLAG=13)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-0.877401	0.7932
Test critical values:		
1% level	-3.473382	
5% level	-2.880336	
10% level	-2.576871	

*MacKinnon (1996) one-sided p-values.

ผลการทดสอบ Unit Root สำหรับ LNCPI ที่ระดับ level I(0) ของ CPI รูปสมการ Trend and Intercept

Null Hypothesis: LNCPI has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 1 (Automatic based on SIC, MAXLAG=13)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-3.571558	0.0356
Test critical values:		
1% level	-4.019151	
5% level	-3.439461	
10% level	-3.144113	

*MacKinnon (1996) one-sided p-values.

ผลการทดสอบ Unit Root สำหรับ D(LNCPI) ระดับ 1st Difference I(1) ของ CPI รูปสมการ

None

Null Hypothesis: D(LNCPI) has a unit root
Exogenous: None
Lag Length: 0 (Automatic based on SIC, MAXLAG=13)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-8.389502	0.0000
Test critical values:		
1% level	-2.580164	
5% level	-1.942924	
10% level	-1.615325	

*MacKinnon (1996) one-sided p-values.

ผลการทดสอบ Unit Root สำหรับ D(LNCPI) ระดับ 1st Difference I(1) ของ CPI รูปสมการ

Intercept

Null Hypothesis: D(LNCPI) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic based on SIC, MAXLAG=13)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-8.751643	0.0000
Test critical values:		
1% level	-3.473382	
5% level	-2.880336	
10% level	-2.576871	

*MacKinnon (1996) one-sided p-values.

ผลการทดสอบ Unit Root สำหรับ D(LNCPI) ระดับ 1st Difference I(1) ของ CPI รูปสมการ

Trend and Intercept

Null Hypothesis: D(LNCPI) has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 0 (Automatic based on SIC, MAXLAG=13)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-8.722238	0.0000
Test critical values:		
1% level	-4.019151	
5% level	-3.439461	
10% level	-3.144113	

*MacKinnon (1996) one-sided p-values.

ผลการทดสอบ Unit Root สำหรับ LNCP1 ที่ระดับ level I(0) ของ Exc รูปสมการ Trend and Intercept

Null Hypothesis: LNEXC has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 1 (Automatic based on SIC, MAXLAG=13)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.018137	0.5865
Test critical values:		
1% level	-4.019151	
5% level	-3.439461	
10% level	-3.144113	

*MacKinnon (1996) one-sided p-values.

ผลการทดสอบ Unit Root สำหรับ D(LNCP1) ระดับ 1st Difference I(1) ของ Exc รูปสมการ Trend and Intercept

Null Hypothesis: D(LNEXC) has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 0 (Automatic based on SIC, MAXLAG=13)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-9.975516	0.0000
Test critical values:		
1% level	-4.019151	
5% level	-3.439461	
10% level	-3.144113	

*MacKinnon (1996) one-sided p-values.

3.3 EXP

ผลการทดสอบ Unit Root สำหรับ LNCP1 ที่ระดับ level I(0) ของ EXP รูปสมการ Trend and Intercept

Null Hypothesis: LNEXP01 has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 2 (Automatic based on SIC, MAXLAG=13)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.193749	0.4892
Test critical values:		
1% level	-4.019561	
5% level	-3.439658	
10% level	-3.144229	

*MacKinnon (1996) one-sided p-values.

ผลการทดสอบ Unit Root สำหรับ D(LNCP1) ระดับ 1st Difference I(1) ของ EXP รูปสมการ

Trend and Intercept

t

Null Hypothesis: D(LNEXP01) has a unit root
Exogenous: Constant, Linear Trend

Lag Length: 1 (Automatic based on SIC, MAXLAG=13)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-15.75931	0.0000
Test critical values:		
1% level	-4.019561	
5% level	-3.439658	
10% level	-3.144229	

*MacKinnon (1996) one-sided p-values.

3.4 IPI

ผลการทดสอบ Unit Root สำหรับ LN CPI ที่ระดับ level I(0) ของ IPI รูปสมการ Trend and Intercept

Null Hypothesis: LN IPI has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 13 (Automatic based on SIC, MAXLAG=13)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.924549	0.1580
Test critical values:		
1% level	-4.024452	
5% level	-3.442006	
10% level	-3.145608	

*MacKinnon (1996) one-sided p-values.

ผลการทดสอบ Unit Root สำหรับ D(LN CPI) ระดับ 1st Difference I(1) ของ IPI รูปสมการ Trend and Intercept

Null Hypothesis: D(LN IPI) has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 12 (Automatic based on SIC, MAXLAG=13)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.603587	0.7869
Test critical values:		
1% level	-4.024452	
5% level	-3.442006	
10% level	-3.145608	

*MacKinnon (1996) one-sided p-values.

4.China

4.1 CPI

ผลการทดสอบ Unit Root สำหรับ LN CPI ที่ระดับ level I(0) ของ CPI รูปสมการ Trend and Intercept

Null Hypothesis: LN CPI has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 1 (Automatic based on SIC, MAXLAG=13)

	t-Statistic	Prob.*
--	-------------	--------

Augmented Dickey-Fuller test statistic	-3.020253	0.1301
Test critical values:	1% level	-4.019151
	5% level	-3.439461
	10% level	-3.144113

*MacKinnon (1996) one-sided p-values.

ผลการทดสอบ Unit Root สำหรับ D(LNCPI) ระดับ 1st Difference I(1) ของ CPI รูปสมการ

Trend and Intercept

Null Hypothesis: D(LNCPI) has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 0 (Automatic based on SIC, MAXLAG=13)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-9.487141	0.0000
Test critical values:	1% level	-4.019151
	5% level	-3.439461
	10% level	-3.144113

*MacKinnon (1996) one-sided p-values.

4.2 Exc

ผลการทดสอบ Unit Root สำหรับ LNCPI ที่ระดับ level I(0) ของ Exc รูปสมการ Trend and Intercept

Null Hypothesis: LNEXC has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 1 (Automatic based on SIC, MAXLAG=13)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.525583	0.3155
Test critical values:	1% level	-4.019151
	5% level	-3.439461
	10% level	-3.144113

*MacKinnon (1996) one-sided p-values.

ผลการทดสอบ Unit Root สำหรับ D(LNEXC) ระดับ 1st Difference I(1) ของ Exc I รูปสมการ

Trend and Intercept

Null Hypothesis: D(LNEXC) has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 0 (Automatic based on SIC, MAXLAG=13)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-10.25942	0.0000
Test critical values:	1% level	-4.019151
	5% level	-3.439461
	10% level	-3.144113

*MacKinnon (1996) one-sided p-values.

4.3 EXP

ผลการทดสอบ Unit Root สำหรับ LNCP1 ที่ระดับ level I(0) ของ EXP รูปสมการ Trend and Interce

Null Hypothesis: LNEXP01 has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 0 (Automatic based on SIC, MAXLAG=13)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-5.324346	0.0001
Test critical values:		
1% level	-4.018748	
5% level	-3.439267	
10% level	-3.143999	

*MacKinnon (1996) one-sided p-values.

ผลการทดสอบ Unit Root สำหรับ D(LNCP1) ระดับ 1st Difference I(1) ของ EXP รูปสมการ Trend and Intercept

Null Hypothesis: D(LNEXP01) has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 0 (Automatic based on SIC, MAXLAG=13)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-14.79345	0.0000
Test critical values:		
1% level	-4.019151	
5% level	-3.439461	
10% level	-3.144113	

*MacKinnon (1996) one-sided p-values.

4.4 IPI

ผลการทดสอบ Unit Root สำหรับ LNCP1 ที่ระดับ level I(0) ของ IPI รูปสมการ Trend and Intercept

Null Hypothesis: LNIP1 has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 2 (Automatic based on SIC, MAXLAG=13)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-3.388408	0.0570
Test critical values:		
1% level	-4.023042	
5% level	-3.441330	
10% level	-3.145211	

*MacKinnon (1996) one-sided p-values.

ผลการทดสอบ Unit Root สำหรับ D(LNCP1) ระดับ 1st Difference I(1) ของ IPI รูปสมการ

Trend and Intercept

Null Hypothesis: D(LNIP1) has a unit root
Exogenous: Constant, Linear Trend

Lag Length: 1 (Automatic based on SIC, MAXLAG=13)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-13.14113	0.0000
Test critical values:		
1% level	-4.023042	
5% level	-3.441330	
10% level	-3.145211	

*MacKinnon (1996) one-sided p-values.

5. USA

5.1 CPI

ผลการทดสอบ Unit Root สำหรับ LNCPI ที่ระดับ level I(0) ของ CPI รูปสมการ None

Null Hypothesis: LNCPI has a unit root

Exogenous: None

Lag Length: 0 (Automatic based on SIC, MAXLAG=13)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.697491	0.0848
Test critical values:		
1% level	-2.580065	
5% level	-1.942910	
10% level	-1.615334	

*MacKinnon (1996) one-sided p-values.

ผลการทดสอบ Unit Root สำหรับ LNCPI ที่ระดับ level I(0) ของ CPI รูปสมการ Intercept

Null Hypothesis: LNCPI has a unit root

Exogenous: Constant

Lag Length: 1 (Automatic based on SIC, MAXLAG=13)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.441560	0.1322
Test critical values:		
1% level	-3.473382	
5% level	-2.880336	
10% level	-2.576871	

*MacKinnon (1996) one-sided p-values.

ผลการทดสอบ Unit Root สำหรับ LNCPI ที่ระดับ level I(0) ของ CPI รูปสมการ Trend and Intercept

Null Hypothesis: LNCPI has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on SIC, MAXLAG=13)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.047754	0.5702
Test critical values:		
1% level	-4.018748	
5% level	-3.439267	

10% level

-3.143999

*MacKinnon (1996) one-sided p-values.

ผลการทดสอบ Unit Root สำหรับ D(LNCPI) ระดับ 1st Difference I(1) ของ CPI รูปสมการ None

Null Hypothesis: D(LNCPI) has a unit root
 Exogenous: None
 Lag Length: 0 (Automatic based on SIC, MAXLAG=13)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-10.40392	0.0000
Test critical values:		
1% level	-2.580164	
5% level	-1.942924	
10% level	-1.615325	

*MacKinnon (1996) one-sided p-values.

ผลการทดสอบ Unit Root สำหรับ D(LNCPI) ระดับ 1st Difference I(1) ของ CPI รูปสมการ

Intercept

Null Hypothesis: D(LNCPI) has a unit root
 Exogenous: Constant
 Lag Length: 0 (Automatic based on SIC, MAXLAG=13)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-10.43032	0.0000
Test critical values:		
1% level	-3.473382	
5% level	-2.880336	
10% level	-2.576871	

*MacKinnon (1996) one-sided p-values.

