



ลิขสิทธิ์มหาวิทยาลัยเชียงใหม่
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ภาคผนวก ก

ผลการทดสอบยูนิตรูท(Unit Root Test)

MARKET

1.WITH INTERCEPT&TREND

ADF Test Statistic	-9.774622	1% Critical Value*	-4.0004
		5% Critical Value	-3.4302
		10% Critical Value	-3.1384

*MacKinnon critical values for rejection of hypothesis of a unit root.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(RM)

Method: Least Squares

Date: 04/22/04 Time: 14:37

Sample(adjusted): 3 236

Included observations: 234 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RM(-1)	-0.867709	0.088772	-9.774622	0.0000
D(RM(-1))	-0.037042	0.066100	-0.560385	0.5758
C	0.105975	0.494728	0.214208	0.8306
@TREND(1)	0.003293	0.003639	0.904922	0.3665
R-squared	0.451001	Mean dependent var	0.021488	
Adjusted R-squared	0.443841	S.D. dependent var	5.024107	
S.E. of regression	3.746783	Akaike info criterion	5.496619	
Sum squared resid	3228.829	Schwarz criterion	5.555684	
Log likelihood	-639.1044	F-statistic	62.98153	
Durbin-Watson stat	1.994793	Prob(F-statistic)	0.000000	

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2. WITH INTERCEPT & WITHOUT TREND

ADF Test Statistic	-9.736883	1% Critical Value*	-3.4598
		5% Critical Value	-2.8740
		10% Critical Value	-2.5733

*MacKinnon critical values for rejection of hypothesis of a unit root.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(RM)

Method: Least Squares

Date: 04/22/04 Time: 14:36

Sample(adjusted): 3 236

Included observations: 234 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RM(-1)	-0.861013	0.088428	-9.736883	0.0000
D(RM(-1))	-0.040141	0.065986	-0.608326	0.5436
C	0.492581	0.249367	1.975323	0.0494
R-squared	0.449047	Mean dependent var	0.021488	
Adjusted R-squared	0.444277	S.D. dependent var	5.024107	
S.E. of regression	3.745314	Akaike info criterion	5.491626	
Sum squared resid	3240.325	Schwarz criterion	5.535925	
Log likelihood	-639.5202	F-statistic	94.13665	
Durbin-Watson stat	1.994663	Prob(F-statistic)	0.000000	

3. WITHOUT INTERCEPT & TREND

ADF Test Statistic	-9.476229	1% Critical Value*	-2.5744
		5% Critical Value	-1.9410
		10% Critical Value	-1.6164

*MacKinnon critical values for rejection of hypothesis of a unit root.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(RM)

Method: Least Squares

Date: 04/22/04 Time: 14:36

Sample(adjusted): 3 236

Included observations: 234 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RM(-1)	-0.827884	0.087364	-9.476229	0.0000
D(RM(-1))	-0.056341	0.065882	-0.855174	0.3933
R-squared	0.439740	Mean dependent var	0.021488	
Adjusted R-squared	0.437325	S.D. dependent var	5.024107	
S.E. of regression	3.768665	Akaike info criterion	5.499829	
Sum squared resid	3295.058	Schwarz criterion	5.529362	
Log likelihood	-641.4800	F-statistic	182.0937	
Durbin-Watson stat	1.994119	Prob(F-statistic)	0.000000	

หลักทรัพย์ CPN

1.WITH INTERCEPT&TREND

ADF Test Statistic	-9.317009	1% Critical Value*	-4.0004
		5% Critical Value	-3.4302
		10% Critical Value	-3.1384

*MacKinnon critical values for rejection of hypothesis of a unit root.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(RI_CPN)

Method: Least Squares

Date: 04/22/04 Time: 14:15

Sample(adjusted): 3 236

Included observations: 234 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RI_CPN(-1)	-0.863202	0.092648	-9.317009	0.0000
D(RI_CPN(-1))	-0.153023	0.064013	-2.390511	0.0176
C	2.777954	1.268820	2.189399	0.0296
@TREND(1)	-0.007610	0.009060	-0.839933	0.4018
R-squared	0.523037	Mean dependent var	0.017256	
Adjusted R-squared	0.516815	S.D. dependent var	13.40493	
S.E. of regression	9.317963	Akaike info criterion	7.318711	
Sum squared resid	19969.62	Schwarz criterion	7.377777	
Log likelihood	-852.2892	F-statistic	84.07245	
Durbin-Watson stat	1.975966	Prob(F-statistic)	0.000000	

