

ภาคผนวก ก

แสดงผลการเลือกช่วงเวลา (Lag Length) ที่เหมาะสม

1. กรณีศึกษาประเทศไทยกับประเทศจีน

เมื่อช่วงเวลา = 2

Variable Addition Test (OLS case)			

Dependent variable is DLEXPO			
List of the variables added to the regression:			
LEXPO(-1) LMPITH(-1) LMPICN(-1) LRER(-1)			
96 observations used for estimation from 2001M4 to 2009M3			

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
INPT	2.1261	12.0556	.17636 [.860]
DLEXPO(-1)	.076642	.12285	.62385 [.534]
DLEXPO(-2)	.092610	.10469	.88460 [.379]
DLMPITH(-1)	-1.8275	1.2172	-1.5014 [.137]
DLMPITH(-2)	1.5613	1.2061	1.2945 [.199]
DLMPICN(-1)	-.31847	2.5689	-.12397 [.902]
DLMPICN(-2)	.38686	2.0418	.18947 [.850]
DLRER(-1)	3.8926	3.0582	1.2729 [.207]
DLRER(-2)	-1.8442	3.3463	-.55110 [.583]
LEXPO(-1)	-.53980	.11917	-4.5299 [.000]
LMPITH(-1)	1.1724	.94032	1.2468 [.216]
LMPICN(-1)	.56906	2.3152	.24579 [.806]
LRER(-1)	-.16829	1.7225	-.097701 [.922]

Joint test of zero restrictions on the coefficients of additional variables:			
Lagrange Multiplier Statistic CHSQ(4)= 19.6858 [.001]			
Likelihood Ratio Statistic CHSQ(4)= 22.0310 [.000]			
F Statistic F(4, 83)= 5.3526 [.001]			

ເມື່ອຂ່າວເວລາ = 3

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Variable Addition Test (OLS case)
*****
Dependent variable is DLEXPO
List of the variables added to the regression:
LEXPO(-1)      LMPITH(-1)      LMPICN(-1)      LRER(-1)
95 observations used for estimation from 2001M5 to 2009M3
*****
Regressor          Coefficient       Standard Error     T-Ratio[Prob]
INPT              6.1445           13.6726          .44940 [.654]
DLEXPO(-1)        .16546            .13630          1.2140 [.228]
DLEXPO(-2)        .20117            .13053          1.5411 [.127]
DLEXPO(-3)        .15189            .10671          1.4234 [.159]
DLMPITH(-1)       -1.4908          1.3606          -1.0957 [.277]
DLMPITH(-2)       1.9349            1.5231          1.2704 [.208]
DLMPITH(-3)       .35492             .3105          .27083 [.787]
DLMPICN(-1)       -.15946            3.1159          -.051177 [.959]
DLMPICN(-2)       .51952             3.1723          .16377 [.870]
DLMPICN(-3)       -1.4768            2.2025          -.67051 [.505]
DLRER(-1)         4.8958            3.1507          1.5539 [.124]
DLRER(-2)         -1.5924            3.3600          -.47392 [.637]
DLRER(-3)         -2.3311            3.3970          -.68624 [.495]
LEXPO(-1)         -.65518            1.13673         -4.7919 [.000]
LMPITH(-1)        1.4296            1.0799          1.3239 [.189]
LMPICN(-1)        -.072278          2.7911          -.025896 [.979]
LRER(-1)          -1.9532            1.8838          -.10368 [.918]
*****
Joint test of zero restrictions on the coefficients of additional variables:
Lagrange Multiplier Statistic   CHSQ( 4)= 23.0551 [.000]
Likelihood Ratio Statistic     CHSQ( 4)= 26.4078 [.000]
F Statistic                  F( 4, 78)= 6.2489 [.000]
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ເມື່ອຂ່າວເວລາ = 4

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Variable Addition Test (OLS case)
*****
Dependent variable is DLEXPO
List of the variables added to the regression:
LEXPO(-1)      LMPITH(-1)      LMPICN(-1)      LRER(-1)
94 observations used for estimation from 2001M6 to 2009M3
*****
Regressor          Coefficient       Standard Error     T-Ratio[Prob]
INPT              -10.5535          13.8908          -.75975 [.450]
DLEXPO(-1)        .31460            .13962          2.2533 [.027]
DLEXPO(-2)        .37979            .13536          2.8059 [.006]
DLEXPO(-3)        .23709            .12696          1.8675 [.066]
DLEXPO(-4)        .22925            .10187          2.2504 [.027]
DLMPITH(-1)       -2.1504            1.4028          -1.5329 [.130]
DLMPITH(-2)       .16766            1.4968          .11201 [.911]
DLMPITH(-3)       -1.9378            1.4767          -1.3123 [.194]
DLMPITH(-4)       -3.3134            1.2780          -2.5927 [.011]
DLMPICN(-1)       -2.4565            3.5209          -.69769 [.488]
DLMPICN(-2)       -2.0299            3.6894          -.55018 [.584]
DLMPICN(-3)       -4.3733            3.3382          -1.3101 [.194]
DLMPICN(-4)       -2.5226            2.1847          -1.1547 [.252]
DLRER(-1)         3.9224            3.1174          1.2582 [.212]
DLRER(-2)         -3.7751            3.3275          -1.1345 [.260]
DLRER(-3)         -1.7380            3.2148          -.54063 [.590]
DLRER(-4)         -3.9208            3.2843          -1.1938 [.236]
LEXPO(-1)         -.84220            1.4981          -5.6217 [.000]
LMPITH(-1)        2.6224            1.1959          2.1929 [.032]
LMPICN(-1)        2.2642            3.0126          .75158 [.455]
LRER(-1)          1.7520            2.0014          .87537 [.384]
*****
Joint test of zero restrictions on the coefficients of additional variables:
Lagrange Multiplier Statistic   CHSQ( 4)= 29.1714 [.000]
Likelihood Ratio Statistic     CHSQ( 4)= 34.9256 [.000]
F Statistic                  F( 4, 73)= 8.2121 [.000]
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เมื่อช่วงเวลา = 5

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Variable Addition Test (OLS case)
*****
Dependent variable is DLEXPO
List of the variables added to the regression:
LEXPO(-1)      LMPITH(-1)      LMPICN(-1)      LRER(-1)
93 observations used for estimation from 2001M7 to 2009M3
*****
Regressor          Coefficient       Standard Error     T-Ratio[Prob]
INPT              -16.9145        14.3801          -1.1762 [.244]
DLEXPO(-1)         .51685         .15108           3.4212 [.001]
DLEXPO(-2)         .50928         .14353           3.5482 [.001]
DLEXPO(-3)         .40482         .13978           2.8961 [.005]
DLEXPO(-4)         .47393         .13090           3.6207 [.001]
DLEXPO(-5)         .30862         .10573           2.9190 [.005]
DLMPITH(-1)        -3.4647        1.5320          -2.2616 [.027]
DLMPITH(-2)        -1.8676        1.6175          -1.1546 [.252]
DLMPITH(-3)        -2.5390        1.4996          -1.6931 [.095]
DLMPITH(-4)        -2.1262        1.6180          -1.3141 [.193]
DLMPITH(-5)        1.5134         1.4457           1.0468 [.299]
DLMPICN(-1)        -4.7092        3.7631           -1.2514 [.215]
DLMPICN(-2)        -3.9720        4.0977           -.96932 [.336]
DLMPICN(-3)        -6.8496        3.9472          -1.7353 [.087]
DLMPICN(-4)        -5.1736        3.4398          -1.5041 [.137]
DLMPICN(-5)        -2.6026        2.1806          -1.1936 [.237]
DLRER(-1)           2.3526         3.1662           .74305 [.460]
DLRER(-2)           -2.8615        3.4245          -.83560 [.406]
DLRER(-3)           -.024543        3.3321          -.0073656 [.994]
DLRER(-4)           -4.7227        3.2275          -1.4633 [.148]
DLRER(-5)           -1.1923        3.2626          -.36546 [.716]
LEXPO(-1)           -1.1200        .17647           -6.3466 [.000]
LMPITH(-1)          3.0170         1.3554           2.2260 [.029]
LMPICN(-1)          4.3513         3.3284           1.3073 [.196]
LRER(-1)            1.6411         2.2130           .74160 [.461]
*****
Joint test of zero restrictions on the coefficients of additional variables:
Lagrange Multiplier Statistic   CHSQ( 4)= 35.5366 [.000]
Likelihood Ratio Statistic     CHSQ( 4)= 44.7750 [.000]
F Statistic                  F( 4, 68)= 10.5132 [.000]
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เมื่อช่วงเวลา = 6

Variable Addition Test (OLS case)

Dependent variable is DLEXPO

List of the variables added to the regression:

LEXPO(-1) LMPITH(-1) LMPICN(-1) LRER(-1)
 92 observations used for estimation from 2001M8 to 2009M3

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
INPT	-30.3071	15.2732	-1.9843[.052]
DLEXPO(-1)	.60018	.17800	3.3718[.001]
DLEXPO(-2)	.54561	.16888	3.2307[.002]
DLEXPO(-3)	.49400	.15721	3.1423[.003]
DLEXPO(-4)	.57543	.15097	3.8115[.000]
DLEXPO(-5)	.38903	.14627	2.6597[.010]
DLEXPO(-6)	.10787	.11211	.96217[.340]
DLMPITH(-1)	-3.6877	1.7533	-2.1033[.039]
DLMPITH(-2)	-2.1562	1.8205	-1.1844[.241]
DLMPITH(-3)	-2.7226	1.6439	-1.6562[.103]
DLMPITH(-4)	-2.3527	1.7326	-1.3579[.179]
DLMPITH(-5)	1.1285	1.9354	.58307[.562]
DLMPITH(-6)	.026190	1.5644	.016741[.987]
DLMPICN(-1)	-7.5560	4.0239	-1.8778[.065]
DLMPICN(-2)	-6.8800	4.3690	-1.5747[.120]
DLMPICN(-3)	-11.1442	4.3814	-2.5435[.013]
DLMPICN(-4)	-10.2490	4.1413	-2.4748[.016]
DLMPICN(-5)	-9.1753	3.4856	-2.6324[.011]
DLMPICN(-6)	-4.8427	2.1740	-2.2276[.029]
DLRER(-1)	1.4009	3.6367	.38521[.701]
DLRER(-2)	-1.0274	3.5363	-.29053[.772]
DLRER(-3)	-1.1606	3.4234	-.33903[.736]
DLRER(-4)	-5.2100	3.3398	-1.5600[.124]
DLRER(-5)	-1.7641	3.2898	-.53625[.594]
DLRER(-6)	-.30683	3.2770	-.093629[.926]
LEXPO(-1)	-1.2617	.22542	-5.5969[.000]
LMPITH(-1)	2.9055	1.5025	1.9338[.058]
LMPICN(-1)	7.9749	3.6574	2.1805[.033]
LRER(-1)	1.3252	2.3567	.56232[.576]

Joint test of zero restrictions on the coefficients of additional variables:

Lagrange Multiplier Statistic CHSQ(4)= 31.9049[.000]
 Likelihood Ratio Statistic CHSQ(4)= 39.1791[.000]
 F Statistic F(4, 63)= 8.3618[.000]

เมื่อช่วงเวลา = 7

Variable Addition Test (OLS case)			
Regressor	Coefficient	Standard Error	T-Ratio[Prob]
INPT	-29.5008	16.6419	-1.7727 [.082]
DLEXPO(-1)	.41389	.22874	1.8095 [.076]
DLEXPO(-2)	.42651	.19938	2.1392 [.037]
DLEXPO(-3)	.34820	.18451	1.8871 [.064]
DLEXPO(-4)	.54578	.17129	3.1862 [.002]
DLEXPO(-5)	.33804	.16957	1.9935 [.051]
DLEXPO(-6)	-.017776	.15548	-.11433 [.909]
DLEXPO(-7)	-.10076	.11189	-.90050 [.372]
DLMPITH(-1)	-3.6693	1.8474	-1.9862 [.052]
DLMPITH(-2)	-2.5207	2.0246	-1.2451 [.218]
DLMPITH(-3)	-2.3834	1.8407	-1.2948 [.201]
DLMPITH(-4)	-1.4274	1.8516	-.77089 [.444]
DLMPITH(-5)	1.1696	2.0618	.56725 [.573]
DLMPITH(-6)	-1.3691	2.0892	-.65530 [.515]
DLMPITH(-7)	-1.4051	1.5761	-.89151 [.376]
DLMPICN(-1)	-6.3739	4.3512	-1.4648 [.148]
DLMPICN(-2)	-4.8109	4.6596	-1.0325 [.306]
DLMPICN(-3)	-8.6041	4.6614	-1.8458 [.070]
DLMPICN(-4)	-8.7596	4.7007	-1.8635 [.067]
DLMPICN(-5)	-6.8087	4.3247	-1.5744 [.121]
DLMPICN(-6)	-3.5575	3.6468	-.97553 [.333]
DLMPICN(-7)	1.8791	2.2583	.83211 [.409]
DLRER(-1)	.82807	3.8588	.21459 [.831]
DLRER(-2)	-3.4040	3.8581	-.88232 [.381]
DLRER(-3)	.10563	3.5144	.030057 [.976]
DLRER(-4)	-7.1736	3.4351	-2.0883 [.041]
DLRER(-5)	-3.3944	3.3890	-1.0016 [.321]
DLRER(-6)	.47864	3.2807	.14590 [.885]
DLRER(-7)	3.0052	3.2867	.91436 [.364]
LEXPO(-1)	-1.0871	.28009	-3.8810 [.000]
LMPITH(-1)	2.8487	1.6324	1.7452 [.086]
LMPICN(-1)	7.0756	4.0841	1.7325 [.089]
LRER(-1)	1.5625	2.4576	.63578 [.527]

