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GDP

JEL: F16-E25-D33

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¹ Wolfgang Stolper and Paul Samuelson.

² William R. Cline, 1999.

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¹ Carol Litwin.

² Ronald Jones.

³ spilimbergo A, Landoni JL & Szekely M.(2003)

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Q n m E
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$$Q^c = F(E) \quad ()$$

$$P^c F'(E) = W \quad ()$$

W E

$F'(E)$

(p) W

:

(E)

$$W^c = W(E, P^c) \quad (1)$$

:

$$P^c = P(Q^c) \quad (2)$$

:

$$W^c = W(E) \quad (3)$$

F

(P*)

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¹ Not Factor Intensity recursive

$$W^0 = W(p^*) \quad ()$$

$$W^0 = W(P^*, E) \quad ()$$

$$P^* = P^*(E^*) \quad ()$$

$$W^0 = W^0(E^*) \quad ()$$

$$W^0 = W^0(E^*, E)$$

T

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$$W^0 = W^0(T, E^*, E) \quad ()$$

$$Y_i$$

$$y_i = w_1(E, E^*, T)E_1\omega_{i1} + \dots + w_j(E, E^*, T)E_j\omega_{ij} \quad i = 1, \dots, I \quad ()$$

$$w_{ij} \quad j \quad E_j$$

$$\sum_{i=1}^I \omega_{ij} = 1 \quad , \quad i = 1, \dots, J. \quad ()$$

$$W_{ij} \quad j \quad W_j$$

$$\Omega$$

$$()$$

$$gini \equiv g(y) = g(E, E^*, T, \Omega) \quad ()$$

$$()$$

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^۱ با توجه به اینکه قیمت جهانی را قیمت کشورهای تعیین می کنند که کالا را با قیمت پایین تری به بازار ارائه می دهند که ناشی از کارایی بیشتر و یا مزیت نسبی تولید آنهاست، بنابراین می تواند نتیجه گرفت که اگر بر اثر وضع تعرفه و سایر محدودیت‌ها، قیمت یک کالا با قیمت‌های جهانی اختلاف داشته باشد، در این صورت قیمت کالاهای داخلی بیشتر است. این نتیجه گیری با بیان این موضوع کاملتر می شود که معمولاً اعمال تعرفه برای کسب درآمد دولت و یا حمایت از تولید داخلی وضع می شود و در صورت پایین بودن قیمت داخلی نسبت به قیمت جهانی نیازی به اعمال تعرفه واردات وجود نخواهد داشت.

^۲ که در صورت باز بودن اقتصاد، درآمد نسبی آنها به فراوانی آن بستگی نخواهد داشت

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^۱ که بر گرفته از نظریه هکشر-اوهلین با اندکی تغییرات است.

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¹ Krugman,2008.

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¹ Saint Paul
² verder

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$$gini = F(gdpp, trade, unmpl, p, hp)$$

trade

GDPP

gini

hp

p

unmpl

¹ Blejer, M. I. and I. Guerrero (1990).

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(gdpp) (gini)

(OILEX) (p) (unmpl)

(trade)

(nooiltrd)

(hp)

m x supp taxp

:

%

trade	p	subp	taxp	gini	
0.99	0.001	0.98	1	0.23	%
0.002	-	0	0.055	0	
I(1)	I(0)	I(1)	I(1)	I(1)	

:

gdpp	unmpl	nonoilex	nooiltrd	oilexp	
0.64	0.02	0.82	0.51	0.08	%
0.0001	-	0	0	0.02	
I(1)	I(0)	I(1)	I(1)	I(1)	

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ARDL

ECM

ARDL

ARDL

$$X_{1t} = A_1(L)X_{1(t)} + A_2(L)X_{2(t)} + \dots + A_n(L)X_{n(t)}$$

L

i

$A_i(L)$

X_1

L .

$(p+1)^k$ ARDL

k

P

ARDL
ARDL
(SBC)
()
(
ARDL GDP
(SBC)
MICROFIT
 $\overline{R^2}$ ($R^2=0.93$)
ARDL
(gdpp)
/
/
%

Estimated Long Run Coefficients using the ARDL Approach
 ARDL(0,0,2,0,0,2,0,1) selected based on Schwarz Bayesian Criterion

 Dependent variable is LGINI
 29 observations used for estimation from 1358 to 1386

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
LGDP	.12798	.033876	3.7779[.002]
LTRADE	-.095396	.028752	-3.3179[.004]
LSUBP	-.0055396	.0031840	-1.7398[.101]
LP	.028029	.0079288	3.5352[.003]
LHCP	-.11244	.019693	-5.7099[.000]
LUNMPL	.093428	.036209	2.5803[.020]
LOILEX	.081337	.018276	4.4504[.000]
C	-3.8898	.64527	-6.0282[.000]