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2. WITH INTERCEPT & WITHOUT TREND

ADF Test Statistic	-9.285168	1% Critical Value*	-3.4598
		5% Critical Value	-2.8740
		10% Critical Value	-2.5733

*MacKinnon critical values for rejection of hypothesis of a unit root.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(RI_CPN)

Method: Least Squares

Date: 04/22/04 Time: 14:14

Sample(adjusted): 3 236

Included observations: 234 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RI_CPN(-1)	-0.855712	0.092159	-9.285168	0.0000
D(RI_CPN(-1))	-0.157209	0.063778	-2.464966	0.0144
C	1.859313	0.642792	2.892556	0.0042
R-squared	0.521574	Mean dependent var	0.017256	
Adjusted R-squared	0.517431	S.D. dependent var	13.40493	
S.E. of regression	9.312021	Akaike info criterion	7.313227	
Sum squared resid	20030.87	Schwarz criterion	7.357526	
Log likelihood	-852.6476	F-statistic	125.9165	
Durbin-Watson stat	1.975806	Prob(F-statistic)	0.000000	

3. WITHOUT INTERCEPT & TREND

ADF Test Statistic	-8.686770	1% Critical Value*	-2.5744
		5% Critical Value	-1.9410
		10% Critical Value	-1.6164

*MacKinnon critical values for rejection of hypothesis of a unit root.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(RI_CPN)

Method: Least Squares

Date: 04/22/04 Time: 14:12

Sample(adjusted): 3 236

Included observations: 234 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RI_CPN(-1)	-0.770139	0.088657	-8.686770	0.0000
D(RI_CPN(-1))	-0.200429	0.062979	-3.182459	0.0017
R-squared	0.504245	Mean dependent var	0.017256	
Adjusted R-squared	0.502108	S.D. dependent var	13.40493	
S.E. of regression	9.458712	Akaike info criterion	7.340260	
Sum squared resid	20756.40	Schwarz criterion	7.369792	
Log likelihood	-856.8104	F-statistic	235.9730	
Durbin-Watson stat	1.984875	Prob(F-statistic)	0.000000	

ผลการพิจารณา HEMR

1. WITH INTERCEPT&TREND

ADF Test Statistic	-10.63201	1% Critical Value*	-4.0004
		5% Critical Value	-3.4302
		10% Critical Value	-3.1384

*MacKinnon critical values for rejection of hypothesis of a unit root.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(RI_HEM)

Method: Least Squares

Date: 04/22/04 Time: 14:21

Sample(adjusted): 3 236

Included observations: 234 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RI_HEM(-1)	-1.012699	0.095250	-10.63201	0.0000
D(RI_HEM(-1))	-0.041024	0.065705	-0.624365	0.5330
C	-0.436814	1.467281	-0.297703	0.7662
@TREND(1)	0.010663	0.010794	0.987944	0.3242
R-squared	0.527958	Mean dependent var	-0.074822	
Adjusted R-squared	0.521801	S.D. dependent var	16.07138	
S.E. of regression	11.11367	Akaike info criterion	7.671174	
Sum squared resid	28408.12	Schwarz criterion	7.730239	
Log likelihood	-893.5274	F-statistic	85.74841	
Durbin-Watson stat	1.977518	Prob(F-statistic)	0.000000	

2. WITH INTERCEPT & WITHOUT TREND

ADF Test Statistic	-10.58707	1% Critical Value*	-3.4598
		5% Critical Value	-2.8740
		10% Critical Value	-2.5733

*MacKinnon critical values for rejection of hypothesis of a unit root.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(RI_HEM)

Method: Least Squares

Date: 04/22/04 Time: 14:20

Sample(adjusted): 3 236

Included observations: 234 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RI_HEM(-1)	-1.004873	0.094915	-10.58707	0.0000
D(RI_HEM(-1))	-0.044390	0.065613	-0.676549	0.4994
C	0.819748	0.731532	1.120592	0.2636
R-squared	0.525955	Mean dependent var	-0.074822	
Adjusted R-squared	0.521851	S.D. dependent var	16.07138	
S.E. of regression	11.11309	Akaike info criterion	7.666862	
Sum squared resid	28528.67	Schwarz criterion	7.711161	
Log likelihood	-894.0228	F-statistic	128.1479	
Durbin-Watson stat	1.977228	Prob(F-statistic)	0.000000	

