



ภาคผนวก

ลิขสิทธิ์มหาวิทยาลัยเชียงใหม่

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ภาคผนวก ก

ผลการทดสอบพาแนลยูนิทรูท (Panel Unit Root Test)

ตาราง 1ก ผลการทดสอบพาแนลยูนิทรูทของมูลค่าการส่งออกสินค้าภาคอุตสาหกรรม ที่ระดับ

level (I(0)) with Individual Intercept

Panel unit root test: Summary

Series: LNEXTM

Date: 02/07/12 Time: 19:37

Sample: 1999Q1 2011Q2

Exogenous variables: Individual effects

Automatic selection of maximum lags

Automatic selection of lags based on SIC: 0 to 5

Newey-West bandwidth selection using Bartlett kernel

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-0.89807	0.1846	5	240
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	1.23968	0.8925	5	240
ADF - Fisher Chi-square	3.43964	0.9691	5	240
PP - Fisher Chi-square	4.53746	0.9199	5	245

** Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

Null Hypothesis: Stationarity

Series: LNEXTM

Date: 02/07/12 Time: 19:38

Sample: 1999Q1 2011Q2

Exogenous variables: Individual effects

Newey-West bandwidth selection using Bartlett kernel

Total (balanced) observations: 250

Cross-sections included: 5

Method	Statistic	Prob.**
Hadri Z-stat	11.1876	0.0000
Heteroscedastic Consistent Z-stat	11.0268	0.0000

* Note: High autocorrelation leads to severe size distortion in Hadri test, leading to over-rejection of the null.

** Probabilities are computed assuming asymptotic normality

ที่มา: จากการคำนวณ

ตาราง 2ก ผลการทดสอบพาแนลยูนิทของอัตราแลกเปลี่ยน ที่ระดับ level (I(0)) with Individual

Intercept

Panel unit root test: Summary

Series: LNEXR

Date: 02/07/12 Time: 19:43

Sample: 1999Q1 2011Q2

Exogenous variables: Individual effects

Automatic selection of maximum lags

Automatic selection of lags based on SIC: 0 to 1

Newey-West bandwidth selection using Bartlett kernel

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	1.95435	0.9747	5	243
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	1.41047	0.9208	5	243
ADF - Fisher Chi-square	26.8174	0.0028	5	243
PP - Fisher Chi-square	26.6119	0.0030	5	245

** Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

Null Hypothesis: Stationarity

Series: LNEXR

Date: 02/07/12 Time: 19:45

Sample: 1999Q1 2011Q2

Exogenous variables: Individual effects

Newey-West bandwidth selection using Bartlett kernel

Total (balanced) observations: 250

Cross-sections included: 5

Method	Statistic	Prob.**
Hadri Z-stat	5.22810	0.0000
Heteroscedastic Consistent Z-stat	7.26775	0.0000

* Note: High autocorrelation leads to severe size distortion in Hadri test, leading to over-rejection of the null.

** Probabilities are computed assuming asymptotic normality

ที่มา: จากการคำนวณ

ตาราง 3ก ผลการทดสอบพาแนลยูนิทรูทของดัชนีราคาผู้บริโภค ที่ระดับ level (I(0)) with

Individual Intercept

Panel unit root test: Summary

Series: LNCPI

Date: 02/07/12 Time: 19:52

Sample: 1999Q1 2011Q2

Exogenous variables: Individual effects

Automatic selection of maximum lags

Automatic selection of lags based on SIC: 0 to 8

Newey-West bandwidth selection using Bartlett kernel

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	2.08754	0.9816	5	234
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	4.05961	1.0000	5	234
ADF - Fisher Chi-square	1.28351	0.9995	5	234
PP - Fisher Chi-square	3.39024	0.9707	5	245

** Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

Null Hypothesis: Stationarity

Series: LNCPI

Date: 02/07/12 Time: 19:52

Sample: 1999Q1 2011Q2

Exogenous variables: Individual effects

Newey-West bandwidth selection using Bartlett kernel

Total (balanced) observations: 250

Cross-sections included: 5

Method	Statistic	Prob.**
Hadri Z-stat	11.3842	0.0000
Heteroscedastic Consistent Z-stat	9.91339	0.0000

* Note: High autocorrelation leads to severe size distortion in Hadri test, leading to over-rejection of the null.

** Probabilities are computed assuming asymptotic normality

ที่มา: จากการคำนวณ

ตาราง 4ก ผลการทดสอบพาแนลยูนิทของเงินลงทุนโดยตรงจากต่างประเทศ ที่ระดับ level

(I(0)) with Individual Intercept

Panel unit root test: Summary

Series: LNFDI

Date: 02/07/12 Time: 19:57

Sample: 1999Q1 2011Q2

Exogenous variables: Individual effects

Automatic selection of maximum lags

Automatic selection of lags based on SIC: 0 to 3

Newey-West bandwidth selection using Bartlett kernel

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-4.10999	0.0000	5	241
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-4.04001	0.0000	5	241
ADF - Fisher Chi-square	48.2887	0.0000	5	241
PP - Fisher Chi-square	59.6791	0.0000	5	245

** Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

Null Hypothesis: Stationarity

Series: LNFDI

Date: 02/07/12 Time: 19:58

Sample: 1999Q1 2011Q2

Exogenous variables: Individual effects

Newey-West bandwidth selection using Bartlett kernel

Total (balanced) observations: 250

Cross-sections included: 5

Method	Statistic	Prob.**
Hadri Z-stat	7.94331	0.0000
Heteroscedastic Consistent Z-stat	5.12065	0.0000

* Note: High autocorrelation leads to severe size distortion in Hadri test, leading to over-rejection of the null.

