State Tax Revenue Performance over the Business Cycle

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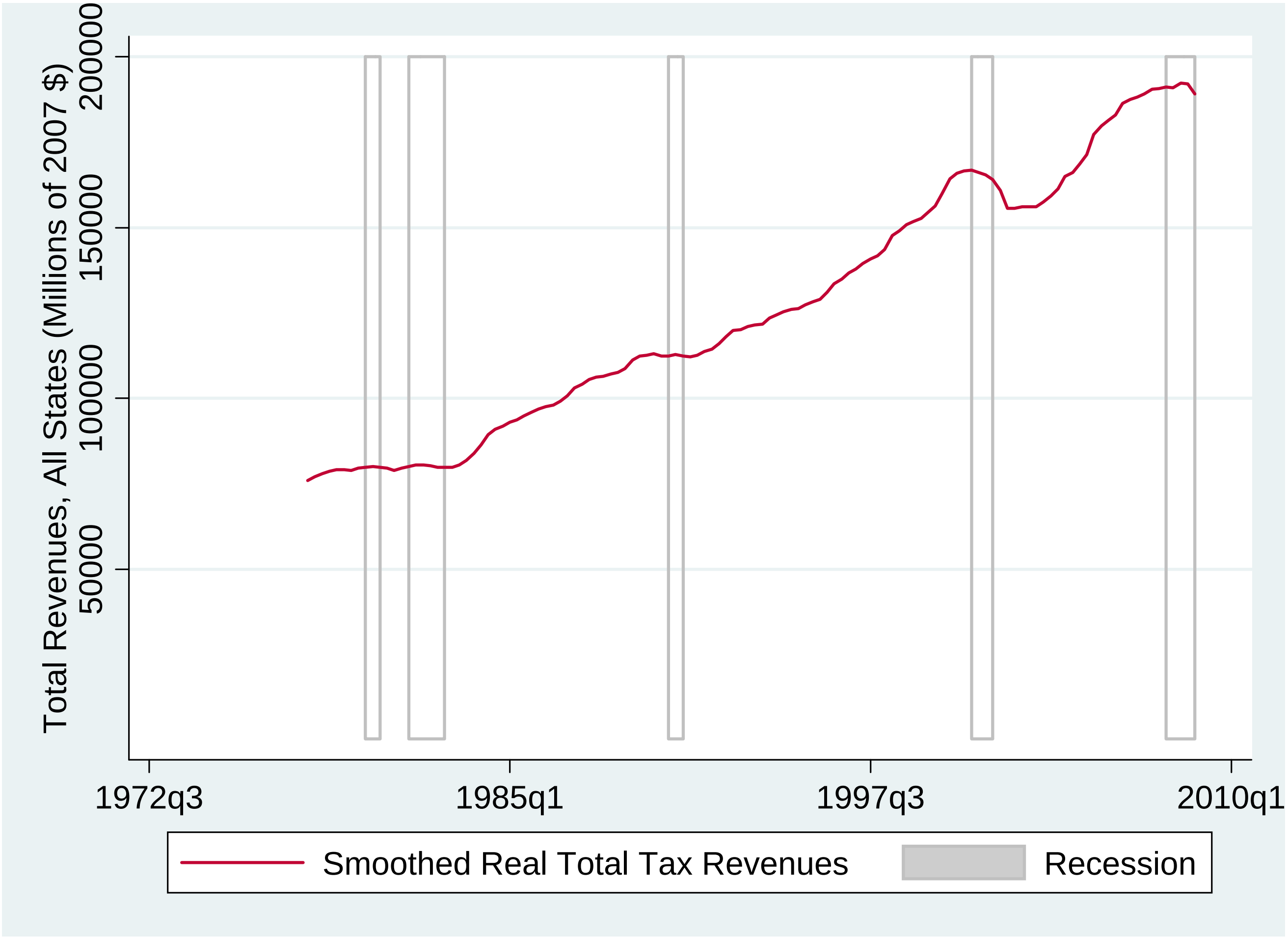
