ภาคผนวก

ผลการทดสอบยูนิทรูท (Unit Root Test) ด้วยวิธี Augmented Dickey – Fuller Test

1) ผลการทดสอบ Unit Root Test ของอัตราแลกเปลี่ยนเงินหยวนต่อบาท

    1.1) Level with intercept

Null Hypothesis: EXCH has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic based on SIC, MAXLAG=12)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-2.154538	0.2241
Test critical values:	1% level	-3.486064	
	5% level	-2.885863	
	10% level	-2.579818	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(EXCH)
Method: Least Squares
Date: 10/10/10   Time: 14:53
Sample (adjusted): 2 120
Included observations: 119 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
EXCH(-1)	-0.062288	0.028910	-2.154538	0.0332
C	0.308727	0.141908	2.175545	0.0316
R-squared	0.038161	Mean dependent var		0.003392
Adjusted R-squared	0.029941	S.D. dependent var		0.081498
S.E. of regression	0.080269	Akaike info criterion		-2.190206
Sum squared resid	0.753842	Schwarz criterion		-2.143498
Log likelihood	132.3172	Hannan-Quinn criter.		-2.171239
F-statistic	4.642032	Durbin-Watson stat		1.771784
Prob(F-statistic)	0.033248			

1.2) Level with intercept and Trend

Null Hypothesis: EXCH has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 0 (Automatic based on SIC, MAXLAG=12)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-2.475200	0.3398
Test critical values:	1% level	-4.036983	
	5% level	-3.448021	
	10% level	-3.149135	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(EXCH)
Method: Least Squares
Date: 10/10/10   Time: 14:53
Sample (adjusted): 2 120
Included observations: 119 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
EXCH(-1)	-0.073711	0.029780	-2.475200	0.0148
C	0.384331	0.150134	2.559923	0.0118
@TREND(1)	-0.000327	0.000221	-1.481095	0.1413

R-squared	0.056013	Mean dependent var	0.003392
Adjusted R-squared	0.039737	S.D. dependent var	0.081498
S.E. of regression	0.079863	Akaike info criterion	-2.192133
Sum squared resid	0.739851	Schwarz criterion	-2.122071
Log likelihood	133.4319	Hannan-Quinn criter.	-2.163683
F-statistic	3.441516	Durbin-Watson stat	1.785013
Prob(F-statistic)	0.035321		

1.3) Level without intercept and Trend

Null Hypothesis: EXCH has a unit root
Exogenous: None
Lag Length: 0 (Automatic based on SIC, MAXLAG=12)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		0.343314	0.7827
Test critical values:	1% level	-2.584539	
	5% level	-1.943540	
	10% level	-1.614941	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(EXCH)
Method: Least Squares
Date: 10/10/10   Time: 14:53
Sample (adjusted): 2 120
Included observations: 119 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
EXCH(-1)	0.000523	0.001523	0.343314	0.7320

R-squared	-0.000748	Mean dependent var	0.003392
Adjusted R-squared	-0.000748	S.D. dependent var	0.081498
S.E. of regression	0.081529	Akaike info criterion	-2.167356
Sum squared resid	0.784337	Schwarz criterion	-2.144002
Log likelihood	129.9577	Hannan-Quinn criter.	-2.157873
Durbin-Watson stat	1.812880		

2) ผลการทดสอบ Unit Root Test ของมูลค่าการส่งออกสินค้าเกษตรไปยังประเทศจีน

    2.1) Level with intercept

Null Hypothesis: ACH has a unit root
Exogenous: Constant
Lag Length: 3 (Automatic based on SIC, MAXLAG=12)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		0.964371	0.9960
Test critical values:	1% level	-3.487550	
	5% level	-2.886509	
	10% level	-2.580163	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(ACH)
Method: Least Squares
Date: 10/10/10   Time: 14:41
Sample (adjusted): 5 120
Included observations: 116 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
ACH(-1)	0.056167	0.058242	0.964371	0.3370
D(ACH(-1))	-0.497149	0.110154	-4.513224	0.0000
D(ACH(-2))	-0.472877	0.105621	-4.477124	0.0000
D(ACH(-3))	-0.257277	0.100509	-2.559753	0.0118
C	-329597.9	3873156.	-0.085098	0.9323

R-squared	0.216237	Mean dependent var	1748329.
Adjusted R-squared	0.187994	S.D. dependent var	20349051
S.E. of regression	18336814	Akaike info criterion	36.32887
Sum squared resid	3.73E+16	Schwarz criterion	36.44756
Log likelihood	-2102.074	Hannan-Quinn criter.	36.37705
F-statistic	7.656124	Durbin-Watson stat	1.859112
Prob(F-statistic)	0.000017		

2.2) Level with intercept and Trend

Null Hypothesis: ACH has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 0 (Automatic based on SIC, MAXLAG=12)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-4.274813	0.0048
Test critical values:	1% level	-4.036983	
	5% level	-3.448021	
	10% level	-3.149135	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(ACH)
Method: Least Squares
Date: 10/10/10   Time: 14:49
Sample (adjusted): 2 120
Included observations: 119 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
ACH(-1)	-0.363726	0.085086	-4.274813	0.0000
C	3399164.	3640977.	0.933586	0.3525
@TREND(1)	340146.7	84183.97	4.040516	0.0001
R-squared	0.142693	Mean dependent var		1653210.
Adjusted R-squared	0.127912	S.D. dependent var		20101256
S.E. of regression	18771688	Akaike info criterion		36.35848
Sum squared resid	4.09E+16	Schwarz criterion		36.42855
Log likelihood	-2160.330	Hannan-Quinn criter.		36.38693
F-statistic	9.653730	Durbin-Watson stat		1.981084
Prob(F-statistic)	0.000132			

2.3) Level without intercept and Trend

Null Hypothesis: ACH has a unit root
Exogenous: None
Lag Length: 3 (Automatic based on SIC, MAXLAG=12)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		2.007896	0.9892
Test critical values:	1% level	-2.585050	
	5% level	-1.943612	
	10% level	-1.614897	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(ACH)
Method: Least Squares
Date: 10/10/10   Time: 14:50
Sample (adjusted): 5 120
Included observations: 116 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
ACH(-1)	0.051727	0.025762	2.007896	0.0471
D(ACH(-1))	-0.493548	0.101251	-4.874509	0.0000
D(ACH(-2))	-0.470290	0.100704	-4.670044	0.0000
D(ACH(-3))	-0.255666	0.098271	-2.601652	0.0105

R-squared	0.216186	Mean dependent var	1748329.
Adjusted R-squared	0.195191	S.D. dependent var	20349051
S.E. of regression	18255366	Akaike info criterion	36.31169
Sum squared resid	3.73E+16	Schwarz criterion	36.40664
Log likelihood	-2102.078	Hannan-Quinn criter.	36.35024
Durbin-Watson stat	1.857881		

3) ผลการทดสอบ Unit Root Test ของอัตราแลกเปลี่ยนเงินเยนต่อบาท

3.1) Level with intercept

Null Hypothesis: EXJP has a unit root
Exogenous: Constant
Lag Length: 1 (Automatic based on SIC, MAXLAG=12)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-1.303660	0.6263
Test critical values:	1% level	-3.486551	
	5% level	-2.886074	
	10% level	-2.579931	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(EXJP)
Method: Least Squares
Date: 10/10/10   Time: 14:54
Sample (adjusted): 3 120
Included observations: 118 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
EXJP(-1)	-0.041066	0.031500	-1.303660	0.1950
D(EXJP(-1))	-0.313210	0.089188	-3.511809	0.0006
C	0.118022	0.092583	1.274780	0.2050

R-squared	0.124225	Mean dependent var	-0.001356
Adjusted R-squared	0.108994	S.D. dependent var	0.116332
S.E. of regression	0.109810	Akaike info criterion	-1.555042
Sum squared resid	1.386688	Schwarz criterion	-1.484601
Log likelihood	94.74748	Hannan-Quinn criter.	-1.526441
F-statistic	8.156107	Durbin-Watson stat	1.871952
Prob(F-statistic)	0.000487		

3.2) Level with intercept and Trend

Null Hypothesis: EXJP has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 1 (Automatic based on SIC, MAXLAG=12)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-1.214054	0.9026
Test critical values:	1% level	-4.037668	
	5% level	-3.448348	
	10% level	-3.149326	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(EXJP)
Method: Least Squares
Date: 10/10/10   Time: 14:55
Sample (adjusted): 3 120
Included observations: 118 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
EXJP(-1)	-0.042606	0.035094	-1.214054	0.2272
D(EXJP(-1))	-0.311849	0.090573	-3.443046	0.0008
C	0.120492	0.096119	1.253566	0.2126
@TREND(1)	3.36E-05	0.000331	0.101419	0.9194

R-squared	0.124304	Mean dependent var	-0.001356
Adjusted R-squared	0.101259	S.D. dependent var	0.116332
S.E. of regression	0.110285	Akaike info criterion	-1.538183
Sum squared resid	1.386563	Schwarz criterion	-1.444262
Log likelihood	94.75280	Hannan-Quinn criter.	-1.500048
F-statistic	5.394038	Durbin-Watson stat	1.872228
Prob(F-statistic)	0.001656		