3. WITHOUT INTERCEPT & TREND

ADF Test Statistic	-10.52250	1% Critical Value*	-2.5744
		5% Critical Value	-1.9410
		10% Critical Value	-1.6164

*MacKinnon critical values for rejection of hypothesis of a unit root.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(RI_HEM)

Method: Least Squares

Date: 04/22/04 Time: 14:20

Sample(adjusted): 3 236

Included observations: 234 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RI_HEM(-1)	-0.992402	0.094312	-10.52250	0.0000
D(RI_HEM(-1))	-0.050688	0.065408	-0.774957	0.4392
R-squared	0.523378	Mean dependent var	-0.074822	
Adjusted R-squared	0.521324	S.D. dependent var	16.07138	
S.E. of regression	11.11921	Akaike info criterion	7.663736	
Sum squared resid	28683.75	Schwarz criterion	7.693269	
Log likelihood	-894.6571	F-statistic	254.7592	
Durbin-Watson stat	1.977381	Prob(F-statistic)	0.000000	

หลักทรัพย์ ITD

1.WITH INTERCEPT&TREND

ADF Test Statistic	-10.71665	1% Critical Value*	-4.0004
		5% Critical Value	-3.4302
		10% Critical Value	-3.1384

*MacKinnon critical values for rejection of hypothesis of a unit root.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(RI_ITD)

Method: Least Squares

Date: 04/22/04 Time: 14:27

Sample(adjusted): 3 236

Included observations: 234 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RI_ITD(-1)	-1.003756	0.093663	-10.71665	0.0000
D(RI_ITD(-1))	-0.003281	0.066285	-0.049506	0.9606
C	-2.200842	1.318333	-1.669413	0.0964
@TREND(1)	0.028612	0.009914	2.885924	0.0043
R-squared	0.502285	Mean dependent var	-0.019245	
Adjusted R-squared	0.495793	S.D. dependent var	13.88858	
S.E. of regression	9.861939	Akaike info criterion	7.432189	
Sum squared resid	22369.30	Schwarz criterion	7.491254	
Log likelihood	-865.5661	F-statistic	77.37058	
Durbin-Watson stat	1.987443	Prob(F-statistic)	0.000000	

2. WITH INTERCEPT & WITHOUT TREND

ADF Test Statistic	-10.16085	1% Critical Value*	-3.4598
		5% Critical Value	-2.8740
		10% Critical Value	-2.5733

*MacKinnon critical values for rejection of hypothesis of a unit root.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(RI_ITD)

Method: Least Squares

Date: 04/22/04 Time: 14:27

Sample(adjusted): 3 236

Included observations: 234 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RI_ITD(-1)	-0.930617	0.091589	-10.16085	0.0000
D(RI_ITD(-1))	-0.038758	0.066160	-0.585815	0.5586
C	1.103696	0.663623	1.663138	0.0976
R-squared	0.484262	Mean dependent var	-0.019245	
Adjusted R-squared	0.479797	S.D. dependent var	13.88858	
S.E. of regression	10.01715	Akaike info criterion	7.459213	
Sum squared resid	23179.32	Schwarz criterion	7.503512	
Log likelihood	-869.7279	F-statistic	108.4509	
Durbin-Watson stat	1.985179	Prob(F-statistic)	0.000000	

3. WITHOUT INTERCEPT & TREND

ADF Test Statistic	-9.985893	1% Critical Value*	-2.5744
		5% Critical Value	-1.9410
		10% Critical Value	-1.6164

*MacKinnon critical values for rejection of hypothesis of a unit root.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(RI_ITD)

Method: Least Squares

Date: 04/22/04 Time: 14:26

Sample(adjusted): 3 236

Included observations: 234 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RI_ITD(-1)	-0.905928	0.090721	-9.985893	0.0000
D(RI_ITD(-1))	-0.050833	0.066010	-0.770070	0.4420
R-squared	0.478087	Mean dependent var	-0.019245	
Adjusted R-squared	0.475837	S.D. dependent var	13.88858	
S.E. of regression	10.05521	Akaike info criterion	7.462569	
Sum squared resid	23456.87	Schwarz criterion	7.492101	
Log likelihood	-871.1205	F-statistic	212.5181	
Durbin-Watson stat	1.985019	Prob(F-statistic)	0.000000	