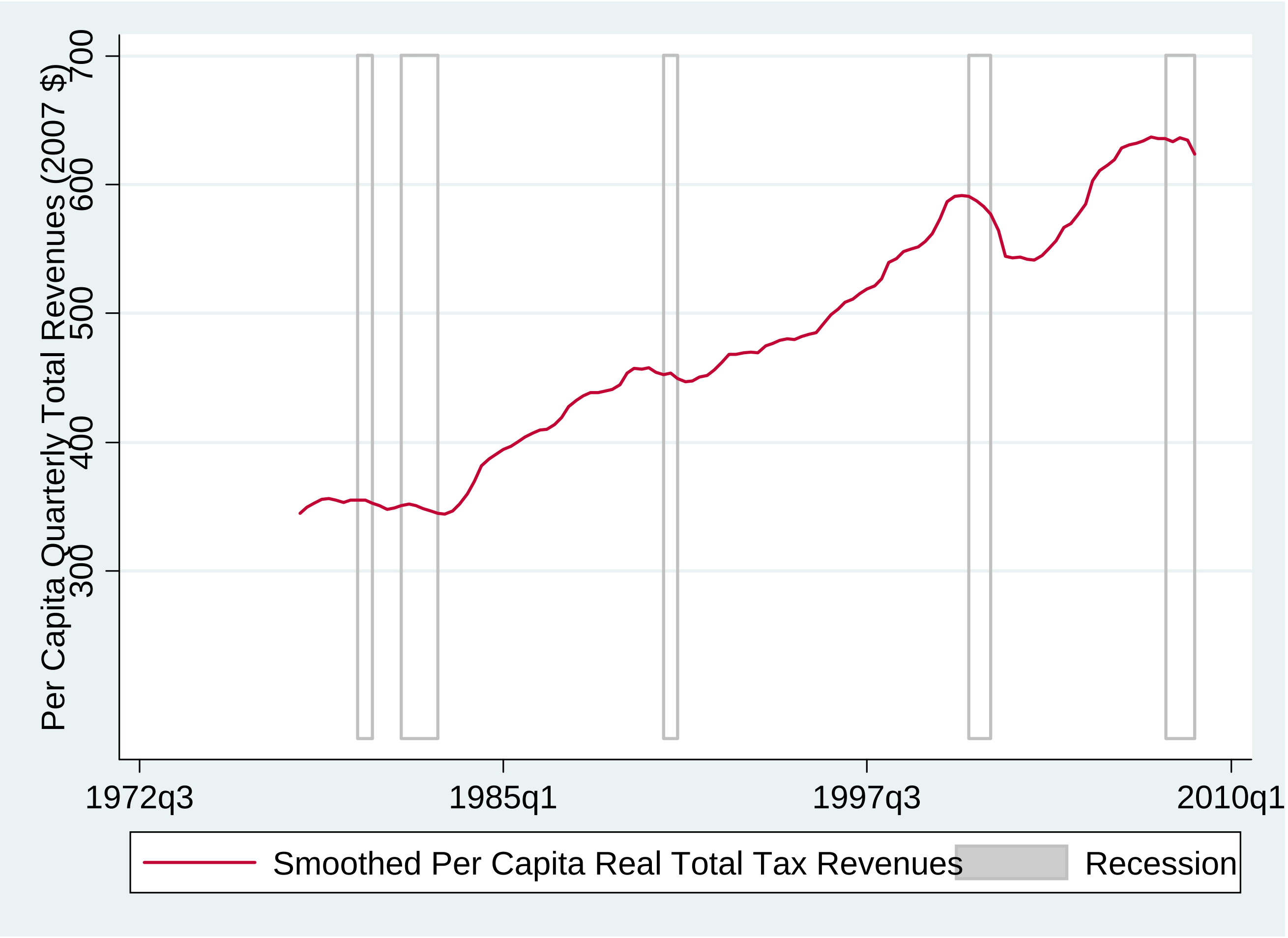
What Does Tax Revenue Performance Look Like Over the Business Cycle – Has this Changed?