ผลการทดสอบ Unit Root สำหรับ D(LNCPI) ระดับ 1st Difference I(1) ของ CPI รูปสมการ

Trend and Intercept

Null Hypothesis: D(LNCPI) has a unit root
 Exogenous: Constant, Linear Trend
 Lag Length: 0 (Automatic based on SIC, MAXLAG=13)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-10.48585	0.0000
Test critical values:		
1% level	-4.019151	
5% level	-3.439461	
10% level	-3.144113	

*MacKinnon (1996) one-sided p-values.

5.2 Exc

ผลการทดสอบ Unit Root สำหรับ LNCPI ที่ระดับ level I(0) ของ Exc รูปสมการ Trend and Intercept

Null Hypothesis: LNEXC has a unit root

Exogenous: Constant, Linear Trend
Lag Length: 1 (Automatic based on SIC, MAXLAG=13)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.311188	0.4250
Test critical values:		
1% level	-4.019151	
5% level	-3.439461	
10% level	-3.144113	

*MacKinnon (1996) one-sided p-values.

ผลการทดสอบ Unit Root สำหรับ D(LNEXC) ระดับ 1st Difference I(1) ของ Exc รูปสมการ Trend and Intercept

Null Hypothesis: D(LNEXC) has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 0 (Automatic based on SIC, MAXLAG=13)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-10.16601	0.0000
Test critical values:		
1% level	-4.019151	
5% level	-3.439461	
10% level	-3.144113	

*MacKinnon (1996) one-sided p-values.

5.3 EXP

ผลการทดสอบ Unit Root สำหรับ LNEXP1 ที่ระดับ level I(0) ของ EXP รูปสมการ Trend and Intercept

Null Hypothesis: LNEXP01 has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 12 (Automatic based on SIC, MAXLAG=13)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-4.114151	0.0076
Test critical values:		
1% level	-4.023975	
5% level	-3.441777	
10% level	-3.145474	

*MacKinnon (1996) one-sided p-values.

ผลการทดสอบ Unit Root สำหรับ D(LNEXP1) ระดับ 1st Difference I(1) ของ EXP รูปสมการ Trend and Intercept

Null Hypothesis: D(LNEXP01) has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 11 (Automatic based on SIC, MAXLAG=13)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-3.548858	0.0381
Test critical values:		
1% level	-4.023975	
5% level	-3.441777	
10% level	-3.145474	

*MacKinnon (1996) one-sided p-values.

5.4 IPI

ผลการทดสอบ Unit Root สำหรับ LN CPI ที่ระดับ level I(0) ของ IPI รูปสมการ Trend and Intercept

Null Hypothesis: LN IPI has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 13 (Automatic based on SIC, MAXLAG=13)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-4.295421	0.0043
Test critical values:		
1% level	-4.024452	
5% level	-3.442006	
10% level	-3.145608	

*MacKinnon (1996) one-sided p-values.

ผลการทดสอบ Unit Root สำหรับ D(LN CPI) ระดับ 1st Difference I(1) ของ IPI รูปสมการ Trend and Intercept

Null Hypothesis: D(LN IPI) has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 11 (Automatic based on SIC, MAXLAG=13)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.992218	0.6002
Test critical values:		
1% level	-4.023975	
5% level	-3.441777	
10% level	-3.145474	

*MacKinnon (1996) one-sided p-values.

ภาคผนวก ข

Johansen Cointegration Test Summary

1.Barzil

Series: LNEXP01 LNCPI LNEXC LNPI

Lags interval: 1 to 2

Selected (0.05 level*) Number of Cointegrating Relations by Model

Data Trend:	None	None	Linear	Linear	Quadratic
Test Type	No Intercept	Intercept	Intercept	Intercept	Intercept
	No Trend	No Trend	No Trend	Trend	Trend
Trace	0	1	1	1	2
Max-Eig	0	0	0	0	0

*Critical values based on MacKinnon-Haug-Michelis (1999)

Information Criteria by Rank and Model

Data Trend:	None	None	Linear	Linear	Quadratic
Rank or	No Intercept	Intercept	Intercept	Intercept	Intercept
No. of CEs	No Trend	No Trend	No Trend	Trend	Trend

Log Likelihood by Rank (rows) and Model (columns)

0	1023.715	1023.715	1027.434	1027.434	1028.259
1	1035.426	1037.639	1038.728	1042.437	1043.261
2	1040.010	1046.004	1047.094	1053.699	1054.171
3	1041.651	1050.405	1051.482	1059.733	1059.781
4	1041.808	1051.622	1051.622	1063.359	1063.359

Akaike Information Criteria by Rank (rows) and Model (columns)

0	-13.04888	-13.04888	-13.04518	-13.04518	-13.00340
1	-13.09771	-13.11367	-13.08853	-13.12417	-13.09554
2	-13.05277	-13.10532	-13.09334	-13.15393*	-13.13383
3	-12.96910	-13.04480	-13.04582	-13.11491	-13.10239
4	-12.86590	-12.94239	-12.94239	-13.04420	-13.04420

Schwarz Criteria by Rank (rows) and Model (columns)

0	-12.41227*	-12.41227*	-12.32900	-12.32900	-12.20764
1	-12.30195	-12.29801	-12.21319	-12.22895	-12.14063
2	-12.09786	-12.11062	-12.05885	-12.07966	-12.01976
3	-11.85504	-11.87105	-11.85218	-11.86159	-11.82917
4	-11.59269	-11.58960	-11.58960	-11.61184	-11.61184

2. Russia

Series: LNEXP01 LNCPI LNEXC LNIPI
Lags interval: 1 to 16

Selected (0.05 level*) Number of Cointegrating Relations by Model

Data Trend:	None	None	Linear	Linear	Quadratic
Test Type	No Intercept No Trend	Intercept No Trend	Intercept No Trend	Intercept Trend	Intercept Trend
Trace	3	4	2	2	4
Max-Eig	3	4	2	2	4

*Critical values based on MacKinnon-Haug-Michelis (1999)

Information Criteria by Rank and Model

Data Trend:	None	None	Linear	Linear	Quadratic
Rank or No. of CEs	No Intercept No Trend	Intercept No Trend	Intercept No Trend	Intercept Trend	Intercept Trend

Log Likelihood by Rank (rows) and Model (columns)

0	1077.328	1077.328	1086.029	1086.029	1086.827
1	1092.630	1096.887	1105.381	1108.299	1108.505
2	1102.800	1110.154	1118.578	1121.683	1121.770
3	1109.265	1120.324	1125.610	1131.359	1131.399
4	1109.322	1125.663	1125.663	1134.364	1134.364

Akaike Information Criteria by Rank (rows) and Model (columns)

0	-11.90330	-11.90330	-11.97144	-11.97144	-11.92502
1	-12.00912	-12.05633	-12.13595	-12.16375	-12.12326
2	-12.04059	-12.11817	-12.21127	-12.22730	-12.19956
3	-12.01833	-12.13513	-12.19725	-12.23708*	-12.22318
4	-11.90322	-12.08207	-12.08207	-12.15021	-12.15021

Schwarz Criteria by Rank (rows) and Model (columns)					
0	-6.473033*	-6.473033*	-6.456320	-6.456320	-6.325060
1	-6.409161	-6.435159	-6.451140	-6.457729	-6.353596
2	-6.270926	-6.306089	-6.356766	-6.330366	-6.260205
3	-6.078977	-6.132137	-6.173044	-6.149243	-6.114129
4	-5.794165	-5.888169	-5.888169	-5.871461	-5.871461

3.India

Series: LNEXP01 LNEXC LNCPI

Lags interval: 1 to 3

Selected (0.05 level*) Number of Cointegrating Relations by Model

Data Trend:	None	None	Linear	Linear	Quadratic
Test Type	No Intercept No Trend	Intercept No Trend	Intercept No Trend	Intercept Trend	Intercept Trend
Trace	0	0	0	0	3
Max-Eig	0	0	0	0	0

*Critical values based on MacKinnon-Haug-Michelis (1999)

Information Criteria by Rank and Model

Data Trend:	None	None	Linear	Linear	Quadratic
Rank or No. of CEs	No Intercept No Trend	Intercept No Trend	Intercept No Trend	Intercept Trend	Intercept Trend

Log Likelihood by Rank (rows) and Model (columns)

0	938.4565	938.4565	942.0801	942.0801	942.4733
1	942.5454	947.0290	950.4593	950.6596	951.0139
2	945.3235	950.5638	953.1051	958.2053	958.3886
3	945.3345	953.1054	953.1054	960.8484	960.8484

Akaike Information Criteria by Rank (rows) and Model (columns)

0	-12.07227	-12.07227	-12.08053	-12.08053	-12.04600
1	-12.04696	-12.09310	-12.11204*	-12.10145	-12.07965
2	-12.00429	-12.04720	-12.06762	-12.10868	-12.09786
3	-11.92496	-11.98815	-11.98815	-12.05097	-12.05097

Schwarz Criteria by Rank (rows) and Model (columns)

0	-11.53276*	-11.53276*	-11.48107	-11.48107	-11.38660
1	-11.38755	-11.41371	-11.39269	-11.36212	-11.30036
2	-11.22499	-11.22794	-11.22837	-11.22947	-11.19867
3	-11.02577	-11.02902	-11.02902	-11.03189	-11.03189

4.China

Series: LNEXP01 LNCPI LNEXC LNIPI

Lags interval: 1 to 2

Selected (0.05 level*) Number of Cointegrating Relations by Model

Data Trend:	None	None	Linear	Linear	Quadratic
Test Type	No Intercept No Trend	Intercept No Trend	Intercept No Trend	Intercept Trend	Intercept Trend
Trace	0	1	0	1	1
Max-Eig	0	1	0	0	0

*Critical values based on MacKinnon-Haug-Michelis (1999)

Information Criteria by Rank and Model

Data Trend:	None	None	Linear	Linear	Quadratic
Rank or No. of CEs	No Intercept No Trend	Intercept No Trend	Intercept No Trend	Intercept Trend	Intercept Trend
Log Likelihood by Rank (rows) and Model (columns)					
0	1082.692	1082.692	1089.592	1089.592	1091.638
1	1092.989	1097.704	1101.848	1104.903	1106.780
2	1099.103	1106.711	1108.142	1114.498	1116.157
3	1101.223	1110.116	1111.529	1120.786	1120.798
4	1101.330	1111.640	1111.640	1123.389	1123.389
Akaike Information Criteria by Rank (rows) and Model (columns)					
0	-14.59294	-14.59294	-14.63322	-14.63322	-14.60609
1	-14.62485	-14.67645	-14.69233	-14.72088	-14.70527
2	-14.59866	-14.67654	-14.66863	-14.72913*	-14.72441
3	-14.51699	-14.59884	-14.60458	-14.69147	-14.67775
4	-14.40736	-14.49500	-14.49500	-14.60262	-14.60262
Schwarz Criteria by Rank (rows) and Model (columns)					
0	-13.93298*	-13.93298*	-13.89076	-13.89076	-13.78114
1	-13.79990	-13.83088	-13.78489	-13.79281	-13.71534
2	-13.60872	-13.64536	-13.59620	-13.61545	-13.56948
3	-13.36206	-13.38204	-13.36715	-13.39218	-13.35783
4	-13.08745	-13.09259	-13.09259	-13.11772	-13.11772

