

() :

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Export-Led-

Growth (ELG)

-

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:

Export-Led-Growth (ELG)

(ELG)

Import Substitution (IS)

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:

Export-Led-Growth (ELG)

(2005=100)

Ln

Exponential Function

E-

.Views

:

(ELG)

Export-Led-Growth (ELG)

- () -

(Sinocha-Lopete)
(ELG)

-

-

Likelihood)

(Elbeydi)

(Ratio-LR

-

(Choong)
(ELG)

ECM

(ELG)

()

ELG

-

(Chebbi)

-

(Husein)

(Shahbaz)

ELG

ELG

-

-

(ELG)

()

(Ullah)

-

(D. W. test) -

(D. h. test)

(Ramphul)

$$GDPGr_t = \alpha_0 + \beta_1 AgEx_t + \beta_2 GFCF_t + \beta_3 AgCIm_t + \beta_4 AgL_t + \beta_5 AgT_t$$

ELG

:GDPGr_t

(Gabriel)

:AgEx_t

:GFCF_t

(Shafiullah)

AgInv_t

:AgCIm_t

(OLS)

F

R²

R²

t

Phillips-Perron (PP)

$$- \left(\right) -$$

$$d \quad I(d)$$

:AgL_t

:AgT_t

(Dickey and Fuller 1979)

: Unit Root

$$\Delta y_t = \gamma y_{t-1} + \varepsilon_t$$

ELG

$$\Delta y_t = \alpha_0 + \gamma y_{t-1} + \varepsilon_t$$

$$\Delta y_t = \alpha_0 + \alpha_{1t} + \gamma y_{t-1} + \sum \alpha_j \Delta y_{t-j+1} + \varepsilon_t$$

$$y \quad \Delta$$

$$\varepsilon_t$$

$$= \quad \gamma = \alpha_{t-1} \quad \gamma$$

$$y_t$$

The Unit Root of Stationary

α_0 & α_{1t}

Non-Stationary

α_0

y_{t-1}

t

Spurious Regression

()

Unit Root Test

Mackinnon

Stationary

Order of)

I(0)

(integration

OLS

Augmented Dickey-Fuller Test (ADF)

...

:

-

I(1)

(Information Criterion SIC)

.()

Co integration Test :

-

(Akaike and the Schwartz)

.Information Criteria

:

-

Pairwise Granger Causality Test

(Residuals)

()

Engle and Granger (1987)

)

(

d

.I(d)

d

Engle and Granger (1987)

(Level)

.I(0)

)

Feed-Back

-

(

)

ADF

.(

Akaike and the Schwartz Information

:

.Criteria

(With intercept and trend))

Effect ()

Cause

(Johansen

Y

X

()

| % | | % | | |
|----------|---|----------|---|------------------------|
| ** (,) | , | ** () | , | () GDPGr _t |
| ** () | , | ** (,) | , | () AgEx |
| · (, -) | , | ** (,) | , | () AgInv |
| · (, -) | , | ** (,) | , | AgClm |
| | | ** (,) | | () AgL |
| | | ** (,) | | AgT |
| (=) | | :() , | | :(**) |
| | | () | | : |

ADF
 %
 Unit Root
 PP
 :

(PP) (ADF)
 %)

Unit Root Test:

(%
 ()
 I-() ()
 Stationary

GDPGr
 AgEx
 AgInv
 AgT AgL
 I-()
 Dickey-Fuller Test (ADF) Augmented
 (PP) -
 ELG

Trace Statistic
 Max-Eigen-Statistic
 ()
 %
 ()
 % ,
 ELG
 Max-Eigen-Statistic Trace Statistic
 ()
 (,)
 (%)
 ELG
 (,)
 (%)
 %
 %
 :

$$\text{GDPGrt} = -1259988.7 + 5.213 \text{ AgEx}_t + 2.136 \text{ AgInv}_t + 34.983 \text{ AgLt} - 36793.5 \text{ AgTt}$$

$$\begin{matrix} (-9.673)^{**} & (6.590)^{**} & (6.417)^{**} \\ (11.803)^{**} & (-3.290)^{**} & \end{matrix}$$

$$R^2 = 0.983 \quad F = (348.12)^{**}$$
 (%)
 (,)
 (, ,)