ผลกثارพย LH

1.WITH INTERCEPT&TREND

ADF Test Statistic	-10.02156	1% Critical Value*	-4.0004
		5% Critical Value	-3.4302
		10% Critical Value	-3.1384

*MacKinnon critical values for rejection of hypothesis of a unit root.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(RI_LH)

Method: Least Squares

Date: 04/22/04 Time: 14:32

Sample(adjusted): 3 236

Included observations: 234 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RI_LH(-1)	-0.857675	0.085583	-10.02156	0.0000
D(RI_LH(-1))	0.017887	0.065955	0.271194	0.7865
C	1.051462	0.957371	1.098280	0.2732
@TREND(1)	7.97E-05	0.006980	0.011413	0.9909
R-squared	0.421429	Mean dependent var	-0.003816	
Adjusted R-squared	0.413882	S.D. dependent var	9.420478	
S.E. of regression	7.212160	Akaike info criterion	6.806360	
Sum squared resid	11963.51	Schwarz criterion	6.865426	
Log likelihood	-792.3441	F-statistic	55.84368	
Durbin-Watson stat	1.999431	Prob(F-statistic)	0.000000	

2. WITH INTERCEPT & WITHOUT TREND

ADF Test Statistic	-10.04341	1% Critical Value*	-3.4598
		5% Critical Value	-2.8740
		10% Critical Value	-2.5733

*MacKinnon critical values for rejection of hypothesis of a unit root.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(RI_LH)

Method: Least Squares

Date: 04/22/04 Time: 14:31

Sample(adjusted): 3 236

Included observations: 234 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RI_LH(-1)	-0.857669	0.085396	-10.04341	0.0000
D(RI_LH(-1))	0.017884	0.065811	0.271751	0.7861
C	1.060895	0.482107	2.200539	0.0288
R-squared	0.421428	Mean dependent var	-0.003816	
Adjusted R-squared	0.416419	S.D. dependent var	9.420478	
S.E. of regression	7.196534	Akaike info criterion	6.797814	
Sum squared resid	11963.52	Schwarz criterion	6.842113	
Log likelihood	-792.3442	F-statistic	84.12960	
Durbin-Watson stat	1.999437	Prob(F-statistic)	0.000000	

3. WITHOUT INTERCEPT & TREND

ADF Test Statistic	-9.719224	1% Critical Value*	-2.5744
		5% Critical Value	-1.9410
		10% Critical Value	-1.6164

*MacKinnon critical values for rejection of hypothesis of a unit root.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(RI_LH)

Method: Least Squares

Date: 04/22/04 Time: 14:31

Sample(adjusted): 3 236

Included observations: 234 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RI_LH(-1)	-0.816601	0.084019	-9.719224	0.0000
D(RI_LH(-1))	-0.002474	0.065695	-0.037651	0.9700
R-squared	0.409300	Mean dependent var	-0.003816	
Adjusted R-squared	0.406754	S.D. dependent var	9.420478	
S.E. of regression	7.255884	Akaike info criterion	6.810013	
Sum squared resid	12214.30	Schwarz criterion	6.839545	
Log likelihood	-794.7715	F-statistic	160.7544	
Durbin-Watson stat	1.998808	Prob(F-statistic)	0.000000	

ภาควิชาฯ
การทดสอบเพื่อหาสัมพرمแคนเชิงเพื่นสู่ม

หลักทรัพย์ CPN

the ols estimates are :

	coefficient	standard-error	t-ratio
beta 0	0.19572009E+01	0.61212020E+00	0.31974126E+01
beta 1	0.58045084E+00	0.16228788E+00	0.35766739E+01
sigma-squared	0.86502670E+02		
log likelihood function	= -0.86016591E+03		

the estimates after the grid search were :

beta 0	0.36364540E+01
beta 1	0.58045084E+00
sigma-squared	0.88589488E+02
gamma	0.50000000E-01

mu is restricted to be zero

eta is restricted to be zero

the final mle estimates are :

	coefficient	standard-error	t-ratio
beta 0	0.19790330E+01	0.60477846E+00	0.32723272E+01
beta 1	0.58042612E+00	0.16142778E+00	0.35955777E+01
sigma-squared	0.85770166E+02	0.79080049E+01	0.10845993E+02
gamma	0.86769922E-05	0.77123206E-04	0.11250819E+00
mu	is restricted to be zero		
eta	is restricted to be zero		
log likelihood function	= -0.86016591E+03		

