

The p probability value denotes the marginal significance level for which the null hypothesis would still be rejected. It is defined as the probability, under the null, to find a test statistic that (in absolute value) exceeds the value of the statistic that is computed from the sample. If the p -value is smaller than the significance level α , the null hypothesis is rejected. This probability allows the researcher to draw their conclusions without consulting or computing the appropriate critical values. For example, a p -value of 0.08 indicates that the null hypothesis is rejected at the 10% significance level, but not at the 5% level (Verbeek, 2008:32).

<u>In order to have a significant parameter</u>		Distribution: t		P < 0.05
Jarque-Bera Test (Normality)				
S=0; K=3; JB \approx 0		Distribution: Normal	Normal Distribution	p > 0.05
<u>(White) Heteroskedasticity</u>				
Null hypothesis: No Heteroskedasticity		Distribution: chi-square		We accept Ho P > 0.05
Alt. Hypothesis: There is Heteroskedasticity				We reject Ho P < 0.05
<u>DW=2</u> For no autocorrelation				
<u>(Breusch-Godfrey) Serial Correlation (LM test)</u>				
Null hypothesis: There is not Serial Correlation in the residuals		Distribution: chi-square		We accept Ho P > 0.05
Alt. Hypothesis: There is Serial Correlation in the residuals				We reject Ho P < 0.05
<u>Ramsey's RESET Test (Specification Errors)</u>				
Omitted Variables		Distribution: chi-square		
Incorrect Functional Form				
Correlation between X and the error				
Null Hypothesis: The disturbance vector follows a multivariate normal distribution				We accept Ho P > 0.05
Alt. Hypothesis: The disturbance vector does not follow a multivariate normal distribution				We reject Ho P < 0.05
<u>Stability Tests</u>				
Recursive residuals	One-Step Forecast Test			All these tests should lie inside the band.
Cusum Test	N-Step Forecast Test			Residuals outside the standard error bands
Cusum of Squares Test	Recursive Coefficients			suggest instability in the parameters.
<u>Unit Root Tests (ADF, DFGLS, PP, KPSS, ERS, and NP)</u>				
Null Hypothesis: the series has a unit root		Distribution: Several		
Alt. Hypothesis: the series has not a unit root				
(ADF, DFGLS, PP, KPSS, ERS, and NP) test statistic				We accept Ho P > 0.05
Test critical values:	1% level	if t-statistic > critical values \Rightarrow we reject Ho		We reject Ho P < 0.05
	5% level			
	10% level			
Only in KPSS				
Null Hypothesis: the series is stationary	if t-statistic < critical values \Rightarrow we accept Ho		We accept Ho	
Alt. Hypothesis: the series is not stationary			We reject Ho	
<u>VAR Model (Method: OLS)</u>				
Normality	Skewness (Joint)			p > 0.05
	Kurtosis (Joint)			p > 0.05
Jarque-Bera (Joint) This is the most important test.		Normal Dist.		p > 0.05
Heteroskedasticity:	Null hypothesis: No Heteroskedasticity			We accept Ho p > 0.05
Autocorrelation:	Null hypothesis: There is not Serial Correlation in the residuals			We reject Ho p > 0.05
Stability Condition: all the roots should lie inside the unit circle.				
<u>Cointegration (Johansen procedure)</u>				
Hypothesized		Trace	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.720768	63.02273	40.17493	0.0001
At most 1	0.464361	23.47563	24.27596	0.0628
At most 2	0.10933	4.122468	12.3209	0.6932
		If the trace statistic > Critical Value \Rightarrow there is at least one cointegrating vector		
		see example above: There is only one cointegrating vector		