| Trace Statistic | | | | | |
|-----------------|---|---|---|----------------|---|
| | % | % | | H ₀ | |
| , | , | , | , | ** r=0 | % |
| , | , | , | , | * r ≤ 1 | % |
| , | , | , | , | r ≤ 2 | % |
| , | , | , | , | r ≤ 3 | % |
| , | , | , | , | r ≤ 4 | % |

| Max-Eigen.Statistic | | | | | |
|---------------------|---|---|---|----------------|---|
| | % | % | | H ₀ | |
| , | , | , | , | ** r=0 | % |
| , | , | , | , | * r ≤ 1 | % |
| , | , | , | , | r ≤ 2 | % |
| , | , | , | , | r ≤ 3 | % |
| , | , | , | , | r ≤ 4 | % |

:(*) :(**)

E-views :

.(ΔLnX_{t-i}) :

:

(Y_t)

(P_t) (G_t) (X_t)

(Y_t)

)

:(

() .(Hsiao, 1981)

$$\Delta \text{Ln} (Y_t) = C_0 + C_1 \Delta \text{Ln} Y_{t-1} + C_2 \Delta \text{Ln} X_t + u_t$$

:X_t :Y_t : (ΔLnY_t)

: u_t :C₀

(ΔLnY_t)

:

$$\Delta \text{Ln} X_t = \alpha_0 + \alpha_1 \Delta \text{Ln} X_{t-1} + \alpha_2 \Delta \text{Ln} Y_t + v_t$$

(FPE) (ΔLnX_{t-i})

Unidirectional Causality

(Granger-Causality)

()

Unidirectional Causality

| F-Statistic | () | kaldor |
|-------------|-----|--------|
| · (,) | | |
| * (,) | | |
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E-views :

جدول ٥. تطور بعض المتغيرات الاقتصادية بالقطاع الزراعي في مصر خلال الفترة ١٩٩٠-٢٠١٣ م (مليون جنيه)