** Probabilities are computed assuming asymptotic normality

ที่มา: จากการคำนวณ

ตาราง 5ก ผลการทดสอบพหุเมตริกของอัตราดอกเบี้ย ที่ระดับ level (I(0)) with Individual

Intercept

Panel unit root test: Summary

Series: LNITR

Date: 02/07/12 Time: 20:03

Sample: 1999Q1 2011Q2

Exogenous variables: Individual effects

Automatic selection of maximum lags

Automatic selection of lags based on SIC: 0 to 3

Newey-West bandwidth selection using Bartlett kernel

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	0.56550	0.7141	5	239
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-1.39112	0.0821	5	239
ADF - Fisher Chi-square	16.7531	0.0800	5	239
PP - Fisher Chi-square	27.7590	0.0020	5	245

** Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

Null Hypothesis: Stationarity

Series: LNITR

Date: 02/07/12 Time: 20:03

Sample: 1999Q1 2011Q2

Exogenous variables: Individual effects

Newey-West bandwidth selection using Bartlett kernel

Total (balanced) observations: 250

Cross-sections included: 5

Method	Statistic	Prob.**
Hadri Z-stat	2.25044	0.0122
Heteroscedastic Consistent Z-stat	2.42696	0.0076

* Note: High autocorrelation leads to severe size distortion in Hadri test, leading to over-rejection of the null.

** Probabilities are computed assuming asymptotic normality

ที่มา: จากการคำนวณ

ตาราง 6 ผลการทดสอบพาแนลยูนิทรูทของมูลค่าการส่งออกสินค้าภาคอุตสาหกรรม ที่ระดับ

1st difference (I(1)) with Individual Intercept

Panel unit root test: Summary

Series: D(LNEXM)

Date: 02/07/12 Time: 19:38

Sample: 1999Q1 2011Q2

Exogenous variables: Individual effects

Automatic selection of maximum lags

Automatic selection of lags based on SIC: 0 to 4

Newey-West bandwidth selection using Bartlett kernel

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-12.2945	0.0000	5	235
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-12.1005	0.0000	5	235
ADF - Fisher Chi-square	130.553	0.0000	5	235
PP - Fisher Chi-square	170.439	0.0000	5	240

** Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

Null Hypothesis: Stationarity

Series: D(LNEXM)

Date: 02/07/12 Time: 19:38

Sample: 1999Q1 2011Q2

Exogenous variables: Individual effects

Newey-West bandwidth selection using Bartlett kernel

Total (balanced) observations: 245

Cross-sections included: 5

Method	Statistic	Prob.**
Hadri Z-stat	-0.92419	0.8223
Heteroscedastic Consistent Z-stat	-0.77448	0.7807

* Note: High autocorrelation leads to severe size distortion in Hadri test, leading to over-rejection of the null.

** Probabilities are computed assuming asymptotic normality

ที่มา: จากการคำนวณ

ตาราง 7ก ผลการทดสอบพหุเมตริกของอัตราแลกเปลี่ยน ที่ระดับ 1st difference (I(1)) with

Individual Intercept

Panel unit root test: Summary

Series: D(LNEXR)

Date: 02/07/12 Time: 19:44

Sample: 1999Q1 2011Q2

Exogenous variables: Individual effects

Automatic selection of maximum lags

Automatic selection of lags based on SIC: 0 to 1

Newey-West bandwidth selection using Bartlett kernel

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-6.96859	0.0000	5	237
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-8.04371	0.0000	5	237
ADF - Fisher Chi-square	81.1500	0.0000	5	237
PP - Fisher Chi-square	65.2435	0.0000	5	240

** Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

Null Hypothesis: Stationarity

Series: D(LNEXR)

Date: 02/07/12 Time: 19:46

Sample: 1999Q1 2011Q2

Exogenous variables: Individual effects

Newey-West bandwidth selection using Bartlett kernel

Total (balanced) observations: 245

Cross-sections included: 5

Method	Statistic	Prob.**
Hadri Z-stat	3.48100	0.0002
Heteroscedastic Consistent Z-stat	3.36879	0.0004

* Note: High autocorrelation leads to severe size distortion in Hadri test, leading to over-rejection of the null.

** Probabilities are computed assuming asymptotic normality

ที่มา: จากการคำนวณ

ตาราง 8ก ผลการทดสอบพหุเมตริกของดัชนีราคาผู้บริโภค ที่ระดับ 1st difference (I(1)) with

Individual Intercept

Panel unit root test: Summary

Series: D(LNCPI)

Date: 02/07/12 Time: 19:52

Sample: 1999Q1 2011Q2

Exogenous variables: Individual effects

Automatic selection of maximum lags

Automatic selection of lags based on SIC: 0 to 7

Newey-West bandwidth selection using Bartlett kernel

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-7.08098	0.0000	5	232
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-9.46263	0.0000	5	232
ADF - Fisher Chi-square	97.7780	0.0000	5	232
PP - Fisher Chi-square	85.1425	0.0000	5	240

** Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

Null Hypothesis: Stationarity

Series: D(LNCPI)

Date: 02/07/12 Time: 19:53

Sample: 1999Q1 2011Q2

Exogenous variables: Individual effects

Newey-West bandwidth selection using Bartlett kernel

Total (balanced) observations: 245

Cross-sections included: 5

Method	Statistic	Prob.**
Hadri Z-stat	-0.23075	0.5912
Heteroscedastic Consistent Z-stat	0.71092	0.2386

* Note: High autocorrelation leads to severe size distortion in Hadri test, leading to over-rejection of the null.

** Probabilities are computed assuming asymptotic normality

ที่มา: จากการคำนวณ

ตาราง 9ก ผลการทดสอบพหุคูณนิพจน์ของเงินลงทุนโดยตรงจากต่างประเทศ ที่ระดับ

1st difference (I(1)) with Individual Intercept

Panel unit root test: Summary

Series: D(LNFDI)

Date: 02/07/12 Time: 19:57

Sample: 1999Q1 2011Q2

Exogenous variables: Individual effects

Automatic selection of maximum lags

Automatic selection of lags based on SIC: 0 to 3

Newey-West bandwidth selection using Bartlett kernel

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-16.5907	0.0000	5	235
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-19.4530	0.0000	5	235
ADF - Fisher Chi-square	202.851	0.0000	5	235
PP - Fisher Chi-square	139.205	0.0000	5	240

** Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

Null Hypothesis: Stationarity

Series: D(LNFDI)

Date: 02/07/12 Time: 19:58

Sample: 1999Q1 2011Q2

Exogenous variables: Individual effects

Newey-West bandwidth selection using Bartlett kernel

Total (balanced) observations: 245

Cross-sections included: 5

Method	Statistic	Prob.**
Hadri Z-stat	-0.13579	0.5540
Heteroscedastic Consistent Z-stat	1.64593	0.0499

* Note: High autocorrelation leads to severe size distortion in Hadri test, leading to over-rejection of the null.