3.3) Level without intercept and Trend

Null Hypothesis: EXJP has a unit root
Exogenous: None
Lag Length: 1 (Automatic based on SIC, MAXLAG=12)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-0.333384	0.5632
Test critical values:	1% level	-2.584707	
	5% level	-1.943563	
	10% level	-1.614927	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(EXJP)
Method: Least Squares
Date: 10/10/10   Time: 14:55
Sample (adjusted): 3 120
Included observations: 118 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
EXJP(-1)	-0.001150	0.003449	-0.333384	0.7394
D(EXJP(-1))	-0.334511	0.087844	-3.808011	0.0002

R-squared	0.111849	Mean dependent var	-0.001356
Adjusted R-squared	0.104193	S.D. dependent var	0.116332
S.E. of regression	0.110105	Akaike info criterion	-1.557959
Sum squared resid	1.406283	Schwarz criterion	-1.510998
Log likelihood	93.91959	Hannan-Quinn criter.	-1.538892
Durbin-Watson stat	1.875481		

4) ผลการทดสอบ Unit Root Test ของมูลค่าการส่งออกสินค้าเกษตรไปยังประเทศญี่ปุ่น

4.1) Level with intercept

Null Hypothesis: AJP has a unit root
Exogenous: Constant
Lag Length: 1 (Automatic based on SIC, MAXLAG=12)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-2.347367	0.1591
Test critical values:	1% level	-3.486551	
	5% level	-2.886074	
	10% level	-2.579931	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(AJP)
Method: Least Squares
Date: 10/10/10   Time: 15:11
Sample (adjusted): 3 120
Included observations: 118 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
AJP(-1)	-0.125779	0.053583	-2.347367	0.0206
D(AJP(-1))	-0.220180	0.093794	-2.347475	0.0206
C	28465569	11703204	2.432289	0.0165

R-squared	0.124355	Mean dependent var	997508.7
Adjusted R-squared	0.109127	S.D. dependent var	22944010
S.E. of regression	21655952	Akaike info criterion	36.64455
Sum squared resid	5.39E+16	Schwarz criterion	36.71499
Log likelihood	-2159.029	Hannan-Quinn criter.	36.67315
F-statistic	8.165907	Durbin-Watson stat	2.064951
Prob(F-statistic)	0.000483		

4.2) Level with intercept and Trend

Null Hypothesis: AJP has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 0 (Automatic based on SIC, MAXLAG=12)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-5.406744	0.0001
Test critical values:	1% level	-4.036983	
	5% level	-3.448021	
	10% level	-3.149135	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(AJP)
Method: Least Squares
Date: 10/10/10   Time: 15:11
Sample (adjusted): 2 120
Included observations: 119 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
AJP(-1)	-0.403108	0.074556	-5.406744	0.0000
C	66353346	12700293	5.224552	0.0000
@TREND(1)	358617.0	85751.78	4.182036	0.0001

R-squared	0.201296	Mean dependent var	993320.0
Adjusted R-squared	0.187525	S.D. dependent var	22846628
S.E. of regression	20593351	Akaike info criterion	36.54372
Sum squared resid	4.92E+16	Schwarz criterion	36.61378
Log likelihood	-2171.351	Hannan-Quinn criter.	36.57217
F-statistic	14.61765	Durbin-Watson stat	2.105934
Prob(F-statistic)	0.000002		

4.3) Level without intercept and Trend

Null Hypothesis: AJP has a unit root
Exogenous: None
Lag Length: 11 (Automatic based on SIC, MAXLAG=12)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		2.490604	0.9969
Test critical values:	1% level	-2.586550	
	5% level	-1.943824	
	10% level	-1.614767	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(AJP)
Method: Least Squares
Date: 10/10/10   Time: 15:12
Sample (adjusted): 13 120
Included observations: 108 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
AJP(-1)	0.021895	0.008791	2.490604	0.0145
D(AJP(-1))	-0.522861	0.097489	-5.363309	0.0000
D(AJP(-2))	-0.562659	0.103248	-5.449609	0.0000
D(AJP(-3))	-0.389725	0.105665	-3.688301	0.0004
D(AJP(-4))	-0.324950	0.110747	-2.934165	0.0042
D(AJP(-5))	-0.408605	0.108253	-3.774537	0.0003
D(AJP(-6))	-0.294685	0.111309	-2.647453	0.0095
D(AJP(-7))	-0.382210	0.106895	-3.575579	0.0005
D(AJP(-8))	-0.210641	0.109764	-1.919027	0.0580
D(AJP(-9))	-0.512124	0.105851	-4.838164	0.0000
D(AJP(-10))	-0.382252	0.102536	-3.727982	0.0003
D(AJP(-11))	-0.375349	0.096725	-3.880590	0.0002

R-squared	0.431318	Mean dependent var	893821.8
Adjusted R-squared	0.366156	S.D. dependent var	23282165
S.E. of regression	18535938	Akaike info criterion	36.41276
Sum squared resid	3.30E+16	Schwarz criterion	36.71077
Log likelihood	-1954.289	Hannan-Quinn criter.	36.53359
Durbin-Watson stat	1.840288		

5) ผลการทดสอบ Unit Root Test ของอัตราแลกเปลี่ยน ดอลล่าห์สหรัฐต่อบาท

    5.1) Level with intercept

Null Hypothesis: EXUS has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic based on SIC, MAXLAG=12)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-0.412242	0.9024
Test critical values:	1% level	-3.486064	
	5% level	-2.885863	
	10% level	-2.579818	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(EXUS)
Method: Least Squares
Date: 10/10/10   Time: 15:14
Sample (adjusted): 2 120
Included observations: 119 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
EXUS(-1)	-0.006624	0.016069	-0.412242	0.6809
C	0.224658	0.629599	0.356828	0.7219

R-squared	0.001450	Mean dependent var	-0.033662
Adjusted R-squared	-0.007084	S.D. dependent var	0.664548
S.E. of regression	0.666898	Akaike info criterion	2.044304
Sum squared resid	52.03605	Schwarz criterion	2.091012
Log likelihood	-119.6361	Hannan-Quinn criter.	2.063270
F-statistic	0.169943	Durbin-Watson stat	1.631084
Prob(F-statistic)	0.680917		

5.2) Level with intercept and Trend

Null Hypothesis: EXUS has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 1 (Automatic based on SIC, MAXLAG=12)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-3.615304	0.0327
Test critical values:	1% level	-4.037668	
	5% level	-3.448348	
	10% level	-3.149326	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(EXUS)
Method: Least Squares
Date: 10/10/10   Time: 15:14
Sample (adjusted): 3 120
Included observations: 118 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
EXUS(-1)	-0.102589	0.028376	-3.615304	0.0004
D(EXUS(-1))	0.155830	0.087673	1.777404	0.0782
C	4.710758	1.275641	3.692854	0.0003
@TREND(1)	-0.012238	0.003194	-3.831672	0.0002

R-squared	0.145684	Mean dependent var	-0.037205
Adjusted R-squared	0.123202	S.D. dependent var	0.666252
S.E. of regression	0.623862	Akaike info criterion	1.927536
Sum squared resid	44.36925	Schwarz criterion	2.021457
Log likelihood	-109.7246	Hannan-Quinn criter.	1.965671
F-statistic	6.480009	Durbin-Watson stat	2.026775
Prob(F-statistic)	0.000434		

5.3) Level without intercept and Trend

Null Hypothesis: EXUS has a unit root
Exogenous: None
Lag Length: 0 (Automatic based on SIC, MAXLAG=12)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-0.590239	0.4597
Test critical values:	1% level	-2.584539	
	5% level	-1.943540	
	10% level	-1.614941	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(EXUS)
Method: Least Squares
Date: 10/10/10   Time: 15:15
Sample (adjusted): 2 120
Included observations: 119 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
EXUS(-1)	-0.000918	0.001555	-0.590239	0.5562
R-squared	0.000364	Mean dependent var		-0.033662
Adjusted R-squared	0.000364	S.D. dependent var		0.664548
S.E. of regression	0.664427	Akaike info criterion		2.028585
Sum squared resid	52.09268	Schwarz criterion		2.051939
Log likelihood	-119.7008	Hannan-Quinn criter.		2.038068
Durbin-Watson stat	1.638642			

6)　　　　ผลการทดสอบ Unit Root Test ของมูลค่าการส่งออกสินค้าเกษตรไปยังประเทศ
สหรัฐอเมริกา

6.1) Level with intercept

Null Hypothesis: AUS has a unit root
Exogenous: Constant
Lag Length: 10 (Automatic based on SIC, MAXLAG=12)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		0.582427	0.9887
Test critical values:	1% level	-3.491345	
	5% level	-2.888157	
	10% level	-2.581041	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(AUS)
Method: Least Squares
Date: 10/10/10   Time: 15:18
Sample (adjusted): 12 120
Included observations: 109 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
AUS(-1)	0.029438	0.050543	0.582427	0.5616
D(AUS(-1))	-0.393950	0.111021	-3.548444	0.0006
D(AUS(-2))	-0.389904	0.112032	-3.480281	0.0008
D(AUS(-3))	-0.375935	0.109652	-3.428448	0.0009
D(AUS(-4))	-0.345187	0.101607	-3.397288	0.0010
D(AUS(-5))	-0.253574	0.090318	-2.807560	0.0060
D(AUS(-6))	-0.529071	0.085938	-6.156436	0.0000
D(AUS(-7))	-0.501234	0.094966	-5.278032	0.0000
D(AUS(-8))	-0.390588	0.101279	-3.856553	0.0002
D(AUS(-9))	-0.270756	0.100846	-2.684852	0.0085
D(AUS(-10))	-0.268662	0.097326	-2.760426	0.0069
C	-1705430.	10418677	-0.163690	0.8703