5. US

Series: LNEXP01 LNEXC LNCPI

Lags interval: 1 to 13

Selected (0.05 level*) Number of Cointegrating Relations by Model

Data Trend:	None	None	Linear	Linear	Quadratic
Test Type	No Intercept No Trend	Intercept No Trend	Intercept No Trend	Intercept Trend	Intercept Trend
Trace	1	1	1	1	0
Max-Eig	1	1	1	1	0

*Critical values based on MacKinnon-Haug-Michelis (1999)

Information
Criteria by
Rank and
Model

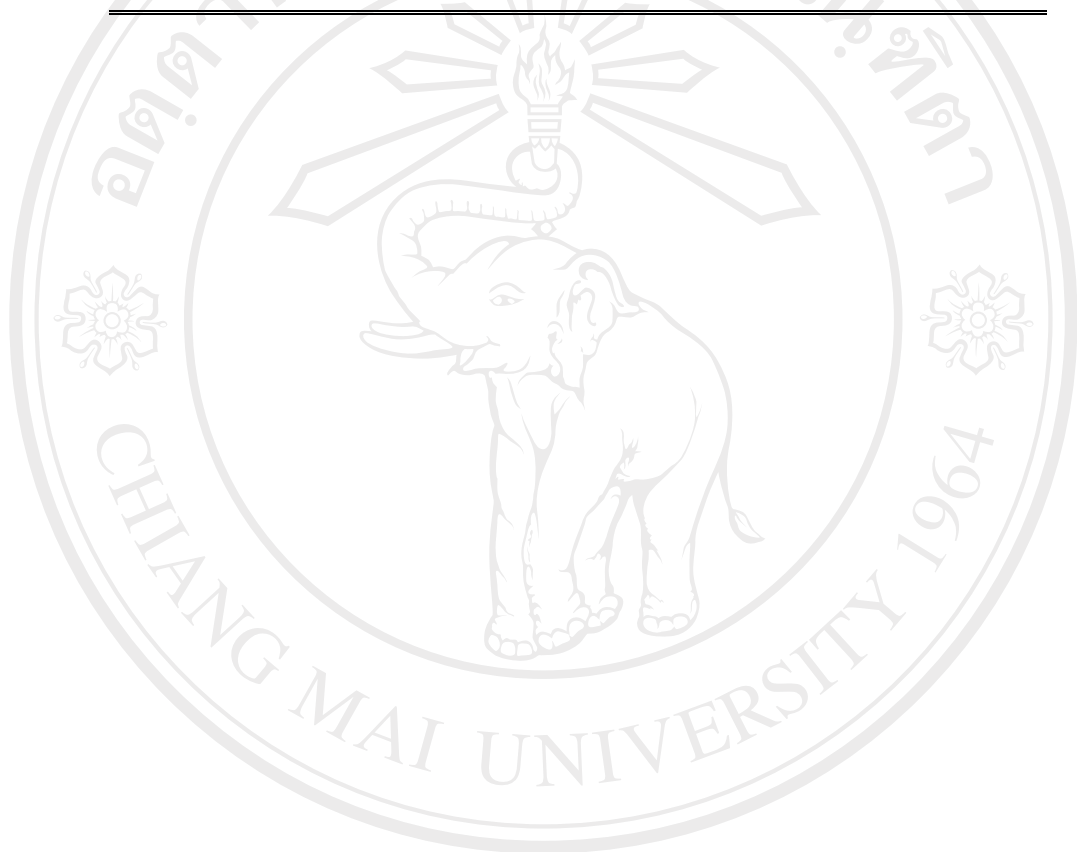
Data Trend:	None	None	Linear	Linear	Quadratic
Rank or No. of CEs	No Intercept No Trend	Intercept No Trend	Intercept No Trend	Intercept Trend	Intercept Trend
Log Likelihood by Rank (rows) and Model (columns)					
0	1063.643	1063.643	1065.479	1065.479	1072.320
1	1073.220	1077.242	1079.028	1079.360	1084.096
2	1076.328	1084.021	1084.402	1085.000	1086.515
3	1076.565	1086.034	1086.034	1087.380	1087.380

Akaïke Information Criteria by Rank (rows) and Model (columns)

0	-13.42757	-13.42757	-13.41106	-13.41106	-13.46553
1	-13.47830	-13.52116	-13.51812	-13.50865	-13.54747*
2	-13.43727	-13.51803	-13.50925	-13.48936	-13.49667
3	-13.35553	-13.44729	-13.44729	-13.42383	-13.42383

Schwarz Criteria by Rank (rows) and Model (columns)

0	-10.98072*	-10.98072*	-10.90147	-10.90147	-10.89321
1	-10.90598	-10.92793	-10.88306	-10.85268	-10.84966
2	-10.73947	-10.77840	-10.74870	-10.68699	-10.67339
3	-10.53225	-10.56127	-10.56127	-10.47507	-10.47507



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ภาคผนวก ก

Cointegration vectors

1.Barzil

Series: LNCPI LNEXC LNEXP01 LNIPI
Lags interval (in first differences): 1 to 2

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.179147	71.85080	63.87610	0.0092
At most 1	0.137724	41.84438	42.91525	0.0638
At most 2	0.076329	19.32106	25.87211	0.2622
At most 3	0.046593	7.252405	12.51798	0.3189

Trace test indicates 1 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None	0.179147	30.00642	32.11832	0.0886
At most 1	0.137724	22.52332	25.82321	0.1286
At most 2	0.076329	12.06865	19.38704	0.4088
At most 3	0.046593	7.252405	12.51798	0.3189

Max-eigenvalue test indicates no cointegration at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegrating Coefficients (normalized by b*S11*b=I):

LNCPI	LNEXC	LNEXP01	LNIPI	@TREND(2)
6.006392	4.539560	0.933337	28.28990	0.087551
-15.56179	6.693051	0.170665	-3.937287	0.007026
-0.124337	-2.621912	-2.049098	-0.346928	0.045756
-29.51091	2.176449	1.013563	-7.208523	0.039379

Unrestricted Adjustment Coefficients (alpha):

D(LNCPI)	D(LNEXC)	D(LNEXP01)	D(LNIPI)
0.000600	-0.000519	0.001605	0.000446
0.000935	0.007727	-0.012091	0.012284
0.007727	-0.024321	0.027452	0.038206
-0.024321	0.003266	-0.001128	-0.005358

1 Cointegrating Equation(s): Log likelihood 1042.437

Normalized cointegrating coefficients (standard error in parentheses)				
LNCPI	LNEXC	LNEXP01	LNIFI	@TREND(2)
1.000000	0.755788 (0.23156)	0.155391 (0.07275)	4.709965 (0.78922)	0.014576 (0.00315)

Adjustment coefficients (standard error in parentheses)

D(LNCPI)	0.003605 (0.00326)
D(LNEXC)	-0.003116 (0.03313)
D(LNEXP01)	-0.198267 (0.10365)
D(LNIFI)	-0.100540 (0.02196)

2 Cointegrating Equation(s): Log likelihood 1053.699

Normalized cointegrating coefficients (standard error in parentheses)				
LNCPI	LNEXC	LNEXP01	LNIFI	@TREND(2)
1.000000	0.000000	0.049367 (0.02917)	1.869455 (0.26315)	0.004999 (0.00134)
0.000000	1.000000	0.140282 (0.05829)	3.758342 (0.52598)	0.012672 (0.00269)

Adjustment coefficients (standard error in parentheses)

D(LNCPI)	-0.021369 (0.00876)	0.013466 (0.00425)
D(LNEXC)	0.185049 (0.09045)	-0.083284 (0.04385)
D(LNEXP01)	-0.625466 (0.28527)	0.033888 (0.13831)
D(LNIFI)	-0.082984 (0.06096)	-0.083537 (0.02956)

3 Cointegrating Equation(s): Log likelihood 1059.733

Normalized cointegrating coefficients (standard error in parentheses)				
LNCPI	LNEXC	LNEXP01	LNIFI	@TREND(2)
1.000000	0.000000	0.000000	2.156484 (0.32333)	0.007345 (0.00166)
0.000000	1.000000	0.000000	4.573957 (0.78032)	0.019338 (0.00401)
0.000000	0.000000	1.000000	-5.814128 (3.36072)	-0.047520 (0.01728)

Adjustment coefficients (standard error in parentheses)

D(LNCPI)	-0.021424 (0.00874)	0.012298 (0.00445)	-7.88E-05 (0.00118)
D(LNEXC)	0.183521 (0.08880)	-0.115491 (0.04526)	-0.027718 (0.01202)
D(LNEXP01)	-0.630216 (0.28022)	-0.066284 (0.14282)	-0.104411 (0.03793)
D(LNIFI)	-0.082318 (0.06050)	-0.069490 (0.03084)	-0.004837 (0.00819)

2.Russia

Series: LNCPI LNEXC LNEXP01 LNIFI
 Lags interval (in first differences): 1 to 3

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.298730	108.5884	63.87610	0.0000
At most 1 *	0.165074	55.00410	42.91525	0.0021
At most 2 *	0.116340	27.76187	25.87211	0.0288
At most 3	0.058396	9.085805	12.51798	0.1751

Trace test indicates 3 cointegrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**Mackinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.298730	53.58426	32.11832	0.0000
At most 1 *	0.165074	27.24223	25.82321	0.0323
At most 2	0.116340	18.67607	19.38704	0.0632
At most 3	0.058396	9.085805	12.51798	0.1751

Max-eigenvalue test indicates 2 cointegrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**Mackinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegrating Coefficients (normalized by b*S11*b=I):

LNCPI	LNEXC	LNEXP01	LNIFI	@TREND(2)
4.271047	-3.472132	-3.352904	-4.780033	0.037670
18.86971	-10.41946	-0.618350	24.21452	-0.128026
10.33783	-6.686010	-0.091367	0.966514	-0.077396
13.37857	-3.905459	-0.084568	-13.24133	-0.127088

Unrestricted Adjustment Coefficients (alpha):

	D(LNCPI)	D(LNEXC)	D(LNEXP01)	D(LNIFI)
	0.002549	-0.008647	-0.000425	-0.003000
	0.008873	-0.013428	0.005961	-0.006502
	0.225492	0.066380	-0.028851	0.042871
	-0.001512	-0.003966	0.002438	0.006113

