

Example 8-8

September 11, 2020

```
[ ]: # install the following packages and library
install.packages("pder")
install.packages("plm")

library("plm")

# import the data
data("HousePricesUS", package = "pder")
```

```
[3]: ##-----Block 1-----

#### Example 8-8 ####

## -----
price <- pdata.frame(HousePricesUS)$price

# unit root tests
# Levin-Lin-Chu unit root test
purtest(log(price), test = "levinlin", lags = 2, exo = "trend")
```

Levin-Lin-Chu Unit-Root Test (ex. var.: Individual Intercepts and Trend)

```
data: log(price)
z = -1.2573, p-value = 0.1043
alternative hypothesis: stationarity
```

```
[4]: ##-----Block 2-----

# Maddala-Wu unit root test
purtest(log(price), test = "madwu", lags = 2, exo = "trend")
```

Maddala-Wu Unit-Root Test (ex. var.: Individual Intercepts and Trend)

```
data: log(price)
chisq = 99.768, df = 98, p-value = 0.4313
```

alternative hypothesis: stationarity

```
[5]: ##-----Block 3-----  
  
# Im-Pesaran-Shin unit root test  
purtest(log(price), test = "ips", lags = 2, exo = "trend")
```

Im-Pesaran-Shin Unit-Root Test (ex. var.: Individual Intercepts and Trend)

data: log(price)
Wtbar = 0.76622, p-value = 0.7782
alternative hypothesis: stationarity