R-squared	0.407941	Mean dependent var	750723.8
Adjusted R-squared	0.340801	S.D. dependent var	27707810
S.E. of regression	22496273	Akaike info criterion	36.79914
Sum squared resid	4.91E+16	Schwarz criterion	37.09544
Log likelihood	-1993.553	Hannan-Quinn criter.	36.91930
F-statistic	6.075920	Durbin-Watson stat	2.039717
Prob(F-statistic)	0.000000		

6.2) Level with intercept and Trend

Null Hypothesis: AUS has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 0 (Automatic based on SIC, MAXLAG=12)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-4.178942	0.0065
Test critical values:	1% level	-4.036983	
	5% level	-3.448021	
	10% level	-3.149135	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(AUS)
Method: Least Squares
Date: 10/10/10   Time: 15:21
Sample (adjusted): 2 120
Included observations: 119 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
AUS(-1)	-0.261589	0.062597	-4.178942	0.0001
C	34725806	9449110.	3.675034	0.0004
@TREND(1)	332852.2	104702.5	3.179030	0.0019

R-squared	0.130918	Mean dependent var	1229658.
Adjusted R-squared	0.115934	S.D. dependent var	27868280
S.E. of regression	26203096	Akaike info criterion	37.02554
Sum squared resid	7.96E+16	Schwarz criterion	37.09560
Log likelihood	-2200.020	Hannan-Quinn criter.	37.05399
F-statistic	8.737065	Durbin-Watson stat	1.717112
Prob(F-statistic)	0.000292		

6.3) Level without intercept and Trend

Null Hypothesis: AUS has a unit root
Exogenous: None
Lag Length: 10 (Automatic based on SIC, MAXLAG=12)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		1.993392	0.9888
Test critical values:	1% level	-2.586350	
	5% level	-1.943796	
	10% level	-1.614784	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(AUS)
Method: Least Squares
Date: 10/10/10   Time: 15:22
Sample (adjusted): 12 120
Included observations: 109 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
AUS(-1)	0.021354	0.010712	1.993392	0.0490
D(AUS(-1))	-0.386002	0.099342	-3.885570	0.0002
D(AUS(-2))	-0.382509	0.102008	-3.749797	0.0003
D(AUS(-3))	-0.369338	0.101468	-3.639934	0.0004
D(AUS(-4))	-0.339553	0.095124	-3.569570	0.0006
D(AUS(-5))	-0.248581	0.084588	-2.938717	0.0041
D(AUS(-6))	-0.525004	0.081859	-6.413541	0.0000
D(AUS(-7))	-0.497626	0.091913	-5.414114	0.0000
D(AUS(-8))	-0.387745	0.099282	-3.905505	0.0002
D(AUS(-9))	-0.268647	0.099522	-2.699383	0.0082
D(AUS(-10))	-0.267218	0.096443	-2.770730	0.0067

R-squared	0.407778	Mean dependent var	750723.8
Adjusted R-squared	0.347347	S.D. dependent var	27707810
S.E. of regression	22384293	Akaike info criterion	36.78107
Sum squared resid	4.91E+16	Schwarz criterion	37.05268
Log likelihood	-1993.568	Hannan-Quinn criter.	36.89122
Durbin-Watson stat	2.038622		

7) ผลการทดสอบ Unit Root Test ของอัตราแลกเปลี่ยนเงินหยวนต่อบาท

    7.1) st difference with intercept

Null Hypothesis: D(EXCH) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic based on SIC, MAXLAG=12)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-9.817069	0.0000
Test critical values:	1% level	-3.486551	
	5% level	-2.886074	
	10% level	-2.579931	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(EXCH,2)
Method: Least Squares
Date: 08/12/10   Time: 16:12
Sample (adjusted): 3 120
Included observations: 118 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(EXCH(-1))	-0.907202	0.092411	-9.817069	0.0000
C	0.002855	0.007537	0.378790	0.7055

R-squared	0.453796	Mean dependent var	-0.000130
Adjusted R-squared	0.449087	S.D. dependent var	0.110212
S.E. of regression	0.081803	Akaike info criterion	-2.152196
Sum squared resid	0.776245	Schwarz criterion	-2.105235
Log likelihood	128.9796	Hannan-Quinn criter.	-2.133129
F-statistic	96.37484	Durbin-Watson stat	2.009570
Prob(F-statistic)	0.000000		

7.2) 1st difference with intercept and Trend

Null Hypothesis: D(EXCH) has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 0 (Automatic based on SIC, MAXLAG=12)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-9.823456	0.0000
Test critical values:	1% level	-4.037668	
	5% level	-3.448348	
	10% level	-3.149326	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(EXCH,2)
Method: Least Squares
Date: 08/12/10   Time: 16:16
Sample (adjusted): 3 120
Included observations: 118 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(EXCH(-1))	-0.912702	0.092910	-9.823456	0.0000
C	0.012622	0.015445	0.817231	0.4155
@TREND(1)	-0.000161	0.000222	-0.724971	0.4699

R-squared	0.456281	Mean dependent var	-0.000130
Adjusted R-squared	0.446825	S.D. dependent var	0.110212
S.E. of regression	0.081971	Akaike info criterion	-2.139807
Sum squared resid	0.772714	Schwarz criterion	-2.069366
Log likelihood	129.2486	Hannan-Quinn criter.	-2.111206
F-statistic	48.25314	Durbin-Watson stat	2.007185
Prob(F-statistic)	0.000000		

7.3) 1st difference without intercept and Trend

Null Hypothesis: D(EXCH) has a unit root
Exogenous: None
Lag Length: 0 (Automatic based on SIC, MAXLAG=12)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-9.845879	0.0000
Test critical values:	1% level	-2.584707	
	5% level	-1.943563	
	10% level	-1.614927	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(EXCH,2)
Method: Least Squares
Date: 08/12/10   Time: 16:17
Sample (adjusted): 3 120
Included observations: 118 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(EXCH(-1))	-0.905790	0.091997	-9.845879	0.0000

R-squared	0.453120	Mean dependent var	-0.000130
Adjusted R-squared	0.453120	S.D. dependent var	0.110212
S.E. of regression	0.081503	Akaike info criterion	-2.167909
Sum squared resid	0.777205	Schwarz criterion	-2.144429
Log likelihood	128.9066	Hannan-Quinn criter.	-2.158375
Durbin-Watson stat	2.010062		

8) ผลการทดสอบ Unit Root Test ของมูลค่าการส่งออกสินค้าเกษตรไปยังประเทศจีน

8.1) 1st difference with intercept

Null Hypothesis: D(ACH) has a unit root
Exogenous: Constant
Lag Length: 2 (Automatic based on SIC, MAXLAG=12)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-9.497039	0.0000
Test critical values:	1% level	-3.487550	
	5% level	-2.886509	
	10% level	-2.580163	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(ACH,2)
Method: Least Squares
Date: 08/12/10   Time: 16:25
Sample (adjusted): 5 120
Included observations: 116 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(ACH(-1))	-2.113188	0.222510	-9.497039	0.0000
D(ACH(-1),2)	0.666848	0.162067	4.114631	0.0001
D(ACH(-2),2)	0.231917	0.096977	2.391460	0.0184
C	3016661.	1720282.	1.753585	0.0822

R-squared	0.676082	Mean dependent var	523986.5
Adjusted R-squared	0.667405	S.D. dependent var	31785609
S.E. of regression	18331084	Akaike info criterion	36.31997
Sum squared resid	3.76E+16	Schwarz criterion	36.41492
Log likelihood	-2102.558	Hannan-Quinn criter.	36.35851
F-statistic	77.92209	Durbin-Watson stat	1.840883
Prob(F-statistic)	0.000000		

8.2) 1ˢᵗ difference with intercept and Trend

Null Hypothesis: D(ACH) has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 2 (Automatic based on SIC, MAXLAG=12)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-9.668252	0.0000
Test critical values:	1% level	-4.039075	
	5% level	-3.449020	
	10% level	-3.149720	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(ACH,2)
Method: Least Squares
Date: 08/12/10   Time: 16:25
Sample (adjusted): 5 120
Included observations: 116 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(ACH(-1))	-2.150412	0.222420	-9.668252	0.0000
D(ACH(-1),2)	0.691057	0.161811	4.270776	0.0000
D(ACH(-2),2)	0.243770	0.096675	2.521552	0.0131
C	-1791690.	3538188.	-0.506386	0.6136
@TREND(1)	78866.40	50809.51	1.552198	0.1235

R-squared	0.682963	Mean dependent var	523986.5
Adjusted R-squared	0.671538	S.D. dependent var	31785609
S.E. of regression	18216830	Akaike info criterion	36.31574
Sum squared resid	3.68E+16	Schwarz criterion	36.43443
Log likelihood	-2101.313	Hannan-Quinn criter.	36.36392
F-statistic	59.77927	Durbin-Watson stat	1.853640
Prob(F-statistic)	0.000000		

