

Appendix Table 1. Phillips-Perron τ and Φ Tests

	Y_t	L_t	K_t	F_t
<i>Equation with Constant and Trend Terms</i> ($\Delta z_t = a_0 + a_1 z_{t-1} + a_2 t + \varepsilon_t$)				
$H_0: a_1 = 0$	-0.65	-2.42	-2.4	-0.97
$H_0: a_1 = a_2 = 0$	8.81***	7.44**	11.00***	1.44
$H_0: a_0 = a_1 = a_2 = 0$	38.49***	12.64***	16.56***	1.8
<i>Equation with Constant but no Trend Term</i> ($\Delta z_t = a_0 + a_1 z_{t-1} + \varepsilon_t$)				
$H_0: a_1 = 0$				-1.66
$H_0: a_0 = a_1 = 0$				2.62
<i>Equation with No Constant and No Trend</i> ($\Delta z_t = a_1 z_{t-1} + \varepsilon_t$)				
$H_0: a_1 = 0$				1.22
	ΔY_t	ΔL_t	ΔK_t	ΔF_t
<i>Equation with Constant and Trend Terms</i> ($\Delta^2 z_t = a_0 + a_1 \Delta z_{t-1} + a_2 t + \varepsilon_t$)				
$H_0: a_1 = 0$	-10.22***	-3.65**	-3.18*	-3.75**

***, **, and * represent rejection of the null at 1%, 5%, and 10% levels of significance.

Note 1: The Phillips-Perron test does use Newey-West robust standard errors, which require that a truncation parameter be specified that is large enough to capture all significant autocorrelations. Current practice is to use the smallest integer greater than or equal to $N^{1/4}$, where N is the sample size (Greene 2003, p 267). For our series, this value is three.

Note 2: Monte Carlo studies (for example, Schwert 1989) indicate that the Phillips-Perron test has poor size properties (over-rejecting the null when it is true) when the underlying d.g.p. has large negative moving-average components. Inspection of the autocorrelation and partial autocorrelation functions of the first differences in our tested series indicate this to be the case only with the first difference in GDP, where the first order autocorrelation coefficient is -0.74. The highly significant result for this variable in the table should therefore be discounted.

Appendix Table 2. Augmented Dickey Fuller τ and Φ Tests

	Y_t	L_t	K_t	F_t
Number of lags	2	1	1	4
<i>Equation with Constant and Trend Terms ($\Delta z_t = a_0 + a_1 z_{t-1} + a_2 t + \varepsilon_t$)</i>				
$H_0: a_1 = 0$	-0.66	-3.02	-1.53	-0.9
$H_0: a_1 = a_2 = 0$	6.10*	6.12*	1.66	1.15
$H_0: a_0 = a_1 = a_2 = 0$	6.39**	5.91**	1.93	1.7
<i>Equation with Constant but no Trend Term ($\Delta z_t = a_0 + a_1 z_{t-1} + \varepsilon_t$)</i>				
$H_0: a_1 = 0$			-1.73	-1.41
$H_0: a_0 = a_1 = 0$			2.76	2.44
<i>Equation with No Constant and No Trend ($\Delta z_t = a_1 z_{t-1} + \varepsilon_t$)</i>				
$H_0: a_1 = 0$			1.49	1.42
	ΔY_t	ΔL_t	ΔK_t	ΔF_t
Number of lags	2	0	0	2
<i>Equation with Constant and Trend Terms ($\Delta^2 z_t = a_0 + a_1 \Delta z_{t-1} + a_2 t + \varepsilon_t$)</i>				
$H_0: a_1 = 0$	-3.50**	-3.82**	-2.97	-1.97
$H_0: a_1 = a_2 = 0$			5.73*	2.04
$H_0: a_0 = a_1 = a_2 = 0$			4	1.43
<i>Equation with Constant but no Trend Term ($\Delta^2 z_t = a_0 + a_1 \Delta z_{t-1} + \varepsilon_t$)</i>				
$H_0: a_1 = 0$			-3.24**	-1.75
$H_0: a_0 = a_1 = 0$			5.53**	1.64
<i>Equation with No Constant and No Trend ($\Delta^2 z_t = a_1 \Delta z_{t-1} + \varepsilon_t$)</i>				
$H_0: a_1 = 0$			-2.88***	-1.77**

***, **, and * represent rejection of the null at 1%, 5%, and 10% levels of significance respectively.

Appendix Table 3. Tests on Unrestricted VAR

	Unrestricted	No time trends $H_0 : \delta = \mathbf{0}$	No lags = 3 $H_0 : \mathbf{A}_3 = \mathbf{0}$	No lags = 2 or 3 $H_0 : \mathbf{A}_2 = \mathbf{A}_3 = \mathbf{0}$
Test VAR is $\mathbf{z}_t = \mathbf{A}_1 \mathbf{z}_{t-1} + \mathbf{A}_2 \mathbf{z}_{t-2} + \mathbf{A}_3 \mathbf{z}_{t-3} + \delta t + \mu + \mathbf{u}_t$				
d.f.		4	16	32
LLR test statistic		13.3	17.3	50.7
<i>p</i> -value		0.01	0.37	0.018
AIC	-26.75	-26.2	-26.77	-26.75
SBC	-24.2	-23.8	-24.9	-24.2
HQC	-25.9	-25.4	-26.2	-25.9
Test VAR is $\mathbf{z}_t = \mathbf{A}_1 \mathbf{z}_{t-1} + \mathbf{A}_2 \mathbf{z}_{t-2} + \delta t + \mu + \mathbf{u}_t$				
d.f.		4		16
LLR test statistic		14.6		38.4
<i>p</i> -value		0.006		0.0013
AIC	-26.7	-26.3		-25.9
SBC	-25.3	-24.6		-24.8
HQC	-26.7	-25.7		-25.6

Appendix Table 4. Results of Model Diagnostic Tests

(at 5% level of significance except where noted)

Equation	ΔY_t	ΔL_t	ΔK_t	ΔF_t
<i>Tests of serial independence</i>				
Breusch-Godfrey (against AR(1) or MA(1))	Accept	Accept	Accept	Accept
Breusch-Pagan LM test	Accept	Accept	Accept	Accept
No. of significant residual autocorrelations (up to 9)	None	None	None	None
<i>Test of normality in residuals</i>				
Jarque-Bera test	Accept	Accept	Accept	Accept
<i>Tests of homoskedasticity</i>				
LM tests (including ARCH)	10 accept	8 accept; Harvey & Koenker tests reject	10 accept	10 accept
Harvey-Phillips test	Accept	Accept	Accept	Accept
Hansen stability test (10%)	Reject	Accept	Reject	Accept
Goldfeld-Quandt test: No. of significant breakpoints (out of 15)	3 (1975-77)	1 (1971)	4 (1976-78, 1981)	None
<i>Tests of model stability</i>				
Note: Stability of the cointegration parameters is not tested.				
Hansen stability test	Accept	Accept	Accept	Accept
Harvey-Collier recursive <i>t</i> -test	Accept	Accept	Accept	Accept
Chow test: No. of significant breakpoints (out of 15)	1 (1981)	None	5 (1971-1976)	None
<i>Model specification tests</i>				
Ramsey RESET test	Accept	Accept	Accept	Accept
Debenedictis-Giles FRESET test	Accept	Accept	Accept	Accept

Note: Tests that are usually conditioned on independent variables (e.g., most LM tests) are *not* conditioned on any *I*(1) variables in the model, in order to ensure that they possess the appropriate distributions.