斛කທຮ່ພຍໍ HEMR

the ols estimates are :

	coefficient	standard-error	t-ratio
beta 0	0.36292349E+00	0.69038943E+00	0.52567939E+00
beta 1	0.98822090E+00	0.18303895E+00	0.53989650E+01
sigma-squared	0.11003842E+03		
log likelihood function =	-0.88856312E+03		

the estimates after the grid search were :

	coefficient	standard-error	t-ratio
beta 0	0.22568957E+01		
beta 1	0.98822090E+00		
sigma-squared	0.11269303E+03		
gamma	0.50000000E-01		
mu	is restricted to be zero		
eta	is restricted to be zero		

the final mle estimates are :

	coefficient	standard-error	t-ratio
beta 0	0.40040139E+00	0.63896805E+01	0.62663757E-01
beta 1	0.98817689E+00	0.16150904E+00	0.61183998E+01
sigma-squared	0.10910688E+03	0.99798663E+01	0.10932699E+02
gamma	0.20087973E-04	0.72721788E-02	0.27623047E-02
mu	is restricted to be zero		
eta	is restricted to be zero		
log likelihood function =	-0.88856312E+03		

หลักทรัพย์ ITD

the ols estimates are :

	coefficient	standard-error	t-ratio
beta 0	0.42873727E+00	0.56515641E+00	0.75861701E+00
beta 1	0.13507693E+01	0.14983665E+00	0.90149460E+01
sigma-squared	0.73738350E+02		
log likelihood function =	-0.84132694E+03		

the estimates after the grid search were :

	coefficient	standard-error	t-ratio
beta 0	0.19791528E+01		
beta 1	0.13507693E+01		
sigma-squared	0.75517237E+02		
gamma	0.50000000E-01		
mu	is restricted to be zero		
eta	is restricted to be zero		

the final mle estimates are :

	coefficient	standard-error	t-ratio
beta 0	0.46871848E+00	0.53114901E+00	0.88246135E+00
beta 1	0.13507699E+01	0.14821777E+00	0.91134140E+01
sigma-squared	0.73114612E+02	0.67558653E+01	0.10822390E+02
gamma	0.34285689E-04	0.14225804E-02	0.24101055E-01
mu	is restricted to be zero		
eta	is restricted to be zero		
log likelihood function =	-0.84132694E+03		

斛ັກກວ້າພຍ' LH

the ols estimates are :

	coefficient	standard-error	t-ratio
beta 0	0.55587006E+00	0.37235795E+00	0.14928379E+01
beta 1	0.12068989E+01	0.98721107E-01	0.12225338E+02
sigma-squared	0.32009386E+02		
log likelihood function =	-0.74285667E+03		

the estimates after the grid search were :

beta 0	0.15773741E+01
beta 1	0.12068989E+01
sigma-squared	0.32781591E+02
gamma	0.50000000E-01
mu	is restricted to be zero
eta	is restricted to be zero

the final mle estimates are :

	coefficient	standard-error	t-ratio
beta 0	0.57369312E+00	0.26751830E+01	0.21445005E+00
beta 1	0.12068941E+01	0.99196548E-01	0.12166694E+02
sigma-squared	0.31738446E+02	0.26069403E+01	0.12174596E+02
gamma	0.15573265E-04	0.54522703E-02	0.28562900E-02
mu	is restricted to be zero		
eta	is restricted to be zero		
log likelihood function =	-0.74285667E+03		

ภาคนวัก ค

ผลการทดสอบหาจำลังสองน้อยที่สุด

หลักทรัพย์ CPN

+-----+
| Ordinary least squares regression Weighting variable = none |
| Dep. var. = RICPN Mean= 2.280180642 S.D.= 9.531184758 |
| Model size: Observations = 236, Parameters = 2, Deg.Fr.= 234 |
| Residuals: Sum of squares= 20241.62477 , Std.Dev.= 9.30068 |
| Fit: R-squared= .051835, Adjusted R-squared = .04778 |
| Model test : F[1, 234] = 12.79, Prob value = .00042 |
| Diagnostic: Log-L = -860.1659, Restricted(b=0) Log-L = -866.4467 |
| LogAmemiyaPrCrt= 4.469, Akaike Info. Crt.= 7.306 |
| Autocorrel : Durbin-Watson Statistic = 2.07922, Rho = -.03961 |
+-----+