** Probabilities are computed assuming asymptotic normality

ที่มา: จากการคำนวณ

ตาราง 10ก ผลการทดสอบพหุอนุกรมของอัตราดอกเบี้ย ที่ระดับ 1st difference (I(1)) with

Individual Intercept

Panel unit root test: Summary
 Series: D(LNITR)
 Date: 02/07/12 Time: 20:03
 Sample: 1999Q1 2011Q2
 Exogenous variables: Individual effects
 Automatic selection of maximum lags
 Automatic selection of lags based on SIC: 0 to 3
 Newey-West bandwidth selection using Bartlett kernel

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-4.72344	0.0000	5	237
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-7.64162	0.0000	5	237
ADF - Fisher Chi-square	74.7144	0.0000	5	237
PP - Fisher Chi-square	93.3427	0.0000	5	240

** Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

Null Hypothesis: Stationarity
 Series: D(LNITR)
 Date: 02/07/12 Time: 20:03
 Sample: 1999Q1 2011Q2
 Exogenous variables: Individual effects
 Newey-West bandwidth selection using Bartlett kernel
 Total (balanced) observations: 245
 Cross-sections included: 5

Method	Statistic	Prob.**
Hadri Z-stat	-0.03275	0.5131
Heteroscedastic Consistent Z-stat	0.08617	0.4657

* Note: High autocorrelation leads to severe size distortion in Hadri test, leading to over-rejection of the null.

** Probabilities are computed assuming asymptotic normality

ที่มา: จากการคำนวณ

ตาราง 11ก ผลการทดสอบพาแนลยูนิทรูทของการมูลค่าส่งออกสินค้าภาคอุตสาหกรรมที่ระดับ

level (I(0)) with Individual Intercept & Trend

Panel unit root test: Summary

Series: LNEXM

Date: 02/07/12 Time: 19:39

Sample: 1999Q1 2011Q2

Exogenous variables: Individual effects, individual linear trends

Automatic selection of maximum lags

Automatic selection of lags based on SIC: 0 to 5

Newey-West bandwidth selection using Bartlett kernel

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	0.43028	0.6665	5	237
Breitung t-stat	-1.96173	0.0249	5	232
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-0.29143	0.3854	5	237
ADF - Fisher Chi-square	10.5190	0.3962	5	237
PP - Fisher Chi-square	15.9612	0.1007	5	245

** Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

Null Hypothesis: Stationarity

Series: LNEXM

Date: 02/07/12 Time: 19:40

Sample: 1999Q1 2011Q2

Exogenous variables: Individual effects, individual linear trends

Newey-West bandwidth selection using Bartlett kernel

Total (balanced) observations: 250

Cross-sections included: 5

Method	Statistic	Prob.**
Hadri Z-stat	2.96215	0.0015
Heteroscedastic Consistent Z-stat	2.57270	0.0050

* Note: High autocorrelation leads to severe size distortion in Hadri test, leading to over-rejection of the null.

** Probabilities are computed assuming asymptotic normality

ที่มา: จากการคำนวณ

ตาราง 12ก ผลการทดสอบพหุอนุกรมของอัตราแลกเปลี่ยน ที่ระดับ level (I(0)) with

Individual Intercept & Trend

Panel unit root test: Summary

Series: LNEXR

Date: 02/07/12 Time: 19:47

Sample: 1999Q1 2011Q2

Exogenous variables: Individual effects, individual linear trends

Automatic selection of maximum lags

Automatic selection of lags based on SIC: 0 to 1

Newey-West bandwidth selection using Bartlett kernel

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-1.81465	0.0348	5	241
Breitung t-stat	-0.70854	0.2393	5	236
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-2.42105	0.0077	5	241
ADF - Fisher Chi-square	29.4476	0.0011	5	241
PP - Fisher Chi-square	24.8366	0.0057	5	245

** Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

Null Hypothesis: Stationarity

Series: LNEXR

Date: 02/07/12 Time: 19:48

Sample: 1999Q1 2011Q2

Exogenous variables: Individual effects, individual linear trends

Newey-West bandwidth selection using Bartlett kernel

Total (balanced) observations: 250

Cross-sections included: 5

Method	Statistic	Prob.**
Hadri Z-stat	2.95667	0.0016
Heteroscedastic Consistent Z-stat	5.79209	0.0000

* Note: High autocorrelation leads to severe size distortion in Hadri test, leading to over-rejection of the null.

** Probabilities are computed assuming asymptotic normality

ที่มา: จากการคำนวณ

ตาราง 13ก ผลการทดสอบพหุคูณนิทรูทของดัชนีราคาผู้บริโภค ที่ระดับ level (I(0)) with

Individual Intercept and trend

Panel unit root test: Summary

Series: LNCPI

Date: 02/07/12 Time: 19:53

Sample: 1999Q1 2011Q2

Exogenous variables: Individual effects, individual linear trends

Automatic selection of maximum lags

Automatic selection of lags based on SIC: 0 to 5

Newey-West bandwidth selection using Bartlett kernel

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	0.55937	0.7120	5	237
Breitung t-stat	-1.88818	0.0295	5	232
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-0.77439	0.2194	5	237
ADF - Fisher Chi-square	14.4497	0.1534	5	237
PP - Fisher Chi-square	7.94626	0.6341	5	245

** Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

Null Hypothesis: Stationarity

Series: LNCPI

Date: 02/07/12 Time: 19:54

Sample: 1999Q1 2011Q2

Exogenous variables: Individual effects, individual linear trends

Newey-West bandwidth selection using Bartlett kernel

Total (balanced) observations: 250

Cross-sections included: 5

Method	Statistic	Prob.**
Hadri Z-stat	4.53843	0.0000
Heteroscedastic Consistent Z-stat	4.38876	0.0000

* Note: High autocorrelation leads to severe size distortion in Hadri test, leading to over-rejection of the null.