1 Cointegrating Equation(s): Log likelihood 960.5065

Normalized cointegrating coefficients (standard error in parentheses)

LNCPI	LNEXC	LNEXP01	LNIFI	@TREND(2)
1.000000	-0.812946	-0.785031	-1.119171	0.008820
	(0.11069)	(0.09915)	(0.84739)	(0.00249)

Adjustment coefficients (standard error in parentheses)

D(LNCPI)	0.010885
	(0.00911)

D(LNEXC)	0.037899 (0.01752)
D(LNEXP01)	0.963088 (0.15682)
D(LNIPI)	-0.006458 (0.01027)

2 Cointegrating Equation(s): Log likelihood 974.1276

Normalized cointegrating coefficients (standard error in parentheses)

LNCPI	LNEXC	LNEXP01	LNIPI	@TREND(2)
1.000000	0.000000	1.560157 (0.21174)	6.370411 (1.72926)	-0.039827 (0.00438)
0.000000	1.000000	2.884800 (0.36298)	9.212885 (2.96440)	-0.059841 (0.00751)

Adjustment coefficients (standard error in parentheses)

D(LNCPI)	-0.152281 (0.03873)	0.081248 (0.02199)
D(LNEXC)	-0.215477 (0.07622)	0.109099 (0.04327)
D(LNEXP01)	2.215658 (0.70182)	-1.474582 (0.39840)
D(LNIPI)	-0.081289 (0.04604)	0.046570 (0.02614)

3 Cointegrating Equation(s): Log likelihood 983.4656

Normalized cointegrating coefficients (standard error in parentheses)

LNCPI	LNEXC	LNEXP01	LNIPI	@TREND(2)
1.000000	0.000000	0.000000	8.044709 (2.86899)	-0.006384 (0.00346)
0.000000	1.000000	0.000000	12.30874 (5.11703)	0.001998 (0.00617)
0.000000	0.000000	1.000000	-1.073160 (1.84868)	-0.021436 (0.00223)

Adjustment coefficients (standard error in parentheses)

D(LNCPI)	-0.156670 (0.04391)	0.084087 (0.02574)	-0.003159 (0.00683)
D(LNEXC)	-0.153850 (0.08569)	0.069242 (0.05023)	-0.021993 (0.01332)
D(LNEXP01)	1.917404 (0.79389)	-1.281686 (0.46534)	-0.794464 (0.12344)
D(LNIPI)	-0.056083 (0.05200)	0.030268 (0.03048)	0.007299 (0.00809)

3. อินทรีย์

Cointegration vector

Lags interval (in first differences): 1 to 1

Unrestricted Cointegration Rank Test (Trace)

Hypothesized	Trace	0.05
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No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.186633	36.36000	29.79707	0.0076
At most 1	0.030121	4.754313	15.49471	0.8343
At most 2	0.000490	0.075042	3.841466	0.7841

Trace test indicates 1 cointegrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.186633	31.60569	21.13162	0.0012
At most 1	0.030121	4.679271	14.26460	0.7816
At most 2	0.000490	0.075042	3.841466	0.7841

Max-eigenvalue test indicates 1 cointegrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegrating Coefficients (normalized by b*S11*b=I):

LNEXP01	LNEXC	LNCPI
-3.518980	-21.68345	44.74533
0.252581	12.94523	-4.805234
0.625571	-3.180477	6.896633

Unrestricted Adjustment Coefficients (alpha):

D(LNEXP01)	D(LNEXC)	D(LNCPI)
0.074432	-0.000212	-0.002714
0.003314	-0.002504	9.30E-05
-0.003830	-6.60E-05	-0.000153

1 Cointegrating Equation(s): Log likelihood 941.0053

Normalized cointegrating coefficients (standard error in parentheses)

LNEXP01	LNEXC	LNCPI
1.000000	6.161856	-12.71543
	(0.65245)	(0.71824)

Adjustment coefficients (standard error in parentheses)

D(LNEXP01)	D(LNEXC)	D(LNCPI)
-0.261924	0.000745	0.009550
(0.06748)	(0.00426)	(0.00259)

2 Cointegrating Equation(s): Log likelihood 943.3450

Normalized cointegrating coefficients (standard error in parentheses)

LNEXP01	LNEXC	LNCPI
1.000000	0.000000	-11.85325
		(2.99518)

0.000000 1.000000 -0.139922
(0.47493)

Adjustment coefficients (standard error in parentheses)

D(LNEXP01) -0.261087 -1.571033
(0.06765) (0.48423)
D(LNEXC) 0.000112 -0.027822
(0.00421) (0.03015)
D(LNCPI) 0.009574 0.060052
(0.00260) (0.01861)

4.China

Series: LNCPI LNEXC LNEXP01 LNIPI
Lags interval (in first differences): 1 to 2

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.191571	67.59470	63.87610	0.0236
At most 1	0.124758	36.97130	42.91525	0.1730
At most 2	0.083631	17.78267	25.87211	0.3587
At most 3	0.035508	5.206204	12.51798	0.5671

Trace test indicates 1 cointegrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None	0.191571	30.62339	32.11832	0.0753
At most 1	0.124758	19.18864	25.82321	0.2928
At most 2	0.083631	12.57646	19.38704	0.3634
At most 3	0.035508	5.206204	12.51798	0.5671

Max-eigenvalue test indicates no cointegration at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegrating Coefficients (normalized by b*S11*b=I):

LNCPI	LNEXC	LNEXP01	LNIPI	@TREND(2)
12.45825	5.099922	2.279987	28.52247	0.183909
-12.57462	1.807257	7.033944	-2.549678	-0.169870
14.24478	2.709772	2.122619	1.385551	-0.007916
-28.19919	9.326193	0.797730	-3.276787	-0.077897

Unrestricted Adjustment Coefficients (alpha):

D(LNCPI)	0.000694	0.000296	-0.002101	9.09E-05
D(LNEXC)	-0.000600	0.003031	-0.003678	-0.006152
D(LNEXP01)	0.021148	-0.046012	-0.000195	-0.004488
D(LNIPI)	-0.021757	-0.001800	-0.002236	0.000830

1 Cointegrating Equation(s):		Log likelihood	1104.903		
Normalized cointegrating coefficients (standard error in parentheses)					
LNCPI	LNEXC	LNEXP01	LNIP1	@TREND(2)	
1.000000	0.409361 (0.14397)	0.183010 (0.10830)	2.289445 (0.37039)	0.014762 (0.00272)	
Adjustment coefficients (standard error in parentheses)					
D(LNCPI)	0.008640 (0.00804)				
D(LNEXC)	-0.007478 (0.03884)				
D(LNEXP01)	0.263462 (0.15000)				
D(LNIP1)	-0.271051 (0.04935)				
2 Cointegrating Equation(s):		Log likelihood	1114.498		
Normalized cointegrating coefficients (standard error in parentheses)					
LNCPI	LNEXC	LNEXP01	LNIP1	@TREND(2)	
1.000000	0.000000	-0.366462 (0.09797)	0.745002 (0.27458)	0.013835 (0.00244)	
0.000000	1.000000	1.342268 (0.29305)	3.772813 (0.82136)	0.002266 (0.00731)	
Adjustment coefficients (standard error in parentheses)					
D(LNCPI)	0.004916 (0.01141)	0.004072 (0.00349)			
D(LNEXC)	-0.045588 (0.05500)	0.002416 (0.01681)			
D(LNEXP01)	0.842044 (0.20117)	0.024696 (0.06149)			
D(LNIP1)	-0.248414 (0.07007)	-0.114211 (0.02142)			
3 Cointegrating Equation(s):		Log likelihood	1120.786		
Normalized cointegrating coefficients (standard error in parentheses)					
LNCPI	LNEXC	LNEXP01	LNIP1	@TREND(2)	
1.000000	0.000000	0.000000	-1.178545 (0.57811)	-0.007045 (0.00387)	
0.000000	1.000000	0.000000	10.81833 (2.43715)	0.078742 (0.01633)	
0.000000	0.000000	1.000000	-5.248967 (1.72146)	-0.056975 (0.01154)	
Adjustment coefficients (standard error in parentheses)					
D(LNCPI)	-0.025019 (0.01405)	-0.001622 (0.00374)	-0.000796 (0.00476)		
D(LNEXC)	-0.097980 (0.07022)	-0.007550 (0.01870)	0.012142 (0.02378)		
D(LNEXP01)	0.839261 (0.25822)	0.024167 (0.06877)	-0.275843 (0.08743)		
D(LNIP1)	-0.280269 (0.08983)	-0.120271 (0.02392)	-0.067014 (0.03041)		

5. US

Series: LNEXP01 LNEXC LNCPI

Lags interval (in first differences): 1 to 1

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None	0.144746	36.78862	42.91525	0.1790
At most 1	0.063614	12.86604	25.87211	0.7486
At most 2	0.018197	2.809797	12.51798	0.8983

Trace test indicates no cointegration at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None	0.144746	23.92258	25.82321	0.0873
At most 1	0.063614	10.05625	19.38704	0.6128
At most 2	0.018197	2.809797	12.51798	0.8983

Max-eigenvalue test indicates no cointegration at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegrating Coefficients (normalized by b*S11*b=I):

LNEXP01	LNEXC	LNCPI	@TREND(2)
-10.60931	9.435248	-28.87445	0.051792
2.555481	1.540091	-11.77277	-0.004226
0.646199	-5.355293	-41.43068	-0.005025

Unrestricted Adjustment Coefficients (alpha):

D(LNEXP01)	0.021150	-0.018947	0.000784
D(LNEXC)	-0.005764	-0.004880	0.003371
D(LNCPI)	0.001306	0.000730	0.000296

1 Cointegrating Equation(s): Log likelihood 1058.241

Normalized cointegrating coefficients (standard error in parentheses)

LNEXP01	LNEXC	LNCPI	@TREND(2)
1.000000	-0.889336	2.721613	-0.004882
	(0.12641)	(0.88448)	(0.00044)

Adjustment coefficients (standard error in parentheses)

D(LNEXP01)	-0.224388
	(0.07955)
D(LNEXC)	0.061149
	(0.03015)

D(LNCPI) -0.013857
 (0.00421)

2 Cointegrating Equation(s): Log likelihood 1063.269

Normalized cointegrating coefficients (standard error in parentheses)

LNEXP01	LNEXC	LNCPI	@TREND(2)
1.000000	0.000000	-1.646680 (3.20283)	-0.002958 (0.00171)
0.000000	1.000000	-4.911858 (3.62374)	0.002163 (0.00194)

Adjustment coefficients (standard error in parentheses)