| الرقم القياسي ١٠٠=٢٠٠٥ | العمالة الزراعية | معدل التبادل الزراعي | واردات السلع الاستثمارية الزراعية | | إجمالي تصورات الزراعة | | إجمالي الاستثمار الزراعي | | إجمالي الناتج الزراعي | | الدين |
|---------------------------|---------------------|----------------------------|--------------------------------------|--------------------|-----------------------|--------------------|--------------------------|--------------------|-----------------------|--------------------|-------|
| | | | بالأسهم الحقيقية | بالأسهم الجارية | بالأسهم الحقيقية | بالأسهم الجارية | بالأسهم الحقيقية | بالأسهم الجارية | بالأسهم الحقيقية | بالأسهم الجارية | |
| ٣٥,١٩ | ٤٥١٣ | ٠,٢ | ٤٢٤٨,٩ | ١٤٩٥ | ٣٢٢٠,٥ | ١١٤٠,٩ | ٥٨٠,٨٦ | ٢٠٤٣,٨ | ٥٢٣١,٨ | ١٩١٠ | ١٩٩٠ |
| ٤١,٤٩ | ٤٥٥٥ | ٠,٢ | ٤٦٤١,٩ | ١٩٢٦ | ٢٣١١,١ | ٩٥٧,٩ | ٦٣٠ | ٢٢٢٢,٣ | ٥٢٥٠,٩٥ | ١٩١٨ | ١٩٩١ |
| ٤١,٥٢ | ٤٢٢٠ | ٠,٢ | ٤٩٢١,٨ | ١٣١١ | ٢١٩٩,٧ | ١٠٦٩,٨ | ٦٣٠ | ٢٢٩٨,٤ | ٥٢٥٠,٩٥ | ١٩٤٢ | ١٩٩٢ |
| ٥٠,٥ | ٤١٨٢ | ٠,٢ | ٤١٠١,٢ | ٢٠٧١ | ٢١١٧,٩ | ١٣٢٢ | ٦٣٧٨,١ | ٣١٧٨,١ | ٥٤٤٥٨ | ١٩٥٠ | ١٩٩٣ |
| ٥٢,٨٣ | ٤٧٤٤ | ٠,٢ | ٤٠٦٤,١ | ٢١٤٧ | ٢٥٣١,٨ | ١٣٤١,٧ | ٦٤٠٠,٨ | ٣٣٨١,٤ | ٦٠٢٢٨,٥ | ١٩٩٤ | ١٩٩٥ |
| ٥٢,١٧ | ٤٨١٢ | ٠,٢ | ٤٣٣٦,١ | ٢٩٩٧ | ٢٧٢٠,٧ | ١٥٥١,٧ | ٧٤٨٤,٣ | ٤٤٨٤,٤ | ٦٥٨٢,٠,٢ | ١٩٩٥ | ١٩٩٥ |
| ٦٠,٨٤ | ٤٨٨٦ | ٠,٢ | ٤٤٣٤,٨ | ٢٦٩٨ | ٢٣٨٢,٣ | ١٤٤٩,٣ | ٨٥٣٤,٦ | ٥١٩٢,٢ | ٦٨٨٤,٠ | ١٩٩٦ | ١٩٩٦ |
| ٦٢,٣٨ | ٤٨١٠ | ٠,٢ | ٤٤٥٧,٤ | ٢٥٠٨ | ٢٢٤٤ | ١٤٤٠,٩ | ١٢٨٧,٤ | ٨١٥٧,٣ | ٧٢٠٣٤,١ | ١٩٩٧ | ١٩٩٧ |
| ٦٤,٢٦ | ٤٩٠٤ | ٠,٢ | ٤٢٠١,٥ | ٢٧٠٠ | ٢٧٣٩,١ | ١٦٦٠,٢ | ١٣١٠,١,٢ | ٨٤١٩,١ | ٧٦١٤٩,٢ | ١٩٩٨ | ١٩٩٨ |
| ٦٤,٨٤ | ٤٩٨٥ | ٠,٢ | ٤٢٨٢,٧ | ٢٧٧٧ | ٢٧٨٢ | ١٨٠٣,٩ | ١٢٥٤٢,٦ | ٨١٣٣,٥ | ٨١٤٩٨,١ | ١٩٩٩ | ١٩٩٩ |
| ٦٦,١٨ | ٥١١٩ | ٠,٢ | ٢٢٧٥,٢ | ٢١٢٢ | ٢١٢٢ | ١١١١,٤ | ١٢٤١,٩,١ | ٨١٩٧,٣ | ٨٣٤٢٨,٠ | ٢٠٠٠ | ٢٠٠٠ |
| ٧٠,٩٣ | ٥١١٩ | ٠,٢ | ٣٦٧٥,٣ | ٢٦٠٧ | ٣١٦١,٣ | ١١١١,٤ | ١٤٣٨٦,٦ | ٩٥٩٣,٥ | ٨٧٥٣١,١ | ٢٠٠١ | ٢٠٠١ |
| ٨١,١٤ | ٥٢٠٦ | ٠,٢ | ٣٦٧٥,٣ | ٢٦٠٧ | ٣١٦١,٣ | ١١١١,٤ | ١٤٣٨٦,٦ | ٩٥٩٣,٥ | ٨٧٥٣١,١ | ٢٠٠١ | ٢٠٠١ |
| ٨٤,٩٩ | ٥٢٠٦ | ٠,٢ | ٣٦٧٥,٣ | ٢٦٠٧ | ٣١٦١,٣ | ١١١١,٤ | ١٤٣٨٦,٦ | ٩٥٩٣,٥ | ٨٧٥٣١,١ | ٢٠٠١ | ٢٠٠١ |
| ١٠٠ | ٥٢٠٦ | ٠,٢ | ٣٦٧٥,٣ | ٢٦٠٧ | ٣١٦١,٣ | ١١١١,٤ | ١٤٣٨٦,٦ | ٩٥٩٣,٥ | ٨٧٥٣١,١ | ٢٠٠١ | ٢٠٠١ |
| ١٠٧,٠٣ | ٥٤٩٣ | ٠,٢ | ٣٠٤٣,١ | ٣٠٤٣,١ | ٣٠٤٣,١ | ٣٠٤٣,١ | ٣٠٤٣,١ | ٣٠٤٣,١ | ٣٠٤٣,١ | ٢٠٠٢ | ٢٠٠٢ |
| ١١٧,٦٩ | ٥٤٩٣ | ٠,٢ | ٣٠٤٣,١ | ٣٠٤٣,١ | ٣٠٤٣,١ | ٣٠٤٣,١ | ٣٠٤٣,١ | ٣٠٤٣,١ | ٣٠٤٣,١ | ٢٠٠٢ | ٢٠٠٢ |
| ١٤٢,٥٦ | ٥٥١٢ | ٠,٢ | ٣٧٧٠,٨ | ٣٧٧٠,٨ | ٣٧٧٠,٨ | ٣٧٧٠,٨ | ٣٧٧٠,٨ | ٣٧٧٠,٨ | ٣٧٧٠,٨ | ٢٠٠٣ | ٢٠٠٣ |
| ١٣٤,٥١ | ٥٦٧٠ | ٠,٢ | ٣٢٤٣,١ | ٣٢٤٣,١ | ٣٢٤٣,١ | ٣٢٤٣,١ | ٣٢٤٣,١ | ٣٢٤٣,١ | ٣٢٤٣,١ | ٢٠٠٤ | ٢٠٠٤ |
| ١٥١,٤٩ | ٥٧٨٤ | ٠,٢ | ٣١٢١,٩ | ٣١٢١,٩ | ٣١٢١,٩ | ٣١٢١,٩ | ٣١٢١,٩ | ٣١٢١,٩ | ٣١٢١,٩ | ٢٠٠٥ | ٢٠٠٥ |
| ١٧٣,٨٥ | ٥٨٥٢ | ٠,٢ | ٢٥٨١,٩ | ٢٥٨١,٩ | ٢٥٨١,٩ | ٢٥٨١,٩ | ٢٥٨١,٩ | ٢٥٨١,٩ | ٢٥٨١,٩ | ٢٠٠٦ | ٢٠٠٦ |
| ١٧٨,١٢ | ٦٢٢١ | ٠,٢ | ٢٧٨٤,٧ | ٢٧٨٤,٧ | ٢٧٨٤,٧ | ٢٧٨٤,٧ | ٢٧٨٤,٧ | ٢٧٨٤,٧ | ٢٧٨٤,٧ | ٢٠٠٧ | ٢٠٠٧ |
| ١٨٦,٨٤ | ٦٣٨٦ | ٠,٢ | ٢٨٥١,٣ | ٢٨٥١,٣ | ٢٨٥١,٣ | ٢٨٥١,٣ | ٢٨٥١,٣ | ٢٨٥١,٣ | ٢٨٥١,٣ | ٢٠٠٨ | ٢٠٠٨ |
| ٥٢٠ | ٠,٢١ | ٠,٢١ | ٣٦٩٩,٩ | ٣٦٩٩,٩ | ٣٦٩٩,٩ | ٣٦٩٩,٩ | ٣٦٩٩,٩ | ٣٦٩٩,٩ | ٣٦٩٩,٩ | ٢٠٠٩ | ٢٠٠٩ |