Joint test of zero restrictions on the coefficients of additional variables:

Lagrange Multiplier Statistic CHSQ(4)= 19.4051 [.001]

Likelihood Ratio Statistic CHSQ(4)= 21.8251 [.000]

F Statistic F(4, 58)= 3.9301 [.007]

เมื่อช่วงเวลา = 8

Variable Addition Test (OLS case)			

Dependent variable is DLEXPO			
List of the variables added to the regression:			
LEXPO(-1) LMPITH(-1) LMPICN(-1) LRER(-1)			
90 observations used for estimation from 2001M10 to 2009M3			

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
INPT	-40.7839	18.7153	-2.1792 [.034]
DLEXPO(-1)	.74722	.28740	2.6000 [.012]
DLEXPO(-2)	.68456	.24298	2.8174 [.007]
DLEXPO(-3)	.54811	.21588	2.5390 [.014]
DLEXPO(-4)	.69753	.19894	3.5061 [.001]
DLEXPO(-5)	.47870	.19484	2.4569 [.017]
DLEXPO(-6)	.14749	.18247	.80832 [.423]
DLEXPO(-7)	.063163	.15800	.39977 [.691]
DLEXPO(-8)	.20059	.11731	1.7099 [.093]
DLMPITH(-1)	-4.6859	2.0650	-2.2691 [.027]
DLMPITH(-2)	-3.5695	2.2017	-1.6212 [.111]
DLMPITH(-3)	-3.6524	2.1209	-1.7220 [.091]
DLMPITH(-4)	-2.7955	2.0750	-1.3472 [.184]
DLMPITH(-5)	-1.15202	2.1992	-.069128 [.945]
DLMPITH(-6)	-2.5586	2.2779	-1.1232 [.266]
DLMPITH(-7)	-2.0420	2.1499	-.94981 [.347]
DLMPITH(-8)	-.54929	1.6346	-.33604 [.738]
DLMPICN(-1)	-7.8878	4.7584	-1.6576 [.103]
DLMPICN(-2)	-6.1661	4.9644	-1.2421 [.220]
DLMPICN(-3)	-9.9880	4.9773	-2.0067 [.050]
DLMPICN(-4)	-9.8846	4.9775	-1.9858 [.052]
DLMPICN(-5)	-8.3533	4.9369	-1.6920 [.097]
DLMPICN(-6)	-5.8216	4.4839	-1.2983 [.200]
DLMPICN(-7)	-.81060	3.7266	-.21752 [.829]
DLMPICN(-8)	-2.5208	2.2973	-1.0973 [.277]
DLRER(-1)	-1.3397	4.0954	-.32713 [.745]
DLRER(-2)	-3.0203	4.1634	-.72543 [.471]
DLRER(-3)	.422290	3.9309	.10759 [.915]
DLRER(-4)	-7.8088	3.6030	-2.1673 [.035]
DLRER(-5)	-2.8468	3.6391	-.78228 [.438]
DLRER(-6)	-.10927	3.4878	-.031328 [.975]
DLRER(-7)	2.2667	3.3900	.66862 [.507]
DLRER(-8)	-2.3461	3.4009	-.68984 [.493]
LEXPO(-1)	-1.3815	.32857	-4.2047 [.000]
LMPITH(-1)	3.6856	1.8055	2.0413 [.046]
LMPICN(-1)	9.5072	4.6217	2.0571 [.045]
LRER(-1)	2.3043	2.6385	.87335 [.386]

Joint test of zero restrictions on the coefficients of additional variables:			
Lagrange Multiplier Statistic CHSQ(4)= 22.8956 [.000]			
Likelihood Ratio Statistic CHSQ(4)= 26.4204 [.000]			
F Statistic F(4, 53)= 4.5208 [.003]			

ເນື້ອຂ່າວງວດ = 9

Variable Addition Test (OLS case)

Dependent variable is DLEXPO

List of the variables added to the regression:

LEXPO(-1) LMPITH(-1) LMPICN(-1) LRER(-1)
 89 observations used for estimation from 2001M11 to 2009M3

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
INPT	-43.6004	22.4910	-1.9386[.058]
DLEXPO(-1)	.83662	.34812	2.4033[.020]
DLEXPO(-2)	.77599	.32219	2.4085[.020]
DLEXPO(-3)	.63291	.27560	2.2965[.026]
DLEXPO(-4)	.76155	.24210	3.1456[.003]
DLEXPO(-5)	.52396	.23159	2.2625[.028]
DLEXPO(-6)	.21577	.21928	.98399[.330]
DLEXPO(-7)	.12648	.19278	.65610[.515]
DLEXPO(-8)	.28030	.16704	1.6781[.100]
DLEXPO(-9)	.070055	.13482	.51962[.606]
DLMPITH(-1)	-5.4918	2.4309	-2.2591[.028]
DLMPITH(-2)	-4.3387	2.6167	-1.6581[.104]
DLMPITH(-3)	-4.4284	2.4857	-1.7816[.081]
DLMPITH(-4)	-3.9651	2.6979	-1.4697[.148]
DLMPITH(-5)	-1.1937	2.8261	-.42239[.675]
DLMPITH(-6)	-3.0356	2.6504	-1.1453[.258]
DLMPITH(-7)	-2.0489	2.5337	-.80864[.423]
DLMPITH(-8)	-.39197	2.4175	-.16214[.872]
DLMPITH(-9)	.14254	1.8070	.078881[.937]
DLMPICN(-1)	-7.7418	5.5570	-1.3932[.170]
DLMPICN(-2)	-5.5605	5.5804	-.99644[.324]
DLMPICN(-3)	-9.2148	5.4524	-1.6901[.098]
DLMPICN(-4)	-9.1081	5.5331	-1.6461[.106]
DLMPICN(-5)	-7.8748	5.4204	-1.4528[.153]
DLMPICN(-6)	-5.4233	5.3308	-1.0174[.314]
DLMPICN(-7)	-.58494	4.8076	-.12167[.904]
DLMPICN(-8)	-3.1883	3.9518	-.80679[.424]
DLMPICN(-9)	-.14977	2.5264	-.059283[.953]
DLRER(-1)	-2.0233	4.4286	-.45686[.650]
DLRER(-2)	-4.2610	4.6294	-.92042[.362]
DLRER(-3)	-.87521	4.3792	-.19985[.842]
DLRER(-4)	-9.3849	4.2167	-2.2256[.031]
DLRER(-5)	-3.0454	3.9464	-.77169[.444]
DLRER(-6)	-.90300	3.8808	-.23268[.817]
DLRER(-7)	2.2070	3.6811	.59956[.552]
DLRER(-8)	-2.6381	3.6226	-.72823[.470]
DLRER(-9)	-2.5077	3.6207	-.69261[.492]
LEXPO(-1)	-1.4930	.41058	-3.6364[.001]
LMPITH(-1)	4.4732	2.0627	2.1686[.035]
LMPICN(-1)	9.3741	5.4497	1.7201[.092]
LRER(-1)	3.2874	2.9253	1.1238[.267]

Joint test of zero restrictions on the coefficients of additional variables:

Lagrange Multiplier Statistic CHSQ(4)= 19.3418[.001]
 Likelihood Ratio Statistic CHSQ(4)= 21.8082[.000]
 F Statistic F(4, 48)= 3.3320[.017]

เมื่อช่วงเวลา = 10

Variable Addition Test (OLS case)			

Dependent variable is DLEXPO			
List of the variables added to the regression:			
LEXPO(-1) LMPITH(-1) LMPICN(-1) LRER(-1)			
88 observations used for estimation from 2001M12 to 2009M3			

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
INPT	-34.0173	26.8564	-1.2666 [.212]
DLEXPO(-1)	.42792	.41221	1.0381 [.305]
DLEXPO(-2)	.42332	.36520	1.1591 [.253]
DLEXPO(-3)	.27030	.33665	.80289 [.426]
DLEXPO(-4)	.44780	.28309	1.5819 [.121]
DLEXPO(-5)	.27952	.25898	1.0793 [.286]
DLEXPO(-6)	-.049366	.24260	-.20348 [.840]
DLEXPO(-7)	-.048280	.21760	-.22188 [.825]
DLEXPO(-8)	.13051	.18915	.68997 [.494]
DLEXPO(-9)	-.085802	.17580	-.48807 [.628]
DLEXPO(-10)	-.29565	.13793	-2.1434 [.038]
DLMPITH(-1)	-5.3569	2.6239	-2.0416 [.047]
DLMPITH(-2)	-3.2688	2.9117	-1.1226 [.268]
DLMPITH(-3)	-2.3187	2.7846	-.83266 [.410]
DLMPITH(-4)	-1.8060	2.9274	-.61692 [.541]
DLMPITH(-5)	.0039360	3.2312	.0012181 [1.00]
DLMPITH(-6)	-.97540	3.0505	-.31975 [.751]
DLMPITH(-7)	.56648	2.7507	.20595 [.838]
DLMPITH(-8)	2.0949	2.8152	.74416 [.461]
DLMPITH(-9)	1.1747	2.7428	.42829 [.671]
DLMPITH(-10)	.46054	1.9145	.24056 [.811]
DLMPICN(-1)	-5.8981	5.8842	-1.0024 [.322]
DLMPICN(-2)	-2.6482	5.8395	-.45349 [.652]
DLMPICN(-3)	-7.5990	5.6193	-1.3523 [.183]
DLMPICN(-4)	-7.8835	5.6239	-1.4018 [.168]
DLMPICN(-5)	-7.1223	5.6033	-1.2711 [.211]
DLMPICN(-6)	-4.4679	5.4748	-.81609 [.419]
DLMPICN(-7)	.72113	5.3626	.13447 [.894]
DLMPICN(-8)	-2.1618	4.7674	-.45345 [.653]
DLMPICN(-9)	-1.7593	3.8873	-.45259 [.653]
DLMPICN(-10)	-.89789	2.4635	-.36448 [.717]
DLRER(-1)	-4.2451	4.7094	-.90142 [.372]
DLRER(-2)	-2.9782	4.7502	-.62696 [.534]
DLRER(-3)	1.4556	4.5749	.31817 [.752]
DLRER(-4)	-9.9723	4.3415	-2.2970 [.027]
DLRER(-5)	-5.6091	4.3310	-1.2951 [.202]
DLRER(-6)	1.5750	3.8986	.40400 [.688]
DLRER(-7)	.80005	3.9291	.20362 [.840]
DLRER(-8)	-1.7185	3.6300	-.47342 [.638]
DLRER(-9)	-2.2279	3.6474	-.61082 [.545]
DLRER(-10)	-4.2374	3.6751	-1.1530 [.255]
LEXPO(-1)	-1.0762	.47261	-2.2771 [.028]
LMPITH(-1)	3.2638	2.2243	1.4673 [.150]
LMPICN(-1)	7.1850	6.2657	1.1467 [.258]
LRER(-1)	2.5457	3.0378	.83800 [.407]

Joint test of zero restrictions on the coefficients of additional variables:			
Lagrange Multiplier Statistic CHSQ(4)= 9.6437 [.047]			
Likelihood Ratio Statistic CHSQ(4)= 10.2142 [.037]			
F Statistic F(4, 43)= 1.3231 [.277]			

เมื่อช่วงเวลา = 11

Variable Addition Test (OLS case)			

Dependent variable is DLEXPO			
List of the variables added to the regression:			
LEXPO(-1) LMPITH(-1) LMPLICN(-1) LRER(-1)			
87 observations used for estimation from 2002M1 to 2009M3			

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
INPT	-42.0022	31.4229	-1.3367 [.189]
DLEXPO(-1)	.64443	.48608	1.3258 [.193]
DLEXPO(-2)	.61639	.42559	1.4483 [.156]
DLEXPO(-3)	.46864	.37931	1.2355 [.224]
DLEXPO(-4)	.61460	.34493	1.7818 [.083]
DLEXPO(-5)	.38732	.29598	1.3086 [.199]
DLEXPO(-6)	.083016	.27192	.30530 [.762]
DLEXPO(-7)	.10781	.24914	.43272 [.668]
DLEXPO(-8)	.26321	.22153	1.1881 [.242]
DLEXPO(-9)	.0034972	.19765	.017694 [.986]
DLEXPO(-10)	-.14849	.17911	-.82904 [.412]
DLEXPO(-11)	.13614	.15196	.89588 [.376]
DLMPITH(-1)	-6.4761	2.8817	-2.2473 [.031]
DLMPITH(-2)	-4.2091	3.1934	-1.3181 [.195]
DLMPITH(-3)	-3.1333	3.2127	-.97529 [.336]
DLMPITH(-4)	-3.3650	3.3616	-1.0010 [.323]
DLMPITH(-5)	-1.1305	3.5198	-.32117 [.750]
DLMPITH(-6)	-1.5001	3.5153	-.42674 [.672]
DLMPITH(-7)	.34692	3.2212	.10770 [.915]
DLMPITH(-8)	1.1803	3.1300	.37710 [.708]
DLMPITH(-9)	1.1921	3.1724	.37576 [.709]
DLMPITH(-10)	1.9754	2.9388	.67218 [.506]
DLMPITH(-11)	2.3294	2.0093	1.1593 [.254]
DLMPICN(-1)	-6.4361	6.6534	-.96735 [.339]
DLMPICN(-2)	-3.1047	6.2748	-.49479 [.624]
DLMPICN(-3)	-8.2537	6.0733	-1.3590 [.182]
DLMPICN(-4)	-8.6086	5.8944	-1.4605 [.152]
DLMPICN(-5)	-7.3882	5.8194	-1.2696 [.212]
DLMPICN(-6)	-4.4123	5.7588	-.76618 [.448]
DLMPICN(-7)	.099149	5.5967	.017716 [.986]
DLMPICN(-8)	-4.1907	5.4200	-.77320 [.444]
DLMPICN(-9)	-3.5821	4.8223	-.74281 [.462]
DLMPICN(-10)	-3.0904	3.9752	-.77743 [.442]
DLMPICN(-11)	-.68155	2.5926	-.26289 [.794]
DLRER(-1)	-4.5052	4.9218	-.91535 [.366]
DLRER(-2)	-3.7419	5.2796	-.70874 [.483]
DLRER(-3)	1.5119	4.8634	.31088 [.758]
DLRER(-4)	-11.2326	4.7098	-2.3850 [.022]
DLRER(-5)	-4.4887	4.6591	-.96341 [.341]
DLRER(-6)	.030608	4.6393	.0065975 [.995]
DLRER(-7)	1.0369	4.1497	.24987 [.804]
DLRER(-8)	-3.4077	4.1391	-.82329 [.415]
DLRER(-9)	-1.9549	3.7675	-.51888 [.607]
DLRER(-10)	-5.0200	3.8336	-1.3095 [.198]
DLRER(-11)	2.5666	3.8238	.67121 [.506]
LEXPO(-1)	-1.2934	.53058	-2.4378 [.020]
LMPITH(-1)	4.0058	2.4974	1.6040 [.117]
LMPLICN(-1)	8.7969	7.0443	1.2488 [.219]
LRER(-1)	3.0136	3.3564	.89788 [.375]