D(LNEXP01)	-0.272807 (0.08004)	0.170376 (0.07012)
D(LNEXC)	0.048678 (0.03070)	-0.061897 (0.02689)
D(LNCPI)	-0.011992 (0.00428)	0.013447 (0.00375)

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ภาคผนวก ง

Vector Error Correction Estimates

1. Barzil

Vector Error Correction Estimates

Standard errors in () & t-statistics in []

Cointegrating Eq:	CointEq1			
LNEXP01(-1)	1.000000			
LNCPI(-1)	6.435394 (6.20573) [1.03701]			
LNEXC(-1)	4.863795 (1.39542) [3.48554]			
LNIFI(-1)	30.31048 (5.48507) [5.52600]			
@TREND(1)	0.093804 (0.02049) [4.57841]			
C	11.95207			
Error Correction:	D(LNEXP01)	D(LNCPI)	D(LNEXC)	D(LNIFI)
CointEq1	-0.030809 (0.01611) [-1.91291]	0.000560 (0.00051) [1.10734]	-0.000484 (0.00515) [-0.09406]	-0.015623 (0.00341) [-4.57842]
D(LNEXP01(-1))	-0.384964 (0.08401) [-4.58218]	-0.001845 (0.00264) [-0.69902]	-0.005988 (0.02686) [-0.22297]	0.038537 (0.01780) [2.16503]
D(LNEXP01(-2))	-0.024031 (0.08419) [-0.28543]	0.000630 (0.00264) [0.23816]	-0.014477 (0.02691) [-0.53788]	0.019537 (0.01784) [1.09529]
D(LNCPI(-1))	3.646125 (2.71681) [1.34206]	0.374858 (0.08534) [4.39242]	0.184872 (0.86849) [0.21287]	-0.187799 (0.57561) [-0.32626]
D(LNCPI(-2))	-1.167496 (2.66815) [-0.43757]	0.103510 (0.08381) [1.23501]	1.286882 (0.85294) [1.50877]	-0.806792 (0.56530) [-1.42720]
D(LNEXC(-1))	-0.212205 (0.27189) [-0.78048]	0.012476 (0.00854) [1.46079]	0.045486 (0.08692) [0.52333]	-0.052328 (0.05760) [-0.90840]
D(LNEXC(-2))	0.113691 (0.27822) [0.40863]	0.008658 (0.00874) [0.99062]	-0.074926 (0.08894) [-0.84243]	0.132290 (0.05895) [2.24423]
D(LNIFI(-1))	1.489864	-0.016943	0.112598	-0.356666

	(0.45938)	(0.01443)	(0.14685)	(0.09733)
	[3.24318]	[-1.17410]	[0.76675]	[-3.66455]
D(LNIPI(-2))	1.161637	-0.005122	-0.035317	-0.155159
	(0.37635)	(0.01182)	(0.12031)	(0.07974)
	[3.08656]	[-0.43329]	[-0.29355]	[-1.94587]
C	0.013952	0.001445	-2.86E-05	-0.003652
	(0.01899)	(0.00060)	(0.00607)	(0.00402)
	[0.73490]	[2.42330]	[-0.00471]	[-0.90786]
R-squared	0.237785	0.268204	0.038900	0.468703
Adj. R-squared	0.189476	0.221822	-0.022015	0.435029
Sum sq. resids	6.427124	0.006342	0.656793	0.288502
S.E. equation	0.212747	0.006683	0.068010	0.045074
F-statistic	4.922138	5.782559	0.638590	13.91893
Log likelihood	24.73619	550.7395	198.0856	-260.6082
Akaike AIC	-0.193897	-7.114994	-2.474811	-3.297476
Schwarz SC	0.005042	-6.916054	-2.275871	-3.098537
Mean dependent	0.008467	0.002924	0.003441	-0.003875
S.D. dependent	0.236310	0.007576	0.067273	0.059968
Determinant resid covariance (dof adj.)		1.70E-11		
Determinant resid covariance		1.30E-11		
Log likelihood		1042.437		
Akaike information criterion		-13.12417		
Schwarz criterion		-12.22895		

2. VAR Model - Substituted Coefficients:

2. Russia

Vector Error Correction Estimates
Standard errors in () & t-statistics in []

Cointegrating Eq:	CointEq1	CointEq2		
LNEXP01(-1)	1.000000	0.000000		
LNCPI(-1)	0.000000	1.000000		
LNEXC(-1)	-2.217868 (0.67456) [-3.28790]	-0.740806 (0.08034) [-9.22085]		
LNIPI(-1)	3.808207 (8.78699) [0.43339]	-1.043980 (1.04654) [-0.99755]		
@TREND(1)	-0.007725 (0.00565) [-1.36674]	-0.006539 (0.00067) [-9.71341]		
C	-16.47690	7.354799		
Error Correction:	D(LNEXP01)	D(LNCPI)	D(LNEXC)	D(LNIPI)
CointEq1	-0.110796 (0.17178) [-0.64498]	-0.004038 (0.01142) [-0.35371]	-0.010916 (0.02052) [-0.53189]	-0.044396 (0.01133) [-3.91806]
CointEq2	0.942749	0.037357	0.190245	0.311748

	(1.29793) [0.72635]	(0.08626) [0.43310]	(0.15507) [1.22684]	(0.08561) [3.64133]
D(LNEXP01(-1))	-0.464642 (0.21235) [-2.18808]	0.002972 (0.01411) [0.21059]	0.001492 (0.02537) [0.05880]	0.038715 (0.01401) [2.76397]
D(LNEXP01(-2))	-0.331168 (0.21379) [-1.54904]	-0.009004 (0.01421) [-0.63372]	-0.018408 (0.02554) [-0.72069]	0.038550 (0.01410) [2.73364]
D(LNEXP01(-3))	-0.517605 (0.20247) [-2.55640]	0.011732 (0.01346) [0.87190]	0.027424 (0.02419) [1.13366]	0.028049 (0.01336) [2.10020]
D(LNEXP01(-4))	-0.136043 (0.20893) [-0.65115]	-0.012230 (0.01388) [-0.88085]	-0.020062 (0.02496) [-0.80373]	0.025264 (0.01378) [1.83323]
D(LNEXP01(-5))	-0.241068 (0.19569) [-1.23186]	-0.008864 (0.01301) [-0.68154]	-0.020640 (0.02338) [-0.88279]	0.015040 (0.01291) [1.16512]
D(LNEXP01(-6))	-0.469351 (0.18774) [-2.50007]	0.011414 (0.01248) [0.91487]	0.016621 (0.02243) [0.74104]	0.003689 (0.01238) [0.29792]
D(LNEXP01(-7))	-0.367260 (0.18576) [-1.97708]	0.005215 (0.01234) [0.42241]	0.005473 (0.02219) [0.24659]	-0.000177 (0.01225) [-0.01443]
D(LNEXP01(-8))	-0.511462 (0.18070) [-2.83042]	0.001391 (0.01201) [0.11580]	0.002521 (0.02159) [0.11677]	0.003106 (0.01192) [0.26056]
D(LNEXP01(-9))	-0.372905 (0.17509) [-2.12984]	-0.006124 (0.01164) [-0.52630]	-0.007726 (0.02092) [-0.36935]	-0.001348 (0.01155) [-0.11673]
D(LNEXP01(-10))	-0.111297 (0.16383) [-0.67935]	-0.000373 (0.01089) [-0.03424]	-0.001345 (0.01957) [-0.06874]	-0.006107 (0.01081) [-0.56514]
D(LNEXP01(-11))	-0.301764 (0.15235) [-1.98067]	-0.000692 (0.01012) [-0.06837]	-0.001871 (0.01820) [-0.10276]	-0.003730 (0.01005) [-0.37112]
D(LNEXP01(-12))	-0.200106 (0.15221) [-1.31463]	-0.001836 (0.01012) [-0.18149]	-0.007434 (0.01819) [-0.40878]	-0.009093 (0.01004) [-0.90561]
D(LNEXP01(-13))	0.111187 (0.14523) [0.76560]	-0.011335 (0.00965) [-1.17440]	-0.028191 (0.01735) [-1.62471]	-0.004386 (0.00958) [-0.45781]
D(LNEXP01(-14))	-0.114825 (0.14037) [-0.81799]	0.010772 (0.00933) [1.15469]	0.017556 (0.01677) [1.04679]	-0.010951 (0.00926) [-1.18272]
D(LNEXP01(-15))	-0.024199	-0.004912	-0.003979	-0.001584

	(0.13475) [-0.17958]	(0.00896) [-0.54851]	(0.01610) [-0.24714]	(0.00889) [-0.17822]
D(LNEXP01(-16))	0.014170 (0.12130) [0.11681]	-5.13E-05 (0.00806) [-0.00636]	0.004097 (0.01449) [0.28271]	-0.001824 (0.00800) [-0.22790]
D(LNCPI(-1))	-0.906903 (5.21432) [-0.17393]	1.019906 (0.34652) [2.94325]	1.921312 (0.62298) [3.08408]	0.073906 (0.34395) [0.21488]
D(LNCPI(-2))	3.156091 (5.29522) [0.59603]	-0.378312 (0.35190) [-1.07505]	-1.044783 (0.63264) [-1.65146]	0.318072 (0.34928) [0.91064]
D(LNCPI(-3))	-1.095693 (5.43958) [-0.20143]	0.112784 (0.36149) [0.31199]	0.116026 (0.64989) [0.17853]	-0.005628 (0.35881) [-0.01569]
D(LNCPI(-4))	-0.781178 (5.71335) [-0.13673]	-0.418986 (0.37969) [-1.10350]	-0.723469 (0.68260) [-1.05988]	-0.027073 (0.37686) [-0.07184]
D(LNCPI(-5))	-1.522094 (5.92836) [-0.25675]	-0.152353 (0.39398) [-0.38670]	-0.154027 (0.70829) [-0.21746]	-0.482824 (0.39105) [-1.23470]
D(LNCPI(-6))	1.640721 (5.87911) [0.27908]	-0.634386 (0.39070) [-1.62370]	-1.176714 (0.70240) [-1.67527]	0.367182 (0.38780) [0.94684]
D(LNCPI(-7))	7.652298 (5.74110) [1.33290]	0.172354 (0.38153) [0.45174]	0.738949 (0.68591) [1.07732]	-0.057484 (0.37869) [-0.15179]
D(LNCPI(-8))	1.607556 (5.26832) [0.30514]	0.377600 (0.35011) [1.07851]	0.632390 (0.62943) [1.00471]	-0.053664 (0.34751) [-0.15442]
D(LNCPI(-9))	-3.868288 (5.06435) [-0.76383]	-0.356013 (0.33656) [-1.05781]	-0.068168 (0.60506) [-0.11266]	0.017579 (0.33405) [0.05262]
D(LNCPI(-10))	2.906379 (5.08325) [0.57176]	-0.322878 (0.33781) [-0.95579]	-0.829948 (0.60732) [-1.36658]	-0.031511 (0.33530) [-0.09398]
D(LNCPI(-11))	-2.533433 (5.08126) [-0.49858]	0.116578 (0.33768) [0.34523]	0.209226 (0.60708) [0.34464]	-0.169126 (0.33517) [-0.50460]
D(LNCPI(-12))	2.505617 (4.89061) [0.51233]	0.528932 (0.32501) [1.62742]	0.926380 (0.58430) [1.58545]	0.085289 (0.32259) [0.26438]
D(LNCPI(-13))	7.412944 (4.90000) [1.51285]	-1.344184 (0.32564) [-4.12788]	-2.801895 (0.58542) [-4.78610]	-0.025723 (0.32321) [-0.07959]
D(LNCPI(-14))	-1.119611	0.074959	0.258125	-0.606015

