Temple University

Department of Economics

W-LM-LR Homework Key

1. The estimation result is

|  |  |
| --- | --- |
| Dependent Variable: LOG(CE)-LOG(CE(-1)) |  |
| Method: Least Squares |  |  |
| Date: 11/08/11 Time: 16:08 |  |  |
| Sample (adjusted): 3 200 |  |  |
| Included observations: 198 after adjustments |  |
|  |  |  |  |  |
|  |  |  |  |  |
| Variable | Coefficient | Std. Error | t-Statistic | Prob.   |
|  |  |  |  |  |
|  |  |  |  |  |
| C | 0.005197 | 0.001255 | 4.142518 | 0.0001 |
| LOG(YD)-LOG(YD(-1)) | 0.356802 | 0.063709 | 5.600527 | 0.0000 |
| LOG(YD(-1))-LOG(YD(-2)) | 0.108591 | 0.063734 | 1.703824 | 0.0900 |
|  |  |  |  |  |
|  |  |  |  |  |
| R-squared | 0.146394 |     Mean dependent var | 0.009602 |
| Adjusted R-squared | 0.137639 |     S.D. dependent var | 0.013650 |
| S.E. of regression | 0.012676 |     Akaike info criterion | -5.883151 |
| Sum squared resid | 0.031334 |     Schwarz criterion | -5.833329 |
| Log likelihood | 585.4320 |     Hannan-Quinn criter. | -5.862985 |
| F-statistic | 16.72129 |     Durbin-Watson stat | 2.434656 |
| Prob(F-statistic) | 0.000000 |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

1. The log-likelihood is $ln⁡\{\left(\frac{1}{\left(σ\right)\left(2π\right)^{2}}\right)^{n}e^{-\frac{1}{2σ^{2}}\left(\sum\_{}^{}\left(y\_{j}-x\_{j}'β\right)^{2}\right)}$.
2. Wald test for $β\_{1}$.









For questions 4 and 5 you’ll have to get the other part in RTF.