- Motivation
  - 2001 Recession as a watershed event – a mild business cycle contraction led to a major crisis in state government finances.
  - Why? What changed?
  - What does this imply for the more severe recession that we are experiencing.
- Data
  - Quarterly Summary of State and Local Government Tax Revenue
    - Collected (more or less) continuously since 1962
    - Released in a timely fashion (90 days after the quarter ends)
    - Quarterly frequency a big plus

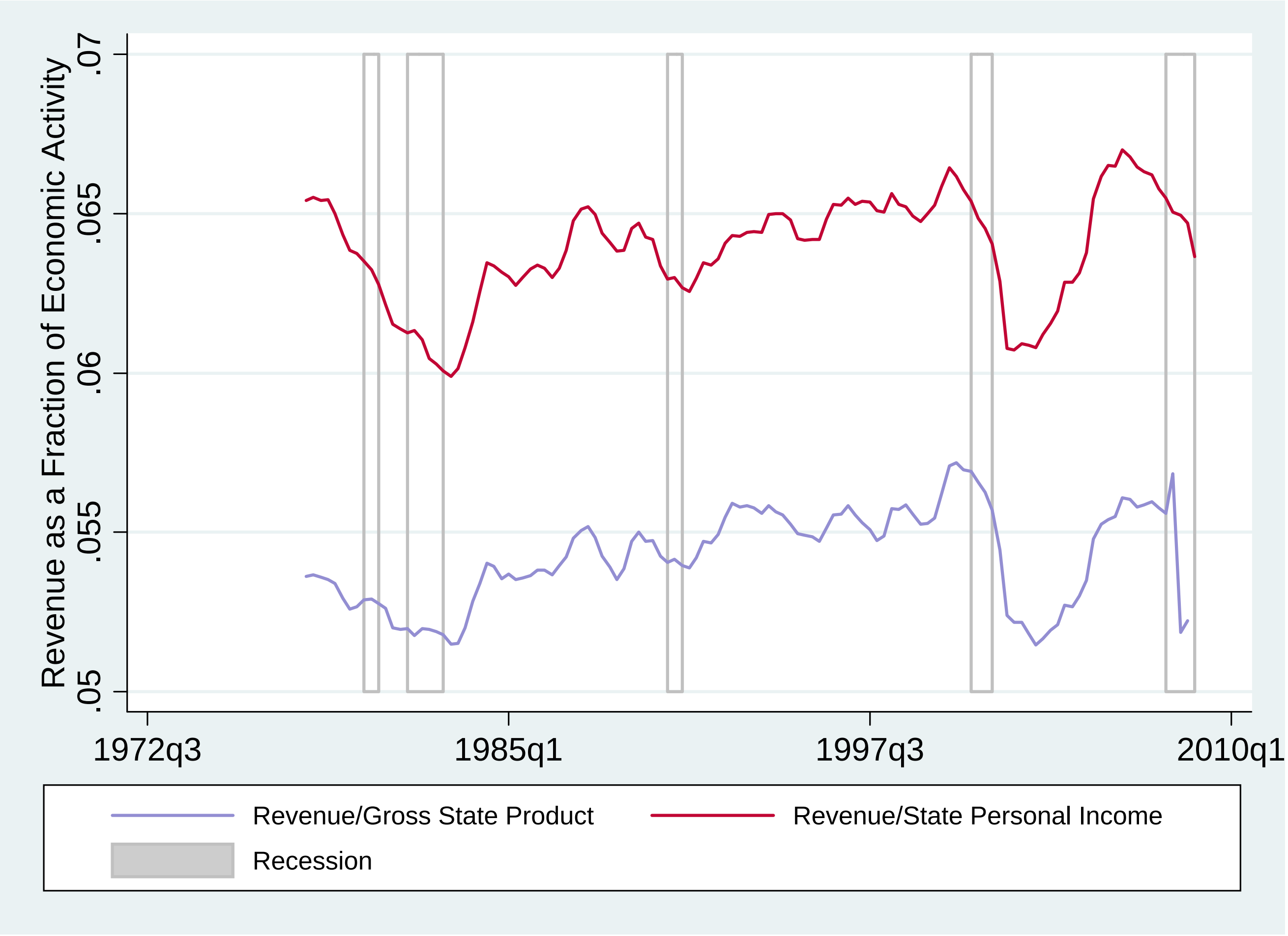
Total Quarterly State Tax Revenues (Smoothed)