** Probabilities are computed assuming asymptotic normality

ที่มา: จากการคำนวณ

ตาราง 14ก ผลการทดสอบพหุเมตริกของเงินลงทุนโดยตรงจากต่างประเทศ ที่ระดับ level

(I(0)) with intercept and trend

Panel unit root test: Summary

Series: LNFDI

Date: 02/07/12 Time: 19:58

Sample: 1999Q1 2011Q2

Exogenous variables: Individual effects, individual linear trends

Automatic selection of maximum lags

Automatic selection of lags based on SIC: 0 to 4

Newey-West bandwidth selection using Bartlett kernel

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-8.14193	0.0000	5	241
Breitung t-stat	-2.71549	0.0033	5	236
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-7.05056	0.0000	5	241
ADF - Fisher Chi-square	64.4522	0.0000	5	241
PP - Fisher Chi-square	86.2303	0.0000	5	245

** Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

Null Hypothesis: Stationarity

Series: LNFDI

Date: 02/07/12 Time: 19:59

Sample: 1999Q1 2011Q2

Exogenous variables: Individual effects, individual linear trends

Newey-West bandwidth selection using Bartlett kernel

Total (balanced) observations: 250

Cross-sections included: 5

Method	Statistic	Prob.**
Hadri Z-stat	1.80060	0.0359
Heteroscedastic Consistent Z-stat	1.66017	0.0484

* Note: High autocorrelation leads to severe size distortion in Hadri test, leading to over-rejection of the null.

** Probabilities are computed assuming asymptotic normality

ที่มา: จากการคำนวณ

ตาราง 15ก ผลการทดสอบพหุสมมติฐานของอัตราดอกเบี้ย ที่ระดับ level (I(0)) with Individual

Intercept and trend

Panel unit root test: Summary

Series: LNITR

Date: 02/07/12 Time: 20:05

Sample: 1999Q1 2011Q2

Exogenous variables: Individual effects, individual linear trends

Automatic selection of maximum lags

Automatic selection of lags based on SIC: 0 to 3

Newey-West bandwidth selection using Bartlett kernel

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	0.55118	0.7092	5	239
Breitung t-stat	-0.72504	0.2342	5	234
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-1.57080	0.0581	5	239
ADF - Fisher Chi-square	18.6223	0.0453	5	239
PP - Fisher Chi-square	23.1638	0.0102	5	245

** Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

Null Hypothesis: Stationarity

Series: LNITR

Date: 02/07/12 Time: 20:06

Sample: 1999Q1 2011Q2

Exogenous variables: Individual effects, individual linear trends

Newey-West bandwidth selection using Bartlett kernel

Total (balanced) observations: 250

Cross-sections included: 5

Method	Statistic	Prob.**
Hadri Z-stat	2.58819	0.0048
Heteroscedastic Consistent Z-stat	1.89480	0.0291

* Note: High autocorrelation leads to severe size distortion in Hadri test, leading to over-rejection of the null.

** Probabilities are computed assuming asymptotic normality

ที่มา: จากการคำนวณ

ตาราง 16 ผลการทดสอบพาแนลยูนิทของการมูลค่าส่งออกสินค้าภาคอุตสาหกรรมที่ระดับ

1st difference (I(1)) with Individual Intercept & Trend

Panel unit root test: Summary

Series: D(LNEXM)

Date: 02/07/12 Time: 19:40

Sample: 1999Q1 2011Q2

Exogenous variables: Individual effects, individual linear trends

Automatic selection of maximum lags

Automatic selection of lags based on SIC: 0 to 4

Newey-West bandwidth selection using Bartlett kernel

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-11.7060	0.0000	5	235
Breitung t-stat	-5.74600	0.0000	5	230
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-11.2792	0.0000	5	235
ADF - Fisher Chi-square	111.026	0.0000	5	235
PP - Fisher Chi-square	181.507	0.0000	5	240

** Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

Null Hypothesis: Stationarity

Series: D(LNEXM)

Date: 02/07/12 Time: 19:40

Sample: 1999Q1 2011Q2

Exogenous variables: Individual effects, individual linear trends

Newey-West bandwidth selection using Bartlett kernel

Total (balanced) observations: 245

Cross-sections included: 5

Method	Statistic	Prob.**
Hadri Z-stat	0.64941	0.2580
Heteroscedastic Consistent Z-stat	1.22374	0.1105

* Note: High autocorrelation leads to severe size distortion in Hadri test, leading to over-rejection of the null.

** Probabilities are computed assuming asymptotic normality

ที่มา: จากการคำนวณ

ตาราง 17ก ผลการทดสอบพหุคูณนิทรูทของอัตราแลกเปลี่ยน ที่ระดับ 1st difference (I(1)) with

Individual Intercept & Trend

Panel unit root test: Summary

Series: D(LNEXR)

Date: 02/07/12 Time: 19:47

Sample: 1999Q1 2011Q2

Exogenous variables: Individual effects, individual linear trends

Automatic selection of maximum lags

Automatic selection of lags based on SIC: 0 to 1

Newey-West bandwidth selection using Bartlett kernel

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-7.63301	0.0000	5	236
Breitung t-stat	-7.09368	0.0000	5	231
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-8.16493	0.0000	5	236
ADF - Fisher Chi-square	77.6423	0.0000	5	236
PP - Fisher Chi-square	308.165	0.0000	5	240

** Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

Null Hypothesis: Stationarity

Series: D(LNEXR)

Date: 02/07/12 Time: 19:48

Sample: 1999Q1 2011Q2

Exogenous variables: Individual effects, individual linear trends

Newey-West bandwidth selection using Bartlett kernel

Total (balanced) observations: 245

Cross-sections included: 5

Method	Statistic	Prob.**
Hadri Z-stat	15.0729	0.0000
Heteroscedastic Consistent Z-stat	4.30504	0.0000

* Note: High autocorrelation leads to severe size distortion in Hadri test, leading to over-rejection of the null.