	(5.59587)	(0.37188)	(0.66856)	(0.36911)
	[-0.20008]	[0.20157]	[0.38609]	[-1.64181]
D(LNCPI(-15))	6.248793	-0.074123	0.338471	-0.279184
	(5.55564)	(0.36921)	(0.66375)	(0.36646)
	[1.12477]	[-0.20076]	[0.50993]	[-0.76184]
D(LNCPI(-16))	1.117576	0.181139	0.649589	-0.125105
	(5.34081)	(0.35493)	(0.63809)	(0.35229)
	[0.20925]	[0.51035]	[1.01802]	[-0.35512]
D(LNEXC(-1))	1.202493	-0.537603	-0.649675	-0.145033
	(2.73290)	(0.18162)	(0.32651)	(0.18027)
	[0.44001]	[-2.96007]	[-1.98975]	[-0.80455]
D(LNEXC(-2))	-2.226358	0.354499	0.588942	-0.078329
	(2.96573)	(0.19709)	(0.35433)	(0.19563)
	[-0.75069]	[1.79865]	[1.66214]	[-0.40040]
D(LNEXC(-3))	-0.340275	-0.164387	-0.259021	0.014840
	(3.02099)	(0.20076)	(0.36093)	(0.19927)
	[-0.11264]	[-0.81881]	[-0.71765]	[0.07447]
D(LNEXC(-4))	0.726615	0.207352	0.317239	0.036394
	(3.27221)	(0.21746)	(0.39094)	(0.21584)
	[0.22206]	[0.95353]	[0.81147]	[0.16862]
D(LNEXC(-5))	0.398762	0.058222	0.085886	0.139712
	(3.62188)	(0.24070)	(0.43272)	(0.23891)
	[0.11010]	[0.24189]	[0.19848]	[0.58480]
D(LNEXC(-6))	-1.703554	0.426958	0.749173	-0.249674
	(3.66562)	(0.24360)	(0.43795)	(0.24179)
	[-0.46474]	[1.75268]	[1.71065]	[-1.03260]
D(LNEXC(-7))	-0.116102	-0.275478	-0.563595	0.125031
	(3.57606)	(0.23765)	(0.42725)	(0.23588)
	[-0.03247]	[-1.15916]	[-1.31913]	[0.53005]
D(LNEXC(-8))	-1.657715	0.090897	-0.001427	0.094891
	(3.15012)	(0.20935)	(0.37636)	(0.20779)
	[-0.52624]	[0.43420]	[-0.00379]	[0.45667]
D(LNEXC(-9))	0.658610	0.125697	0.007210	0.035617
	(2.96984)	(0.19736)	(0.35482)	(0.19590)
	[0.22177]	[0.63688]	[0.02032]	[0.18181]
D(LNEXC(-10))	-4.486180	0.242734	0.518711	0.097583
	(2.51720)	(0.16728)	(0.30074)	(0.16604)
	[-1.78221]	[1.45103]	[1.72478]	[0.58771]
D(LNEXC(-11))	-0.527011	-0.208665	-0.377062	0.174256
	(2.51597)	(0.16720)	(0.30059)	(0.16596)
	[-0.20947]	[-1.24798]	[-1.25439]	[1.05000]
D(LNEXC(-12))	-1.920827	0.096697	0.321600	-0.073474
	(2.33598)	(0.15524)	(0.27909)	(0.15409)
	[-0.82228]	[0.62288]	[1.15232]	[-0.47684]
D(LNEXC(-13))	-0.481931	0.634110	1.273754	0.072484

	(2.40374)	(0.15974)	(0.28718)	(0.15856)
	[-0.20049]	[3.96955]	[4.43531]	[0.45715]
D(LNEXC(-14))	-0.494220	-0.082223	-0.150158	0.185135
	(2.73379)	(0.18168)	(0.32662)	(0.18033)
	[-0.18078]	[-0.45258]	[-0.45974]	[1.02667]
D(LNEXC(-15))	-1.604644	0.118745	0.001904	0.020844
	(2.47991)	(0.16481)	(0.29629)	(0.16358)
	[-0.64706]	[0.72051]	[0.00643]	[0.12742]
D(LNEXC(-16))	-0.158890	-0.017385	-0.074022	0.003478
	(2.25069)	(0.14957)	(0.26890)	(0.14846)
	[-0.07060]	[-0.11623]	[-0.27528]	[0.02343]
D(LNIPI(-1))	2.835723	-0.150065	-0.124606	0.005978
	(2.03946)	(0.13554)	(0.24366)	(0.13453)
	[1.39043]	[-1.10720]	[-0.51139]	[0.04444]
D(LNIPI(-2))	2.331118	-0.244056	-0.300422	0.132884
	(2.23741)	(0.14869)	(0.26731)	(0.14758)
	[1.04188]	[-1.64137]	[-1.12386]	[0.90039]
D(LNIPI(-3))	4.492423	-0.236294	-0.237598	0.126683
	(2.24041)	(0.14889)	(0.26767)	(0.14778)
	[2.00518]	[-1.58704]	[-0.88765]	[0.85723]
D(LNIPI(-4))	4.086982	-0.369501	-0.632589	0.138220
	(2.21889)	(0.14746)	(0.26510)	(0.14636)
	[1.84190]	[-2.50578]	[-2.38622]	[0.94437]
D(LNIPI(-5))	2.960580	-0.318998	-0.607784	0.206969
	(2.13314)	(0.14176)	(0.25485)	(0.14071)
	[1.38790]	[-2.25026]	[-2.38482]	[1.47093]
D(LNIPI(-6))	4.918801	-0.204061	-0.355398	0.285290
	(2.15461)	(0.14319)	(0.25742)	(0.14212)
	[2.28292]	[-1.42513]	[-1.38061]	[2.00736]
D(LNIPI(-7))	1.969622	-0.085710	-0.046816	0.196970
	(2.24496)	(0.14919)	(0.26821)	(0.14808)
	[0.87735]	[-0.57450]	[-0.17455]	[1.33014]
D(LNIPI(-8))	0.527469	-0.150938	-0.241417	0.232026
	(2.26440)	(0.15048)	(0.27054)	(0.14936)
	[0.23294]	[-1.00302]	[-0.89236]	[1.55342]
D(LNIPI(-9))	1.901622	-0.174261	-0.411430	0.423374
	(2.16674)	(0.14399)	(0.25887)	(0.14292)
	[0.87764]	[-1.21020]	[-1.58933]	[2.96227]
D(LNIPI(-10))	-2.182966	0.048989	0.102550	0.333889
	(2.06024)	(0.13692)	(0.24615)	(0.13590)
	[-1.05957]	[0.35781]	[0.41662]	[2.45692]
D(LNIPI(-11))	-0.897896	-0.060730	-0.061413	0.343620
	(2.20562)	(0.14658)	(0.26351)	(0.14549)
	[-0.40709]	[-0.41432]	[-0.23305]	[2.36186]
D(LNIPI(-12))	0.161944	-0.252246	-0.416206	0.203693

	(2.11063) [0.07673]	(0.14026) [-1.79836]	(0.25217) [-1.65053]	(0.13922) [1.46309]
D(LNIPI(-13))	-0.323130 (1.93404) [-0.16707]	-0.041017 (0.12853) [-0.31913]	-0.081679 (0.23107) [-0.35349]	0.186971 (0.12757) [1.46560]
D(LNIPI(-14))	-0.812503 (1.79112) [-0.45363]	0.036833 (0.11903) [0.30944]	0.092989 (0.21399) [0.43454]	0.424868 (0.11815) [3.59614]
D(LNIPI(-15))	0.228049 (1.94560) [0.11721]	0.057041 (0.12930) [0.44117]	0.105246 (0.23245) [0.45277]	0.333304 (0.12834) [2.59714]
D(LNIPI(-16))	0.962621 (1.89422) [0.50819]	-0.163289 (0.12588) [-1.29715]	-0.213237 (0.22631) [-0.94224]	0.180328 (0.12495) [1.44324]
C	-0.066054 (0.15863) [-0.41640]	0.016004 (0.01054) [1.51809]	0.005976 (0.01895) [0.31532]	0.001721 (0.01046) [0.16451]
R-squared	0.692169	0.616614	0.705951	0.602573
Adj. R-squared	0.406017	0.260227	0.432609	0.233133
Sum sq. resid	11.48234	0.050711	0.163900	0.049959
S.E. equation	0.402148	0.026725	0.048046	0.026526
F-statistic	2.418885	1.730179	2.582666	1.631045
Log likelihood	-24.24889	349.8982	268.9535	350.9286
Akaike AIC	1.322448	-4.099974	-2.926863	-4.114907
Schwarz SC	2.743651	-2.678771	-1.505660	-2.693704
Mean dependent	0.012449	0.012889	0.011421	-0.000931
S.D. dependent	0.521794	0.031072	0.063785	0.030291
Determinant resid covariance (dof adj.)		1.46E-11		
Determinant resid covariance		1.02E-12		
Log likelihood		1121.683		
Akaike information criterion		-12.22730		
Schwarz criterion		-6.330366		

VAR Model - Substituted Coefficients:

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D(LNEXP01) = - 0.110795908748*( LNEXP01(-1) - 2.21786838881*LNEXC(-1) + 3.80820668997*LNIPI(-1)
- 0.00772474148553*@TREND(1) - 16.4769025325 ) + 0.942749484933*( LNCPI(-1) -
0.740806267214*LNEXC(-1) - 1.04398000578*LNIPI(-1) - 0.00653860686837*@TREND(1) +
7.35479906946 ) - 0.464642259874*D(LNEXP01(-1)) - 0.331168185661*D(LNEXP01(-2)) -
0.517604574252*D(LNEXP01(-3)) - 0.136043358866*D(LNEXP01(-4)) - 0.241068353135*D(LNEXP01(-5))
- 0.469350687243*D(LNEXP01(-6)) - 0.367260328752*D(LNEXP01(-7)) - 0.511461948208*D(LNEXP01(-
8)) - 0.372905277767*D(LNEXP01(-9)) - 0.111297352279*D(LNEXP01(-10)) -
0.301763933384*D(LNEXP01(-11)) - 0.200105621372*D(LNEXP01(-12)) + 0.111187295814*D(LNEXP01(-
13)) - 0.114824789972*D(LNEXP01(-14)) - 0.0241990521307*D(LNEXP01(-15)) +
0.0141696679705*D(LNEXP01(-16)) - 0.906902840734*D(LNCPI(-1)) + 3.15609135259*D(LNCPI(-2)) -

