DISCUSSION OF
GREAT MODERATION OR
“WILL ’O THE WISP”?
TIME-FREQUENCY DECOMPOSITION OF GDP
FOR THE US AND UK
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Research Questions

How has the frequency composition of the variation in US and UK macroeconomic variables changed over time?

At which frequencies can we detect the Great Moderation?

Do the frequencies at which we observe the Great Moderation differ across the expenditure components of GDP?

Do these patterns differ between the US and UK?
**Why Use Wavelet Analysis?**

**Time Domain:**
- Observe how the variance of GDP growth has changed over time
- Cannot observe which frequencies account for the variation

**Frequency Domain:**
- Observe the frequencies at which the variation in GDP growth occurs over the entire period
- Cannot observe how the series changes over time

**Time-Frequency Analysis** using wavelets allows us to see how the spectral composition of GDP growth has changed over time.
LOOKING FOR THE GREAT MODERATION: FREQUENCY DOMAIN


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LOOKING FOR THE GREAT MODERATION: WAVELET ANALYSIS

Fig. 3. MODWT decomposition of log change in US GDP.
Key Findings

US
- Great Moderation at business cycle frequency
- For GDP and consumption, low frequency variation rises during Great Moderation
- Trade-off between ER vs net export volatility evident

UK
- Great Moderation at business cycle frequency
- For GDP and consumption, low frequency variation rises during Great Moderation
- Not much moderation in investment at any frequency
Directions for Further Research

Decompose investment into fixed investment and inventories

- Does inventory management explain the Great Moderation? (McCarthy & Zakrajsek 2007, McMahon 2014)

Analysis of financial sector variables

- Business and consumer credit
- Leverage ratios

Could shed light on the end of the Great Moderation