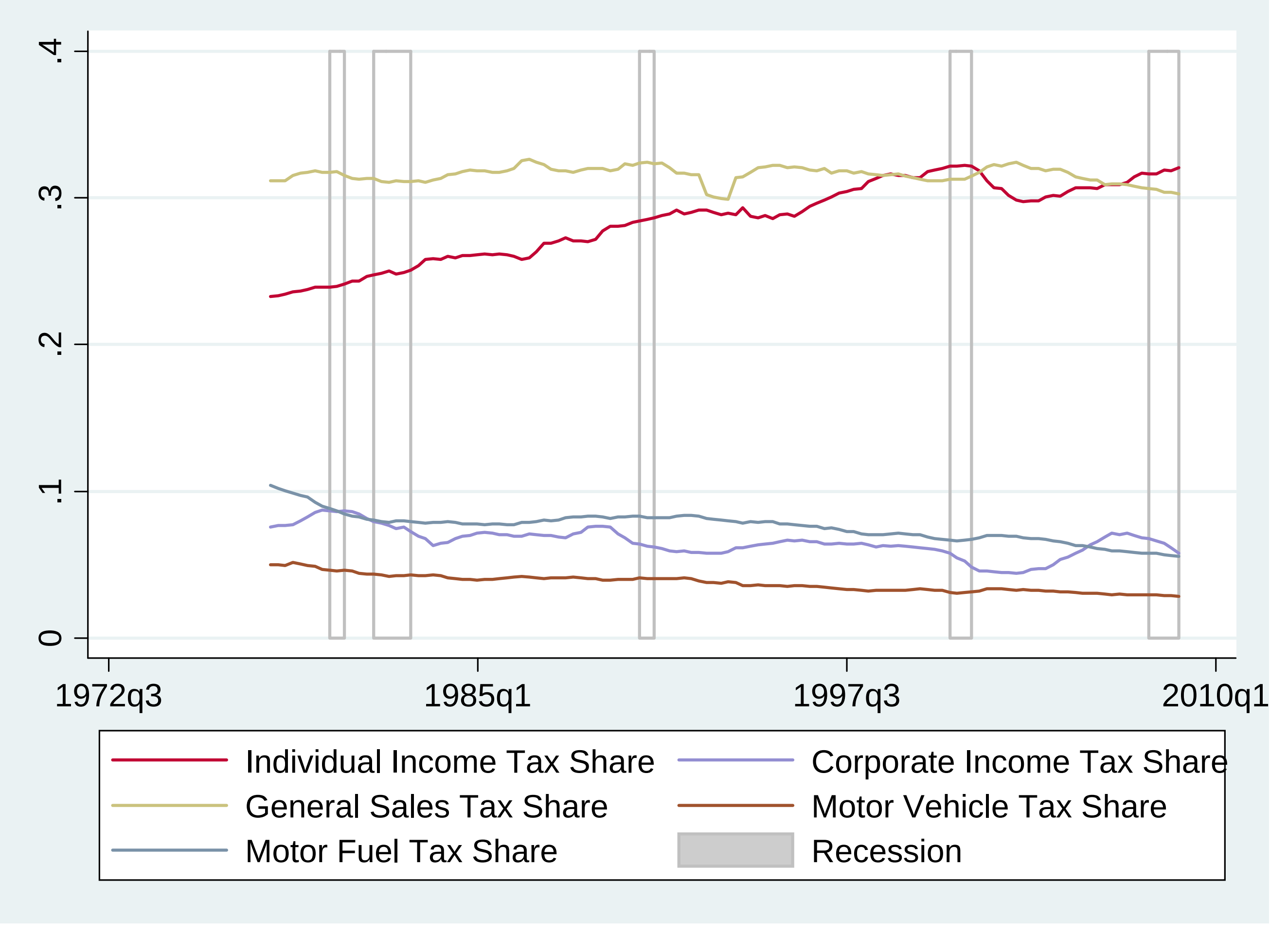
Per Capita State Tax Revenues (Smoothed)