Joint test of zero restrictions on the coefficients of additional variables:			
Lagrange Multiplier Statistic CHSQ(4)= 12.4442 [.014]			
Likelihood Ratio Statistic CHSQ(4)= 13.4294 [.009]			
F Statistic F(4, 38)= 1.5857 [.198]			

เมื่อช่วงเวลา = 12

Variable Addition Test (OLS case)			

Dependent variable is DLEXPO			
List of the variables added to the regression:			
DLEXPO(-1)	LMPITH(-1)	LMPICN(-1)	LRER(-1)
86 observations used for estimation from 2002M2 to 2009M3			

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
INPT	-58.6282	39.6771	-1.4776 [.149]
DLEXPO(-1)	.95952	.56195	1.7075 [.097]
DLEXPO(-2)	.88845	.52242	1.7006 [.098]
DLEXPO(-3)	.72783	.46125	1.5779 [.124]
DLEXPO(-4)	.80473	.40244	1.9996 [.054]
DLEXPO(-5)	.57765	.37427	1.5434 [.132]
DLEXPO(-6)	.23221	.32141	.72249 [.475]
DLEXPO(-7)	.23753	.28591	.83078 [.412]
DLEXPO(-8)	.30792	.25930	1.1875 [.243]
DLEXPO(-9)	.11870	.23991	.49475 [.624]
DLEXPO(-10)	-.036414	.20516	-.17749 [.860]
DLEXPO(-11)	.18603	.18836	.98760 [.331]
DLEXPO(-12)	.040857	.15824	.25819 [.798]
DLMPITH(-1)	-7.7856	3.3047	-2.3559 [.025]
DLMPITH(-2)	-5.5243	3.5543	-1.5542 [.130]
DLMPITH(-3)	-4.8237	3.5875	-1.3446 [.188]
DLMPITH(-4)	-4.9277	3.9044	-1.2621 [.216]
DLMPITH(-5)	-2.4971	4.1177	-.60644 [.548]
DLMPITH(-6)	-2.8044	3.9891	-.70303 [.487]
DLMPITH(-7)	-1.8723	3.9079	-.47911 [.635]
DLMPITH(-8)	-.50155	3.8694	-.12962 [.898]
DLMPITH(-9)	.44817	3.7126	.12071 [.905]
DLMPITH(-10)	1.4957	3.5783	.41798 [.679]
DLMPITH(-11)	1.6355	3.1744	.51521 [.610]
DLMPITH(-12)	-.63599	2.4617	-.25836 [.798]
DLMPICN(-1)	-9.1237	7.8155	-1.1674 [.251]
DLMPICN(-2)	-5.3771	7.3115	-.73544 [.467]
DLMPICN(-3)	-9.7067	6.6666	-1.4560 [.155]
DLMPICN(-4)	-9.8042	6.6262	-1.4796 [.148]
DLMPICN(-5)	-8.4242	6.4003	-1.3162 [.197]
DLMPICN(-6)	-5.2352	6.2609	-.83618 [.409]
DLMPICN(-7)	-1.2163	6.2461	-.19474 [.847]
DLMPICN(-8)	-5.5030	5.8970	-.93319 [.357]
DLMPICN(-9)	-5.3602	5.7266	-.93601 [.356]
DLMPICN(-10)	-5.1963	5.2521	-.98938 [.330]
DLMPICN(-11)	-4.5112	4.2422	-1.0634 [.295]
DLMPICN(-12)	-2.6122	2.9664	-.88059 [.385]
DLRER(-1)	-5.7275	5.5064	-1.0402 [.306]
DLRER(-2)	-5.6025	5.6592	-.98998 [.329]
DLRER(-3)	-1.5999	5.6271	-.28431 [.778]
DLRER(-4)	-10.3968	5.0087	-2.0757 [.046]
DLRER(-5)	-6.2262	5.1986	-1.1977 [.240]
DLRER(-6)	-1.8129	4.9634	-.36525 [.717]
DLRER(-7)	-1.7526	5.0005	-.35049 [.728]
DLRER(-8)	-3.0134	4.4308	-.68012 [.501]
DLRER(-9)	-3.9303	4.4259	-.88803 [.381]
DLRER(-10)	-5.7038	4.0326	-1.4144 [.167]
DLRER(-11)	2.4917	4.0641	.61310 [.544]
DLRER(-12)	-4.6660	4.0887	-1.1412 [.262]
LEXPO(-1)	-1.6275	.62238	-2.6150 [.013]
LMPITH(-1)	5.5577	2.7870	1.9941 [.054]
LMPICN(-1)	11.3681	8.7623	1.2974 [.203]
LRER(-1)	4.8684	3.6649	1.3284 [.193]

Joint test of zero restrictions on the coefficients of additional variables:			
Lagrange Multiplier Statistic	CHSQ(4)=	15.5472 [.004]	
Likelihood Ratio Statistic	CHSQ(4)=	17.1488 [.002]	
F Statistic	F(4, 33)=	1.8206 [.148]	

การประมาณค่าของ Error Correction Model ตามกระบวนการ ARDL โดยใช้ SBC

ระยะสั้น

```

Error Correction Representation for the Selected ARDL Model
ARDL(6,2,0,0) selected based on Schwarz Bayesian Criterion
*****
Dependent variable is dLEXPO
93 observations used for estimation from 2001M7 to 2009M3
*****
Regressor          Coefficient      Standard Error   T-Ratio[Prob]
dLEXPO1            .44606        .14333           3.1122 [.003]
dLEXPO2            .50954        .13044           3.9065 [.000]
dLEXPO3            .48056        .11689           4.1112 [.000]
dLEXPO4            .44534        .10392           4.2855 [.000]
dLEXPO5            .27196        .091036          2.9874 [.004]
dLMPITH            -1.6787       1.0613          -1.5816 [.118]
dLMPITH1           -5.2082       1.0051          -5.1817 [.000]
dLMPICN            3.1032        1.5444           2.0094 [.048]
dLRER              1.5254        1.5440           .98793 [.326]
dINPT              -11.8327      9.5853          -1.2345 [.221]
ecm(-1)            -1.0835       .15933          -6.8005 [.000]
*****
List of additional temporary variables created:
dLEXPO = LEXPO-LEXPO(-1)
dLEXPO1 = LEXPO(-1)-LEXPO(-2)
dLEXPO2 = LEXPO(-2)-LEXPO(-3)
dLEXPO3 = LEXPO(-3)-LEXPO(-4)
dLEXPO4 = LEXPO(-4)-LEXPO(-5)
dLEXPO5 = LEXPO(-5)-LEXPO(-6)
dLMPITH = LMPITH-LMPITH(-1)
dLMPITH1 = LMPITH(-1)-LMPITH(-2)
dLMPICN = LMPICN-LMPICN(-1)
dLRER = LRER-LRER(-1)
dINPT = INPT-INPT(-1)
ecm = LEXPO -2.8495*LMPITH -2.8640*LMPICN -1.4078*LRER + 10.9208*INPT
*****
R-Squared           .52216        R-Bar-Squared     .45726
S.E. of Regression .45318        F-stat.          F( 10, 82)    8.8511 [.000]
Mean of Dependent Variable .020418      S.D. of Dependent Variable .61515
Residual Sum of Squares 16.6353       Equation Log-likelihood -51.9314
Akaike Info. Criterion -63.9314      Schwarz Bayesian Criterion -79.1270
DW-statistic        1.9687
*****
R-Squared and R-Bar-Squared measures refer to the dependent variable
dLEXPO and in cases where the error correction model is highly
restricted, these measures could become negative.

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Estimated Long Run Coefficients using the ARDL Approach
ARDL(6,2,0,0) selected based on Schwarz Bayesian Criterion
*****
Dependent variable is LEXPO
93 observations used for estimation from 2001M7 to 2009M3
*****
Regressor          Coefficient      Standard Error   T-Ratio[Prob]
LMPITH             2.8495        .70250          4.0562 [.000]
LMPICN             2.8640        1.5157          1.8896 [.062]
LRER               1.4078        1.3812          1.0193 [.311]
INPT               -10.9208      8.9495          -1.2203 [.226]
*****

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2. กรณีศึกษาประเทศไทยกับสหราชอาณาจักร

เมื่อช่วงเวลา = 2

```
Variable Addition Test (OLS case)
*****
Dependent variable is DLEXPO
List of the variables added to the regression:
LEXPO(-1)      LMPITH(-1)      LMPIUK(-1)      LRER(-1)
96 observations used for estimation from 2001M4 to 2009M3
*****
Regressor          Coefficient       Standard Error     T-Ratio[Prob]
INPT              9.9395          10.3556          .95983[.340]
DLEXPO(-1)        .078715          .11461           .68682[.494]
DLEXPO(-2)        .32628           .10517           3.1023[.003]
DLMPITH(-1)      -.40732          .92048          -.44252[.659]
DLMPITH(-2)      1.1367           .90411           1.2573[.212]
DLMPIUK(-1)      2.8493           4.9740          .57285[.568]
DLMPIUK(-2)      1.5268           4.9460          .30869[.758]
DLRER(-1)         1.0618           2.0643          .51435[.608]
DLRER(-2)         -.66250          2.0424          -.32437[.746]
LEXPO(-1)         -.51146          .10980          -4.6581[.000]
LMPITH(-1)        .68784            .28293          2.4312[.017]
LMPIUK(-1)        -.45487          2.4728          -.18395[.855]
LRER(-1)          -.71430           .71100          -1.0046[.318]
*****
Joint test of zero restrictions on the coefficients of additional variables:
Lagrange Multiplier Statistic   CHSQ( 4)= 21.7112[.000]
Likelihood Ratio Statistic     CHSQ( 4)= 24.6132[.000]
F Statistic                  F( 4,  83)= 6.0643[.000]
*****
```

เมื่อช่วงเวลา = 3

```
Variable Addition Test (OLS case)
*****
Dependent variable is DLEXPO
List of the variables added to the regression:
LEXPO(-1)      LMPITH(-1)      LMPIUK(-1)      LRER(-1)
95 observations used for estimation from 2001M5 to 2009M3
*****
Regressor          Coefficient       Standard Error     T-Ratio[Prob]
INPT              17.6712          11.6289          1.5196[.133]
DLEXPO(-1)        .10045           .11675          .86042[.392]
DLEXPO(-2)        .49850           .11409          4.3696[.000]
DLEXPO(-3)        .40134           .10638          3.7727[.000]
DLMPITH(-1)      -.040613          1.0304          -.039414[.969]
DLMPITH(-2)      2.3439            1.2354          1.8972[.062]
DLMPITH(-3)      1.1375            1.0310          1.1032[.273]
DLMPIUK(-1)      2.7283            5.0256          .54289[.589]
DLMPIUK(-2)      .57521             5.1413          .11188[.911]
DLMPIUK(-3)      -.93086            4.7581          -.19564[.845]
DLRER(-1)         1.5830            2.0931          .75630[.452]
DLRER(-2)         -.91053            1.9709          -.46198[.645]
DLRER(-3)         -1.3619            1.9909          -.68404[.496]
LEXPO(-1)         -.68370            .12037          -5.6801[.000]
LMPITH(-1)        1.0440            .29637           3.5226[.001]
LMPIUK(-1)        -2.0548            2.6624          -.77178[.443]
LRER(-1)          -.57546            .72650          -.79210[.431]
*****
Joint test of zero restrictions on the coefficients of additional variables:
Lagrange Multiplier Statistic   CHSQ( 4)= 30.2173[.000]
Likelihood Ratio Statistic     CHSQ( 4)= 36.3696[.000]
F Statistic                  F( 4,  78)= 9.0956[.000]
*****
```

เมื่อช่วงเวลา = 4