8.3) 1st difference without intercept and Trend

Null Hypothesis: D(ACH) has a unit root
Exogenous: None
Lag Length: 1 (Automatic based on SIC, MAXLAG=12)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-11.45263	0.0000
Test critical values:	1% level	-2.584877	
	5% level	-1.943587	
	10% level	-1.614912	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(ACH,2)
Method: Least Squares
Date: 08/12/10   Time: 16:26
Sample (adjusted): 4 120
Included observations: 117 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(ACH(-1))	-1.687743	0.147367	-11.45263	0.0000
D(ACH(-1),2)	0.334763	0.092258	3.628564	0.0004
R-squared	0.652851	Mean dependent var		468762.3
Adjusted R-squared	0.649832	S.D. dependent var		31653942
S.E. of regression	18731216	Akaike info criterion		36.34623
Sum squared resid	4.03E+16	Schwarz criterion		36.39344
Log likelihood	-2124.254	Hannan-Quinn criter.		36.36540
Durbin-Watson stat	2.030181			

9) ผลการทดสอบ Unit Root Test ของอัตราแลกเปลี่ยน เยนต่อบาท

9.1) 1st difference with intercept

Null Hypothesis: D(EXJP) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic based on SIC, MAXLAG=12)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-15.19018	0.0000
Test critical values:	1% level	-3.486551	
	5% level	-2.886074	
	10% level	-2.579931	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(EXJP,2)
Method: Least Squares
Date: 08/12/10   Time: 16:36
Sample (adjusted): 3 120
Included observations: 118 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(EXJP(-1))	-1.334931	0.087881	-15.19018	0.0000
C	-0.001952	0.010140	-0.192496	0.8477

R-squared	0.665457	Mean dependent var	0.000424
Adjusted R-squared	0.662573	S.D. dependent var	0.189608
S.E. of regression	0.110140	Akaike info criterion	-1.557321
Sum squared resid	1.407181	Schwarz criterion	-1.510360
Log likelihood	93.88193	Hannan-Quinn criter.	-1.538253
F-statistic	230.7417	Durbin-Watson stat	1.875594
Prob(F-statistic)	0.000000		

9.2) 1st difference with intercept and Trend

Null Hypothesis: D(EXJP) has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 0 (Automatic based on SIC, MAXLAG=12)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-15.14192	0.0000
Test critical values:	1% level	-4.037668	
	5% level	-3.448348	
	10% level	-3.149326	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(EXJP,2)
Method: Least Squares
Date: 08/12/10   Time: 16:38
Sample (adjusted): 3 120
Included observations: 118 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(EXJP(-1))	-1.337214	0.088312	-15.14192	0.0000
C	0.006539	0.020754	0.315079	0.7533
@TREND(1)	-0.000140	0.000299	-0.469418	0.6397

R-squared	0.666097	Mean dependent var	0.000424
Adjusted R-squared	0.660290	S.D. dependent var	0.189608
S.E. of regression	0.110512	Akaike info criterion	-1.542286
Sum squared resid	1.404490	Schwarz criterion	-1.471845
Log likelihood	93.99487	Hannan-Quinn criter.	-1.513685
F-statistic	114.7056	Durbin-Watson stat	1.874034
Prob(F-statistic)	0.000000		

9.3) 1st difference without intercept and Trend

Null Hypothesis: D(EXJP) has a unit root
Exogenous: None
Lag Length: 0 (Automatic based on SIC, MAXLAG=12)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-15.25192	0.0000
Test critical values:	1% level	-2.584707	
	5% level	-1.943563	
	10% level	-1.614927	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(EXJP,2)
Method: Least Squares
Date: 08/12/10   Time: 16:39
Sample (adjusted): 3 120
Included observations: 118 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(EXJP(-1))	-1.334670	0.087508	-15.25192	0.0000

R-squared	0.665350	Mean dependent var	0.000424
Adjusted R-squared	0.665350	S.D. dependent var	0.189608
S.E. of regression	0.109686	Akaike info criterion	-1.573951
Sum squared resid	1.407631	Schwarz criterion	-1.550470
Log likelihood	93.86308	Hannan-Quinn criter.	-1.564417
Durbin-Watson stat	1.875589		

10) ผลการทดสอบ Unit Root Test ของมูลค่าการส่งออกสินค้าเกษตรไปยังประเทศญี่ปุ่น

10.1) 1st difference with intercept

Null Hypothesis: D(AJP) has a unit root
Exogenous: Constant
Lag Length: 2 (Automatic based on SIC, MAXLAG=12)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-9.777613	0.0000
Test critical values:	1% level	-3.487550	
	5% level	-2.886509	
	10% level	-2.580163	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(AJP,2)
Method: Least Squares
Date: 08/12/10   Time: 16:40
Sample (adjusted): 5 120
Included observations: 116 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(AJP(-1))	-2.016771	0.206264	-9.777613	0.0000
D(AJP(-1),2)	0.591445	0.154201	3.835556	0.0002
D(AJP(-2),2)	0.243199	0.092865	2.618838	0.0100
C	1940146.	1954371.	0.992721	0.3230

R-squared	0.682079	Mean dependent var	-329448.3
Adjusted R-squared	0.673563	S.D. dependent var	36588233
S.E. of regression	20904567	Akaike info criterion	36.58271
Sum squared resid	4.89E+16	Schwarz criterion	36.67766
Log likelihood	-2117.797	Hannan-Quinn criter.	36.62125
F-statistic	80.09613	Durbin-Watson stat	1.956004
Prob(F-statistic)	0.000000		

10.2) 1ˢᵗ difference with intercept and Trend

Null Hypothesis: D(AJP) has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 10 (Automatic based on SIC, MAXLAG=12)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-7.621179	0.0000
Test critical values:	1% level	-4.045236	
	5% level	-3.451959	
	10% level	-3.151440	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(AJP,2)
Method: Least Squares
Date: 08/12/10   Time: 16:40
Sample (adjusted): 13 120
Included observations: 108 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(AJP(-1))	-5.473152	0.718150	-7.621179	0.0000
D(AJP(-1),2)	3.947520	0.672750	5.867741	0.0000
D(AJP(-2),2)	3.377369	0.620085	5.446625	0.0000
D(AJP(-3),2)	2.979363	0.567154	5.253181	0.0000
D(AJP(-4),2)	2.642536	0.501666	5.267517	0.0000
D(AJP(-5),2)	2.221957	0.440002	5.049879	0.0000
D(AJP(-6),2)	1.912064	0.370820	5.156316	0.0000
D(AJP(-7),2)	1.520105	0.308812	4.922424	0.0000
D(AJP(-8),2)	1.296433	0.236203	5.488634	0.0000
D(AJP(-9),2)	0.775747	0.165226	4.695065	0.0000
D(AJP(-10),2)	0.385194	0.095985	4.013077	0.0001
C	-2202808.	4135241.	-0.532692	0.5955
@TREND(1)	105671.1	58526.61	1.805523	0.0742

R-squared	0.784704	Mean dependent var	-127340.1
Adjusted R-squared	0.757509	S.D. dependent var	37319986
S.E. of regression	18377611	Akaike info criterion	36.40365
Sum squared resid	3.21E+16	Schwarz criterion	36.72650
Log likelihood	-1952.797	Hannan-Quinn criter.	36.53455
F-statistic	28.85450	Durbin-Watson stat	1.838802
Prob(F-statistic)	0.000000		

10.3) 1st difference without intercept and Trend

Null Hypothesis: D(AJP) has a unit root
Exogenous: None
Lag Length: 2 (Automatic based on SIC, MAXLAG=12)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-9.728894	0.0000
Test critical values:	1% level	-2.585050	
	5% level	-1.943612	
	10% level	-1.614897	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(AJP,2)
Method: Least Squares
Date: 08/12/10   Time: 16:41
Sample (adjusted): 5 120
Included observations: 116 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(AJP(-1))	-1.992826	0.204836	-9.728894	0.0000
D(AJP(-1),2)	0.575296	0.153330	3.752008	0.0003
D(AJP(-2),2)	0.235730	0.092554	2.546948	0.0122

R-squared	0.679281	Mean dependent var	-329448.3
Adjusted R-squared	0.673605	S.D. dependent var	36588233
S.E. of regression	20903226	Akaike info criterion	36.57423
Sum squared resid	4.94E+16	Schwarz criterion	36.64544
Log likelihood	-2118.305	Hannan-Quinn criter.	36.60314
Durbin-Watson stat	1.954853		

11) ผลการทดสอบ Unit Root Test ของอัตราแลกเปลี่ยน ดอลล่าห์สหรัฐต่อบาท

11.1) 1st difference with intercept

Null Hypothesis: D(EXUS) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic based on SIC, MAXLAG=12)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-9.006717	0.0000
Test critical values:	1% level	-3.486551	
	5% level	-2.886074	
	10% level	-2.579931	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(EXUS,2)
Method: Least Squares
Date: 08/12/10   Time: 16:42
Sample (adjusted): 3 120
Included observations: 118 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(EXUS(-1))	-0.821639	0.091225	-9.006717	0.0000
C	-0.030946	0.060691	-0.509888	0.6111

