**Portugal CES production function without energy**

|  |  |  |
| --- | --- | --- |
| **Parameter** | **Unadjusted** | **Adjusted** |
| **Estimated coefficient values** | |
| γ | 1.0306\*\*\*  (0.0324)  [31.7914] | 1.0299\*\*\*  (0.0249)  [41.2229] |
| λ | 0.0055  (0.0033)  [1.6628] | 0.0055\*\*\*  (0.0005)  [11.5038] |
| δ1 | 0.9844\*\*\*  (0.0101)  [97.7724] | 0.9999\*\*\*  (0.0000)  [52096.52] |
| 1- δ1 | 0.0157  NA | 0.0000  NA |
| ρ1 | 3.4647\*\*\*  (0.5209)  [6.6511] | 23.3779  (20.3311)  [1.1498] |
| σ1 | -0.4057  NA | -0.0447  NA |

Standard errors in parentheses and t stats in brackets. \*\*\* 1% significance level

**Portugal CES production function with energy, using (kl)e nesting**

|  |  |  |
| --- | --- | --- |
| **Parameter** | **Unadjusted** | **Adjusted** |
| **Estimated coefficient values** | |
| γ | 1.0800\*\*\*  (0.2887)  [3.7414] | 1.1219  (1.2205)  [0.9192] |
| λ | 0.0067\*\*\*  (0.0009)  [6.8164] | 0.0009  (0.0017)  [0.5564] |
| δ | 0.5074\*\*\*  (0.0646)  [7.8518] | 0.5121  (0.3051)  [1.6783] |
| 1- δ | 0.4926  NA | 0.4879  NA |
| δ1 | 0.9691\*\*\*  (0.1193)  [8.1196] | 0.9381  (0.9019)  [1.0401] |
| 1- δ1 | 0.0309  NA | 0.0619  NA |
| ρ | 1.2098  (1.0664)  [1.1345] | 1.1933  (4.1568)  [0.2870] |
| σ | -4.7665  NA | -5.1732  NA |
| ρ1 | 4.3205\*  (2.3742)  [1.8198] | 5.7077  (6.8268)  [0.8361] |
| σ1 | -0.3012  NA | -0.2124  NA |

**Portugal Solow Residual estimates using CES and (kl)e nesting**

|  |  |  |
| --- | --- | --- |
|  | **Unadjusted** | **Adjusted** |
| **Without energy** | 0.005464 | 0.005449 |
| **With energy** | 0.006743 | 0.000973 |