

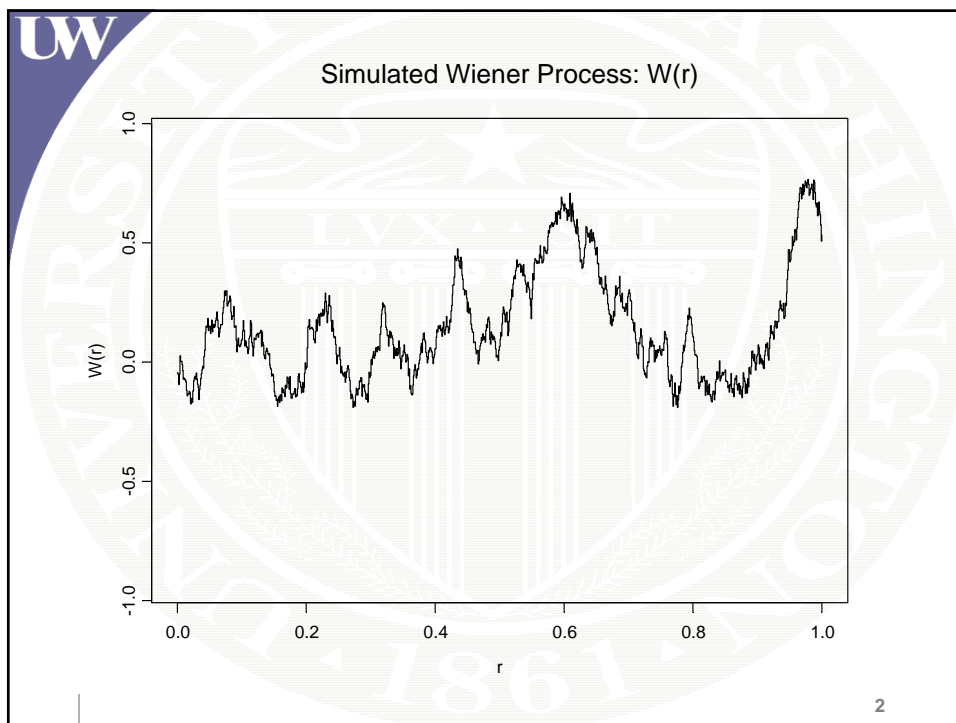
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