

checking differencing and log transforms

y not Δy , $\ln y$, or $\Delta \ln y$

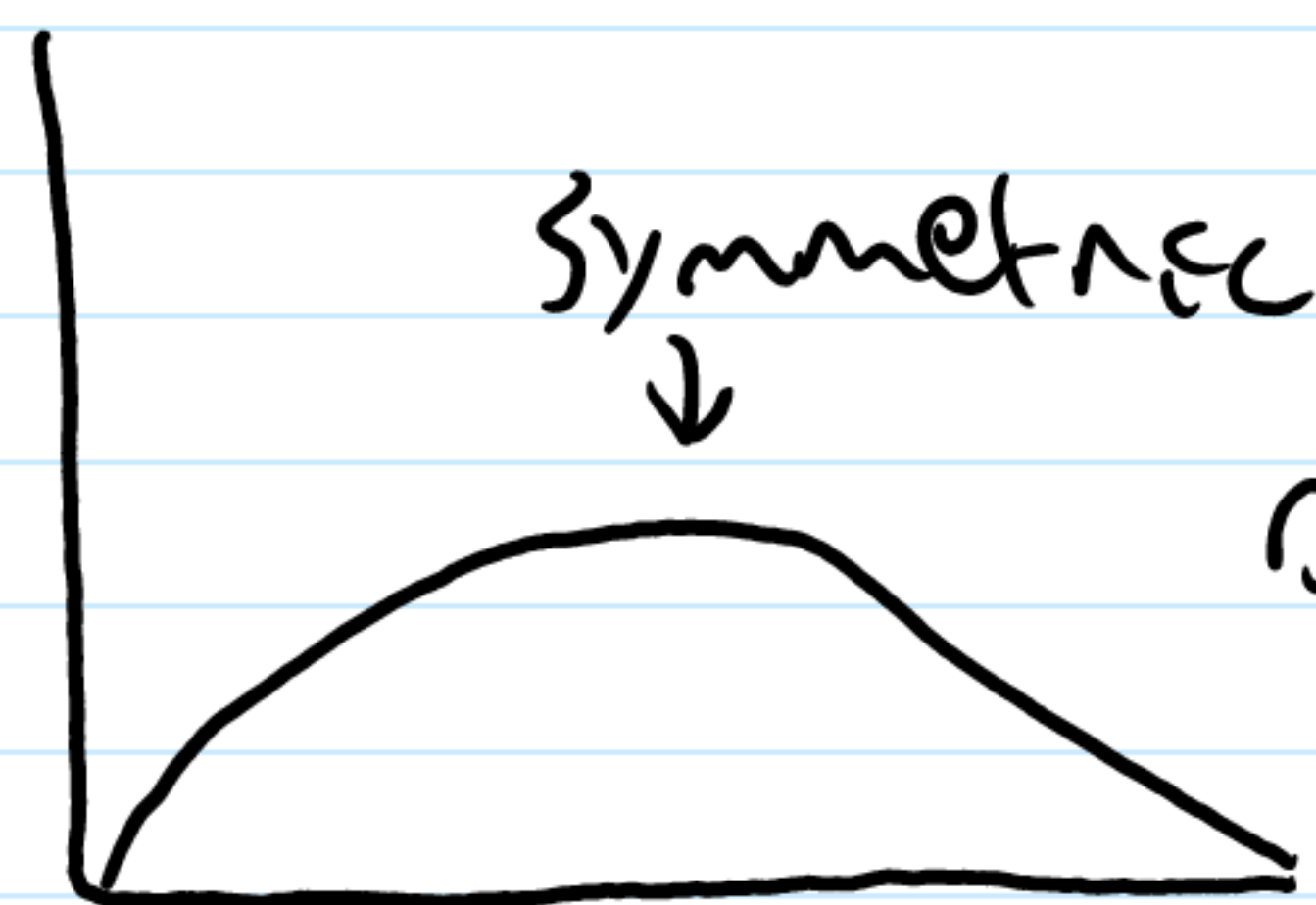
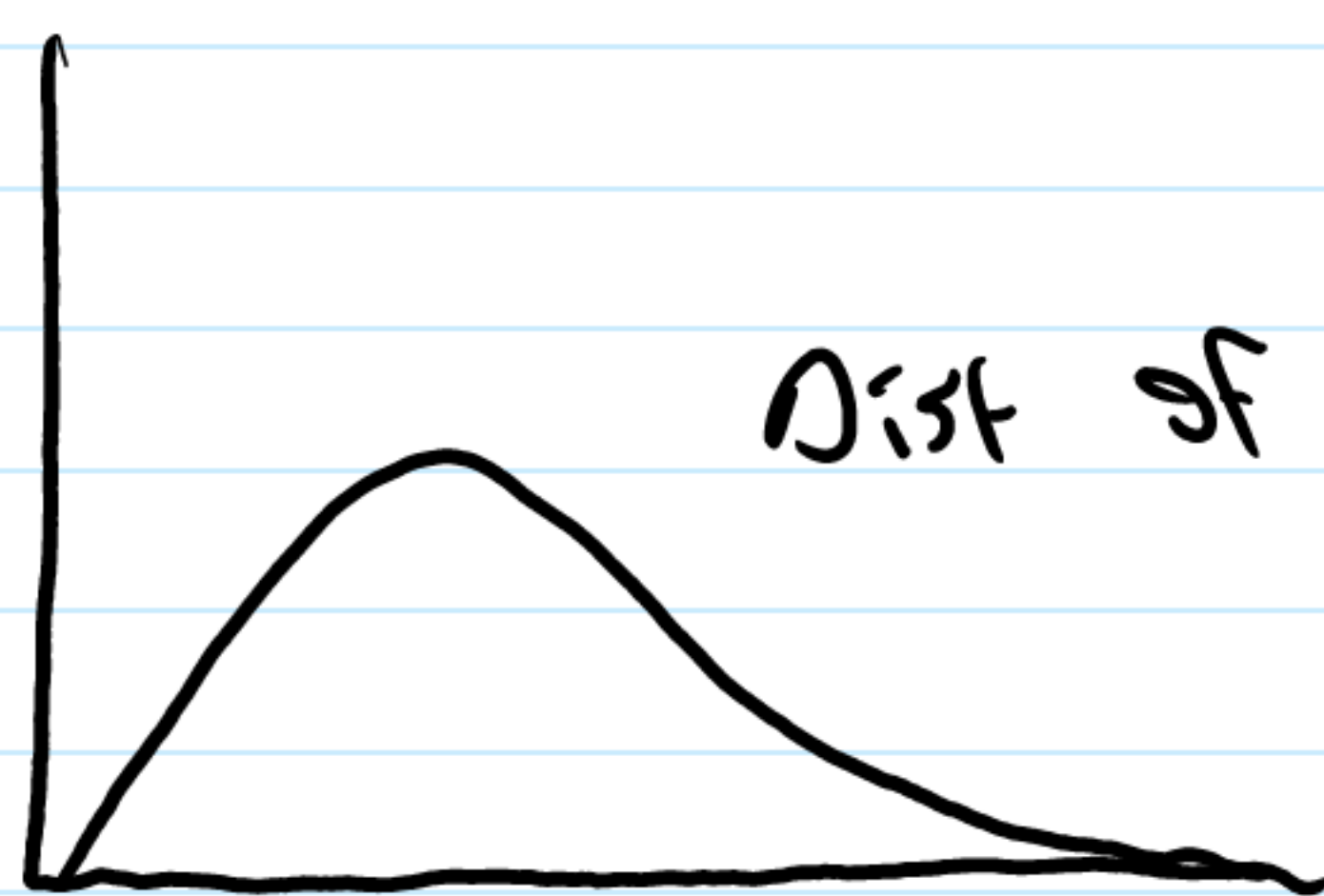
\hat{f}_{t+h} \hat{f}_{t+1} = forecast at t of $t+1$

$$\Delta y_{t+1} = y_{t+1} - y_t$$

$$y_{t+1} = y_t + \Delta y_{t+1}$$

$$\ln y_{t+1} \rightarrow y_{t+1} = e^{\ln y_{t+1}}$$

$$\Delta \ln y_{t+1} = \ln y_{t+1} - \ln y_t$$



Dist of y if $\ln y$ is normal

$$e^{\frac{1}{2} \sigma^2} e^{\ln y_t + \Delta \ln y_{t+1}}$$

assumes normality empirical version

$$\sum_i \hat{e}_i^2 / T$$

$$(e^{\ln y_t + \Delta \ln y_{t+1}}) \left(\sum_i \hat{e}_i^2 / T \right)$$