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3.India

Vector Error Correction Estimates
Standard errors in () & t-statistics in []

Cointegrating Eq:		CointEq1		
LNEXP01(-1)		1.000000		
LNCP1(-1)		-12.96975 (0.91622) [-14.1557]		
LNEXC(-1)		6.664076 (0.81801) [8.14674]		
C		-25.32746		
Error Correction:	D(LNEXP01)	D(LNCP1)	D(LNEXC)	
CointEq1	-0.145809 (0.07520) [-1.93890]	0.009764 (0.00298) [3.27406]	-0.001087 (0.00495) [-0.21964]	
D(LNEXP01(-1))	-0.521852 (0.10231) [-5.10060]	-0.007125 (0.00406) [-1.75607]	0.001511 (0.00673) [0.22433]	
D(LNEXP01(-2))	-0.321741 (0.09965) [-3.22877]	-0.003435 (0.00395) [-0.86940]	0.001770 (0.00656) [0.26991]	
D(LNEXP01(-3))	0.051157 (0.08328) [0.61428]	0.004746 (0.00330) [1.43719]	0.001113 (0.00548) [0.20313]	
D(LNCP1(-1))	-2.046394 (2.06603) [-0.99050]	0.402498 (0.08193) [4.91282]	0.015064 (0.13599) [0.11077]	
D(LNCP1(-2))	3.178889 (2.16426) [1.46881]	-0.111282 (0.08582) [-1.29664]	0.204421 (0.14245) [1.43501]	
D(LNCP1(-3))	-1.105449 (2.04772) [-0.53984]	0.029179 (0.08120) [0.35934]	-0.173592 (0.13478) [-1.28794]	
D(LNEXC(-1))	-1.940899 (1.36577) [-1.42110]	0.130205 (0.05416) [2.40409]	0.287033 (0.08990) [3.19293]	
D(LNEXC(-2))	-1.673513 (1.40271) [-1.19306]	-0.100940 (0.05562) [-1.81467]	-0.058548 (0.09233) [-0.63414]	
D(LNEXC(-3))	0.099479 (1.32873)	-0.004343 (0.05269)	0.196572 (0.08746)	

	[0.07487]	[-0.08242]	[2.24761]
C	0.033481 (0.01987) [1.68517]	0.001646 (0.00079) [2.08931]	0.001405 (0.00131) [1.07459]
R-squared	0.406137	0.293621	0.133870
Adj. R-squared	0.363718	0.243165	0.072004
Sum sq. resids	7.093619	0.011155	0.030732
S.E. equation	0.225097	0.008926	0.014816
F-statistic	9.574452	5.819391	2.163862
Log likelihood	16.62564	503.9842	427.4697
Akaike AIC	-0.074512	-6.529592	-5.516154
Schwarz SC	0.145290	-6.309790	-5.296353
Mean dependent	0.013916	0.002449	0.002412
S.D. dependent	0.282192	0.010260	0.015380
Determinant resid covariance (dof adj.)		8.59E-10	
Determinant resid covariance		6.84E-10	
Log likelihood		950.4593	
Akaike information criterion		-12.11204	
Schwarz criterion		-11.39269	

Estimation Proc:

EC(C,1) 1 3 LNEXP01 LNCPI LNEXC

VAR Model:

$$D(LNEXP01) = A(1,1)*(B(1,1)*LNEXP01(-1) + B(1,2)*LNCPI(-1) + B(1,3)*LNEXC(-1) + B(1,4) + C(1,1)*D(LNEXP01(-1)) + C(1,2)*D(LNEXP01(-2)) + C(1,3)*D(LNEXP01(-3)) + C(1,4)*D(LNCPI(-1)) + C(1,5)*D(LNCPI(-2)) + C(1,6)*D(LNCPI(-3)) + C(1,7)*D(LNEXC(-1)) + C(1,8)*D(LNEXC(-2)) + C(1,9)*D(LNEXC(-3)) + C(1,10)$$

VAR Model - Substituted Coefficients:

$$D(LNEXP01) = -0.145808708688*(LNEXP01(-1) - 12.9697462934*LNCPI(-1) + 6.66407578341*LNEXC(-1) - 25.3274581163) - 0.521851672127*D(LNEXP01(-1)) - 0.321740865648*D(LNEXP01(-2)) + 0.0511566525876*D(LNEXP01(-3)) - 2.04639350864*D(LNCPI(-1)) + 3.17888919633*D(LNCPI(-2)) - 1.10544948412*D(LNCPI(-3)) - 1.94089921888*D(LNEXC(-1)) - 1.67351257049*D(LNEXC(-2)) + 0.0994793304408*D(LNEXC(-3)) + 0.0334811538679$$

4.China

Vector Error Correction Estimates

Standard errors in () & t-statistics in []

Cointegrating Eq.	CointEq1
LNEXP01(-1)	1.000000
LNCPI(-1)	5.464157 (2.82608) [1.93348]
LNEXC(-1)	2.236820 (0.78593)

	[2.84609]
LNIP1(-1)	12.50991 (2.20332) [5.67776]
@TREND(1)	0.080662 (0.01859) [4.33797]
C	-12.88237

Error Correction:	D(LNEXP01)	D(LNCPI)	D(LNEXC)	D(LNIP1)
CointEq1	0.048216 (0.02745) [1.75646]	0.001581 (0.00147) [1.07502]	-0.001369 (0.00711) [-0.19251]	-0.049605 (0.00903) [-5.49228]
D(LNEXP01(-1))	-0.251062 (0.08632) [-2.90837]	0.003957 (0.00463) [0.85546]	-0.045377 (0.02236) [-2.02981]	0.038396 (0.02840) [1.35187]
D(LNEXP01(-2))	-0.230289 (0.08838) [-2.60574]	-0.002389 (0.00474) [-0.50458]	0.009378 (0.02289) [0.40975]	0.047493 (0.02908) [1.63331]
D(LNCPI(-1))	1.875503 (1.70130) [1.10239]	0.331177 (0.09116) [3.63289]	0.301199 (0.44059) [0.68363]	-0.123933 (0.55976) [-0.22141]
D(LNCPI(-2))	-2.784386 (1.69318) [-1.64447]	0.035940 (0.09073) [0.39614]	0.467735 (0.43849) [1.06670]	-0.150345 (0.55709) [-0.26988]
D(LNEXC(-1))	-1.032973 (0.34994) [-2.95185]	-0.029011 (0.01875) [-1.54716]	0.159087 (0.09062) [1.75545]	0.220671 (0.11514) [1.91660]
D(LNEXC(-2))	0.064368 (0.34880) [0.18454]	0.020239 (0.01869) [1.08286]	-0.069030 (0.09033) [-0.76419]	0.132099 (0.11476) [1.15106]
D(LNIP1(-1))	-0.165605 (0.32704) [-0.50637]	0.023466 (0.01752) [1.33909]	0.017114 (0.08469) [0.20206]	-0.256798 (0.10760) [-2.38655]
D(LNIP1(-2))	-0.451694 (0.26365) [-1.71326]	0.011046 (0.01413) [0.78190]	-0.007747 (0.06828) [-0.11346]	-0.057195 (0.08674) [-0.65935]
C	0.016250 (0.01428) [1.13786]	-0.001590 (0.00077) [-2.07723]	-0.000557 (0.00370) [-0.15063]	-0.008782 (0.00470) [-1.86896]
R-squared	0.152857	0.165351	0.092879	0.452698
Adj. R-squared	0.095959	0.109293	0.031953	0.415939
Sum sq. resids	2.797132	0.008031	0.187593	0.302796

S.E. equation	0.144479	0.007742	0.037416	0.047536
F-statistic	2.686516	2.949623	1.524461	12.31525
Log likelihood	79.44060	500.8601	273.9898	239.5176
Akaike AIC	-0.964453	-6.817502	-3.666525	-3.187745
Schwarz SC	-0.758216	-6.611265	-3.460288	-2.981508
Mean dependent	0.018663	-0.002865	-0.003940	-0.006488
S.D. dependent	0.151953	0.008203	0.038028	0.062200

Determinant resid covariance (dof adj.)	3.39E-12
Determinant resid covariance	2.54E-12
Log likelihood	1104.903
Akaike information criterion	-14.72088
Schwarz criterion	-13.79281

Estimation Proc:

EC(D,1) 1 2 LNEXP01 LNCPI LNEXC LNIFI

VAR Model:

$$D(LNEXP01) = A(1,1)*B(1,1)*LNEXP01(-1) + B(1,2)*LNCPI(-1) + B(1,3)*LNEXC(-1) + B(1,4)*LNIFI(-1) + B(1,5)*@TREND(1) + B(1,6) + C(1,1)*D(LNEXP01(-1)) + C(1,2)*D(LNEXP01(-2)) + C(1,3)*D(LNCPI(-1)) + C(1,4)*D(LNCPI(-2)) + C(1,5)*D(LNEXC(-1)) + C(1,6)*D(LNEXC(-2)) + C(1,7)*D(LNIFI(-1)) + C(1,8)*D(LNIFI(-2)) + C(1,9)$$

VAR Model - Substituted Coefficients:

$$D(LNEXP01) = 0.0482162866175*(LNEXP01(-1)) + 5.46415734842*LNCPI(-1) + 2.23681974733*LNEXC(-1) + 12.5099072374*LNIFI(-1) + 0.0806619404963*@TREND(1) - 12.882370103 - 0.25106207451*D(LNEXP01(-1)) - 0.230289285352*D(LNEXP01(-2)) + 1.87550345041*D(LNCPI(-1)) - 2.78438586761*D(LNCPI(-2)) - 1.03297278812*D(LNEXC(-1)) + 0.0643679532101*D(LNEXC(-2)) - 0.165604642884*D(LNIFI(-1)) - 0.451693571549*D(LNIFI(-2)) + 0.0162501442674$$

5.US

Vector Error Correction Estimates

Standard errors in () & t-statistics in []

Cointegrating Eq:	CoIntEq1
LNEXP01(-1)	1.000000
LNEXC(-1)	-0.802128 (0.11263) [-7.12173]
LNCPI(-1)	1.911106 (0.78457) [2.43587]
@TREND(1)	-0.004694 (0.00039) [-12.0113]
C	-7.570830