R-squared	0.411529	Mean dependent var	-0.002112
Adjusted R-squared	0.406456	S.D. dependent var	0.854546
S.E. of regression	0.658358	Akaike info criterion	2.018668
Sum squared resid	50.27849	Schwarz criterion	2.065629
Log likelihood	-117.1014	Hannan-Quinn criter.	2.037736
F-statistic	81.12095	Durbin-Watson stat	2.026137
Prob(F-statistic)	0.000000		

11.2) 1$^{\text{st}}$ difference with intercept and Trend

Null Hypothesis: D(EXUS) has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 0 (Automatic based on SIC, MAXLAG=12)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-9.146021	0.0000
Test critical values:	1% level	-4.037668	
	5% level	-3.448348	
	10% level	-3.149326	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(EXUS,2)
Method: Least Squares
Date: 08/12/10   Time: 16:43
Sample (adjusted): 3 120
Included observations: 118 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(EXUS(-1))	-0.842880	0.092158	-9.146021	0.0000
C	0.118672	0.123951	0.957416	0.3404
@TREND(1)	-0.002485	0.001797	-1.382684	0.1694

R-squared	0.421152	Mean dependent var	-0.002112
Adjusted R-squared	0.411085	S.D. dependent var	0.854546
S.E. of regression	0.655786	Akaike info criterion	2.019129
Sum squared resid	49.45631	Schwarz criterion	2.089571
Log likelihood	-116.1286	Hannan-Quinn criter.	2.047731
F-statistic	41.83520	Durbin-Watson stat	2.014210
Prob(F-statistic)	0.000000		

11.3) 1st difference without intercept and Trend

Null Hypothesis: D(EXUS) has a unit root
Exogenous: None
Lag Length: 0 (Automatic based on SIC, MAXLAG=12)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-9.020913	0.0000
Test critical values:	1% level	-2.584707	
	5% level	-1.943563	
	10% level	-1.614927	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(EXUS,2)
Method: Least Squares
Date: 08/12/10   Time: 16:44
Sample (adjusted): 3 120
Included observations: 118 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(EXUS(-1))	-0.819186	0.090810	-9.020913	0.0000

R-squared	0.410210	Mean dependent var	-0.002112
Adjusted R-squared	0.410210	S.D. dependent var	0.854546
S.E. of regression	0.656273	Akaike info criterion	2.003958
Sum squared resid	50.39118	Schwarz criterion	2.027438
Log likelihood	-117.2335	Hannan-Quinn criter.	2.013491
Durbin-Watson stat	2.026879		

12)　　　　　ผลการทดสอบ Unit Root Test ของมูลค่าการส่งออกสินค้าเกษตรไปยังประเทศ
สหรัฐอเมริกา

12.1) 1st difference with intercept

Null Hypothesis: D(AUS) has a unit root
Exogenous: Constant
Lag Length: 9 (Automatic based on SIC, MAXLAG=12)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-7.951178	0.0000
Test critical values:	1% level	-3.491345	
	5% level	-2.888157	
	10% level	-2.581041	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(AUS,2)
Method: Least Squares
Date: 08/12/10   Time: 16:45
Sample (adjusted): 12 120
Included observations: 109 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(AUS(-1))	-4.531737	0.569945	-7.951178	0.0000
D(AUS(-1),2)	3.168509	0.515486	6.146646	0.0000
D(AUS(-2),2)	2.807665	0.452412	6.205988	0.0000
D(AUS(-3),2)	2.457756	0.387992	6.334557	0.0000
D(AUS(-4),2)	2.134643	0.333336	6.403883	0.0000
D(AUS(-5),2)	1.900390	0.298108	6.374837	0.0000
D(AUS(-6),2)	1.387353	0.263836	5.258396	0.0000
D(AUS(-7),2)	0.900937	0.216304	4.165147	0.0001
D(AUS(-8),2)	0.522714	0.158266	3.302757	0.0013
D(AUS(-9),2)	0.261685	0.096260	2.718521	0.0078
C	4223431.	2211763.	1.909531	0.0591

R-squared	0.692105	Mean dependent var	112567.5
Adjusted R-squared	0.660688	S.D. dependent var	38489442
S.E. of regression	22420302	Akaike info criterion	36.78429
Sum squared resid	4.93E+16	Schwarz criterion	37.05589
Log likelihood	-1993.744	Hannan-Quinn criter.	36.89443
F-statistic	22.02908	Durbin-Watson stat	2.033962
Prob(F-statistic)	0.000000		

12.2) 1st difference with intercept and Trend

Null Hypothesis: D(AUS) has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 9 (Automatic based on SIC, MAXLAG=12)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-8.200418	0.0000
Test critical values:	1% level	-4.044415	
	5% level	-3.451568	
	10% level	-3.151211	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(AUS,2)
Method: Least Squares
Date: 08/12/10   Time: 16:45
Sample (adjusted): 12 120
Included observations: 109 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(AUS(-1))	-4.706089	0.573884	-8.200418	0.0000
D(AUS(-1),2)	3.319195	0.518323	6.403724	0.0000
D(AUS(-2),2)	2.934381	0.454353	6.458373	0.0000
D(AUS(-3),2)	2.562128	0.389246	6.582278	0.0000
D(AUS(-4),2)	2.220703	0.334083	6.647156	0.0000
D(AUS(-5),2)	1.969487	0.298106	6.606672	0.0000
D(AUS(-6),2)	1.448305	0.263818	5.489799	0.0000
D(AUS(-7),2)	0.946860	0.215976	4.384096	0.0000
D(AUS(-8),2)	0.551975	0.157725	3.499605	0.0007
D(AUS(-9),2)	0.275332	0.095694	2.877213	0.0049
C	-3230684.	4914899.	-0.657325	0.5125
@TREND(1)	117123.2	69128.04	1.694294	0.0934

R-squared	0.700955	Mean dependent var	112567.5
Adjusted R-squared	0.667043	S.D. dependent var	38489442
S.E. of regression	22209338	Akaike info criterion	36.77347
Sum squared resid	4.78E+16	Schwarz criterion	37.06977
Log likelihood	-1992.154	Hannan-Quinn criter.	36.89363
F-statistic	20.66967	Durbin-Watson stat	2.049301
Prob(F-statistic)	0.000000		

12.3) 1st difference without intercept and Trend

Null Hypothesis: D(AUS) has a unit root
Exogenous: None
Lag Length: 7 (Automatic based on SIC, MAXLAG=12)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-8.562582	0.0000
Test critical values:	1% level	-2.585962	
	5% level	-1.943741	
	10% level	-1.614818	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(AUS,2)
Method: Least Squares
Date: 08/12/10   Time: 16:46
Sample (adjusted): 10 120
Included observations: 111 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(AUS(-1))	-2.951546	0.344703	-8.562582	0.0000
D(AUS(-1),2)	1.688178	0.291766	5.786076	0.0000
D(AUS(-2),2)	1.487962	0.246961	6.025096	0.0000
D(AUS(-3),2)	1.342007	0.219324	6.118849	0.0000
D(AUS(-4),2)	1.215511	0.193536	6.280527	0.0000
D(AUS(-5),2)	1.057690	0.169496	6.240219	0.0000
D(AUS(-6),2)	0.629417	0.140907	4.466896	0.0000
D(AUS(-7),2)	0.252400	0.094466	2.671865	0.0088

R-squared	0.653405	Mean dependent var	-96162.38
Adjusted R-squared	0.629850	S.D. dependent var	38621753
S.E. of regression	23497458	Akaike info criterion	36.85203
Sum squared resid	5.69E+16	Schwarz criterion	37.04731
Log likelihood	-2037.287	Hannan-Quinn criter.	36.93125
Durbin-Watson stat	2.058053		

ผลการประมาณแบบจำลอง Autoregressive integrated moving average

(ARIMA(p,d,q))

1) ผลการประมาณแบบจำลอง ARIMA(p,d,q)ของอัตราแลกเปลี่ยน หยวนต่อบาท

Dependent Variable: D(EXCH)
Method: Least Squares
Date: 08/16/10   Time: 01:23
Sample (adjusted): 2 120
Included observations: 119 after adjustments
Convergence achieved after 6 iterations
MA Backcast: -1 1

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.003346	0.009292	0.360077	0.7194
MA(3)	0.292588	0.088931	3.290049	0.0013

R-squared	0.073525	Mean dependent var	0.003392
Adjusted R-squared	0.065606	S.D. dependent var	0.081498
S.E. of regression	0.078779	Akaike info criterion	-2.227665
Sum squared resid	0.726125	Schwarz criterion	-2.180957
Log likelihood	134.5461	Hannan-Quinn criter.	-2.208699
F-statistic	9.285113	Durbin-Watson stat	1.887604
Prob(F-statistic)	0.002856		

Inverted MA Roots	.33+.57i	.33-.57i	-.66

2) ผลการประมาณแบบจำลอง ARIMA(p,d,q)ของมูลค่าการส่งออกสินค้าเกษตรไปยังประเทศจีน

Dependent Variable: D(ACH)
Method: Least Squares
Date: 08/21/10   Time: 08:06
Sample (adjusted): 6 120
Included observations: 115 after adjustments
Convergence achieved after 12 iterations
MA Backcast: 5