```

Variable Addition Test (OLS case)
*****
Dependent variable is DLEXPO
List of the variables added to the regression:
LEXPO(-1)      LMPITH(-1)      LMPIUK(-1)      LRER(-1)
94 observations used for estimation from 2001M6 to 2009M3
*****
Regressor          Coefficient       Standard Error     T-Ratio[Prob]
INPT                19.3340        13.0699        1.4793 [.143]
DLEXPO(-1)           .21088         .12608        1.6727 [.099]
DLEXPO(-2)           .59304         .11949        4.9632 [.000]
DLEXPO(-3)           .50352         .12471        4.0376 [.000]
DLEXPO(-4)           .24722         .11259        2.1957 [.031]
DLMPITH(-1)          -.29254        1.0704        -.27329 [.785]
DLMPITH(-2)          1.1851         1.3557        .87411 [.385]
DLMPITH(-3)          -.36078        1.4009        -.25753 [.797]
DLMPITH(-4)          -.0355         1.0417        -1.9541 [.055]
DLMPIUK(-1)           4.4599         5.2381        .85142 [.397]
DLMPIUK(-2)           3.8945         5.4381        .71615 [.476]
DLMPIUK(-3)          -.044172        5.1452        -.0085852 [.993]
DLMPIUK(-4)           1.1367         4.6475        .24457 [.807]
DLRER(-1)              2.0108         2.0913        .96150 [.339]
DLRER(-2)              -.40109        2.1022        -.19080 [.849]
DLRER(-3)              -.81095        1.9982        -.40584 [.686]
DLRER(-4)              -.12828        2.0024        -.064063 [.949]
LEXPO(-1)              -.87943        .14337        -6.1339 [.000]
LMPITH(-1)             1.4012         .32900        4.2590 [.000]
LMPIUK(-1)            -2.1688        2.9031        -.74709 [.457]
LRER(-1)               -.51677        .75346        -.68587 [.495]
*****
Joint test of zero restrictions on the coefficients of additional variables:
Lagrange Multiplier Statistic   CHSQ( 4)= 33.5377 [.000]
Likelihood Ratio Statistic     CHSQ( 4)= 41.4799 [.000]
F Statistic                   F( 4, 73)= 10.1231 [.000]
*****

```

เมื่อช่วงเวลา = 5

Variable Addition Test (OLS case)

Dependent variable is DLEXPO

List of the variables added to the regression:

DLEXPO(-1) LMPITH(-1) LMPIUK(-1) LRER(-1)

93 observations used for estimation from 2001M7 to 2009M3

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
INPT	32.3300	14.2063	2.2758[.026]
DLEXPO(-1)	.34373	.14455	2.3780[.020]
DLEXPO(-2)	.66753	.13127	5.0853[.000]
DLEXPO(-3)	.57453	.13611	4.2210[.000]
DLEXPO(-4)	.37016	.13591	2.7235[.008]
DLEXPO(-5)	.19689	.11566	1.7023[.093]
DLMPITH(-1)	-.91304	1.0807	-.84489[.401]
DLMPITH(-2)	.30246	1.4110	.21435[.831]
DLMPITH(-3)	-1.2820	1.5428	-.83096[.409]
DLMPITH(-4)	-2.7042	1.4720	-1.8371[.071]
DLMPITH(-5)	-.65543	1.1176	-.58648[.559]
DLMPIUK(-1)	8.0133	5.4709	1.4647[.148]
DLMPIUK(-2)	7.6059	5.7424	1.3245[.190]
DLMPIUK(-3)	4.8805	5.6046	.87079[.387]
DLMPIUK(-4)	5.6905	5.1165	1.1122[.270]
DLMPIUK(-5)	9.9666	4.6544	2.1413[.036]
DLRER(-1)	2.8518	2.1453	1.3293[.188]
DLRER(-2)	.11345	2.1440	.052914[.958]
DLRER(-3)	.43604	2.1331	.20442[.839]
DLRER(-4)	-.063406	2.0436	-.031027[.975]
DLRER(-5)	.96068	1.9755	.48629[.628]
LEXPO(-1)	-1.0818	.17664	-6.1244[.000]
LMPITH(-1)	1.7725	.38036	4.6601[.000]
LMPIUK(-1)	-4.1307	3.0871	-1.3381[.185]
LRER(-1)	-1.1059	.78783	-1.4037[.165]

Joint test of zero restrictions on the coefficients of additional variables:

Lagrange Multiplier Statistic CHSQ(4)= 35.1702[.000]

Likelihood Ratio Statistic CHSQ(4)= 44.1839[.000]

F Statistic F(4, 68)= 10.3389[.000]

เมื่อช่วงเวลา = 6