Error Correction:	D(LNEXP01)	D(LNEXC)	D(LNCPI)
CointEq1	-0.362061 (0.08726) [-4.14934]	0.052127 (0.03433) [1.51833]	-0.006660 (0.00477) [-1.39605]
D(LNEXP01(-1))	-0.051461 (0.10009) [-0.51415]	0.057479 (0.03938) [1.45960]	-0.000367 (0.00547) [-0.06705]
D(LNEXP01(-2))	0.189671 (0.09007) [2.10587]	-0.003590 (0.03544) [-0.10130]	-0.009129 (0.00492) [-1.85403]
D(LNEXC(-1))	0.442911 (0.22969) [1.92826]	0.144706 (0.09037) [1.60119]	0.018789 (0.01256) [1.49623]
D(LNEXC(-2))	0.008231 (0.22076) [0.03728]	-0.101555 (0.08686) [-1.16919]	-0.011650 (0.01207) [-0.96525]
D(LNCPI(-1))	-0.752986 (1.55665) [-0.48372]	-0.575232 (0.61247) [-0.93920]	0.199006 (0.08510) [2.33844]
D(LNCPI(-2))	-0.285876 (1.55857) [-0.18342]	-0.502983 (0.61322) [-0.82023]	-0.001301 (0.08521) [-0.01527]
C	0.004046 (0.00746) [0.54247]	0.001377 (0.00293) [0.46927]	-0.000271 (0.00041) [-0.66407]
R-squared	0.225516	0.119177	0.099882
Adj. R-squared	0.187867	0.076360	0.056126
Sum sq. resids	1.183192	0.183164	0.003536
S.E. equation	0.090646	0.035665	0.004956
F-statistic	5.990025	2.783362	2.282720
Log likelihood	153.3519	295.1368	595.1313
Akaike AIC	-1.912525	-3.778116	-7.725412
Schwarz SC	-1.753373	-3.618964	-7.566261
Mean dependent	0.006548	0.002274	-0.000412
S.D. dependent	0.100585	0.037110	0.005101
Determinant resid covariance (dof adj.)		2.13E-10	
Determinant resid covariance		1.81E-10	
Log likelihood		1057.704	
Akaike information criterion		-13.54873	
Schwarz criterion		-12.99170	

Estimation Proc:

=====
EC(D,1) 1 2 LNEXP01 LNEXC LNCPI

VAR Model:

=====

D(LNEXP01) = A(1,1)*(B(1,1)*LNEXP01(-1) + B(1,2)*LNEXC(-1) + B(1,3)*LNCPI(-1) + B(1,4)*@TREND(1) + B(1,5)) + C(1,1)*D(LNEXP01(-1)) + C(1,2)*D(LNEXP01(-2)) + C(1,3)*D(LNEXC(-1)) + C(1,4)*D(LNEXC(-2)) + C(1,5)*D(LNCPI(-1)) + C(1,6)*D(LNCPI(-2)) + C(1,7)

ภาคผนวก จ

VAR Lag Order Selection Criteria

1. ประเทศ Barzil

Sample: 1 155

Included observations: 147

Lag	LogL	LR	FPE	AIC	SC	HQ
0	228.5933	NA	5.53e-07	-3.055691	-2.974318	-3.022628
1	967.1072	1426.789	2.98e-11	-12.88581	-12.47895*	-12.72050
2	1001.765	65.07214	2.31e-11*	-13.13966*	-12.40731	-12.84210*
3	1017.095	27.94881*	2.34e-11	-13.13055	-12.07271	-12.70074
4	1026.305	16.28922	2.57e-11	-13.03816	-11.65483	-12.47610
5	1038.596	21.07087	2.71e-11	-12.98771	-11.27889	-12.29339
6	1051.759	21.84797	2.83e-11	-12.94910	-10.91479	-12.12254
7	1057.527	9.260537	3.28e-11	-12.80989	-10.45009	-11.85108
8	1067.470	15.42242	3.60e-11	-12.72749	-10.04220	-11.63643

* indicates lag order selected by the criterion

LR: sequential modified LR test statistic (each test at 5% level)

FPE: Final prediction error

AIC: Akaike information criterion

SC: Schwarz information criterion

HQ: Hannan-Quinn information criterion

2. Russia

VAR Lag Order Selection Criteria

Endogenous variables: LNEXP01 LNCPI LNEXC LNIPI

Exogenous variables: C

Included observations: 138

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-20.11419	NA	1.67e-05	0.349481	0.434329	0.383961
1	825.9408	1630.802	9.94e-11	-11.68030	-11.25606*	-11.50790
2	862.6759	68.67866	7.37e-11	-11.98081	-11.21718	-11.67049*
3	883.7856	38.24217	6.85e-11	-12.05486	-10.95184	-11.60662
4	891.0084	12.66611	7.80e-11	-11.92766	-10.48524	-11.34150
5	897.9238	11.72609	8.94e-11	-11.79600	-10.01419	-11.07191
6	907.1499	15.10954	9.93e-11	-11.69783	-9.576627	-10.83582
7	936.9870	47.13388	8.20e-11	-11.89836	-9.437772	-10.89844
8	962.3843	38.64801	7.24e-11	-12.03455	-9.234573	-10.89671
9	981.6948	28.26620	7.02e-11	-12.08253	-8.943160	-10.80677
10	1003.725	30.96932	6.56e-11	-12.16992	-8.691156	-10.75624
11	1022.359	25.11551	6.47e-11*	-12.20810	-8.389939	-10.65649
12	1035.628	17.11558	6.94e-11	-12.16852	-8.010973	-10.47900
13	1047.737	14.91719	7.62e-11	-12.11213	-7.615194	-10.28469
14	1074.688	31.63806*	6.79e-11	-12.27084	-7.434511	-10.30548
15	1094.004	21.55524	6.82e-11	-12.31890	-7.143174	-10.21561
16	1116.454	23.75188	6.60e-11	-12.41238*	-6.897266	-10.17118
17	1125.663	9.208368	7.83e-11	-12.31395	-6.459445	-9.934825

* indicates lag order selected by the criterion

LR: sequential modified LR test statistic (each test at 5% level)

FPE: Final prediction error

AIC: Akaike information criterion

SC: Schwarz information criterion

HQ: Hannan-Quinn information criterion

3. India

VAR Lag Order Selection Criteria

Endogenous variables: LNEXP01 LNEXC LNCPI

Exogenous variables: C

Included observations: 147

Lag	LogL	LR	FPE	AIC	SC	HQ
0	293.2073	NA	3.87e-06	-3.948399	-3.887370	-3.923602
1	874.7901	1131.515	1.60e-09	-11.73864	-11.49452	-11.63945
2	901.9279	51.69113	1.25e-09	-11.98541	-11.55821*	-11.81184
3	920.9946	35.53930	1.09e-09*	-12.12238*	-11.51208	-11.87441*
4	926.1050	9.316925	1.15e-09	-12.06946	-11.27608	-11.74710
5	933.4132	13.02547	1.18e-09	-12.04644	-11.06997	-11.64969
6	939.0655	9.843404	1.24e-09	-12.00089	-10.84134	-11.52975
7	951.7557	21.58204*	1.18e-09	-12.05110	-10.70845	-11.50557
8	956.4954	7.867265	1.25e-09	-11.99313	-10.46740	-11.37321

* indicates lag order selected by the criterion

LR: sequential modified LR test statistic (each test at 5% level)

FPE: Final prediction error
 AIC: Akaike information criterion
 SC: Schwarz information criterion
 HQ: Hannan-Quinn information criterion

4.China

VAR Lag Order Selection Criteria
 Endogenous variables: LNEXP01 LNCPI LNEXC LNIPI
 Exogenous variables: C
 Included observations: 129

Lag	LogL	LR	FPE	AIC	SC	HQ
0	343.5304	NA	6.08e-08	-5.264037	-5.175361	-5.228006
1	964.8275	1194.432	5.11e-12	-14.64849	-14.20511*	-14.46833
2	994.7386	5564868	4.12e-12*	-14.86416*	-14.06608	-14.53989*
3	1006.729	21.56425	4.39e-12	-14.80200	-13.64921	-14.33360
4	1015.346	14.96200	4.94e-12	-14.68753	-13.18003	-14.07500
5	1033.492	30.38381	4.81e-12	-14.72080	-12.85860	-13.96415
6	1046.427	20.85725	5.08e-12	-14.67329	-12.45638	-13.77251
7	1056.628	15.81627	5.63e-12	-14.58339	-12.01177	-13.53849
8	1077.027	30.36062*	5.34e-12	-14.65158	-11.72526	-13.46256

* indicates lag order selected by the criterion

LR: sequential modified LR test statistic (each test at 5% level)

FPE: Final prediction error

AIC: Akaike information criterion

SC: Schwarz information criterion

HQ: Hannan-Quinn information criterion

5.US

VAR Lag Order Selection Criteria
 Endogenous variables: LNEXP01 LNEXC LNCPI
 Exogenous variables: C
 Included observations: 139

Lag	LogL	LR	FPE	AIC	SC	HQ
0	497.3542	NA	1.63e-07	-7.113010	-7.049676	-7.087273
1	941.0598	861.8741	3.14e-10	-13.36777	-13.11443*	-13.26482
2	959.7160	35.43332	2.73e-10	-13.50670	-13.06337	-13.32654*
3	966.2031	12.04088	2.84e-10	-13.47055	-12.83721	-13.21318
4	974.7400	15.47698	2.86e-10	-13.46389	-12.64054	-13.12930
5	976.6307	3.346070	3.17e-10	-13.36159	-12.34825	-12.94980
6	992.0187	26.56933	2.90e-10	-13.45351	-12.25016	-12.96450
7	1001.125	15.33038	2.90e-10	-13.45504	-12.06169	-12.88882
8	1016.839	25.77553	2.64e-10	-13.55164	-11.96830	-12.90821
9	1027.779	17.47164	2.58e-10	-13.57955	-11.80620	-12.85891
10	1030.395	4.065323	2.85e-10	-13.48770	-11.52434	-12.68984
11	1034.419	6.078989	3.08e-10	-13.41609	-11.26274	-12.54103
12	1047.264	18.85262	2.95e-10	-13.47143	-11.12807	-12.51915
13	1069.277	31.35573*	2.47e-10*	-13.65866*	-11.12530	-12.62917
14	1073.074	5.245149	2.69e-10	-13.58380	-10.86044	-12.47709
15	1077.943	6.515728	2.90e-10	-13.52436	-10.61100	-12.34045
16	1085.182	9.374330	3.03e-10	-13.49902	-10.39566	-12.23790

ประวัติผู้เขียน

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