(subp)

(/)

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	ARDL	GDP	
		$\overline{R^2}$	R^2
LM	(/)		
	ARDL		

Estimated Long Run Coefficients using the ARDL Approach
 ARDL(0,0,2,0,0,2,0,1) selected based on Schwarz Bayesian Criterion

 Dependent variable is LGINI
 29 observations used for estimation from 1358 to 1386

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
LGDPP	.15193	.033854	4.4879[.000]
LNOOILTRD	-.079424	.022371	-3.5503[.003]
LSUBP	-.0052703	.0032594	-1.6170[.125]
LP	.035058	.0083213	4.2130[.001]
LHCP	-.10253	.019737	-5.1950[.000]
LUNMPL	.10130	.035189	2.8788[.011]
LOILEXP	.080076	.016950	4.7242[.000]
C	-2.3057	.61630	-3.7412[.002]

(LNOOILTRD)

$$\Delta \ln(GDP) = \alpha + \beta_1 \Delta \ln(GDP) + \beta_2 \Delta \ln(LM) + \beta_3 \Delta \ln(GDP) + \epsilon_t$$

Estimated Long Run Coefficients using the ARDL Approach

ARDL(0,0,0,2,0,0,2,0,1) selected based on Schwarz Bayesian Criterion

Dependent variable is LGINI

29 observations used for estimation from 1358 to 1386

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
LGDP	.15745	.037748	4.1711[.001]
LNOILX	.0032674	.012087	.27032[.791]
LM	-.072243	.027290	-2.6473[.018]
LSUBP	-.0049175	.0036557	-1.3451[.199]
LP	.032493	.010044	3.2350[.006]
LHCP	-.15300	.038983	-3.9246[.001]
LUNMPL	.10886	.043913	2.4790[.026]
LOILEX	.068661	.020011	3.4312[.004]
C	-4.3567	.79991	-5.4465[.000]

GDP

(LM)

GDP

GDP

$$\Delta \ln(GDP) = \alpha + \beta_1 \Delta \ln(GDP) + \beta_2 \Delta \ln(LM) + \beta_3 \Delta \ln(GDP) + \epsilon_t$$

^۱ نتایج مدل ARDL در پیوست ۳ ارائه شده است.

WTO

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GDP

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ARDL (
Autoregressive Distributed Lag Estimates
ARDL(0,0,2,0,0,2,0,1) selected based on Schwarz Bayesian Criterion
*****
Dependent variable is LGINI
29 observations used for estimation from 1358 to 1386
*****
Regressor      Coefficient      Standard Error      T-Ratio[Prob]
LGDPP          .12798           .033876             3.7779[.002]
LTRADE         .042112          .029872             1.4097[.178]
LTRADE(-1)     -.068812         .037928             -1.8143[.088]
LTRADE(-2)     -.068695         .029350             -2.3406[.033]
LSUBP          -.0055396        .0031840            -1.7398[.101]
LP             .028029          .0079288            3.5352[.003]
LHCP           -1.1330          .31811              -3.5617[.003]
LHCP(-1)       2.0940           .56938              3.6776[.002]
LHCP(-2)       -1.0734          .25325              -4.2385[.001]
LUNMPL         .093428          .036209             2.5803[.020]
LOILEX         .12630           .015703             8.0426[.000]
LOILEX(-1)     -.044959         .013084             -3.4362[.003]
C              -3.8898          .64527              -6.0282[.000]
*****
R-Squared      .93352  R-Bar-Squared      .88365
S.E. of Regression .014170  F-stat.  F(12, 16)  18.7214[.000]
Mean of Dependent Variable -.90010  S.D. of Dependent Variable .041541
Residual Sum of Squares .0032124  Equation Log-likelihood  90.9171
Akaike Info. Criterion  77.9171  Schwarz Bayesian Criterion  69.0297
DW-statistic    2.4484
*****
Diagnostic Tests
*****
* Test Statistics *  LM Version *  F Version
*****
* A:Serial Correlation*CHSQ( 1)= 1.6479[.199]*F( 1, 15)= .90371[.357]
* B:Functional Form *CHSQ( 1)= 2.5172[.113]*F( 1, 15)= 1.4257[.251]

