Part 1

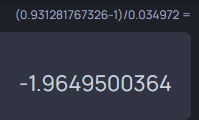
# Data

[TOTAL FORESTRY STATISTICS, U.S. GEOLOGICAL SURVEY](https://www.usgs.gov/centers/national-minerals-information-center/historical-statistics-mineral-and-material-commodities#lead). [All values in metric tons], annual from 1900 to 2014







* The Jarque-Bera statistic and its corresponding p-value indicate that the log series is more likely to be normally distributed than the level series, therefore we favor the transformation.
* There is a visual trend in both series, namely a steady increase from the 1930s to the 2000s.
* Manually computed and directly estimated t-statistics are both equal.
* The 5 % critical value for Dickey-Fuller test with a trend and a sample size 114 is about -3.45.
  + Thus the null hypothesis of a unit root is not rejected since -1.964925 > -3.45.
    - Therefore the trend is stochastic.





* The selected ARDL model based on the Schwarz information criterion includes 1 lag of the differenced log transformed production series.



* The null hypothesis of a unit root is still not rejected as -2.370368 > -3.45.
  + EViews t-test corresponds to the one above.



