Tax Revenue as a Fraction of Economic Activity



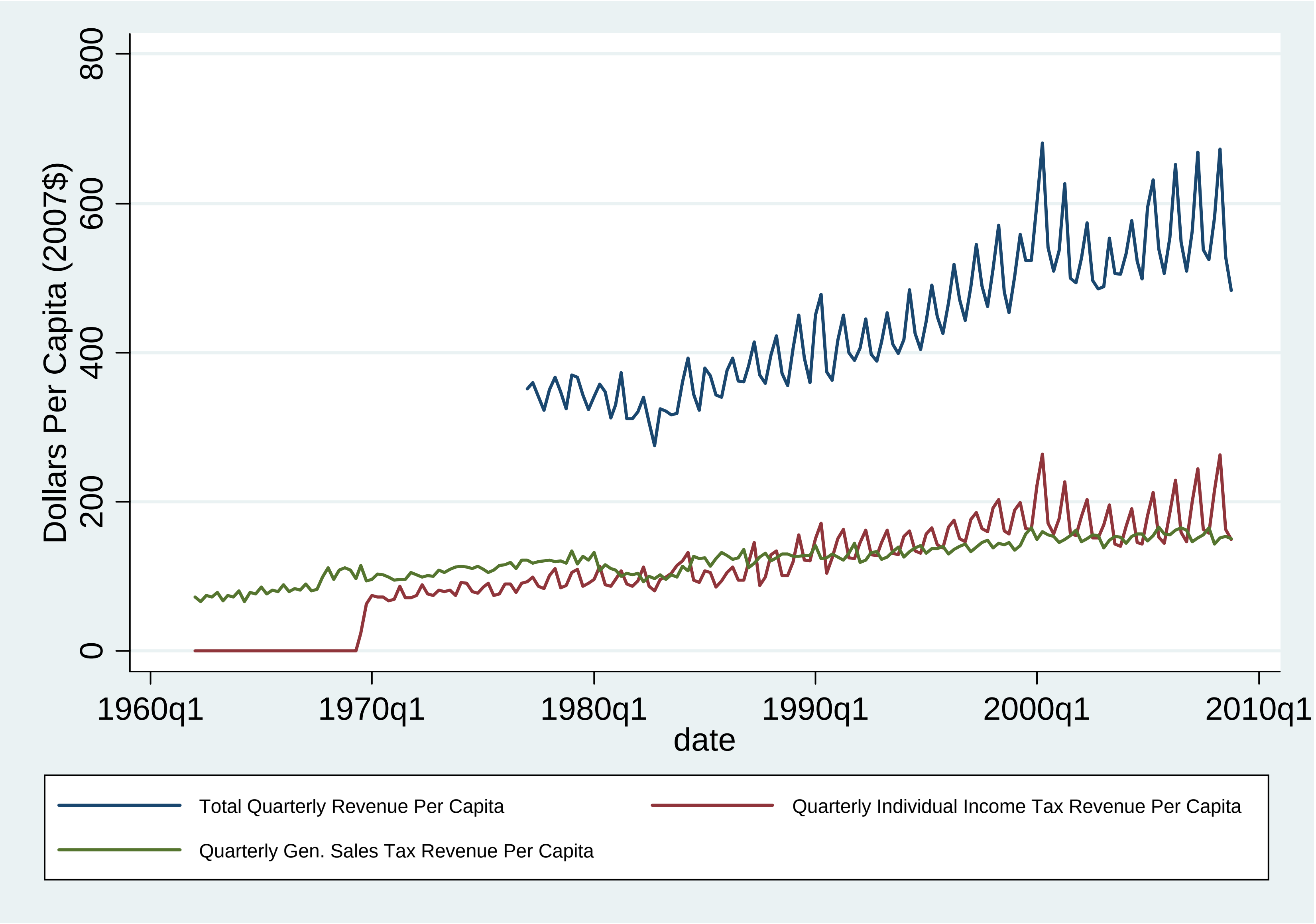
Tax Revenue Shares



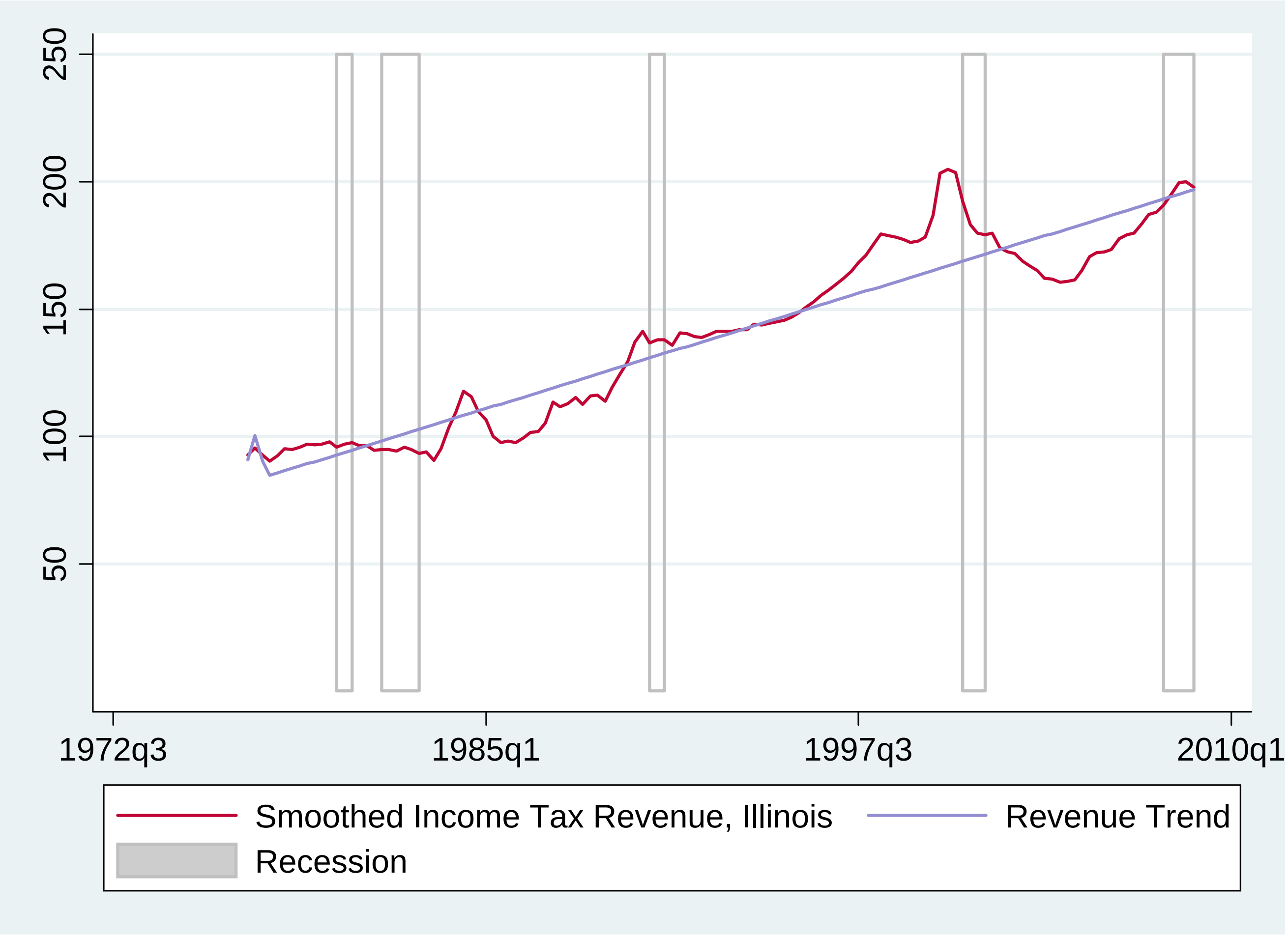
Revenue Responsiveness to Economic Conditions

- Define state business cycle conditions using the state coincident index developed by the FRB Philadelphia
  - Average state down 2.2% over a year ago (2008:Q4 vs 2007:Q4)
    - Mean 1980-2008 2.9% St. Dev 3.7%
- Pre-1998
  - 1% Change in Coincident Indicator
    - 0.72% Change in Total Per Capita Revenue
    - 0.83% Change in Per Capita Sales Tax Revenue
    - 0.69% Change in Per Capita Income Tax Revenue
- 1998 and After
  - 1% Change in Coincident Indicator
    - 1.09% Change in Total Per Capita Revenue
    - 0.64% Change in Per Capita Sales Tax Revenue
    - 1.94% Change in Per Capita Income Tax Revenue