```

Variable Addition Test (OLS case)
*****
Dependent variable is DLEXPO
List of the variables added to the regression:
LEXP(-1)      LMPITH(-1)      LMPIUK(-1)      LRER(-1)
92 observations used for estimation from 2001M8 to 2009M3
*****
Regressor          Coefficient       Standard Error     T-Ratio[Prob]
INPT              36.3717         16.4919          2.2054[.031]
DLEXPO(-1)        .43969          .19437           2.2621[.027]
DLEXPO(-2)        .73332          .16045           4.5703[.000]
DLEXPO(-3)        .64255          .16236           3.9576[.000]
DLEXPO(-4)        .43778          .16170           2.7073[.009]
DLEXPO(-5)        .25639          .15720           1.6309[.108]
DLEXPO(-6)        .081722         .13484           .60608[.547]
DLMPITH(-1)       -1.3332         1.2565          -1.0611[.293]
DLMPITH(-2)       -.12765         1.5471          -.082509[.935]
DLMPITH(-3)       -1.7201          1.6868          -1.0197[.312]
DLMPITH(-4)       -3.2003          1.7628          -1.8155[.074]
DLMPITH(-5)       -1.2002          1.7333          -.69247[.491]
DLMPITH(-6)       -.59093          1.2267          -.48171[.632]
DLMPIUK(-1)       9.8258          6.2165          1.5806[.119]
DLMPIUK(-2)       8.7379          6.3459          1.3769[.173]
DLMPIUK(-3)       6.5121          6.3456          1.0262[.309]
DLMPIUK(-4)       7.1436          5.9527          1.2001[.235]
DLMPIUK(-5)       10.8705         5.4289          2.0024[.050]
DLMPIUK(-6)       .28041          5.0836          .055160[.956]
DLRER(-1)         3.3101          2.3054          1.4358[.156]
DLRER(-2)         .45330          2.3142          .19588[.845]
DLRER(-3)         .87537          2.3241          .37664[.708]
DLRER(-4)         .54892          2.2964          .23904[.812]
DLRER(-5)         1.1914          2.1546          .55296[.582]
DLRER(-6)         1.0114          2.1236          .47628[.636]
LEXP(-1)          -1.2025         .24321          -4.9442[.000]
LMPITH(-1)        2.0174          .49100          4.1088[.000]
LMPIUK(-1)        -4.6495         3.4581          -1.3445[.184]
LRER(-1)          -1.3192         .90124          -1.4637[.148]
*****
Joint test of zero restrictions on the coefficients of additional variables:
Lagrange Multiplier Statistic   CHSQ( 4)= 27.1326[.000]
Likelihood Ratio Statistic     CHSQ( 4)= 32.1487[.000]
F Statistic                  F( 4, 63)= 6.5879[.000]
*****
```

เมื่อช่วงเวลา = 7

Variable Addition Test (OLS case)

Dependent variable is DLEXPO

List of the variables added to the regression:

LEXPO(-1) LMPITH(-1) LMPIUK(-1) LRER(-1)

91 observations used for estimation from 2001M9 to 2009M3

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
INPT	42.3930	18.4122	2.3024 [.025]
DLEXPO(-1)	.41117	.25690	1.6005 [.115]
DLEXPO(-2)	.67201	.21110	3.1835 [.002]
DLEXPO(-3)	.62869	.19015	3.3063 [.002]
DLEXPO(-4)	.49920	.18781	2.6580 [.010]
DLEXPO(-5)	.30177	.18394	1.6406 [.106]
DLEXPO(-6)	.022152	.17219	.12865 [.898]
DLEXPO(-7)	-.12418	.14176	-.87600 [.385]
DLMPITH(-1)	-1.7167	1.2926	-1.3280 [.189]
DLMPITH(-2)	-.14587	1.6541	-.088192 [.930]
DLMPITH(-3)	-2.0507	1.7842	-1.1494 [.255]
DLMPITH(-4)	-3.9005	1.8498	-2.1086 [.039]
DLMPITH(-5)	-2.9436	2.0144	-1.4613 [.149]
DLMPITH(-6)	-2.9158	1.8728	-1.5570 [.125]
DLMPITH(-7)	-1.7853	1.2705	-1.4052 [.165]
DLMPIUK(-1)	12.1487	6.5980	1.8413 [.071]
DLMPIUK(-2)	9.5978	6.7815	1.4153 [.162]
DLMPIUK(-3)	8.8793	6.7636	1.3128 [.194]
DLMPIUK(-4)	9.2339	6.5334	1.4133 [.163]
DLMPIUK(-5)	14.9825	6.1752	2.4262 [.018]
DLMPIUK(-6)	3.9428	5.8043	.67929 [.500]
DLMPIUK(-7)	6.5513	5.1220	1.2790 [.206]
DLRER(-1)	3.1861	2.3722	1.3431 [.184]
DLRER(-2)	.80072	2.4167	.33132 [.742]
DLRER(-3)	.91773	2.4049	.38161 [.704]
DLRER(-4)	1.9499	2.4629	.79170 [.432]
DLRER(-5)	1.8083	2.3317	.77552 [.441]
DLRER(-6)	1.6297	2.2742	.71658 [.477]
DLRER(-7)	2.3002	2.2338	1.0297 [.307]
LEXPO(-1)	-1.1832	.30601	-3.8665 [.000]
LMPITH(-1)	2.0004	.60179	3.3240 [.002]
LMPIUK(-1)	-5.5440	3.7602	-1.4744 [.146]
LRER(-1)	-1.7984	.99276	-1.8116 [.075]

Joint test of zero restrictions on the coefficients of additional variables:

Lagrange Multiplier Statistic CHSQ(4)= 20.6031 [.000]

Likelihood Ratio Statistic CHSQ(4)= 23.3607 [.000]

F Statistic F(4, 58)= 4.2437 [.004]

เมื่อช่วงเวลา = 8

Variable Addition Test (OLS case)			

Dependent variable is DLEXPO			
List of the variables added to the regression:			
LEXPO(-1) LMPITH(-1) LMPIUK(-1) LRER(-1)			
90 observations used for estimation from 2001M10 to 2009M3			

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
INPT	41.3699	21.0430	1.9660 [.055]
DLEXPO(-1)	.36265	.33288	1.0895 [.281]
DLEXPO(-2)	.62295	.28172	2.2113 [.031]
DLEXPO(-3)	.57560	.24589	2.3409 [.023]
DLEXPO(-4)	.47242	.22646	2.0861 [.042]
DLEXPO(-5)	.27650	.22762	1.2147 [.230]
DLEXPO(-6)	-.0042070	.21441	-.019622 [.984]
DLEXPO(-7)	-.13228	.18612	-.71073 [.480]
DLEXPO(-8)	-.037283	.14859	-.25091 [.803]
DLMPITH(-1)	-1.6447	1.4079	-1.1682 [.248]
DLMPITH(-2)	.019018	1.8059	.010531 [.992]
DLMPITH(-3)	-1.5809	1.9982	-.79113 [.432]
DLMPITH(-4)	-3.4681	2.0196	-1.7172 [.092]
DLMPITH(-5)	-2.6228	2.2195	-1.1817 [.243]
DLMPITH(-6)	-2.4337	2.2861	-1.0646 [.292]
DLMPITH(-7)	-1.0745	2.0968	-.51246 [.610]
DLMPITH(-8)	.78039	1.4095	.55366 [.582]
DLMPIUK(-1)	11.6377	7.2788	1.5988 [.116]
DLMPIUK(-2)	9.2546	7.4990	1.2341 [.223]
DLMPIUK(-3)	8.1933	7.5034	1.0919 [.280]
DLMPIUK(-4)	8.5829	7.2949	1.1766 [.245]
DLMPIUK(-5)	14.1369	7.0589	2.0027 [.050]
DLMPIUK(-6)	2.8082	7.2646	.38655 [.701]
DLMPIUK(-7)	6.8313	6.2668	1.0901 [.281]
DLMPIUK(-8)	.25354	6.1087	.041505 [.967]
DLRER(-1)	3.6566	2.7755	1.3175 [.193]
DLRER(-2)	.46345	2.6060	.17784 [.860]
DLRER(-3)	1.0451	2.6866	.38900 [.699]
DLRER(-4)	2.0622	2.6259	.78533 [.436]
DLRER(-5)	1.5704	2.6075	.60227 [.550]
DLRER(-6)	1.6130	2.6562	.60727 [.546]
DLRER(-7)	2.0921	2.4864	.84144 [.404]
DLRER(-8)	1.0946	2.4714	.44291 [.660]
LEXPO(-1)	-1.1348	.38042	-2.9831 [.004]
LMPITH(-1)	1.9321	.74501	2.5933 [.012]
LMPIUK(-1)	-5.3674	4.1978	-1.2786 [.207]
LRER(-1)	-1.8559	1.1568	-1.6043 [.115]

Joint test of zero restrictions on the coefficients of additional variables:			
Lagrange Multiplier Statistic CHSQ(4)= 14.7767 [.005]			
Likelihood Ratio Statistic CHSQ(4)= 16.1413 [.003]			
F Statistic F(4, 53)= 2.6028 [.046]			

เมื่อช่วงเวลา = 9

Variable Addition Test (OLS case)

Dependent variable is DLEXPO

List of the variables added to the regression:

LEXPO(-1) LMPITH(-1) LMPIUK(-1) LRER(-1)
 89 observations used for estimation from 2001M11 to 2009M3

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
INPT	41.4700	23.8556	1.7384[.089]
DLEXPO(-1)	.25615	.41256	.62088[.538]
DLEXPO(-2)	.51238	.36343	1.4098[.165]
DLEXPO(-3)	.46391	.31782	1.4597[.151]
DLEXPO(-4)	.40414	.28722	1.4071[.166]
DLEXPO(-5)	.23150	.27458	.84310[.403]
DLEXPO(-6)	-.028392	.26626	-.10664[.916]
DLEXPO(-7)	-.17370	.23105	-.75179[.456]
DLEXPO(-8)	-.11429	.19568	-.58409[.562]
DLEXPO(-9)	-.12529	.15579	-.80423[.425]
DLMPITH(-1)	-1.5607	1.4957	-1.0434[.302]
DLMPITH(-2)	.12254	1.9226	.063737[.949]
DLMPITH(-3)	-1.6757	2.1855	-.76674[.447]
DLMPITH(-4)	-3.4547	2.2849	-1.5120[.137]
DLMPITH(-5)	-2.6020	2.4415	-1.0657[.292]
DLMPITH(-6)	-2.2744	2.5109	-.90582[.370]
DLMPITH(-7)	-1.2978	2.5518	-.50857[.613]
DLMPITH(-8)	.49430	2.2764	.21714[.829]
DLMPITH(-9)	-.048557	1.4924	-.032536[.974]
DLMPIUK(-1)	12.7812	7.9569	1.6063[.115]
DLMPIUK(-2)	10.3369	8.3824	1.2332[.224]
DLMPIUK(-3)	9.7645	8.3725	1.1663[.249]
DLMPIUK(-4)	7.3965	8.1046	.91263[.366]
DLMPIUK(-5)	13.5058	7.8511	1.7202[.092]
DLMPIUK(-6)	2.3246	8.2820	.28069[.780]
DLMPIUK(-7)	5.6444	7.9227	.71244[.480]
DLMPIUK(-8)	-.90742	7.5059	-.12090[.904]
DLMPIUK(-9)	-2.9851	6.6758	-.44716[.657]
DLRER(-1)	3.4872	2.9108	1.1980[.237]
DLRER(-2)	1.2255	3.1113	.39388[.695]
DLRER(-3)	.53380	2.8694	.18603[.853]
DLRER(-4)	2.6809	2.9469	.90973[.368]
DLRER(-5)	1.4097	2.7731	.50835[.614]
DLRER(-6)	2.1057	3.0231	.69652[.489]
DLRER(-7)	1.8738	2.9827	.62823[.533]
DLRER(-8)	1.6027	2.7230	.58859[.559]
DLRER(-9)	.74450	2.6741	.27842[.782]
LEXPO(-1)	-1.0415	.45975	-2.2653[.028]
LMPITH(-1)	1.8830	.90213	2.0872[.042]
LMPIUK(-1)	-5.6584	4.6843	-1.2079[.233]
LRER(-1)	-1.8566	1.3573	-1.3679[.178]

Joint test of zero restrictions on the coefficients of additional variables:

Lagrange Multiplier Statistic CHSQ(4)= 10.3439[.035]
 Likelihood Ratio Statistic CHSQ(4)= 10.9960[.027]
 F Statistic F(4, 48)= 1.5781[.195]

ເນື້ອຂ່າວງວດ = 10

Variable Addition Test (OLS case)			

Dependent variable is DLEXPO			
List of the variables added to the regression:			
LEXPO(-1) LMPITH(-1) LMPIUK(-1) LRER(-1)			
88 observations used for estimation from 2001M12 to 2009M3			

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
INPT	18.3833	.27.2484	.67466 [.504]
DLEXPO(-1)	-.27073	.50716	-.53383 [.596]
DLEXPO(-2)	-.053437	.47219	-.11317 [.910]
DLEXPO(-3)	-.10554	.42461	-.24856 [.805]
DLEXPO(-4)	-.11112	.38382	-.28951 [.774]
DLEXPO(-5)	-.20868	.35200	-.59285 [.556]
DLEXPO(-6)	-.34333	.32480	-1.0570 [.296]
DLEXPO(-7)	-.44446	.29215	-1.5214 [.135]
DLEXPO(-8)	-.36673	.24798	-1.4789 [.146]
DLEXPO(-9)	-.43569	.21766	-2.0017 [.052]
DLEXPO(-10)	-.38529	.18175	-2.1198 [.040]
DLMPITH(-1)	-1.8747	1.5745	-1.1907 [.240]
DLMPITH(-2)	-.23805	1.9507	-.12203 [.903]
DLMPITH(-3)	-.6737	2.2527	-.74296 [.462]
DLMPITH(-4)	-3.6788	2.4494	-1.5019 [.140]
DLMPITH(-5)	-1.9754	2.6471	-.74623 [.460]
DLMPITH(-6)	-1.6829	2.6279	-.64037 [.525]
DLMPITH(-7)	-.79538	2.6521	-.29991 [.766]
DLMPITH(-8)	.69245	2.6109	.26522 [.792]
DLMPITH(-9)	-.22991	2.3026	-.099851 [.921]
DLMPITH(-10)	.32291	1.5055	.21449 [.831]
DLMPIUK(-1)	7.4183	8.4379	.87917 [.384]
DLMPIUK(-2)	5.8693	9.0661	.64739 [.521]
DLMPIUK(-3)	8.3049	9.0682	.91582 [.365]
DLMPIUK(-4)	5.5239	8.7099	.63421 [.529]
DLMPIUK(-5)	7.6511	8.4609	.90429 [.371]
DLMPIUK(-6)	-2.5143	9.0831	-.27681 [.783]
DLMPIUK(-7)	1.1172	8.7795	.12725 [.899]
DLMPIUK(-8)	-3.0407	9.3053	-.32677 [.745]
DLMPIUK(-9)	-3.6347	7.9674	-.45620 [.651]
DLMPIUK(-10)	.98982	7.0889	.13963 [.890]
DLRER(-1)	3.7828	3.0395	1.2445 [.220]
DLRER(-2)	1.0601	3.1475	.33680 [.738]
DLRER(-3)	-.74403	3.4832	-.21360 [.832]
DLRER(-4)	1.9697	3.0174	.65278 [.517]
DLRER(-5)	.26890	3.0562	.087986 [.930]
DLRER(-6)	-.049932	3.2643	-.015296 [.988]
DLRER(-7)	.74359	3.1978	.23253 [.817]
DLRER(-8)	-.17513	3.2885	-.053257 [.958]
DLRER(-9)	-.53086	2.8132	-.18870 [.851]
DLRER(-10)	-1.5431	2.8727	-.53714 [.594]
LEXPO(-1)	-.49997	.55144	-.90666 [.370]
LMPITH(-1)	.66942	1.1226	.59631 [.554]
LMPIUK(-1)	-2.2666	5.1755	-.43795 [.664]
LRER(-1)	-.72553	1.5934	-.45532 [.651]

Joint test of zero restrictions on the coefficients of additional variables:			
Lagrange Multiplier Statistic	CHSQ(4)=	3.6379 [.457]	
Likelihood Ratio Statistic	CHSQ(4)=	3.7152 [.446]	
F Statistic	F(4, 43)=	.46356 [.762]	

เมื่อช่วงเวลา = 11

Variable Addition Test (OLS case)			

Dependent variable is DLEXPO			
List of the variables added to the regression:			
LEXPO(-1)	LMPITH(-1)	LMPIUK(-1)	LRER(-1)
87 observations used for estimation from 2002M1 to 2009M3			

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
INPT	-.22611	.28.7235	-.0078719[.994]
DLEXPO(-1)	-.37569	.56138	-.66923[.507]
DLEXPO(-2)	-.14791	.52892	-.27964[.781]
DLEXPO(-3)	-.23588	.49426	-.47724[.636]
DLEXPO(-4)	-.29871	.45558	-.65566[.516]
DLEXPO(-5)	-.43941	.41509	-1.0586[.296]
DLEXPO(-6)	-.46381	.37595	-1.2337[.225]
DLEXPO(-7)	-.44120	.32876	-1.3420[.188]
DLEXPO(-8)	-.33124	.29936	-1.1065[.275]
DLEXPO(-9)	-.47170	.26560	-1.7760[.084]
DLEXPO(-10)	-.59046	.23653	-2.4963[.017]
DLEXPO(-11)	-.23969	.18137	-1.3216[.194]
DLMPITH(-1)	-.9761	1.6317	-1.2111[.233]
DLMPITH(-2)	-.4532	1.9324	-.75203[.457]
DLMPITH(-3)	-2.4034	2.1557	-1.1149[.272]
DLMPITH(-4)	-5.3353	2.3806	-2.2412[.031]
DLMPITH(-5)	-4.6713	2.5756	-1.8136[.078]
DLMPITH(-6)	-4.0131	2.5804	-1.5552[.128]
DLMPITH(-7)	-1.5526	2.5368	-.61202[.544]
DLMPITH(-8)	.27059	2.5108	.10777[.915]
DLMPITH(-9)	-1.1280	2.4582	-.45887[.649]
DLMPITH(-10)	-1.1244	2.3280	-.48299[.632]
DLMPITH(-11)	-.95515	1.6091	-.59358[.556]
DLMPIUK(-1)	-1.2384	8.5906	-.14416[.886]
DLMPIUK(-2)	3.0444	9.0018	.33820[.737]
DLMPIUK(-3)	10.2480	9.0463	1.1328[.264]
DLMPIUK(-4)	12.7865	8.6376	1.4803[.147]
DLMPIUK(-5)	7.9437	8.5432	.92983[.358]
DLMPIUK(-6)	-6.5159	9.4305	-.69094[.494]
DLMPIUK(-7)	-7.7291	9.2321	-.83720[.408]
DLMPIUK(-8)	-9.8852	9.8949	-.99901[.324]
DLMPIUK(-9)	-14.6546	9.6328	-1.5213[.136]
DLMPIUK(-10)	-10.3025	8.3123	-1.2394[.223]
DLMPIUK(-11)	-17.9027	6.9917	-2.5606[.015]
DLRER(-1)	4.3672	2.8609	1.5265[.135]
DLRER(-2)	3.2272	2.9735	1.0853[.285]
DLRER(-3)	-.79962	3.2709	-.24446[.808]
DLRER(-4)	5.0586	3.4058	1.4853[.146]
DLRER(-5)	1.2015	2.8635	.41959[.677]
DLRER(-6)	1.0380	3.2862	.31588[.754]
DLRER(-7)	-.056676	3.1864	-.017787[.986]
DLRER(-8)	1.0708	3.2004	.33457[.740]
DLRER(-9)	1.6269	3.1294	.51988[.606]
DLRER(-10)	-2.5382	2.8415	-.89325[.377]
DLRER(-11)	2.3090	2.6919	.85777[.396]
LEXPO(-1)	-.42427	.57750	-.73466[.467]
LMPITH(-1)	.66492	1.2111	.54903[.586]
LMPIUK(-1)	1.1482	5.2744	.21769[.829]
LRER(-1)	-.30123	1.6834	-.17895[.859]

Joint test of zero restrictions on the coefficients of additional variables:			
Lagrange Multiplier Statistic	CHSQ(4)=	2.0250[.731]	
Likelihood Ratio Statistic	CHSQ(4)=	2.0489[.727]	
F Statistic	F(4, 38)=	.22639[.922]	

เมื่อช่วงเวลา = 12

Variable Addition Test (OLS case)			

Dependent variable is DLEXPO			
List of the variables added to the regression:			
DLEXPO(-1)	LMPITH(-1)	LMPIUK(-1)	LRER(-1)
86 observations used for estimation from 2002M2 to 2009M3			

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
INPT	5.7223	33.0021	.17339 [.863]
DLEXPO(-1)	-.36056	.66152	-.54506 [.589]
DLEXPO(-2)	-.13975	.64036	-.21823 [.829]
DLEXPO(-3)	-.20770	.60455	-.34356 [.733]
DLEXPO(-4)	-.25527	.57948	-.44051 [.662]
DLEXPO(-5)	-.42439	.54193	-.78311 [.439]
DLEXPO(-6)	-.47725	.49369	-.96672 [.341]
DLEXPO(-7)	-.46498	.42045	-1.1059 [.277]
DLEXPO(-8)	-.34496	.36479	-.94563 [.351]
DLEXPO(-9)	-.43654	.33753	-1.2933 [.205]
DLEXPO(-10)	-.57491	.30928	-1.8589 [.072]
DLEXPO(-11)	-.31025	.27716	-1.1194 [.271]
DLEXPO(-12)	-.10386	.20203	-.51407 [.611]
DLMPITH(-1)	-2.6673	2.2799	-1.1699 [.250]
DLMPITH(-2)	-1.7642	2.4779	-.71196 [.481]
DLMPITH(-3)	-2.8760	2.4914	-1.1544 [.257]
DLMPITH(-4)	-5.7115	2.6056	-2.1920 [.036]
DLMPITH(-5)	-5.2721	2.9337	-1.7971 [.081]
DLMPITH(-6)	-5.0524	3.0449	-1.6593 [.107]
DLMPITH(-7)	-2.7886	3.0306	-.92016 [.364]
DLMPITH(-8)	-.63621	2.7709	-.22960 [.820]
DLMPITH(-9)	-1.4683	2.6697	-.54999 [.586]
DLMPITH(-10)	-2.1038	2.6901	-.78207 [.440]
DLMPITH(-11)	-2.6072	2.5316	-1.0298 [.311]
DLMPITH(-12)	-1.4844	1.8865	-.78685 [.437]
DLMPIUK(-1)	1.8027	9.7561	.18478 [.855]
DLMPIUK(-2)	4.5151	10.3491	.43628 [.665]
DLMPIUK(-3)	11.4366	10.2539	1.1153 [.273]
DLMPIUK(-4)	15.4686	9.7851	1.5808 [.123]
DLMPIUK(-5)	11.8133	9.9066	1.1925 [.242]
DLMPIUK(-6)	-3.0866	10.5976	-.29126 [.773]
DLMPIUK(-7)	-7.4935	10.7670	-.69597 [.491]
DLMPIUK(-8)	-10.8336	11.7595	-.92126 [.364]
DLMPIUK(-9)	-14.6488	11.5489	-1.2684 [.214]
DLMPIUK(-10)	-10.8589	11.4518	-.94823 [.350]
DLMPIUK(-11)	-18.9123	9.3527	-2.0221 [.051]
DLMPIUK(-12)	-4.0369	8.5325	-.47312 [.639]
DLRER(-1)	4.6452	3.3203	1.3990 [.171]
DLRER(-2)	3.8870	3.3071	1.1754 [.248]
DLRER(-3)	.24675	3.6392	0.67803 [.946]
DLRER(-4)	4.9204	3.6524	1.3471 [.187]
DLRER(-5)	2.2667	3.9400	.57530 [.569]
DLRER(-6)	1.3937	3.5779	.38952 [.699]
DLRER(-7)	1.0493	3.6859	.28468 [.778]
DLRER(-8)	1.2673	3.6474	.34746 [.730]
DLRER(-9)	2.4839	3.4498	.72001 [.477]
DLRER(-10)	-1.8147	3.5747	-.50766 [.615]
DLRER(-11)	2.7743	3.0388	.91296 [.368]
DLRER(-12)	.96999	3.0737	.31558 [.754]
LEXPO(-1)	-.51104	.68455	-.74653 [.461]
LMPITH(-1)	.96800	1.4806	.65381 [.518]
LMPIUK(-1)	.13516	6.0405	.022376 [.982]
LRER(-1)	-.60852	1.9792	-.30746 [.760]

Joint test of zero restrictions on the coefficients of additional variables:			
Lagrange Multiplier Statistic	CHSQ(4)=	1.8845 [.757]	
Likelihood Ratio Statistic	CHSQ(4)=	1.9055 [.753]	
F Statistic	F(4, 33)=	.18483 [.945]	

การประมาณค่าของ Error Correction Model ตามกระบวนการ ARDL โดยใช้ SBC

ระยะតັນ