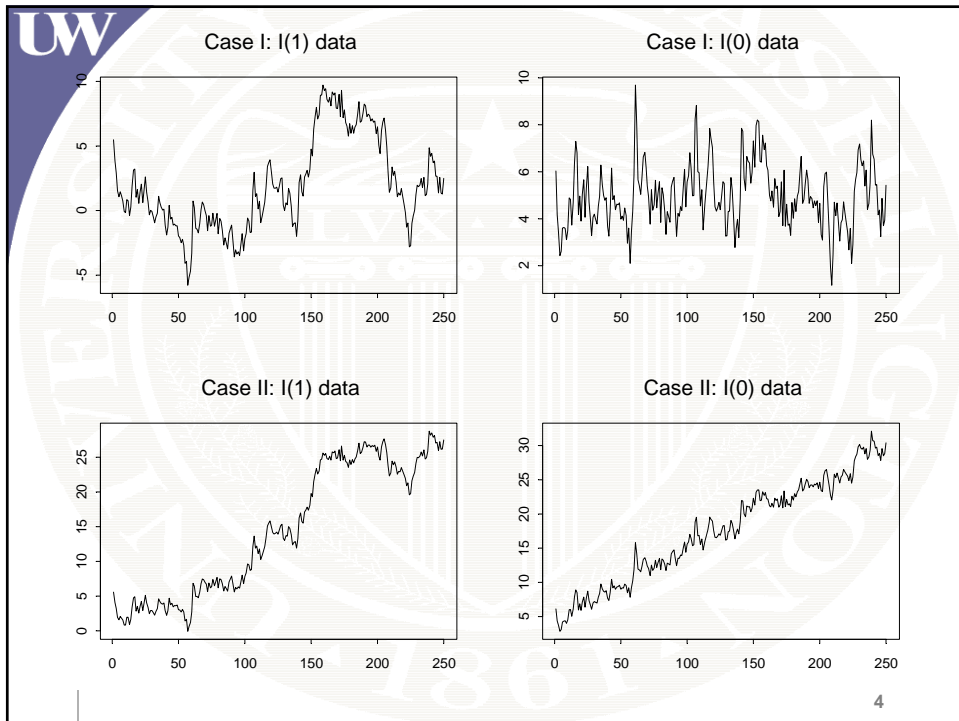
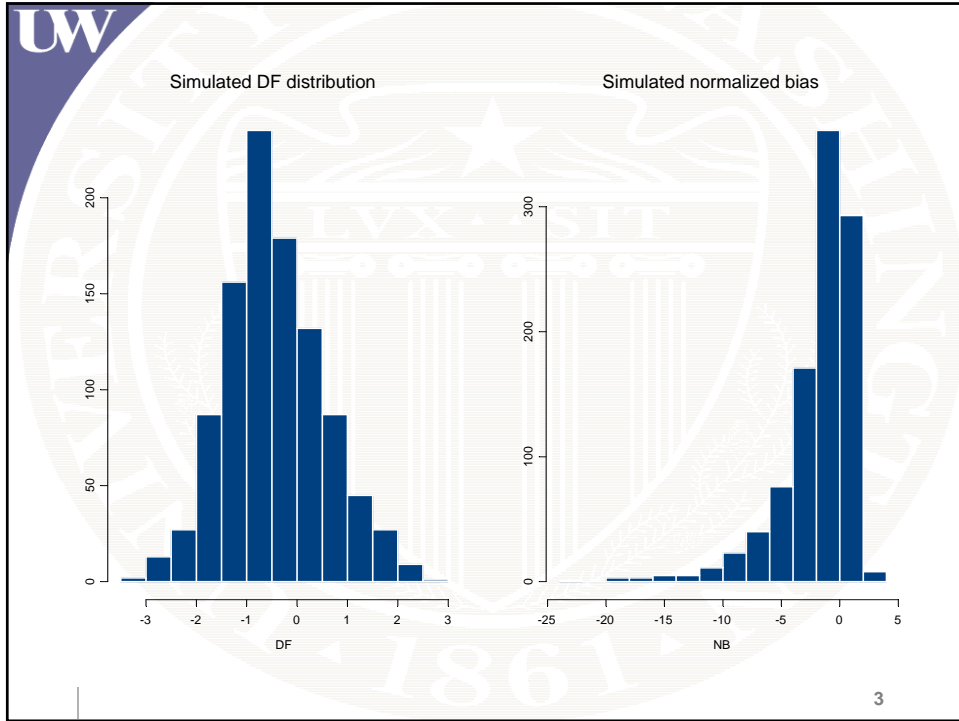
Econ 582