** Probabilities are computed assuming asymptotic normality

ที่มา: จากการคำนวณ

ตาราง 18ก ผลการทดสอบพหุเมตริกของดัชนีราคาผู้บริโภค ที่ระดับ 1st difference (I(1))

with Individual Intercept & Trend

Panel unit root test: Summary

Series: D(LNCPI)

Date: 02/07/12 Time: 19:54

Sample: 1999Q1 2011Q2

Exogenous variables: Individual effects, individual linear trends

Automatic selection of maximum lags

Automatic selection of lags based on SIC: 0 to 7

Newey-West bandwidth selection using Bartlett kernel

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-6.75303	0.0000	5	232
Breitung t-stat	-6.61869	0.0000	5	227
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-8.84252	0.0000	5	232
ADF - Fisher Chi-square	82.6942	0.0000	5	232
PP - Fisher Chi-square	84.8339	0.0000	5	240

** Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

Null Hypothesis: Stationarity

Series: D(LNCPI)

Date: 02/07/12 Time: 19:54

Sample: 1999Q1 2011Q2

Exogenous variables: Individual effects, individual linear trends

Newey-West bandwidth selection using Bartlett kernel

Total (balanced) observations: 245

Cross-sections included: 5

Method	Statistic	Prob.**
Hadri Z-stat	1.00723	0.1569
Heteroscedastic Consistent Z-stat	1.04764	0.1474

* Note: High autocorrelation leads to severe size distortion in Hadri test, leading to over-rejection of the null.

** Probabilities are computed assuming asymptotic normality

ที่มา: จากการคำนวณ

ตาราง 19ก ผลการทดสอบพหุคูณนิทรูทของเงินลงทุนโดยตรงจากต่างประเทศ ที่ระดับ

1st difference (I(1)) with Individual Intercept and trend

Panel unit root test: Summary

Series: D(LNFDI)

Date: 02/07/12 Time: 19:59

Sample: 1999Q1 2011Q2

Exogenous variables: Individual effects, individual linear trends

Automatic selection of maximum lags

Automatic selection of lags based on SIC: 0 to 3

Newey-West bandwidth selection using Bartlett kernel

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-15.8968	0.0000	5	235
Breitung t-stat	-7.47115	0.0000	5	230
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-19.2355	0.0000	5	235
ADF - Fisher Chi-square	222.757	0.0000	5	235
PP - Fisher Chi-square	1040.92	0.0000	5	240

** Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

Null Hypothesis: Stationarity

Series: D(LNFDI)

Date: 02/07/12 Time: 19:59

Sample: 1999Q1 2011Q2

Exogenous variables: Individual effects, individual linear trends

Newey-West bandwidth selection using Bartlett kernel

Total (balanced) observations: 245

Cross-sections included: 5

Method	Statistic	Prob.**
Hadri Z-stat	3.34150	0.0004
Heteroscedastic Consistent Z-stat	10.7988	0.0000

* Note: High autocorrelation leads to severe size distortion in Hadri test, leading to over-rejection of the null.

** Probabilities are computed assuming asymptotic normality

ที่มา: จากการคำนวณ

ตาราง 20ก ผลการทดสอบพหุเมตริกของอัตราดอกเบี้ย ที่ระดับ 1st difference (I(1)) with

Individual Intercept and trend

Panel unit root test: Summary

Series: D(LNITR)

Date: 02/07/12 Time: 20:06

Sample: 1999Q1 2011Q2

Exogenous variables: Individual effects, individual linear trends

Automatic selection of maximum lags

Automatic selection of lags based on SIC: 0 to 3

Newey-West bandwidth selection using Bartlett kernel

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-3.47821	0.0003	5	237
Breitung t-stat	-2.90484	0.0018	5	232
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-6.44233	0.0000	5	237
ADF - Fisher Chi-square	56.4129	0.0000	5	237
PP - Fisher Chi-square	73.9916	0.0000	5	240

** Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

Null Hypothesis: Stationarity

Series: D(LNITR)

Date: 02/07/12 Time: 20:06

Sample: 1999Q1 2011Q2

Exogenous variables: Individual effects, individual linear trends

Newey-West bandwidth selection using Bartlett kernel

Total (balanced) observations: 245

Cross-sections included: 5

Method	Statistic	Prob.**
Hadri Z-stat	0.90791	0.1820
Heteroscedastic Consistent Z-stat	0.74191	0.2291

* Note: High autocorrelation leads to severe size distortion in Hadri test, leading to over-rejection of the null.

** Probabilities are computed assuming asymptotic normality

ที่มา: จากการคำนวณ

ตาราง 21ก ผลการทดสอบพหุคูณนิทรูทของการมูลค่าส่งออกสินค้าภาคอุตสาหกรรมที่ระดับ

level (I(0)) with None

Panel unit root test: Summary

Series: LNEXM

Date: 02/07/12 Time: 19:41

Sample: 1999Q1 2011Q2

Exogenous variables: None

Automatic selection of maximum lags

Automatic selection of lags based on SIC: 0 to 5

Newey-West bandwidth selection using Bartlett kernel

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	5.39869	1.0000	5	240
Null: Unit root (assumes individual unit root process)				
ADF - Fisher Chi-square	0.11578	1.0000	5	240
PP - Fisher Chi-square	0.07271	1.0000	5	245

** Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

ที่มา: จากการคำนวณ

ตาราง 22ก ผลการทดสอบพหุคูณนิทรูทของอัตราแลกเปลี่ยนที่ระดับ level (I(0)) with None

