**Tables**

**Table A2: ADF-GLS tests**

|  |
| --- |
| Test with constant and without trend |
| **Variable** | **Lags** | **Test statistic** | **Conclusion** |
| $$y\_{t}$$ | 0 | -1.80 \* | I(0) |
| $$EDU\_{t}$$ | 2 | -1.98 \*\* |
| $$LIFE\_{t}$$ | 3 | -2.68 \*\*\* |
| $$GFCF\_{t}$$ | 0 | -3.39 \*\*\* |
| $$TRADE\_{t}$$ | 1 | -3.11\*\*\* |
| $$OFMEU\_{t}$$ | 0 | -3.70 \*\*\* |

**Note 1:** ADF-GLS (Elliot et al. 1996) tests were performed using Gretl (2017).

**Note 2:** In the ADF-GLS tests, \*, \*\* and \*\*\* denote the rejection of the null hypothesis ($h\_{0}$) of a unit root at the 10%, 5% and 1% levels. The maximum number of lags was chosen using the rule provided by Schwert (1989). The actual lag was obtained by testing down in order to optimise the Schwarz/Bayesian information criterion (SIC/BIC).

**Note 3:** ADF-GLS is not only considered to be a modified and improved version of the original ADF test of Dickey and Fuller (1979), but also a more suitable test in the case of small samples (Baum, 2000).

**Table A3: KPSS tests**

|  |
| --- |
| Test with constant and without trend |
| **Variable** | **Lags** | **Test statistic** | **Conclusion** |
| $$y\_{t}$$ | 2 | 0.11 | I(0) |
| $$EDU\_{t}$$ | 2 | 0.13 |
| $$LIFE\_{t}$$ | 2 | 0.15 |
| $$GFCF\_{t}$$ | 2 | 0.09 |
| $$TRADE\_{t}$$ | 2 | 0.12 |
| $$OFMEU\_{t}$$ | 2 | 0.25 |

**Note 1:** KPSS tests (Kwiatkwoski et al. 1992) were performed using Gretl (2017).

**Note 2:** In the KPSS test, \*, \*\* and \*\*\* denote the rejection of the null hypothesis ($h\_{0}$) of stationarity at the 10%, 5% and 1% levels. The optimal lag was obtained using the Newey-West automatic bandwidth selection.

**Table A4: Unit root tests with a breakpoint**

|  |
| --- |
| Test with constant and without trend |
| **Variable** | **Break date** | **Lags** | **Test Statistic** | **Conclusion** |
| $$y\_{t}$$ | 1974 | 0 | -4.70 \*\* | I(0) |
| $$EDU\_{t}$$ | 1969 | 0 | -10.35 \*\*\* |
| $$LIFE\_{t}$$ | 1954 | 0 | -11.48 \*\*\* |
| $$GFCF\_{t}$$ | 1972 | 2 | -6.35 \*\* |
| $$TRADE\_{t}$$ | 1974 | 1 | -6.30 \*\*\* |
| $$OFMEU\_{t}$$ | 1959 | 2 | -6.54 \*\*\* |

**Note 1:** Unit root tests with a breakpoint (EViews 2020 following Perron 1989) were performed using EViews (2020).

**Note 2:** In the unit root tests with a breakpoint, \*, \*\* and \*\*\* denote the rejection of the null hypothesis ($h\_{0}$) of a unit root with a possible break at the 10%, 5% and 1% levels. The maximum number of lags was chosen using the rule provided by Schwert (1989). The actual lag was obtained by testing down in order to optimise the Schwarz/Bayesian information criterion (SIC/BIC).

**References**

BAUM, C. (2000). “Tests for Stationarity of a Time Series”. *State Technical Bulletin* 57, pp. 36-39

DICKEY, D. and FULLER, W. (1979). “Distribution of the Estimators for Time Series Regressions with a Unit Root”. *Journal of the American Statistical Association* 74 (366), pp. 427-431

ELLIOT, G., ROTHENBERG, T. and STOCK, J. (1996). “Efficient tests for an autoregressive unit root”. *Econometrica* 64, pp. 813-836

EVIEWS. (2020). “EViews Version 11 for Econometric Analysis”. Downloaded 30 April 2020. www.eviews.com

GRETL. (2017). “Gnu Regression, Econometrics and Time-Series Library”. Downloaded 19 July 2017. <http://gretl.sourceforge.net/>

KWIATKOWSKI, D., PHILLIPS, P., SCHMIDT, P. and SHIN, Y. (1992). “Testing the Null Hypothesis of Stationarity against the Alternative of a Unit Root”. *Journal of Econometrics* 54 (1-3), pp. 159-178

PERRON, P. (1989). “The Great Crash, the Oil Price Shock, and the Unit Root Hypothesis”. *Econometrica* 57 (6), pp. 1361-1401

SCHWERT, G. (1989). “Tests for Unit Roots: A Monte Carlo Investigation”. *Journal of Business & Economic Statistics* 7 (2), pp. 147-159