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1742847.	1205572.	1.445660	0.1511
AR(4)	0.284605	0.098024	2.903427	0.0044
MA(1)	-0.505804	0.088328	-5.726440	0.0000

R-squared	0.204423	Mean dependent var	1770308.
Adjusted R-squared	0.190216	S.D. dependent var	20436723
S.E. of regression	18390593	Akaike info criterion	36.31832
Sum squared resid	3.79E+16	Schwarz criterion	36.38992
Log likelihood	-2085.303	Hannan-Quinn criter.	36.34738
F-statistic	14.38918	Durbin-Watson stat	1.786219
Prob(F-statistic)	0.000003		

Inverted AR Roots	.73	.00-.73i	.00+.73i	-.73
Inverted MA Roots	.51			

3) ผลการประมาณแบบจำลอง ARIMA(p,d,q)ของอัตราแลกเปลี่ยน เยนต่อบาท

Dependent Variable: D(EXJP)
Method: Least Squares
Date: 08/21/10   Time: 08:17
Sample (adjusted): 3 120
Included observations: 118 after adjustments
Convergence achieved after 9 iterations
MA Backcast: 1 2

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.001476	0.010179	-0.144992	0.8850
AR(1)	-0.281954	0.093573	-3.013204	0.0032
MA(2)	0.329201	0.092070	3.575569	0.0005

R-squared	0.168602	Mean dependent var	-0.001356
Adjusted R-squared	0.154143	S.D. dependent var	0.116332
S.E. of regression	0.106991	Akaike info criterion	-1.607043
Sum squared resid	1.316421	Schwarz criterion	-1.536602
Log likelihood	97.81555	Hannan-Quinn criter.	-1.578442
F-statistic	11.66064	Durbin-Watson stat	2.035541
Prob(F-statistic)	0.000024		

| Inverted AR Roots | -.28 | | |

4) ผลการประมาณแบบจำลอง ARIMA(p,d,q)ของมูลค่าการส่งออกสินค้าเกษตรไปยังประเทศ
ญี่ปุ่น

Dependent Variable: D(AJP)
Method: Least Squares
Date: 08/21/10   Time: 08:23
Sample (adjusted): 3 120
Included observations: 118 after adjustments
Convergence achieved after 14 iterations
MA Backcast: 2

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	903366.0	398090.1	2.269250	0.0251
AR(1)	0.368764	0.116841	3.156120	0.0020
MA(1)	-0.874291	0.061333	-14.25478	0.0000

R-squared	0.230201	Mean dependent var	997508.7
Adjusted R-squared	0.216813	S.D. dependent var	22944010
S.E. of regression	20304954	Akaike info criterion	36.51572
Sum squared resid	4.74E+16	Schwarz criterion	36.58616
Log likelihood	-2151.428	Hannan-Quinn criter.	36.54432
F-statistic	17.19482	Durbin-Watson stat	1.952034
Prob(F-statistic)	0.000000		

Inverted AR Roots	.37
Inverted MA Roots	.87

5) ผลการประมาณแบบจำลอง ARIMA(p,d,q)ของอัตราแลกเปลี่ยน ดอลล่าห์สหรัฐต่อบาท

Dependent Variable: D(EXUS)
Method: Least Squares
Date: 08/16/10   Time: 02:14
Sample (adjusted): 8 120
Included observations: 113 after adjustments
Convergence achieved after 15 iterations
MA Backcast: 2 7

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.135334	0.041228	-3.282538	0.0014
AR(6)	0.717865	0.066305	10.82676	0.0000
MA(6)	-0.912098	0.033204	-27.46923	0.0000

R-squared	0.183805	Mean dependent var	-0.068496
Adjusted R-squared	0.168965	S.D. dependent var	0.644660
S.E. of regression	0.587680	Akaike info criterion	1.800920
Sum squared resid	37.99040	Schwarz criterion	1.873329
Log likelihood	-98.75199	Hannan-Quinn criter.	1.830303
F-statistic	12.38582	Durbin-Watson stat	1.851688
Prob(F-statistic)	0.000014		

Inverted AR Roots	.95	.47+.82i	.47-.82i	-.47+.82i
	-.47-.82i	-.95		
Inverted MA Roots	.98	.49-.85i	.49+.85i	-.49-.85i
	-.49+.85i	-.98		

6) ผลการประมาณแบบจำลอง ARIMA(p,d,q)ของมูลค่าการส่งออกสินค้าเกษตรไปยังประเทศ
สหรัฐอเมริกา

Dependent Variable: D(AUS)
Method: Least Squares
Date: 08/21/10   Time: 08:33
Sample (adjusted): 8 120
Included observations: 113 after adjustments
Convergence achieved after 10 iterations

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	779679.2	1717771.	0.453890	0.6508
AR(6)	-0.388440	0.085709	-4.532073	0.0000

R-squared	0.156148	Mean dependent var		600407.3
Adjusted R-squared	0.148546	S.D. dependent var		27472052
S.E. of regression	25349635	Akaike info criterion		36.95197
Sum squared resid	7.13E+16	Schwarz criterion		37.00024
Log likelihood	-2085.786	Hannan-Quinn criter.		36.97156
F-statistic	20.53968	Durbin-Watson stat		2.286546
Prob(F-statistic)	0.000015			

Inverted AR Roots	.74-.43i	.74+.43i	.00+.85i	-.00-.85i
	-.74-.43i	-.74+.43i		

ภาคผนวก ค

ผลการประมาณแบบจำลอง Generalized Autoregressive Conditional

Heteroscedasticity: GARCH(p,q)

1) ผลการประมาณแบบจำลอง GARCH(1,3) ของอัตราแลกเปลี่ยน หยวนต่อบาท

Dependent Variable: D(EXCH)
Method: ML - ARCH (Marquardt) - Normal distribution
Date: 08/17/10   Time: 22:20
Sample (adjusted): 2 120
Included observations: 119 after adjustments
Convergence achieved after 15 iterations
MA Backcast: -1 1
Presample variance: backcast (parameter = 0.7)
GARCH = C(3) + C(4)*RESID(-1)^2 + C(5)*GARCH(-1) + C(6)*GARCH(-2) +
    C(7)*GARCH(-3)

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	-0.004348	0.009557	-0.454982	0.6491
MA(3)	0.415621	0.080960	5.133633	0.0000
Variance Equation				
C	0.000947	0.000277	3.411895	0.0006
RESID(-1)^2	0.195690	0.056743	3.448731	0.0006
GARCH(-1)	0.605157	0.169929	3.561224	0.0004
GARCH(-2)	0.601690	0.205967	2.921287	0.0035
GARCH(-3)	-0.536155	0.079470	-6.746656	0.0000

R-squared	0.053204	Mean dependent var	0.003392
Adjusted R-squared	0.002483	S.D. dependent var	0.081498
S.E. of regression	0.081397	Akaike info criterion	-2.254624
Sum squared resid	0.742052	Schwarz criterion	-2.091147
Log likelihood	141.1502	Hannan-Quinn criter.	-2.188241
F-statistic	1.048951	Durbin-Watson stat	1.945939
Prob(F-statistic)	0.397770		

Inverted MA Roots	.37+.65i	.37-.65i	-.75

2) ผลการประมาณแบบจำลอง GARCH(1,2) ของมูลค่าการส่งออกสินค้าเกษตรไปยังประเทศ
จีน

Dependent Variable: D(ACH)
Method: ML - ARCH (Marquardt) - Normal distribution
Date: 08/21/10   Time: 09:51
Sample (adjusted): 6 120
Included observations: 115 after adjustments
Convergence achieved after 165 iterations
MA Backcast: 5
Presample variance: backcast (parameter = 0.7)
GARCH = C(4) + C(5)*RESID(-1)^2 + C(6)*GARCH(-1) + C(7)*GARCH(-2)

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	1163102.	991991.3	1.172492	0.2410
AR(4)	0.250699	0.109435	2.290841	0.0220
MA(1)	-0.598128	0.086976	-6.876961	0.0000
Variance Equation				
C	2.20E+14	2.41E+14	0.909853	0.3629
RESID(-1)^2	0.085885	0.048017	1.788663	0.0737
GARCH(-1)	-0.357961	0.297045	-1.205071	0.2282
GARCH(-2)	0.673368	0.323078	2.084231	0.0371

R-squared	0.194089	Mean dependent var		1770308.
Adjusted R-squared	0.149316	S.D. dependent var		20436723
S.E. of regression	18849309	Akaike info criterion		36.31458
Sum squared resid	3.84E+16	Schwarz criterion		36.48166
Log likelihood	-2081.088	Hannan-Quinn criter.		36.38240
F-statistic	4.334965	Durbin-Watson stat		1.621054
Prob(F-statistic)	0.000587			

Inverted AR Roots	.71	.00-.71i	.00+.71i	-.71
Inverted MA Roots	.60			

3) ผลการประมาณแบบจำลอง GARCH(3,2) ของอัตราแลกเปลี่ยน เยนต่อบาท

Dependent Variable: D(EXJP)
Method: ML - ARCH (Marquardt) - Normal distribution
Date: 08/21/10   Time: 09:43
Sample (adjusted): 3 120
Included observations: 118 after adjustments
Convergence achieved after 26 iterations
MA Backcast: 1 2
Presample variance: backcast (parameter = 0.7)
GARCH = C(4) + C(5)*RESID(-1)^2 + C(6)*RESID(-2)^2 + C(7)*RESID(-3)^2
    + C(8)*GARCH(-1) + C(9)*GARCH(-2)

