Time Series

Economics

Analysing a variable observed over time, and the trap in it.

Concepts and cautions.

Concepts

- Stationarity — stable mean and variance
- Autocorrelation — today depends on yesterday
- Seasonality — repeating annual pattern
- Cointegration — a genuine long-run link

Cautions

- Spurious regression between trending series
- Test for unit roots before regressing
- Difference or detrend when needed
- Out-of-sample testing for any forecast

> Spurious regression is the classic failure: two random walks will show a high R^2 and a significant coefficient reliably.