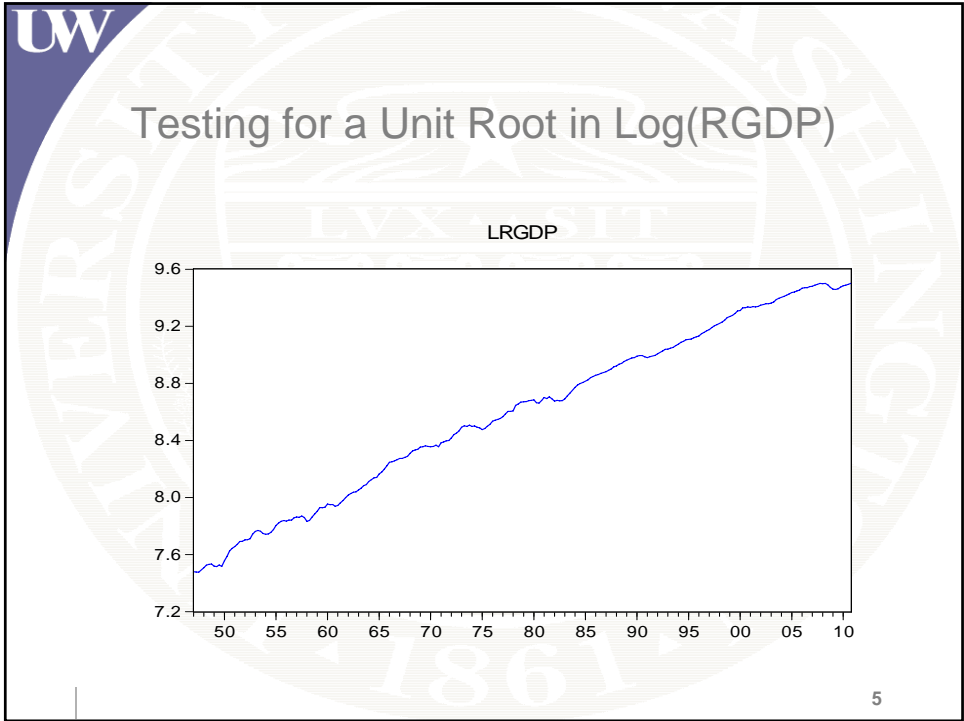
Unit Root Tests

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1







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ADF Test Regression

Augmented Dickey-Fuller Test Equation
 Dependent Variable: D(LRGDP)
 Method: Least Squares
 Date: 05/12/11 Time: 12:17
 Sample (adjusted): 1948Q3 2010Q4
 Included observations: 250 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LRGDP(-1)	-0.017401	0.013609	-1.278664	0.2022
D(LRGDP(-1))	0.321514	0.064231	5.005594	0.0000
D(LRGDP(-2))	0.139033	0.067200	2.068958	0.0396
D(LRGDP(-3))	-0.074283	0.067291	-1.103901	0.2707
D(LRGDP(-4))	-0.054415	0.067088	-0.811101	0.4181
D(LRGDP(-5))	-0.071628	0.064877	-1.104054	0.2707
C	0.139017	0.102267	1.359359	0.1753
@TREND(1947Q1)	0.000128	0.000112	1.139704	0.2555
R-squared	0.181344	Mean dependent var		0.007900
Adjusted R-squared	0.157664	S.D. dependent var		0.009927
S.E. of regression	0.009111	Akaike info criterion		-6.527144
Sum squared resid	0.020089	Schwarz criterion		-6.414457
Log likelihood	823.8930	Hannan-Quinn criter.		-6.481791
F-statistic	7.658065	Durbin-Watson stat		1.985110
Prob(F-statistic)	0.000000			

6

ADF Test Results

Series: LRGDP Workfile: ECON582LAB2::Untitled\

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Augmented Dickey-Fuller Unit Root Test on LRGDP

Null Hypothesis: LRGDP has a unit root
 Exogenous: Constant, Linear Trend
 Lag Length: 5 (Automatic - based on Modified AIC, maxlag=8)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.278664	0.8906
Test critical values:		
1% level	-3.995189	
5% level	-3.427902	
10% level	-3.137310	

*Mackinnon (1996) one-sided p-values.

Do not reject H_0 : $\log(\text{RGDP})$ is $I(1)$

Nelson-Plosser (1980): "Trends and Random Walks in Macroeconomic Time Series," JME

- One of the most cited papers in empirical macroeconomics
- Tested for unit roots in 14 macroeconomic time series using ADF unit root tests
- Could not reject the null of a unit root for 13 of 14 series (unemployment was only rejection)
- Results created the "unit root" era in time series/macro
- Nelson-Plosser data is a benchmark dataset for essentially all unit root papers!