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	-0.000381	0.007142	-0.053334	0.9575
AR(1)	-0.045916	0.082018	-0.559833	0.5756
MA(2)	0.231153	0.075346	3.067869	0.0022
Variance Equation				
C	0.000178	0.000163	1.093613	0.2741
RESID(-1)^2	0.699659	0.222261	3.147922	0.0016
RESID(-2)^2	-0.853802	0.351133	-2.431564	0.0150
RESID(-3)^2	0.353752	0.223191	1.584977	0.1130
GARCH(-1)	1.156899	0.546739	2.115999	0.0343
GARCH(-2)	-0.337685	0.443501	-0.761409	0.4464

R-squared	0.104813	Mean dependent var	-0.001356
Adjusted R-squared	0.039111	S.D. dependent var	0.116332
S.E. of regression	0.114035	Akaike info criterion	-2.047402
Sum squared resid	1.417424	Schwarz criterion	-1.836079
Log likelihood	129.7967	Hannan-Quinn criter.	-1.961599
F-statistic	1.595279	Durbin-Watson stat	2.489247
Prob(F-statistic)	0.134416		

| Inverted AR Roots | -.05 | | |

4) ผลการประมาณแบบจำลอง GARCH(1,3) ของมูลค่าการส่งออกสินค้าเกษตรไปยังประเทศ
ญี่ปุ่น

Dependent Variable: D(AJP)
Method: ML - ARCH (Marquardt) - Normal distribution
Date: 09/30/10   Time: 21:36
Sample (adjusted): 3 120
Included observations: 118 after adjustments
Convergence achieved after 30 iterations
MA Backcast: 2
Presample variance: backcast (parameter = 0.7)
GARCH = C(4) + C(5)*RESID(-1)^2 + C(6)*GARCH(-1) + C(7)*GARCH(-2) +
    C(8)*GARCH(-3)

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	793993.3	273728.1	2.900665	0.0037
AR(1)	0.300740	0.083629	3.596111	0.0003
MA(1)	-0.859565	0.040894	-21.01931	0.0000
Variance Equation				
C	3.34E+14	1.41E+14	2.363314	0.0181
RESID(-1)^2	0.299856	0.106155	2.824691	0.0047
GARCH(-1)	-0.101559	0.176100	-0.576711	0.5641
GARCH(-2)	0.412037	0.170803	2.412350	0.0159
GARCH(-3)	-0.488912	0.205209	-2.382505	0.0172

R-squared	0.226969	Mean dependent var	997508.7
Adjusted R-squared	0.177776	S.D. dependent var	22944010
S.E. of regression	20804844	Akaike info criterion	36.46914
Sum squared resid	4.76E+16	Schwarz criterion	36.65698
Log likelihood	-2143.679	Hannan-Quinn criter.	36.54541
F-statistic	4.613848	Durbin-Watson stat	1.848436
Prob(F-statistic)	0.000148		

Inverted AR Roots	.30
Inverted MA Roots	.86

5) ผลการประมาณแบบจำลอง GARCH(1,3) ของอัตราแลกเปลี่ยน ดอลลาร์สหรัฐต่อบาท

Dependent Variable: D(EXUS)
Method: ML - ARCH (Marquardt) - Normal distribution
Date: 10/11/10   Time: 12:03
Sample (adjusted): 8 120
Included observations: 113 after adjustments
Convergence achieved after 38 iterations
MA Backcast: 2 7
Presample variance: backcast (parameter = 0.7)
GARCH = C(4) + C(5)*RESID(-1)^2 + C(6)*GARCH(-1) + C(7)*GARCH(-2) +
      C(8)*GARCH(-3)

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	-0.139683	0.034349	-4.066557	0.0000
AR(6)	0.665040	0.046973	14.15805	0.0000
MA(6)	-0.906789	0.004145	-218.7854	0.0000
Variance Equation				
C	0.019325	0.011666	1.656431	0.0976
RESID(-1)^2	-0.148187	0.043074	-3.440295	0.0006
GARCH(-1)	1.032059	0.280718	3.676496	0.0002
GARCH(-2)	-0.582755	0.491173	-1.186455	0.2354
GARCH(-3)	0.674459	0.303754	2.220414	0.0264

R-squared	0.176407	Mean dependent var	-0.068496
Adjusted R-squared	0.121501	S.D. dependent var	0.644660
S.E. of regression	0.604229	Akaike info criterion	1.686489
Sum squared resid	38.33472	Schwarz criterion	1.879579
Log likelihood	-87.28665	Hannan-Quinn criter.	1.764843
F-statistic	3.212887	Durbin-Watson stat	1.918469
Prob(F-statistic)	0.003995		

Inverted AR Roots	.93	.47+.81i	.47-.81i	-.47-.81i
	-.47+.81i	-.93		
Inverted MA Roots	.98	.49-.85i	.49+.85i	-.49-.85i
	-.49+.85i	-.98		

6) ผลการประมาณแบบจำลอง GARCH(1,5) ของมูลค่าการส่งออกสินค้าเกษตรไปยังประเทศ
สหรัฐอเมริกา

Dependent Variable: D(AUS)
Method: ML - ARCH (Marquardt) - Normal distribution
Date: 09/30/10   Time: 21:52
Sample (adjusted): 8 120
Included observations: 113 after adjustments
Convergence achieved after 52 iterations
Presample variance: backcast (parameter = 0.7)
GARCH = C(3) + C(4)*RESID(-1)^2 + C(5)*GARCH(-1) + C(6)*GARCH(-2) +
    C(7)*GARCH(-3) + C(8)*GARCH(-4) + C(9)*GARCH(-5)

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	600422.4	1112465.	0.539722	0.5894
AR(6)	-0.285344	0.078632	-3.628837	0.0003
Variance Equation				
C	4.74E+14	3.48E+14	1.361898	0.1732
RESID(-1)^2	-0.184833	0.063291	-2.920355	0.0035
GARCH(-1)	0.016103	0.233416	0.068989	0.9450
GARCH(-2)	-0.699255	0.251570	-2.779564	0.0054
GARCH(-3)	0.412029	0.332432	1.239437	0.2152
GARCH(-4)	0.308850	0.254710	1.212554	0.2253
GARCH(-5)	0.448164	0.203467	2.202634	0.0276

R-squared	0.145104	Mean dependent var	600407.3
Adjusted R-squared	0.079343	S.D. dependent var	27472052
S.E. of regression	26359675	Akaike info criterion	36.93955
Sum squared resid	7.23E+16	Schwarz criterion	37.15677
Log likelihood	-2078.085	Hannan-Quinn criter.	37.02770
F-statistic	2.206530	Durbin-Watson stat	2.192892
Prob(F-statistic)	0.032649		

Inverted AR Roots	.70-.41i	.70+.41i	.00-.81i	-.00+.81i
	-.70+.41i	-.70-.41i		

ผลการประมาณแบบจำลอง Multivariate GARCH และ DCC

1) ผลการประมาณค่าโดยแบบจำลอง BEKK(1,1) ความสัมพันธ์ระหว่างความผันผวนของอัตรา แลกเปลี่ยนเงินบาทต่อเงินหยวนและความผันผวนของมูลค่าการส่งออกสินค้าเกษตรของไทยไปยัง ประเทศจีน

MV-GARCH, BEKK - Estimation by BFGS
Convergence in 220 Iterations. Final criterion was 0.0000065 < 0.0000100
Usable Observations 117
Log Likelihood -2385.41187790

Variable	Coeff	Std Error	T-Stat	Signif
1. Constant	-14.118849	0.000913	-15468.4187	0.00000000
2. EXCH{1}	3.894193	0.000203	19148.8292	0.00000000
3. Mvg Avge{1}	0.925197	0.000008	118839.1096	0.00000000
4. Constant	26545646.9656	0.000177	1.49728e+11	0.00000000
5. ACH{2}	0.561125	0.015391	36.45864	0.00000000
6. Mvg Avge{2}	-4323912.7949	0.090192	-4.79413e+07	0.00000000
7. C(1,1)	-0.319524	0.000220	-1449.4803	0.00000000
8. C(2,1)	-7537567.4040	0.002571	-2.93165e+09	0.00000000
9. C(2,2)	1233271.6977	0.035869	34382273.21	0.00000000
10. A(1,1)	-3.047492	0.000000	0.00000	0.00000000
11. A(1,2)	-58437059.0306	214990.236	-271.81262	0.00000000
12. A(2,1)	0.000000	0.000000	11.12001	0.00000000
13. A(2,2)	0.838225	0.000000	7.10638e+10	0.00000000
14. B(1,1)	0.017340	0.000000	26346832.88	0.00000000
15. B(1,2)	-2841747.9132	2138.394169	-1328.9167	0.00000000
16. B(2,1)	0.000000	0.000000	0.00000	0.00000000
17. B(2,2)	0.962744	0.000042	22742.1828	0.00000000