(*) تنطبق على المستوى عند المستوى الإجمالي (١)؛ تنطبق على المستوى عند المستوى الإجمالي (٢)؛ غير معنوي؛ (سنة الأساس ٢٠٠٥=١٠٠) المصدر: جمعيات وحسبت من بيانات الجهاز المركزي للتعبئة العامة والإحصاء، قاعدة بيانات التجارة الخارجية، بيانات غير منشورة للسنوات ٢٠١٣-٢٠١٣.

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ABSTRACT

The Role of Agricultural Exports in the Agricultural Economic Growth in Egypt

Ahmed A. El-Rasoul, Mahmoud A. Shafey, Sameh M. Shehab, Amna A. Hashem

The purpose of this study is to investigate the long-run relationship between real agricultural exports and agricultural economic growth in Egypt using cointegration analysis. Previous studies suggested that these two variables are cointegrated which is considered as evidence of long-run equilibrium relationship. We employed cointegration analysis and annual data for the period 1990-2013 to study the relationship between real agricultural exports and its agricultural production. We found weak evidence of cointegration between real agricultural exports and agricultural economic growth.

Results showed that there is a unidirectional causality between output and real agricultural exports. Output causes agricultural exports but not agricultural exports cause its output. On the other hand, Results showed that there is a unidirectional causality between output and Terms of Trade agricultural. Output causes Terms of Trade agricultural but not Terms of Trade agricultural cause its output.

Key words: cointegration analysis, agricultural economic growth, a unidirectional causality.