```

Error Correction Representation for the Selected ARDL Model
ARDL(5,0,0,0) selected based on Schwarz Bayesian Criterion
*****
Dependent variable is dLEXPO
94 observations used for estimation from 2001M6 to 2009M3
*****
Regressor          Coefficient      Standard Error      T-Ratio[Prob]
dLEXPO1            .22869         .10961           2.0863 [.040]
dLEXPO2            .53834         .10575           5.0906 [.000]
dLEXPO3            .49703         .11553           4.3023 [.000]
dLEXPO4            .26149         .10659           2.4532 [.016]
dLMPITH            1.3488        .29273           4.6076 [.000]
dLMPUIK            .18911         1.8345           .10309 [.918]
dLRER              -.37150        .57935           -.64123 [.523]
dINPT              8.3105        6.8251           1.2176 [.227]
ecm(-1)            -.89344        .12697           -7.0364 [.000]
*****
List of additional temporary variables created:
dLEXPO = LEXPO-LEXPO(-1)
dLEXPO1 = LEXPO(-1)-LEXPO(-2)
dLEXPO2 = LEXPO(-2)-LEXPO(-3)
dLEXPO3 = LEXPO(-3)-LEXPO(-4)
dLEXPO4 = LEXPO(-4)-LEXPO(-5)
dLMPITH = LMPITH-LMPITH(-1)
dLMPUIK = LMPUIK-LMPUIK(-1)
dLRER = LRER-LRER(-1)
dINPT = INPT-INPT(-1)
ecm = LEXPO -1.5096*LMPITH -.21167*LMPUIK + .41581*LRER -9.3016*INPT
*****
R-Squared           .45254       R-Bar-Squared       .40101
S.E. of Regression .37976       F-stat.             F( 8, 85)   8.7827 [.000]
Mean of Dependent Variable .0024616 S.D. of Dependent Variable .49069
Residual Sum of Squares 12.2587    Equation Log-likelihood     -37.6386
Akaike Info. Criterion  -46.6386   Schwarz Bayesian Criterion -58.0834
DW-statistic        2.0647
*****
R-Squared and R-Bar-Squared measures refer to the dependent variable
dLEXPO and in cases where the error correction model is highly
restricted, these measures could become negative.

```

ระยະຍາວ

```

Estimated Long Run Coefficients using the ARDL Approach
ARDL(5,0,0,0) selected based on Schwarz Bayesian Criterion
*****
Dependent variable is LEXPO
94 observations used for estimation from 2001M6 to 2009M3
*****
Regressor          Coefficient      Standard Error      T-Ratio[Prob]
LMPITH            1.5096        .25867           5.8362 [.000]
LMPUIK            .21167        2.0529           .10311 [.918]
LRER              -.41581        .65080           -.63891 [.525]
INPT              9.3016        7.5639           1.2297 [.222]
*****

```

3. กรณีศึกษาประเทศไทยกับประเทศสหรัฐอเมริกา

เมื่อช่วงเวลา = 2

Variable Addition Test (OLS case)

```
*****
Dependent variable is DLEXPO
List of the variables added to the regression:
LEXPO(-1)      LMPITH(-1)      LMPIUS(-1)      LRER(-1)
96 observations used for estimation from 2001M4 to 2009M3
*****
Regressor        Coefficient     Standard Error    T-Ratio[Prob]
INPT            15.4844       6.7878          2.2812 [.025]
DLEXPO(-1)      .18421        .10211          1.8039 [.075]
DLEXPO(-2)      -.0014802    .095191         -.015550 [.988]
DLMPITH(-1)     -2.6722       .574441         -4.6520 [.000]
DLMPITH(-2)     -.74311       .62275          -1.1933 [.236]
DLMPIUS(-1)     12.6481       3.9572          3.1962 [.002]
DLMPIUS(-2)     3.4546        4.0640          .85003 [.398]
DLRER(-1)        1.1058       1.5971          .69238 [.491]
DLRER(-2)        .62695        1.6093          .38957 [.698]
LEXPO(-1)        -.44146       .093207         -4.7364 [.000]
LMPITH(-1)      .10058        .44360          .22674 [.821]
LMPIUS(-1)      -.46453       1.3821          -.33610 [.738]
LRER(-1)         -1.3393       .64779          -2.0675 [.042]
*****
Joint test of zero restrictions on the coefficients of additional variables:
Lagrange Multiplier Statistic   CHSQ( 4)= 21.6169 [.000]
Likelihood Ratio Statistic     CHSQ( 4)= 24.4915 [.000]
F Statistic                  F( 4,  83)= 6.0303 [.000]
*****
```

เมื่อช่วงเวลา = 3

Variable Addition Test (OLS case)

```
*****
Dependent variable is DLEXPO
List of the variables added to the regression:
LEXPO(-1)      LMPITH(-1)      LMPIUS(-1)      LRER(-1)
95 observations used for estimation from 2001M5 to 2009M3
*****
Regressor        Coefficient     Standard Error    T-Ratio[Prob]
INPT            8.4691        7.1856          1.1786 [.242]
DLEXPO(-1)      .30491        .10987          2.7751 [.007]
DLEXPO(-2)      .081249       .10127          .80230 [.425]
DLEXPO(-3)      .20778        .094000         2.2104 [.030]
DLMPITH(-1)     -2.1694       .62784          -3.4554 [.001]
DLMPITH(-2)     -.26921       .77376          -.34793 [.729]
DLMPITH(-3)     .13200        .64918          .20333 [.839]
DLMPIUS(-1)     11.1327       3.9366          2.8280 [.006]
DLMPIUS(-2)     1.2440        4.1799          .29762 [.767]
DLMPIUS(-3)     -10.2464      4.1786          -2.4521 [.016]
DLRER(-1)        1.4380        1.5675          .91737 [.362]
DLRER(-2)        .38017         1.5931          .23864 [.812]
DLRER(-3)        -2.0862       1.6094          -1.2962 [.199]
LEXPO(-1)        -.51263        .10195          -5.0282 [.000]
LMPITH(-1)      .30420         .45873          .66315 [.509]
LMPIUS(-1)      .43577         1.4435          .30189 [.764]
LRER(-1)         -.64386        .68324          -.94236 [.349]
*****
Joint test of zero restrictions on the coefficients of additional variables:
Lagrange Multiplier Statistic   CHSQ( 4)= 23.3459 [.000]
Likelihood Ratio Statistic     CHSQ( 4)= 26.7925 [.000]
F Statistic                  F( 4,  78)= 6.3534 [.000]
*****
```

เมื่อช่วงเวลา = 4

```

Variable Addition Test (OLS case)
*****
Dependent variable is DLEXPO
List of the variables added to the regression:
LEXP0(-1)      LMPITH(-1)      LMPIUS(-1)      LRER(-1)
94 observations used for estimation from 2001M6 to 2009M3
*****
Regressor          Coefficient       Standard Error     T-Ratio[Prob]
INPT              13.3395         .6.8789           1.9392[.056]
DLEXPO(-1)        .33904          .10598          3.1991[.002]
DLEXPO(-2)        .11568          .10819          1.0692[.288]
DLEXPO(-3)        .23522          .094431          2.4909[.015]
DLEXPO(-4)        .21230          .089685          2.3671[.021]
DLMPITH(-1)       -2.5087         .58766          -4.2689[.000]
DLMPITH(-2)       -.71310         .74118          -.96212[.339]
DLMPITH(-3)       -.45822         .74088          -.61848[.538]
DLMPITH(-4)       -.62757         .59555          -1.0538[.295]
DLMPIUS(-1)       12.4036         3.6804           3.3702[.001]
DLMPIUS(-2)       2.8557          3.9910           .71553[.477]
DLMPIUS(-3)       -7.5360         4.0343          -1.8680[.066]
DLMPIUS(-4)       1.8452          4.2457           .43460[.665]
DLRER(-1)         .18241          1.5086           .12091[.904]
DLRER(-2)         -.13186         1.4846          -.088818[.929]
DLRER(-3)         -.1.4895         1.5059          -.98916[.326]
DLRER(-4)         -.1.3210         1.5005          -.88035[.382]
LEXP0(-1)         -.56360         .10763          -5.2363[.000]
LMPITH(-1)        1.0741          .45463           2.3626[.021]
LMPIUS(-1)        -1.5409         1.3935          -1.1058[.272]
LRER(-1)          -.32095         .67206          -.47756[.634]
*****
Joint test of zero restrictions on the coefficients of additional variables:
Lagrange Multiplier Statistic   CHSQ( 4)= 27.9173[.000]
Likelihood Ratio Statistic     CHSQ( 4)= 33.1244[.000]
F Statistic                  F( 4, 73)= 7.7099[.000]
*****

```

เมื่อช่วงเวลา = 5

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Variable Addition Test (OLS case)
*****
Dependent variable is DLEXPO
List of the variables added to the regression:
LEXPO(-1)      LMPITH(-1)      LMPIUS(-1)      LRER(-1)
93 observations used for estimation from 2001M7 to 2009M3
*****
Regressor          Coefficient       Standard Error     T-Ratio[Prob]
INPT              16.8904         .71595           2.3592 [.021]
DLEXPO(-1)        .41439          .11673           3.5500 [.001]
DLEXPO(-2)        .19429          .11317           1.7167 [.091]
DLEXPO(-3)        .37731          .10871           3.4706 [.001]
DLEXPO(-4)        .28874          .097934          2.9483 [.004]
DLEXPO(-5)        .24938          .091301          2.7315 [.008]
DLMPITH(-1)       -2.9015         .61135          -4.7460 [.000]
DLMPITH(-2)       -1.3413         .77146          -1.7387 [.087]
DLMPITH(-3)       -.58668         .77933          -.75280 [.454]
DLMPITH(-4)       -.37750         .76588          -.49290 [.624]
DLMPITH(-5)       .20165          .64343           .31340 [.755]
DLMPIUS(-1)       12.2189         3.7920          3.2223 [.002]
DLMPIUS(-2)       4.1310          4.2657          .96843 [.336]
DLMPIUS(-3)       -7.5915         4.0222          -1.8874 [.063]
DLMPIUS(-4)       .91025          4.4629          .20396 [.839]
DLMPIUS(-5)       2.3041          4.5891          .50209 [.617]
DLRER(-1)          .046465         1.5245          .030479 [.976]
DLRER(-2)          .18687          1.5189          .12303 [.902]
DLRER(-3)          -.93518         1.5105          -.61910 [.538]
DLRER(-4)          -1.8462         1.5137          -1.2197 [.227]
DLRER(-5)          -.70136         1.4744          -.47571 [.636]
LEXPO(-1)          -.73508         .12299          -5.9769 [.000]
LMPITH(-1)         1.4493          .50571           2.8658 [.006]
LMPIUS(-1)         -2.0587         1.4573          -1.4127 [.162]
LRER(-1)           -.30825         .70442          -.43759 [.663]
*****
Joint test of zero restrictions on the coefficients of additional variables:
Lagrange Multiplier Statistic   CHSQ( 4)= 33.5780 [.000]
Likelihood Ratio Statistic    CHSQ( 4)= 41.6580 [.000]
F Statistic                 F( 4, 68)= 9.6063 [.000]
*****

```

เมื่อช่วงเวลา = 6

Variable Addition Test (OLS case)

Dependent variable is DLEXPO

List of the variables added to the regression:

LEXPO(-1) LMPITH(-1) LMPIUS(-1) LRER(-1)
 92 observations used for estimation from 2001M8 to 2009M3