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* C:Normality      *CHSQ( 2)= 11.7207[.003]*      Not applicable
*
*
* D:Heteroscedasticity*CHSQ( 1)= .14164[.707]*F( 1, 27)= .13252[.719]
*****
*****
A:Lagrange multiplier test of residual serial correlation
B:Ramsey's RESET test using the square of the fitted values
C:Based on a test of skewness and kurtosis of residuals
D:Based on the regression of squared residuals on squared fitted values
:ARDL      :
Autoregressive Distributed Lag Estimates
ARDL(0,0,2,0,0,2,0,1) selected based on Schwarz Bayesian Criterion
*****
*****
Dependent variable is LGINI
29 observations used for estimation from 1358 to 1386
*****
*****
Regressor      Coefficient      Standard Error      T-Ratio[Prob]
LGDPP          .15193           .033854             4.4879[.000]
LNOOILTRD      .042197          .021134             1.9967[.063]
LNOOILTRD(-1) -.067176         .028077             -2.3926[.029]
LNOOILTRD(-2) -.054444         .024448             -2.2270[.041]
LSUBP          -.0052703        .0032594            -1.6170[.125]
LP             .035058          .0083213            4.2130[.001]
LHCP           -1.2423          .29405              -4.2247[.001]
LHCP(-1)       2.2068           .52943              4.1683[.001]
LHCP(-2)       -1.0671          .23570              -4.5274[.000]
LUNMPL         .10130           .035189             2.8788[.011]
LOILEXP        .14251           .014869             9.5841[.000]
LOILEXP(-1)   -.062430         .012413             -5.0295[.000]
C              -2.3057          .61630              -3.7412[.002]
*****
*****
R-Squared          .93565  R-Bar-Squared      .88740
S.E. of Regression .013940  F-stat.  F(12, 16)  19.3881[.000]
Mean of Dependent Variable -.90010  S.D. of Dependent Variable .041541
Residual Sum of Squares .0031091  Equation Log-likelihood  91.3913
Akaike Info. Criterion  78.3913  Schwarz Bayesian Criterion  69.5039
DW-statistic      2.4138
*****
*****

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Diagnostic Tests


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*****
*****
* Test Statistics * LM Version * F Version
*****
*****
* A:Serial Correlation*CHSQ( 1)= 1.4249[.233]*F( 1, 15)= .77511[.393]
*
* B:Functional Form *CHSQ( 1)= 2.6757[.102]*F( 1, 15)= 1.5246[.236]
*
* C:Normality *CHSQ( 2)= 8.5159[.014]* Not applicable
*
* D:Heteroscedasticity*CHSQ( 1)= .28013[.597]*F( 1, 27)= .26336[.612]
*****
*****
A:Lagrange multiplier test of residual serial correlation
B:Ramsey's RESET test using the square of the fitted values
C:Based on a test of skewness and kurtosis of residuals
D:Based on the regression of squared residuals on squared fitted values
    
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ARDL :

Autoregressive Distributed Lag Estimates

ARDL(0,0,0,2,0,0,2,0,1) selected based on Schwarz Bayesian Criterion

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*****
*****
Dependent variable is LGINI
29 observations used for estimation from 1358 to 1386
*****
*****
    
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Regressor	Coefficient	Standard Error	T-Ratio[Prob]
LGDPP	.15745	.037748	4.1711[.001]
LNOILX	.0032674	.012087	.27032[.791]
LM	.028086	.021489	1.3070[.211]
LM(-1)	-.046172	.028522	-1.6189[.126]
LM(-2)	-.054156	.025629	-2.1131[.052]
LSUBP	-.0049175	.0036557	-1.3451[.199]
LP	.032493	.010044	3.2350[.006]
LHCP	-1.4488	.43417	-3.3369[.005]
LHCP(-1)	2.4347	.69512	3.5025[.003]
LHCP(-2)	-1.1389	.28755	-3.9607[.001]
LUNMPL	.10886	.043913	2.4790[.026]
LOILEX	.13518	.016353	8.2666[.000]

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LOILEX(-1)      -0.066520      .014862      -4.4759[.000]
C                -4.3567      .79991      -5.4465[.000]
*****
R-Squared        .92512  R-Bar-Squared      .86023
S.E. of Regression .015530  F-stat.  F(13, 15) 14.2561[.000]
Mean of Dependent Variable -.90010  S.D. of Dependent Variable .041541
Residual Sum of Squares .0036179  Equation Log-likelihood 89.1934
Akaike Info. Criterion 75.1934  Schwarz Bayesian Criterion 65.6223
DW-statistic     2.6240
*****
Diagnostic Tests
*****
* Test Statistics *   LM Version   *   F Version
*****
* A:Serial Correlation*CHSQ( 1)= 3.4697[.063]*F( 1, 14)= 1.9026[.189]
* B:Functional Form *CHSQ( 1)= 8.3688[.004]*F( 1, 14)= 5.6790[.032]
* C:Normality *CHSQ( 2)= 3.3523[.187]* Not applicable
* D:Heteroscedasticity*CHSQ( 1)= .33513[.563]*F( 1, 27)= .31567[.579]

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