+-----+
+-----+-----+-----+-----+
| Variable | Coefficient | Standard Error |t-ratio |P[|T|>t] | Mean of X|
+-----+-----+-----+-----+
Constant 1.957200860 0.61212020 3.197 .0016
RM 0.5804508371 0.16228788 3.577 .0004 .55642918

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ผลลัพธ์ HEMR

```
+-----+
| Ordinary least squares regression   Weighting variable = none |
| Dep. var. = RIHEMR Mean= .9127984364 , S.D.= 11.10040859 |
| Model size: Observations = 236, Parameters = 2, Deg.Fr.= 234 |
| Residuals: Sum of squares = 25748.99113, Std.Dev.= 10.48992 |
| Fit: R-squared = .110769, Adjusted R-squared = .10697 |
| Model test : F[ 1, 234] = 29.15, Prob value = .00000 |
| Diagnostic: Log-L = -888.5631, Restricted(b=0) Log-L = -902.4162 |
| LogAmemiyaPrCrt.= 4.709, Akaike Info. Crt.= 7.547 |
| Autocorrel: Durbin-Watson Statistic = 2.16540, Rho = -.08270 |
+-----+
```

Variable	Coefficient	Standard Error	t-ratio P [T]>t]	Mean of X
Constant	.3629234926	.69038943	.526 .5996	
RM	.9882209013	.18303895	5.399 .0000 .55642918	

ผลลัพธ์ ITD

```
+-----+
| Ordinary least squares regression Weighting variable = none |
| Dep. var. = RIITD Mean= 1.180344718 , S.D.= 9.946117458 |
| Model size: Observations = 236, Parameters = 2, Deg.Fr.= 234 |
| Residuals: Sum of squares = 17254.77382 , Std.Dev. = 8.58710 |
| Fit: R-squared = .257777, Adjusted R-squared = .25461 |
| Model test : F[ 1, 234] = 81.27, Prob value = .00000 |
| Diagnostic: Log-L = -841.3270, Restricted(b=0) Log-L = -876.5035 |
| LogAmemiyaPrCrt .= 4.309, Akaike Info. Crt.= 7.147 |
| Autocorrel: Durbin-Watson Statistic = 2.13289, Rho = -.06645 |
+-----+
+-----+
| Variable | Coefficient | Standard Error | t-ratio | P[|T|>|t|] | Mean of X |
+-----+
Constant .4287372677 .56515641 .759 .4488
RM 1.350769298 .14983665 9.015 .0000 .55642918
```

ผลลัพธ์ LH

```
+
| Ordinary least squares regression Weighting variable = none |
| Dep. var. = RILH Mean = 1.227423807 , S.D.= 7.227101300 |
| Model size: Observations = 236, Parameters = 2, Deg.Fr.= 234 |
| Residuals: Sum of squares= 7490.196382 , Std.Dev .= 5.65768 |
| Fit: R-squared = .389765, Adjusted R-squared = .38716 |
| Model test : F[ 1, 234] = 149.46, Prob value = .00000 |
| Diagnostic: Log-L = -742.8567, Restricted(b=0) Log-L = -801.1382 |
| LogAmemiyaPrCrt .= 3.474, Akaike Info. Crt. = 6.312 |
| Autocorrel: Durbin-Watson Statistic = 1.80810, Rho = .09595 |
+
```

Variable	Coefficient	Standard Error	t-ratio	P[T >t]	Mean of X
Constant	.5558700641	.37235795	1.493	.1368	
RM	1.206898863	.98721107E-01	12.225	.0000	.55642918

ประวัติผู้เขียน

ชื่อ

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วัน เดือน ปี เกิด

3 เมษายน 2522

ประวัติการศึกษา

สำเร็จการศึกษามัธยมศึกษาตอนปลาย โรงเรียนพระปฐมวิทยาลัย
ปีการศึกษา 2540

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