**PRACTICA**

**ECONOMETRIA I**

1. Suponga que Ud. Intenta ajustar el siguiente modelo de regresión:



Donde:



 



 

 



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Donde:

 Importaciones (Millones de S/. 2007)

 CP (Millones de S/. 2007)

 RIN (Millones de $US)

 TI (Índice 2007=100)

Utilizando el archivo Data\_Examen parcial

1. Estime los parámetros del modelo propuesto

data rin cp cg ibf ip ig stock x m ti bc ct ib y

genr z0=cp+cp(-1)+cp(-2)+cp(-3)

genr z1=cp(-1)+2\*cp(-2)+3\*cp(-3)

genr z2=rin(-1)+2\*rin(-2)+2\*rin(-3)+rin(-4)

genr z3=4\*cp+3\*cp(-1)+2\*cp(-2)+cp(-3)

genr z2=rin(-1)+2\*rin(-2)+2\*rin(-3)+rin(-4)

genr z3=4\*ti+3\*ti(-1)+2\*ti(-2)+ti\*(-3)

ls y c z0 z1 z2 z3

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Dependent Variable: Y | | |  |  |
| Method: Least Squares | | |  |  |
| Date: 06/12/19 Time: 00:20 | | |  |  |
| Sample (adjusted): 1984 2017 | | |  |  |
| Included observations: 34 after adjustments | | | |  |
|  |  |  |  |  |
|  |  |  |  |  |
| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|  |  |  |  |  |
|  |  |  |  |  |
| C | -115348.4 | 25485.57 | -4.526026 | 0.0001 |
| Z0 | 1.274672 | 0.099770 | 12.77612 | 0.0000 |
| Z1 | -0.457099 | 0.069239 | -6.601802 | 0.0000 |
| Z2 | -0.390066 | 0.102973 | -3.788056 | 0.0007 |
| Z3 | 42.90546 | 24.62001 | 1.742707 | 0.0920 |
|  |  |  |  |  |
|  |  |  |  |  |
| R-squared | 0.993817 | Mean dependent var | | 274122.1 |
| Adjusted R-squared | 0.992964 | S.D. dependent var | | 116286.9 |
| S.E. of regression | 9753.935 | Akaike info criterion | | 21.34378 |
| Sum squared resid | 2.76E+09 | Schwarz criterion | | 21.56825 |
| Log likelihood | -357.8443 | Hannan-Quinn criter. | | 21.42033 |
| F-statistic | 1165.365 | Durbin-Watson stat | | 0.653108 |
| Prob(F-statistic) | 0.000000 |  |  |  |

|  |  |  |  |  |
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| Prob(F-statistic) | 0.000000 |  |  |  |

1. Obtenga los efectos de corto plazo y de largo plazo del CP, las RIN y los TI sobre las importaciones

data rin cp cg ibf ip ig stock x m ti bc ct ib y

genr z0=cp+cp(-1)+cp(-2)+cp(-3)

genr z1=cp(-1)+2\*cp(-2)+3\*cp(-3)

genr z2=rin(-1)+2\*rin(-2)+rin(-4)

genr z3=4\*ti+3\*ti(-1)+2\*ti(-2)+ti(-3)

ls y c z0 z1 z2 z3

ls y c pdl(cp,2,1) z2 z3

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Dependent Variable: Y | | | | | |
| Method: Least Squares | | | | | |
| Date: 06/16/19 Time: 18:26 | | | | | |
| Sample(adjusted): 1984 2017 | | | | | |
| Included observations: 34 after adjusting endpoints | | | | | |
| Variable | Coefficient |  | Std. Error | t-Statistic | Prob. |
| C | -101411.9 |  | 21665.39 | -4.680826 | 0.0001 |
| Z2 | -0.495498 |  | 0.133457 | -3.712781 | 0.0009 |
| Z3 | 27.54472 |  | 14.23471 | 1.935039 | 0.0628 |
| PDL01 | 0.739386 |  | 0.057479 | 12.86352 | 0.0000 |
| PDL02 | -0.796680 |  | 0.132178 | -6.027330 | 0.0000 |
| R-squared | 0.994888 |  | Mean dependent var | | 274122.1 |
| Adjusted R-squared | 0.994182 |  | S.D. dependent var | | 116286.9 |
| S.E. of regression | 8869.547 |  | Akaike info criterion | | 21.15369 |
| Sum squared resid | 2.28E+09 |  | Schwarz criterion | | 21.37815 |
| Log likelihood | -354.6127 |  | F-statistic | | 1410.868 |
| Durbin-Watson stat | 0.594043 |  | Prob(F-statistic) | | 0.000000 |
| Lag Distribution of CP |  | i | Coefficient | Std. Error | T-Statistic |
| . \*| |  | 0 | 1.53607 | 0.12853 | 11.9511 |
| . \* | |  | 1 | 0.73939 | 0.05748 | 12.8635 |
| \*. | |  | 2 | -0.05729 | 0.15821 | -0.36214 |
|  | Sum of Lags |  | 2.21816 | 0.17244 | 12.8635 |

1. Evalúe la significancia de dichos efectos.

Interpretación

1. Suponga el siguiente modelo de ecuaciones simultáneas:

Yt = CPt + CGt + IBt + Xt – Mt

IBt = IPt + IGt + STOCKt

BCt = Xt - Mt

CPt

= a1 + a2Yt + a3CPt-1

IPt = a4 + a5 Yt + a6 Mt

Mt = a7 + a8 TIt + a9 Yt + a10 RINt

Utilizando la información contenida en: Data\_Examen parcial.

1. Estime los parámetros estructurales del modelo mediante el método de mínimos cuadrados de dos etapas.
2. Suponiendo que (los próximos 5 años) las RIN evolucionan según la tasa de crecimiento promedio de los últimos cinco años, los TI disminuirán 3% y las X en 6%. Además, considere que las variables exógenas internas evolucionaran según las siguientes tasas de crecimiento:

* CG = 0.5%
* IG = 5%
* STOCK = 15%

¿Cuál es la tasa de crecimiento promedio anual de los próximos 5 años? ¿Y el resultado de la balanza comercial?

1. Según la teoría económica y la significancia individual evalúe los resultados y determine el modelo estructural apropiado a utilizar.
2. Con el modelo propuesto, ¿Cuál es la tasa de crecimiento promedio anual de los próximos 5 años? ¿Y el resultado de la balanza comercial?