2) ผลการประมาณค่าโดยแบบจำลอง BEKK(1,1) ความสัมพันธ์ระหว่างความผันผวนของอัตรา
แลกเปลี่ยนเงินบาทต่อเงินเยนและความผันผวนของมูลค่าการส่งออกสินค้าเกษตรของไทยไปยัง
ประเทศญี่ปุ่น

MV-GARCH, BEKK - Estimation by BFGS
Convergence in 166 Iterations. Final criterion was 0.0000028 < 0.0000100
Usable Observations 118
Log Likelihood -2940.07240231

Variable	Coeff	Std Error	T-Stat	Signif
1. Constant	3031.421027	13.200636	229.64205	0.00000000
2. EXJP{1}	-1077.419780	4.929420	-218.56930	0.00000000
3. Mvg Avge{1}	0.660546	0.000003	233948.5599	0.00000000
4. Constant	155156184.3166	0.531244	2.92062e+08	0.00000000
5. AJP{2}	0.239434	0.000000	4.44271e+08	0.00000000
6. Mvg Avge{2}	63374.1102	0.007263	8725655.993	0.00000000
7. C(1,1)	-36.548746	0.000006	-6154812.466	0.00000000
8. C(2,1)	-1558854.3062	3.702561	-421020.5935	0.00000000
9. C(2,2)	16864313.3673	9.142087	-1844689.582	0.00000000
10. A(1,1)	-0.523415	0.000000	-1.18320e+07	0.00000000
11. A(1,2)	50266.1929	0.005023	10006875.809	0.00000000
12. A(2,1)	-0.000001	0.000000	0.00000	0.00000000
13. A(2,2)	0.768918	0.000000	5689480.707	0.00000000
14. B(1,1)	0.807760	0.017465	46.25134	0.00000000
15. B(1,2)	262.7278	0.006252	42024.33988	0.00000000
16. B(2,1)	-0.000000	0.000000	0.00000	0.00000000
17. B(2,2)	0.347994	0.000000	12328618.11	0.00000000

3) ผลการประมาณค่าโดยแบบจำลอง BEKK(1,1) ความสัมพันธ์ระหว่างความผันผวนของอัตรา
แลกเปลี่ยนเงินบาทต่อเงินดอลล่าร์สหรัฐฯ และความผันผวนของมูลค่าการส่งออกสินค้าเกษตรของ
ไทยไปยังประเทศสหรัฐฯ

MV-GARCH, BEKK - Estimation by BFGS
Convergence in   279 Iterations. Final criterion was 0.0000008 < 0.0000100
Usable Observations   117
Log Likelihood   -3145.64587626

Variable	Coeff	Std Error	T-Stat	Signif
1. Constant	-3177.4606	1278.0888	-2.48610	0.01291505
2. EXUS{1}	78.805948	38.02959	2.07223	0.03824429
3. Mvg Avge{1}	0.533625	0.000000	1.70329e+10	0.00000000
4. Constant	60356132.877	90.72768	665244.9404	0.00000000
5. AUS{2}	0.704680	0.039544	17.82029	0.00000000
6. Mvg Avge{2}	3485.508006	0.003031	1149870.087	0.00000000
7. C(1,1)	762.119167	0.015473	49253.87080	0.00000000
8. C(2,1)	0803215.011299	124.049322	248314.2555	0.00000000
9. C(2,2)	3568541.312563	5940.064710	-600.75799	0.00000000
10. A(1,1)	0.249406	0.000017	-14592.81417	0.00000000
11. A(1,2)	5841.720435	0.141311	41339.44356	0.00000000
12. A(2,1)	-0.000004	0.000002	-2.26096	0.02376198
13. A(2,2)	0.303570	0.000036	8321.51528	0.00000000
14. B(1,1)	0.700423	0.000011	62806.02765	0.00000000
15. B(1,2)	-2320.130063	0.395960	-5859.50907	0.00000000
16. B(2,1)	-0.000025	0.000002	-10.62371	0.00000000
17. B(2,2)	0.027335	0.000014	1898.44153	0.00000000

4) ผลการประมาณค่าโดยแบบจำลอง DCC ความสัมพันธ์ระหว่างความผันผวนของอัตราแลกเปลี่ยนเงินบาทต่อเงินหยวนและความผันผวนของมูลค่าการส่งออกสินค้าเกษตรของไทยไปยังประเทศจีน

MV_GARCH, DCC - Estimation by BFGS
Convergence in   69 Iterations. Final criterion was 0.0000085 < 0.0000100
Usable Observations   117
Log Likelihood   -2014.23067861

	Variable	Coeff	Std Error	T-Stat	Signif
1.	Constant	0.2903	4.7487e-04	611.35978	0.00000000
2.	EXCH{1}	0.9413	1.2617e-03	746.09788	0.00000000
3.	Mvg Avge{1}	0.1555	1.6424e-03	94.64997	0.00000000
4.	Constant	12041906.4631	1784.9901	6746.20366	0.00000000
5.	ACH{2}	0.8062	0.0387	20.82641	0.00000000
6.	Mvg Avge{2}	16836090.5974	90779.1684	185.46205	0.00000000
7.	C(1)	7.2881e-03	1.8462e-05	394.75338	0.00000000
8.	C(2)	1.8752e+14	1.0750e+11	1744.40962	0.00000000
9.	A(1)	-0.0541	5.1425e-04	-105.16436	0.00000000
10.	A(2)	0.1937	7.0003e-04	276.65988	0.00000000
11.	B(1)	-0.0480	7.3666e-04	-65.10371	0.00000000
12.	B(2)	0.4544	3.6724e-06	123722.9229	0.00000000
13.	DCC(1)	0.0600	1.9601e-04	306.10039	0.00000000
14.	DCC(2)	0.9355	6.0865e-03	153.69433	0.00000000

5) ผลการประมาณค่าโดยแบบจำลอง   DCC ความสัมพันธ์ระหว่างความผันผวนของอัตรา
แลกเปลี่ยนเงินบาทต่อเงินเยนและความผันผวนของมูลค่าการส่งออกสินค้าเกษตรของไทยไปยัง
ประเทศญี่ปุ่น

MV_GARCH, DCC - Estimation by BFGS
Convergence in   6 Iterations. Final criterion was 0.0000000 < 0.0000100
Usable Observations   117
Log Likelihood   -2056.06411272

Variable	Coeff	Std Error	T-Stat	Signif
1. Constant	0.2780	7.4303e-03	37.41451	0.00000000
2. EXJP{1}	0.8998	2.6677e-03	337.27976	0.00000000
3. Mvg Avge{1}	0.0372	0.0780	0.47714	0.63325906
4. Constant	3.0888	2884.7094	0.00107	0.99914567
5. AJP{2}	1.0088	0.0107	93.87258	0.00000000
6. Mvg Avge{2}	-3.3928	16810.5324	-2.01825e-04	0.99983897
7. C(1)	3.1129e-04	1.7071e-07	1823.48330	0.00000000
8. C(2)	4.0198e+14	9.5356e+13	4.21558	0.00002491
9. A(1)	0.3511	0.0467	7.51164	0.00000000
10. A(2)	0.3199	0.1205	2.65555	0.00791799
11. B(1)	0.6808	0.0210	32.39222	0.00000000
12. B(2)	0.1880	0.1119	1.67963	0.09302984
13. DCC(1)	0.2817	0.2307	1.22133	0.22195986
14. DCC(2)	1.0368e-14	3.7749e-04	2.74652e-11	1.00000000

6) ผลการประมาณค่าโดยแบบจำลอง   DCC ความสัมพันธ์ระหว่างความผันผวนของอัตรา
แลกเปลี่ยนเงินบาทต่อเงินดอลล่าร์สหรัฐฯ และความผันผวนของมูลค่าการส่งออกสินค้าเกษตรของ
ไทยไปยังประเทศสหรัฐฯ

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MV_GARCH, DCC - Estimation by BFGS
Convergence in   239 Iterations. Final criterion was  0.0000086 <  0.0000100
Usable Observations    117
Log Likelihood              -2321.73573625
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Variable	Coeff	Std Error	T-Stat	Signif
1. Constant	0.2359	9.0946e-05	2593.60355	0.00000000
2. EXUS{1}	0.9908	1.7951e-03	551.93826	0.00000000
3. Mvg Avge{1}	0.1011	7.9298e-05	1274.75801	0.00000000
4. Constant	66030764.0437	11.7031	5642143.822	0.00000000
5. AUS{2}	0.7029	0.0126	55.75368	0.00000000
6. Mvg Avge{2}	7350441.4057	1058.7398	6942.63277	0.00000000
7. C(1)	0.0963	2.9348e-06	32819.52999	0.00000000
8. C(2)	2.7868e+15	5.5447e+09	502605.9344	0.0000000
9. A(1)	-0.0155	6.3033e-06	-2456.22376	0.00000000
10. A(2)	0.3749	4.8189e-05	7780.62656	0.00000000
11. B(1)	0.7522	0.0239	31.44002	0.00000000
12. B(2)	-0.8329	0.0357	-23.34560	0.00000000
13. DCC(1)	0.2106	2.0272e-04	1038.89649	0.00000000
14. DCC(2)	0.7832	3.7341e-03	209.74876	0.00000000

ประวัติผู้เขียน

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	ปีการศึกษา 2551