Panel unit root test: Summary

Series: LNEXR

Date: 02/07/12 Time: 19:50

Sample: 1999Q1 2011Q2

Exogenous variables: None

Automatic selection of maximum lags

Automatic selection of lags based on SIC: 0 to 2

Newey-West bandwidth selection using Bartlett kernel

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-2.01621	0.0219	5	240
Null: Unit root (assumes individual unit root process)				
ADF - Fisher Chi-square	14.2970	0.1599	5	240
PP - Fisher Chi-square	19.1899	0.0379	5	245

** Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

ที่มา: จากการคำนวณ

ตาราง 23ก ผลการทดสอบพหุคูณนิพจน์ของดัชนีราคาผู้บริโภค ที่ระดับ level (I(0)) with None

Panel unit root test: Summary

Series: LNCPI

Date: 02/07/12 Time: 19:55

Sample: 1999Q1 2011Q2

Exogenous variables: None

Automatic selection of maximum lags

Automatic selection of lags based on SIC: 0 to 8

Newey-West bandwidth selection using Bartlett kernel

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	6.41295	1.0000	5	234
Null: Unit root (assumes individual unit root process)				
ADF - Fisher Chi-square	0.20268	1.0000	5	234
PP - Fisher Chi-square	0.33580	1.0000	5	245

** Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

ที่มา: จากการคำนวณ

ตาราง 24ก ผลการทดสอบพหุคูณนิพจน์ของเงินลงทุนโดยตรงจากต่างประเทศ ที่ระดับ level

(I(0)) with None

Panel unit root test: Summary

Series: LNFDI

Date: 02/07/12 Time: 20:00

Sample: 1999Q1 2011Q2

Exogenous variables: None

Automatic selection of maximum lags

Automatic selection of lags based on SIC: 0 to 4

Newey-West bandwidth selection using Bartlett kernel

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	1.28657	0.9009	5	236
Null: Unit root (assumes individual unit root process)				
ADF - Fisher Chi-square	4.56490	0.9183	5	236
PP - Fisher Chi-square	5.87497	0.8257	5	245

** Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

ที่มา: จากการคำนวณ

ตาราง 25ก ผลการทดสอบพหุคูณนิทรูทของอัตราดอกเบี้ย ที่ระดับ level (I(0)) with None

Panel unit root test: Summary

Series: LNITR

Date: 02/07/12 Time: 20:07

Sample: 1999Q1 2011Q2

Exogenous variables: None

Automatic selection of maximum lags

Automatic selection of lags based on SIC: 0 to 4

Newey-West bandwidth selection using Bartlett kernel

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-1.08902	0.1381	5	238
Null: Unit root (assumes individual unit root process)				
ADF - Fisher Chi-square	7.22874	0.7037	5	238
PP - Fisher Chi-square	14.3649	0.1570	5	245

** Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

ที่มา: จากการคำนวณ

ตาราง 26ก ผลการทดสอบพหุคูณนิทรูทของการมูลค่าส่งออกสินค้าภาคอุตสาหกรรมที่ระดับ

1st difference (I(1)) with None

Panel unit root test: Summary

Series: D(LNEXM)

Date: 02/07/12 Time: 19:41

Sample: 1999Q1 2011Q2

Exogenous variables: None

Automatic selection of maximum lags

Automatic selection of lags based on SIC: 0 to 4

Newey-West bandwidth selection using Bartlett kernel

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-11.5937	0.0000	5	234
Null: Unit root (assumes individual unit root process)				
ADF - Fisher Chi-square	158.935	0.0000	5	234
PP - Fisher Chi-square	229.476	0.0000	5	240

** Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

ที่มา: จากการคำนวณ

ตาราง 27ก ผลการทดสอบพหุคูณนิพจน์ของอัตราแลกเปลี่ยน ที่ระดับ 1st difference (I(1)) with

None

Panel unit root test: Summary

Series: D(LNEXR)

Date: 02/07/12 Time: 19:50

Sample: 1999Q1 2011Q2

Exogenous variables: None

Automatic selection of maximum lags

Automatic selection of lags based on SIC: 0 to 1

Newey-West bandwidth selection using Bartlett kernel

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-7.64004	0.0000	5	239
Null: Unit root (assumes individual unit root process)				
ADF - Fisher Chi-square	136.897	0.0000	5	239
PP - Fisher Chi-square	329.096	0.0000	5	240

** Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

ที่มา: จากการคำนวณ

ตาราง 28ก ผลการทดสอบพหุคูณนิพจน์ของดัชนีราคาผู้บริโภค ที่ระดับ 1st difference (I(1)) with

None

Panel unit root test: Summary

Series: D(LNCPI)

Date: 02/07/12 Time: 19:55

Sample: 1999Q1 2011Q2

Exogenous variables: None

Automatic selection of maximum lags

Automatic selection of lags based on SIC: 0 to 7

Newey-West bandwidth selection using Bartlett kernel

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-7.72626	0.0000	5	233
Null: Unit root (assumes individual unit root process)				
ADF - Fisher Chi-square	89.3096	0.0000	5	233
PP - Fisher Chi-square	77.6391	0.0000	5	240

** Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

ที่มา: จากการคำนวณ

ตาราง 29ก ผลการทดสอบพหุคูณนิทรูทของเงินลงทุนโดยตรงจากต่างประเทศ ที่ระดับ

1st difference (I(1)) with None

Panel unit root test: Summary

Series: D(LNFDI)

Date: 02/07/12 Time: 20:00

Sample: 1999Q1 2011Q2

Exogenous variables: None

Automatic selection of maximum lags

Automatic selection of lags based on SIC: 0 to 3

Newey-West bandwidth selection using Bartlett kernel

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-18.5017	0.0000	5	235
Null: Unit root (assumes individual unit root process)				
ADF - Fisher Chi-square	728.695	0.0000	5	235
PP - Fisher Chi-square	1316.95	0.0000	5	240

** Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

ที่มา: จากการคำนวณ

ตาราง 30ก ผลการทดสอบพหุคูณนิทรูทของอัตราดอกเบี้ย ที่ระดับ 1st difference (I(1)) with

None

Panel unit root test: Summary

Series: D(LNITR)

Date: 02/07/12 Time: 20:08

Sample: 1999Q1 2011Q2

Exogenous variables: None

Automatic selection of maximum lags

Automatic selection of lags based on SIC: 0 to 3

Newey-West bandwidth selection using Bartlett kernel

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-9.91429	0.0000	5	237
Null: Unit root (assumes individual unit root process)				
ADF - Fisher Chi-square	111.365	0.0000	5	237
PP - Fisher Chi-square	141.884	0.0000	5	240

** Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

ที่มา: จากการคำนวณ

ภาคผนวก ข

ผลการทดสอบพหุสมการโคอินทิเกรชัน (Panel Cointegration Test)

ตาราง 1ข ผลการทดสอบพหุสมการโคอินทิเกรชัน ด้วยวิธีของ Pedroni Test with Individual

Intercept and Trend

Pedroni Residual Cointegration Test
Series: LNEXM LNEXR LNCPI LNFDI LNITR
Date: 02/07/12 Time: 19:16
Sample: 1999Q1 2011Q2
Included observations: 250
Cross-sections included: 5
Null Hypothesis: No cointegration
Trend assumption: Deterministic intercept and trend
Lag selection: Automatic SIC with a max lag of 10
Newey-West bandwidth selection with Bartlett kernel

Alternative hypothesis: common AR coefs. (within-dimension)

	<u>Statistic</u>	<u>Prob.</u>	<u>Weighted Statistic</u>	<u>Prob.</u>
Panel v-Statistic	0.802651	0.2111	0.069218	0.4724
Panel rho-Statistic	-1.112746	0.1329	-1.081745	0.1397
Panel PP-Statistic	-2.767526	0.0028	-2.878219	0.0020
Panel ADF-Statistic	-2.191395	0.0142	-2.485884	0.0065

Alternative hypothesis: individual AR coefs. (between-dimension)

	<u>Statistic</u>	<u>Prob.</u>
Group rho-Statistic	-0.272281	0.3927
Group PP-Statistic	-2.472300	0.0067
Group ADF-Statistic	-1.626227	0.0520

ที่มา: จากการคำนวณ

ตาราง 2ข ผลการทดสอบพหุคูณโคอินทิเกรชัน ด้วยวิธีของ Kao Test with No Deterministic Trend

Kao Residual Cointegration Test
 Series: LNEXM LNEXR LNCPI LNFDI LNITR
 Date: 02/07/12 Time: 19:18
 Sample: 1999Q1 2011Q2
 Included observations: 250
 Null Hypothesis: No cointegration
 Trend assumption: No deterministic trend
 Lag selection: Automatic 1 lag by SIC with a max lag of 1
 Newey-West bandwidth selection using Bartlett kernel

	t-Statistic	Prob.
ADF	-2.003802	0.0225
Residual variance	0.010951	
HAC variance	0.015333	

Augmented Dickey-Fuller Test Equation
 Dependent Variable: D(RESID)
 Method: Least Squares
 Date: 02/07/12 Time: 19:18
 Sample (adjusted): 1999Q3 2011Q2
 Included observations: 240 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RESID(-1)	-0.140416	0.034588	-4.059669	0.0001
D(RESID(-1))	-0.308417	0.059018	-5.225838	0.0000
R-squared	0.188758	Mean dependent var		0.014849
Adjusted R-squared	0.185349	S.D. dependent var		0.221789
S.E. of regression	0.200182	Akaike info criterion		-0.370877
Sum squared resid	9.537376	Schwarz criterion		-0.341872
Log likelihood	46.50522	Hannan-Quinn criter.		-0.359190
Durbin-Watson stat	2.195997			

ที่มา: จากการคำนวณ

ภาคผนวก ก

ผลการทดสอบสมการพาดแนล (Panel Equation Testing)

ตาราง 1ก ผลการทดสอบสมการพาดแนล ด้วยวิธี Hausman Test

Correlated Random Effects - Hausman Test

Equation: Untitled

Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	1667.610540	4	0.0000

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
LNEXR	-0.946913	0.316735	0.022308	0.0000
LNCPI	1.653166	-0.982590	0.012581	0.0000
LNFDI	0.012614	0.224772	0.000069	0.0000
LNITR	0.143664	-0.959338	0.002257	0.0000

Cross-section random effects test equation:

Dependent Variable: LNEXM

Method: Panel Least Squares

Date: 02/07/12 Time: 19:21

Sample: 1999Q1 2011Q2

Periods included: 50

Cross-sections included: 5

Total panel (balanced) observations: 250

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	4.109862	1.214853	3.383012	0.0008
LNEXR	-0.946913	0.149805	-6.320952	0.0000
LNCPI	1.653166	0.237698	6.954889	0.0000
LNFDI	0.012614	0.017391	0.725342	0.4689
LNITR	0.143664	0.056272	2.553018	0.0113

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.942794	Mean dependent var	8.747437
Adjusted R-squared	0.940895	S.D. dependent var	1.665822
S.E. of regression	0.404986	Akaike info criterion	1.065409
Sum squared resid	39.52734	Schwarz criterion	1.192181
Log likelihood	-124.1761	Hannan-Quinn criter.	1.116431
F-statistic	496.4810	Durbin-Watson stat	0.313417
Prob(F-statistic)	0.000000		

ที่มา: จากการคำนวณ

ตาราง 2ค ผลการทดสอบสมการพาดแนล ด้วยวิธี Redundant Fixed Effects Test

Redundant Fixed Effects Tests

Equation: Untitled

Test cross-section fixed effects

Effects Test	Statistic	d.f.	Prob.
Cross-section F	416.902632	(4,241)	0.0000
Cross-section Chi-square	517.333463	4	0.0000

Cross-section fixed effects test equation:

Dependent Variable: LNEXM

Method: Panel Least Squares

Date: 02/07/12 Time: 19:24

Sample: 1999Q1 2011Q2

Periods included: 50

Cross-sections included: 5

Total panel (balanced) observations: 250

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	11.00606	2.534967	4.341698	0.0000
LNEXR	0.316735	0.032312	9.802335	0.0000
LNCPI	-0.982590	0.584930	-1.679841	0.0943
LNFDI	0.224772	0.042681	5.266345	0.0000
LNITR	-0.959338	0.084165	-11.39837	0.0000

R-squared	0.546955	Mean dependent var	8.747437
Adjusted R-squared	0.539558	S.D. dependent var	1.665822
S.E. of regression	1.130358	Akaike info criterion	3.102743
Sum squared resid	313.0386	Schwarz criterion	3.173172
Log likelihood	-382.8428	Hannan-Quinn criter.	3.131088
F-statistic	73.94623	Durbin-Watson stat	0.166995
Prob(F-statistic)	0.000000		

ที่มา: จากการคำนวณ

ภาคผนวก ง

ผลการประมาณค่าแบบจำลองพาแนล (Panel Estimation)

ตาราง 1ง ผลการประมาณค่าแบบจำลองมูลค่าการส่งออกสินค้าภาคอุตสาหกรรมและตัวแปรทางเศรษฐกิจของประเทศในเอเชีย ด้วยวิธี OLS

Dependent Variable: LNEXM
Method: Panel Least Squares
Date: 02/07/12 Time: 19:21
Sample: 1999Q1 2011Q2
Periods included: 50
Cross-sections included: 5
Total panel (balanced) observations: 250

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	4.109862	1.214853	3.383012	0.0008
LNEXR	-0.946913	0.149805	-6.320952	0.0000
LNCPI	1.653166	0.237698	6.954889	0.0000
LNFDI	0.012614	0.017391	0.725342	0.4689
LNITR	0.143664	0.056272	2.553018	0.0113

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.942794	Mean dependent var	8.747437
Adjusted R-squared	0.940895	S.D. dependent var	1.665822
S.E. of regression	0.404986	Akaike info criterion	1.065409
Sum squared resid	39.52734	Schwarz criterion	1.192181
Log likelihood	-124.1761	Hannan-Quinn criter.	1.116431
F-statistic	496.4810	Durbin-Watson stat	0.313417
Prob(F-statistic)	0.000000		

ที่มา: จากการคำนวณ

ตาราง 2ง ผลการประมาณค่าแบบจำลองมูลค่าการส่งออกสินค้าภาคอุตสาหกรรมและตัวแปรทาง

เศรษฐกิจของประเทศไทยด้วยวิธี DOLS

Dependent Variable: LNEXM
 Method: Panel Least Squares
 Date: 02/07/12 Time: 19:25
 Sample (adjusted): 1999Q3 2011Q2
 Periods included: 48
 Cross-sections included: 5
 Total panel (balanced) observations: 240

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	4.664684	1.228989	3.795545	0.0002
LNEXR	-0.931623	0.144285	-6.456838	0.0000
LNCPI	1.513438	0.240659	6.288720	0.0000
LNFDI	0.017401	0.017246	1.008970	0.3141
LNITR	0.156869	0.057740	2.716806	0.0071
D(LNEXR(-1))	0.018515	0.117938	0.156987	0.8754
D(LNCPI(-1))	3.171281	2.412986	1.314256	0.1901
D(LNFDI(-1))	0.000492	0.014307	0.034359	0.9726
D(LNITR(-1))	-0.008914	0.157829	-0.056476	0.9550

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.949475	Mean dependent var	8.780181
Adjusted R-squared	0.946804	S.D. dependent var	1.671106
S.E. of regression	0.385429	Akaike info criterion	0.983727
Sum squared resid	33.72216	Schwarz criterion	1.172261
Log likelihood	-105.0472	Hannan-Quinn criter.	1.059692
F-statistic	355.4826	Durbin-Watson stat	0.350069
Prob(F-statistic)	0.000000		

ที่มา: จากการคำนวณ

ตาราง 3ง ผลการประมาณค่าแบบจำลองมูลค่าการส่งออกสินค้าภาคอุตสาหกรรมและตัวแปรทาง

เศรษฐกิจของประเทศไทยด้วยวิธี GMM

Dependent Variable: LNEXM
 Method: Panel Generalized Method of Moments
 Date: 02/07/12 Time: 19:27
 Sample (adjusted): 1999Q2 2011Q2
 Periods included: 49
 Cross-sections included: 5
 Total panel (balanced) observations: 245
 2SLS instrument weighting matrix
 Instrument list: C LNEXM(-1) LNEXR(-1) LNCPI(-1) LNFDI(-1) LNITR(-1)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	36.49586	8.592572	4.247373	0.0000
LNEXR	-6.262248	1.088729	-5.751889	0.0000
LNCPI	-2.039755	1.560146	-1.307413	0.1923
LNFDI	0.339350	0.156125	2.173583	0.0307
LNITR	-0.038721	0.172767	-0.224124	0.8229

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.609148	Mean dependent var	8.765534
Adjusted R-squared	0.595899	S.D. dependent var	1.667658
S.E. of regression	1.060113	Sum squared resid	265.2260
Durbin-Watson stat	1.854168	J-statistic	2.190508
Instrument rank	10.000000		

ที่มา: จากการคำนวณ

ประวัติผู้เขียน

ชื่อ - สกุล

นายกฤษฎา นาทหลวง

วัน เดือน ปีเกิด

31 สิงหาคม 2531

ประวัติการศึกษา

สำเร็จการศึกษาระดับมัธยมศึกษาตอนปลาย โรงเรียนนวมินทราชูทิศ
พายัพ จังหวัด เชียงใหม่ ปีการศึกษา 2548

สำเร็จการศึกษาระดับปริญญาตรีเศรษฐศาสตรบัณฑิต

คณะเศรษฐศาสตร์ มหาวิทยาลัยเชียงใหม่ ปีการศึกษา 2552