**PRÁCTICA DIRIGIDA**

**ECONOMETRIA I**

1. Suponga el siguiente modelo de ecuaciones simultáneas:

Yt = CP+CG + IBt + Xt – Mt

IBt = IPt + IGt + STOCKt

BCt = Xt - Mt

CPt = a1 + a2Yt + a3CPt-1

IPt = a4 + a5Yt + a6Mt + a7IPt-1

Mt = a8 + a9TIt-1 + a10Yt + a11RIN

\**Las resaltadas son las variables predeterminadas*

*Variables predeterminadas (Para evwies estos son los INSTRUMENTOS): son aquella variable que son exógenas, exógenas rezagadas o endógenas rezagadas*

Utilizando la información contenida en: Data\_Examen final\_Econometria I

1. Estime los parámetros estructurales del modelo mediante el método de mínimos cuadrados de dos etapas.

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| --- | --- | --- | --- | --- |
| System: SYS01 | | | | |
| Estimation Method: Two-Stage Least Squares | | | | |
| Date: 12/07/21 Time: 21:39 | | | | |
| Sample: 1981 2017 | | | | |
| Included observations: 37 | | | | |
| Total system (balanced) observations 222 | | | | |
| Instruments: CG X IG STOCK CP(-1) IP(-1) TI(-1) RIN C | | | | |
|  | Coefficient | Std. Error | t-Statistic | Prob. |
| C(1) | 2288.240 | 2305.053 | 0.992706 | 0.3220 |
| C(2) | 0.293713 | 0.046888 | 6.264090 | 0.0000 |
| C(3) | 0.549138 | 0.082774 | 6.634191 | 0.0000 |
| C(4) | 6778.513 | 3292.188 | 2.058969 | 0.0407 |
| C(5) | -0.073685 | 0.032306 | -2.280816 | 0.0236 |
| C(6) | 0.687981 | 0.114577 | 6.004520 | 0.0000 |
| C(7) | 0.416851 | 0.087178 | 4.781601 | 0.0000 |
| C(8) | -10366.39 | 12118.39 | -0.855426 | 0.3933 |
| C(9) | 65.21839 | 67.94497 | 0.959871 | 0.3382 |
| C(10) | 0.171736 | 0.073097 | 2.349415 | 0.0197 |
| C(11) | 0.948373 | 0.454215 | 2.087938 | 0.0380 |
| Determinant residual covariance | | 0.000000 |  |  |
| Equation: Y=CP+CG+IB+X-M | | | | |
| Observations: 37 | | | | |
| R-squared | 1.000000 | Mean dependent var | | 265721.5 |
| Adjusted R-squared | 1.000000 | S.D. dependent var | | 114996.3 |
| S.E. of regression | 0.000000 | Sum squared resid | | 0.000000 |
| Equation: IB=IP+IG+STOCK | | | | |
| Observations: 37 | | | | |
| R-squared | 1.000000 | Mean dependent var | | 55318.78 |
| Adjusted R-squared | 1.000000 | S.D. dependent var | | 34909.23 |
| S.E. of regression | 0.000000 | Sum squared resid | | 0.000000 |
| Equation: BC=X-M | | | | |
| Observations: 37 | | | | |
| R-squared | 1.000000 | Mean dependent var | | 9114.762 |
| Adjusted R-squared | 1.000000 | S.D. dependent var | | 10825.88 |
| S.E. of regression | 0.000000 | Sum squared resid | | 0.000000 |
| Equation: CP=C(1)+C(2)\*Y+C(3)\*CP(-1) | | | | |
| Observations: 37 | | | | |
| R-squared | 0.995984 | Mean dependent var | | 170822.8 |
| Adjusted R-squared | 0.995747 | S.D. dependent var | | 69524.55 |
| S.E. of regression | 4533.898 | Sum squared resid | | 6.99E+08 |
| Durbin-Watson stat | 1.170493 |  |  |  |
| Equation: IP=C(4)+C(5)\*Y+C(6)\*M+C(7)\*IP(-1) | | | | |
| Observations: 37 | | | | |
| R-squared | 0.990978 | Mean dependent var | | 42649.97 |
| Adjusted R-squared | 0.990158 | S.D. dependent var | | 29956.17 |
| S.E. of regression | 2971.914 | Sum squared resid | | 2.91E+08 |
| Durbin-Watson stat | 0.979219 |  |  |  |
| Equation: M=C(8)+C(9)\*TI(-1)+C(10)\*Y+C(11)\*RIN | | | | |
| Observations: 37 | | | | |
| R-squared | 0.978980 | Mean dependent var | | 55919.06 |
| Adjusted R-squared | 0.977069 | S.D. dependent var | | 38118.21 |
| S.E. of regression | 5772.188 | Sum squared resid | | 1.10E+09 |
| Durbin-Watson stat | 0.852950 |  |  |  |

1. Suponiendo que los próximos 5 años las RIN evolucionaran según la tasa de crecimiento promedio anual de los últimos 10 años, los TI aumentaran en 4% y las X en 8%. Además, considere que las variables exógenas internas evolucionaran según las siguientes tasas de crecimiento:

* CG = 0.3%
* IG = 15%
* STOCK = 5%

Con el modelo propuesto, ¿Cuál es la tasa de crecimiento promedio anual de los próximos 5 años?