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
INPT	17.4067	.78812	2.2086[.031]
DLEXPO(-1)	.45362	.12807	3.5419[.001]
DLEXPO(-2)	.21389	.12903	1.6577[.102]
DLEXPO(-3)	.38501	.11757	3.2746[.002]
DLEXPO(-4)	.36818	.12034	3.0595[.003]
DLEXPO(-5)	.33853	.10646	3.1800[.002]
DLEXPO(-6)	.10845	.10025	1.0818[.283]
DLMPITH(-1)	-3.2566	.66636	-4.8872[.000]
DLMPITH(-2)	-1.7016	.82416	-2.0647[.043]
DLMPITH(-3)	-.93211	.85978	-1.0841[.282]
DLMPITH(-4)	-.15540	.87720	-1.7715[.860]
DLMPITH(-5)	.77019	.87862	.87659[.384]
DLMPITH(-6)	.59240	.68391	.86620[.390]
DLMPIUS(-1)	12.2016	3.9613	3.0802[.003]
DLMPIUS(-2)	5.3980	4.4240	1.2202[.227]
DLMPIUS(-3)	-7.2089	4.4162	-1.6324[.108]
DLMPIUS(-4)	-1.0840	4.5935	-.23598[.814]
DLMPIUS(-5)	.27160	4.8476	.056027[.955]
DLMPIUS(-6)	-2.3362	4.8603	-.48066[.632]
DLRER(-1)	-1.4711	1.6761	-.87768[.383]
DLRER(-2)	-.013183	1.5583	-.0084603[.993]
DLRER(-3)	-1.0457	1.5902	-.65756[.513]
DLRER(-4)	-1.7623	1.5492	-1.1375[.260]
DLRER(-5)	-1.5676	1.5502	-1.0112[.316]
DLRER(-6)	-2.6946	1.5251	-1.7668[.082]
LEXPO(-1)	-.83343	.15361	-5.4255[.000]
LMPITH(-1)	1.8908	.57857	3.2680[.002]
LMPIUS(-1)	-2.6248	1.5886	-1.6522[.103]
LRER(-1)	.069795	.75174	.092844[.926]

Joint test of zero restrictions on the coefficients of additional variables:

Lagrange Multiplier Statistic CHSQ(4)= 31.1267[.000]
 Likelihood Ratio Statistic CHSQ(4)= 37.9955[.000]
 F Statistic F(4, 63)= 8.0535[.000]

เมื่อช่วงเวลา = 7

```

Variable Addition Test (OLS case)
*****
Dependent variable is DLEXPO
List of the variables added to the regression:
LEXPO(-1)      LMPITH(-1)      LMPIUS(-1)      LRER(-1)
91 observations used for estimation from 2001M9 to 2009M3
*****
Regressor          Coefficient       Standard Error     T-Ratio[Prob]
INPT              20.7008         .8.2408           2.5120[.015]
DLEXPO(-1)        .38384          .14775            2.5979[.012]
DLEXPO(-2)        .20994          .13452            1.5606[.124]
DLEXPO(-3)        .22549          .12668            1.7800[.080]
DLEXPO(-4)        .36066          .12315            2.9287[.005]
DLEXPO(-5)        .18647          .12384            1.5057[.138]
DLEXPO(-6)        .042131         .11518            .36577[.716]
DLEXPO(-7)        -.089422         .095166           -.93964[.351]
DLMPITH(-1)       -3.9260         .72961            -5.3810[.000]
DLMPITH(-2)       -2.2731         .86319            -2.6334[.011]
DLMPITH(-3)       -1.3184         .87522            -1.5064[.137]
DLMPITH(-4)       -.42915          .89382            -.48013[.633]
DLMPITH(-5)       -.16593          .94623            -.17536[.861]
DLMPITH(-6)       -.87373          .89821            -.97274[.335]
DLMPITH(-7)       -.1.3522         .68661            -1.9694[.054]
DLMPIUS(-1)       14.6263         3.9077            3.7430[.000]
DLMPIUS(-2)       8.8720          4.4174            2.0084[.049]
DLMPIUS(-3)       -5.9632          4.3613            -1.3673[.177]
DLMPIUS(-4)       1.3397          4.7444            .28237[.779]
DLMPIUS(-5)       2.0009          4.7698            .41949[.676]
DLMPIUS(-6)       -1.1091          4.7745            -.23230[.817]
DLMPIUS(-7)       -2.1694          5.2536            -.41294[.681]
DLRER(-1)         -1.5589          1.7055            -.91401[.364]
DLRER(-2)         .58627           1.6043            .36544[.716]
DLRER(-3)         -1.7702          1.5668            -1.1298[.263]
DLRER(-4)         -2.7647          1.5217            -1.8169[.074]
DLRER(-5)         -2.5398          1.4929            -1.7013[.094]
DLRER(-6)         -1.5728          1.5632            -1.0062[.319]
DLRER(-7)         -.71744           1.4901            -.48148[.632]
LEXPO(-1)         -.74414          .17843             -4.1704[.000]
LMPITH(-1)        2.2106          .62584            3.5322[.001]
LMPIUS(-1)        -4.0761          1.6533            -2.4655[.017]
LRER(-1)          .14145           .73896            .19142[.849]
*****
Joint test of zero restrictions on the coefficients of additional variables:
Lagrange Multiplier Statistic   CHSQ( 4)= 23.9080[.000]
Likelihood Ratio Statistic     CHSQ( 4)= 27.7363[.000]
F Statistic                  F( 4, 58)= 5.1670[.001]
*****
```

เมื่อช่วงเวลา = 8

Variable Addition Test (OLS case)			

Dependent variable is DLEXPO			
List of the variables added to the regression:			
LEXPO(-1) LMPITH(-1) LMPIUS(-1) LRER(-1)			
90 observations used for estimation from 2001M10 to 2009M3			

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
INPT	22.9339	9.4110	2.4369[.018]
DLEXPO(-1)	.27948	.18600	1.5026[.139]
DLEXPO(-2)	.18356	.16426	1.1175[.269]
DLEXPO(-3)	.22918	.14087	1.6269[.110]
DLEXPO(-4)	.30046	.13580	2.2125[.031]
DLEXPO(-5)	.20656	.13590	1.5199[.134]
DLEXPO(-6)	-.032261	.13573	-.23769[.813]
DLEXPO(-7)	-.13906	.11831	-1.1754[.245]
DLEXPO(-8)	-.081171	.10031	-.80922[.422]
DLMPITH(-1)	-4.0494	.83860	-4.8288[.000]
DLMPITH(-2)	-2.7122	1.0125	-2.6786[.010]
DLMPITH(-3)	-1.6214	.99808	-1.6245[.110]
DLMPITH(-4)	-.60394	.98365	-.61398[.542]
DLMPITH(-5)	-.23593	1.0333	-.22833[.820]
DLMPITH(-6)	-1.2611	1.0286	-1.2260[.226]
DLMPITH(-7)	-2.1140	.96789	-2.1841[.033]
DLMPITH(-8)	-.77364	.73425	-1.0536[.297]
DLMPIUS(-1)	14.5608	4.2052	3.4626[.001]
DLMPIUS(-2)	10.8379	4.8247	2.2463[.029]
DLMPIUS(-3)	-4.1426	4.8011	-.86285[.392]
DLMPIUS(-4)	.49193	5.0462	.097484[.923]
DLMPIUS(-5)	2.8115	5.4372	.51710[.607]
DLMPIUS(-6)	.32149	5.1121	.062887[.950]
DLMPIUS(-7)	-.90301	5.6117	-.16092[.873]
DLMPIUS(-8)	-.98984	5.4221	-.18256[.856]
DLRER(-1)	-1.8429	1.7922	-1.0283[.308]
DLRER(-2)	.40927	1.7791	.23004[.819]
DLRER(-3)	-1.3261	1.7102	-.77539[.442]
DLRER(-4)	-3.2944	1.6492	-1.9976[.051]
DLRER(-5)	-3.3114	1.6235	-2.0397[.046]
DLRER(-6)	-2.3286	1.6771	-1.3885[.171]
DLRER(-7)	-.21257	1.6337	-.13012[.897]
DLRER(-8)	-.096561	1.5434	-.062563[.950]
LEXPO(-1)	-.73541	.21079	-3.4889[.001]
LMPITH(-1)	2.4717	.73482	3.3637[.001]
LMPIUS(-1)	-4.9476	1.8931	-2.6135[.012]
LRER(-1)	.22974	.79629	.28852[.774]

Joint test of zero restrictions on the coefficients of additional variables:			
Lagrange Multiplier Statistic CHSQ(4)= 20.1106[.000]			
Likelihood Ratio Statistic CHSQ(4)= 22.7607[.000]			
F Statistic F(4, 53)= 3.8127[.009]			

ເນື້ອຂ່າວງວດ = 9

Variable Addition Test (OLS case)

Dependent variable is DLEXPO

List of the variables added to the regression:

LEXPO(-1) LMPITH(-1) LMPIUS(-1) LRER(-1)
 89 observations used for estimation from 2001M11 to 2009M3

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
INPT	18.5936	10.7469	1.7301[.090]
DLEXPO(-1)	.33187	.21899	1.5154[.136]
DLEXPO(-2)	.27217	.20153	1.3505[.183]
DLEXPO(-3)	.25774	.17008	1.5154[.136]
DLEXPO(-4)	.31390	.15114	2.0768[.043]
DLEXPO(-5)	.22521	.14466	1.5568[.126]
DLEXPO(-6)	-.060823	.14770	-.41181[.682]
DLEXPO(-7)	-.046250	.14033	-.32958[.743]
DLEXPO(-8)	.015999	.12485	.12814[.899]
DLEXPO(-9)	.077749	.10449	.74408[.460]
DLMPITH(-1)	-3.6572	.98717	-3.7047[.001]
DLMPITH(-2)	-2.3413	1.1433	-2.0479[.046]
DLMPITH(-3)	-1.1728	1.1586	-1.0122[.317]
DLMPITH(-4)	-.30001	1.1116	-.26989[.788]
DLMPITH(-5)	.21109	1.1578	.18232[.856]
DLMPITH(-6)	-.83546	1.1549	-.72342[.473]
DLMPITH(-7)	-1.1657	1.1492	-1.0144[.315]
DLMPITH(-8)	.52740	1.0619	.49666[.622]
DLMPITH(-9)	1.1640	.76558	1.5205[.135]
DLMPIUS(-1)	14.4456	4.5034	3.2077[.002]
DLMPIUS(-2)	9.7576	5.1769	1.8848[.066]
DLMPIUS(-3)	-6.0180	5.2886	-1.1379[.261]
DLMPIUS(-4)	-.81379	5.5062	-.14780[.883]
DLMPIUS(-5)	3.4506	5.7044	.60491[.548]
DLMPIUS(-6)	.044120	5.7295	.0077006[.994]
DLMPIUS(-7)	-1.4705	6.1954	-.23736[.813]
DLMPIUS(-8)	-3.9401	5.7880	-.68073[.499]
DLMPIUS(-9)	-4.9535	5.9323	-.83501[.408]
DLRER(-1)	-1.3281	1.8630	-.71286[.479]
DLRER(-2)	.52191	1.8524	.28175[.779]
DLRER(-3)	-1.0581	1.9067	-.55492[.582]
DLRER(-4)	-3.7798	1.7988	-2.1013[.041]
DLRER(-5)	-2.6826	1.7558	-1.5279[.133]
DLRER(-6)	-1.8592	1.8413	-1.0097[.318]
DLRER(-7)	.67911	1.7793	.38168[.704]
DLRER(-8)	-.59434	1.6660	-.35674[.723]
DLRER(-9)	-.23007	1.6153	-.14243[.887]
LEXPO(-1)	-.73100	.24121	-3.0306[.004]
LMPITH(-1)	2.4036	.84795	2.8346[.007]
LMPIUS(-1)	-4.1517	2.1479	-1.9330[.059]
LRER(-1)	.42526	.85220	.49901[.620]

Joint test of zero restrictions on the coefficients of additional variables:

Lagrange Multiplier Statistic CHSQ(4)= 16.4257[.002]
 Likelihood Ratio Statistic CHSQ(4)= 18.1583[.001]
 F Statistic F(4, 48)= 2.7160[.041]

เมื่อช่วงเวลา = 10

Variable Addition Test (OLS case)			

Dependent variable is DLEXPO			
List of the variables added to the regression:			
DLEXPO(-1)	LMPITH(-1)	LMPIUS(-1)	LRER(-1)
88 observations used for estimation from 2001M12 to 2009M3			

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
INPT	17.1492	12.1113	1.4160 [.164]
DLEXPO(-1)	.39058	.25040	1.5598 [.126]
DLEXPO(-2)	.31901	.23220	1.3739 [.177]
DLEXPO(-3)	.27395	.20630	1.3280 [.191]
DLEXPO(-4)	.29531	.18133	1.6286 [.111]
DLEXPO(-5)	.29026	.15953	1.8195 [.076]
DLEXPO(-6)	-.093911	.15369	-.61104 [.544]
DLEXPO(-7)	-.030023	.15196	-.19757 [.844]
DLEXPO(-8)	.025733	.14389	.17884 [.859]
DLEXPO(-9)	.13912	.12524	1.1108 [.273]
DLEXPO(-10)	-.043269	.10748	-.40259 [.689]
DLMPITH(-1)	-4.2172	1.1125	-3.7906 [.000]
DLMPITH(-2)	-2.9267	1.2807	-2.2853 [.027]
DLMPITH(-3)	-1.4941	1.2875	-1.1605 [.252]
DLMPITH(-4)	-.75117	1.2597	-.59631 [.554]
DLMPITH(-5)	-.0079691	1.2533	-.0063586 [.995]
DLMPITH(-6)	-.55986	1.2683	-.44144 [.661]
DLMPITH(-7)	-.63892	1.2450	-.51319 [.610]
DLMPITH(-8)	1.2180	1.2060	1.0099 [.318]
DLMPITH(-9)	1.7394	1.0801	1.6105 [.115]
DLMPITH(-10)	.36427	.78048	.46673 [.643]
DLMPIUS(-1)	17.0314	5.0474	3.3743 [.002]
DLMPIUS(-2)	11.8547	5.4558	2.1729 [.035]
DLMPIUS(-3)	-6.3580	5.6227	-1.1308 [.264]
DLMPIUS(-4)	.69360	5.9367	.11683 [.908]
DLMPIUS(-5)	4.4151	6.0106	.73456 [.467]
DLMPIUS(-6)	-.45320	5.8402	-.077601 [.939]
DLMPIUS(-7)	-1.5491	6.5994	-.23473 [.816]
DLMPIUS(-8)	-4.5158	6.2405	-.72363 [.473]
DLMPIUS(-9)	-7.6441	6.4396	-1.1870 [.242]
DLMPIUS(-10)	-9.7713	6.2289	-1.5687 [.124]
DLRER(-1)	-1.6838	1.8811	-.89515 [.376]
DLRER(-2)	.60080	1.8810	.31941 [.751]
DLRER(-3)	-1.6233	1.9335	-.83957 [.406]
DLRER(-4)	-3.9707	1.9319	-2.0554 [.046]
DLRER(-5)	-3.5281	1.9044	-1.8526 [.071]
DLRER(-6)	-2.5092	1.9038	-1.3180 [.194]
DLRER(-7)	-.24081	1.9384	-.12423 [.902]
DLRER(-8)	-1.2001	1.7703	-.67789 [.501]
DLRER(-9)	-.43082	1.7020	-.25313 [.801]
DLRER(-10)	-2.9611	1.6676	-1.7757 [.083]
LEXPO(-1)	-.82341	.27299	-3.0162 [.004]
LMPITH(-1)	3.0568	.95459	3.2022 [.003]
LMPIUS(-1)	-4.7853	2.3750	-2.0148 [.050]
LRER(-1)	1.0553	.90757	1.1628 [.251]

Joint test of zero restrictions on the coefficients of additional variables:			
Lagrange Multiplier Statistic	CHSQ(4) =	19.9942 [.001]	
Likelihood Ratio Statistic	CHSQ(4) =	22.6815 [.000]	
F Statistic	F(4, 43) =	3.1606 [.023]	

เมื่อช่วงเวลา = 11

Variable Addition Test (OLS case)			

Dependent variable is DLEXPO			
List of the variables added to the regression:			
LEXPO(-1)	LMPITH(-1)	LMPIUS(-1)	LRER(-1)
87 observations used for estimation from 2002M1 to 2009M3			

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
INPT	27.0303	13.6811	1.9757[.055]
DLEXPO(-1)	.69629	.29100	2.3927[.022]
DLEXPO(-2)	.58266	.27353	2.1302[.040]
DLEXPO(-3)	.54078	.23991	2.2540[.030]
DLEXPO(-4)	.61480	.23451	2.6216[.013]
DLEXPO(-5)	.48978	.19140	2.5589[.015]
DLEXPO(-6)	.058800	.17873	.32898[.744]
DLEXPO(-7)	.045991	.16129	.28515[.777]
DLEXPO(-8)	.12520	.15640	.80056[.428]
DLEXPO(-9)	.31541	.15196	2.0756[.045]
DLEXPO(-10)	.16984	.13682	1.2413[.222]
DLEXPO(-11)	.20109	.13050	1.5409[.132]
DLMPITH(-1)	-5.9737	1.3446	-4.4427[.000]
DLMPITH(-2)	-4.9025	1.5328	-3.1984[.003]
DLMPITH(-3)	-3.1357	1.5097	-2.0770[.045]
DLMPITH(-4)	-2.0261	1.4383	-1.4087[.167]
DLMPITH(-5)	-.81449	1.4115	-.57703[.567]
DLMPITH(-6)	-1.3357	1.3858	-.96383[.341]
DLMPITH(-7)	-1.4088	1.3933	-1.0111[.318]
DLMPITH(-8)	.59348	1.3334	.44509[.659]
DLMPITH(-9)	1.9594	1.2463	1.5722[.124]
DLMPITH(-10)	1.5332	1.1379	1.3474[.186]
DLMPITH(-11)	1.2163	.83952	1.4488[.156]
DLMPIUS(-1)	18.9282	5.2949	3.5748[.001]
DLMPIUS(-2)	15.3035	6.3312	2.4171[.021]
DLMPIUS(-3)	-1.0898	6.1844	-.17621[.861]
DLMPIUS(-4)	8.0470	7.0747	1.1374[.262]
DLMPIUS(-5)	8.9342	6.4308	1.3893[.173]
DLMPIUS(-6)	1.0743	6.1912	.17352[.863]
DLMPIUS(-7)	-1.6599	6.6746	-.24869[.805]
DLMPIUS(-8)	-3.3753	6.7290	-.50161[.619]
DLMPIUS(-9)	-9.5373	6.6591	-1.4322[.160]
DLMPIUS(-10)	-12.2834	6.6583	-1.8448[.073]
DLMPIUS(-11)	.059505	6.9008	.0086228[.993]
DLRER(-1)	-1.1503	2.1459	-.53607[.595]
DLRER(-2)	.81541	1.9085	.42726[.672]
DLRER(-3)	-.68773	1.9570	-.35143[.727]
DLRER(-4)	-3.5518	1.9480	-1.8233[.076]
DLRER(-5)	-4.3984	2.0356	-2.1608[.037]
DLRER(-6)	-3.6580	2.0809	-1.7579[.087]
DLRER(-7)	-.19868	2.0371	-.097531[.923]
DLRER(-8)	-.74389	2.0042	-.37117[.713]
DLRER(-9)	-.57628	1.7705	-.32550[.747]
DLRER(-10)	-4.3765	1.7754	-2.4651[.018]
DLRER(-11)	-1.6516	1.7385	-.95002[.348]
LEXPO(-1)	-1.1795	3.32232	-3.6594[.001]
LMPITH(-1)	3.7336	1.1275	3.3113[.002]
LMPIUS(-1)	-5.9146	2.6871	-2.2011[.034]
LRER(-1)	.68458	.99507	.68797[.496]

Joint test of zero restrictions on the coefficients of additional variables:			
Lagrange Multiplier Statistic	CHSQ(4)=	25.2080[.000]	
Likelihood Ratio Statistic	CHSQ(4)=	29.7656[.000]	
F Statistic	F(4, 38)=	3.8755[.010]	

เมื่อช่วงเวลา = 12

Variable Addition Test (OLS case)			

Dependent variable is DLEXPO			
List of the variables added to the regression:			
LEXPO(-1) LMPITH(-1) LMPIUS(-1) LRER(-1)			
86 observations used for estimation from 2002M2 to 2009M3			

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
INPT	16.8337	15.1967	1.1077[.276]
DLEXPO(-1)	.71598	.32457	2.2059[.034]
DLEXPO(-2)	.46779	.31342	1.4925[.145]
DLEXPO(-3)	.49050	.28120	1.7443[.090]
DLEXPO(-4)	.53270	.26097	2.0412[.049]
DLEXPO(-5)	.58490	.25709	2.2750[.030]
DLEXPO(-6)	.044952	.21710	.20706[.837]
DLEXPO(-7)	.088383	.17895	.49389[.625]
DLEXPO(-8)	.7336E-3	.16094	.00455579[.996]
DLEXPO(-9)	.14025	.16146	.86860[.391]
DLEXPO(-10)	.16752	.16051	1.0437[.304]
DLEXPO(-11)	.21494	.13617	1.5784[.124]
DLEXPO(-12)	-0.32938	.13333	-.24704[.806]
DLMPITH(-1)	-5.5734	1.4155	-3.9374[.000]
DLMPITH(-2)	-4.9318	1.7091	-2.8857[.007]
DLMPITH(-3)	-3.5602	1.7607	-2.0220[.051]
DLMPITH(-4)	-1.9493	1.5998	-1.2185[.232]
DLMPITH(-5)	.24077	1.5433	.15601[.877]
DLMPITH(-6)	.38322	1.5571	.24612[.807]
DLMPITH(-7)	.56769	1.5219	.37301[.712]
DLMPITH(-8)	2.7456	1.4908	1.8417[.075]
DLMPITH(-9)	3.7765	1.3611	2.7745[.009]
DLMPITH(-10)	3.4068	1.2713	2.6799[.011]
DLMPITH(-11)	3.4707	1.2247	2.8340[.008]
DLMPITH(-12)	2.2293	1.0629	2.0973[.044]
DLMPIUS(-1)	18.2383	5.5004	3.3158[.002]
DLMPIUS(-2)	16.0739	6.6655	2.4115[.022]
DLMPIUS(-3)	.98287	6.8784	.14289[.887]
DLMPIUS(-4)	3.7360	6.9681	.53616[.595]
DLMPIUS(-5)	1.8919	7.1822	.26341[.794]
DLMPIUS(-6)	-.39051	6.4384	-.060653[.952]
DLMPIUS(-7)	3.3083	7.0529	.46906[.642]
DLMPIUS(-8)	-5.2472	6.5757	-.79797[.431]
DLMPIUS(-9)	-15.1541	6.9876	-2.1687[.037]
DLMPIUS(-10)	-17.3712	6.8945	-2.5196[.017]
DLMPIUS(-11)	-11.3511	8.1747	-1.3886[.174]
DLMPIUS(-12)	-15.2558	7.0135	-2.1752[.037]
DLRER(-1)	-3.9730	2.2441	-1.7704[.086]
DLRER(-2)	-2.3232	2.1645	-1.0733[.291]
DLRER(-3)	-1.4081	1.9205	-.73318[.469]
DLRER(-4)	-3.2251	1.8801	-1.7154[.096]
DLRER(-5)	-5.7854	1.9823	-2.9185[.006]
DLRER(-6)	-5.7642	2.2975	-2.5089[.017]
DLRER(-7)	-2.6279	2.2033	-1.1927[.241]
DLRER(-8)	-2.4361	2.0626	-1.1811[.246]
DLRER(-9)	-1.0161	1.8917	-.53713[.595]
DLRER(-10)	-4.0886	1.7540	-2.3310[.026]
DLRER(-11)	-3.0911	1.9241	-1.6065[.118]
DLRER(-12)	-3.5026	1.7904	-1.9564[.059]
LEXPO(-1)	-1.3329	.38825	-3.4331[.002]
LMPITH(-1)	5.3185	1.4294	3.7208[.001]
LMPIUS(-1)	-6.8041	3.0319	-2.2441[.032]
LRER(-1)	2.7438	1.1417	2.4033[.022]

Joint test of zero restrictions on the coefficients of additional variables:			
Lagrange Multiplier Statistic	CHSQ(4)=	31.2246[.000]	
Likelihood Ratio Statistic	CHSQ(4)=	38.7952[.000]	
F Statistic	F(4, 33)=	4.7029[.004]	

การประมาณค่าของ Error Correction Model ตามกระบวนการ ARDL โดยใช้ SBC

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Error Correction Representation for the Selected ARDL Model
ARDL(2,2,0,1) selected based on Schwarz Bayesian Criterion
*****
Dependent variable is dLEXPO
96 observations used for estimation from 2001M4 to 2009M3
*****
Regressor          Coefficient      Standard Error      T-Ratio[Prob]
dLEXPO1           .22752        .092652          2.4557 [.016]
dLMPITH          -.2356E-3     .51870          -.4543E-3 [1.00]
dLMPITH1         -2.2303       .53012          -4.2072 [.000]
dMPIUS            1.7327       .98679          1.7559 [.083]
dLRER              2.6723       1.5691          1.7031 [.092]
dINPT              4.2984       4.9467          .86893 [.387]
ecm(-1)           -.45203      .082631          -5.4705 [.000]
*****
List of additional temporary variables created:
dLEXPO = LEXPO-LEXPO(-1)
dLEXPO1 = LEXPO (-1)-LEXPO (-2)
dLMPITH = LMPITH-LMPITH(-1)
dLMPITH1 = LMPITH (-1)-LMPITH (-2)
dMPIUS = MPIUS-LMPIUS (-1)
dLRER = LRER-LRER(-1)
dINPT = INPT-INPT(-1)
ecm = LEXPO + .38822*LMPITH -3.8332*LMPIUS + 1.7107*LRER -9.5090*INPT
*****
R-Squared           .42969      R-Bar-Squared       .37725
S.E. of Regression   .25096      F-stat.    F( 6, 89) 10.9249 [.000]
Mean of Dependent Variable   .012345     S.D. of Dependent Variable   .31802
Residual Sum of Squares   5.4794      Equation Log-likelihood   1.2231
Akaike Info. Criterion   -7.7769      Schwarz Bayesian Criterion   -19.3165
DW-statistic          1.9753
*****
R-Squared and R-Bar-Squared measures refer to the dependent variable
dLEXPO and in cases where the error correction model is highly
restricted, these measures could become negative.

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Estimated Long Run Coefficients using the ARDL Approach
ARDL(2,2,0,1) selected based on Schwarz Bayesian Criterion
*****
Dependent variable is LEXPO
96 observations used for estimation from 2001M4 to 2009M3
*****
Regressor          Coefficient      Standard Error      T-Ratio[Prob]
LMPITH           -.38822        .94168          -.41227 [.681]
LMPIUS            3.8332       2.2262          1.7219 [.089]
LRER              -1.7107       1.3390          -1.2776 [.205]
INPT              9.5090       10.6602          .89201 [.375]
*****

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ประวัติผู้เขียน

ชื่อ นางสาวเบญจรัตน์ ทองพันชั่ง

วัน เดือน ปีเกิด 1 มีนาคม 2526

ประวัติการศึกษา สำเร็จการศึกษาระดับมัธยมศึกษา โรงเรียนสาธิตมหาวิทยาลัยเชียงใหม่
ปีการศึกษา 2544

สำเร็จการศึกษาระดับปริญญาตรี เทคโนโลยีชีวภาพคณะอุตสาหกรรมเกษตร
มหาวิทยาลัยเชียงใหม่มีการศึกษา 2548

ประวัติการทำงาน พ.ศ. 2548 – ปัจจุบัน พนักงานของ Program for HIV Prevention and Treatment

ลิขสิทธิ์มหาวิทยาลัยเชียงใหม่
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