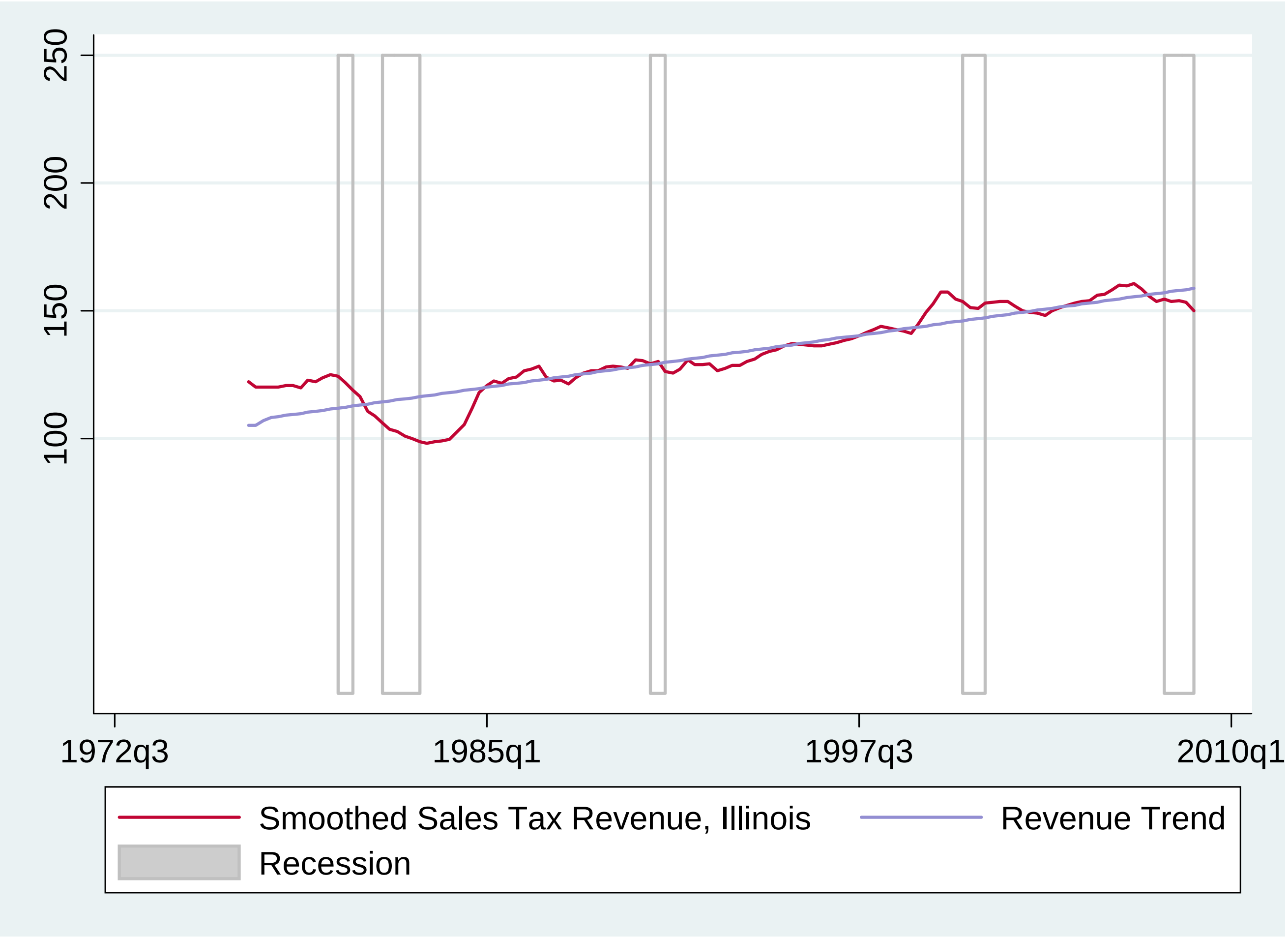
Looking at Case of Illinois



Revenue Variability – Illinois Income Tax



Revenue Variability – Illinois Sales



What Happened?

- Not so much a long term switch from a stable source (sales) to a volatile source (income)
- Instead a change within the income tax where revenues have become more sensitive to economic conditions.

Explanations

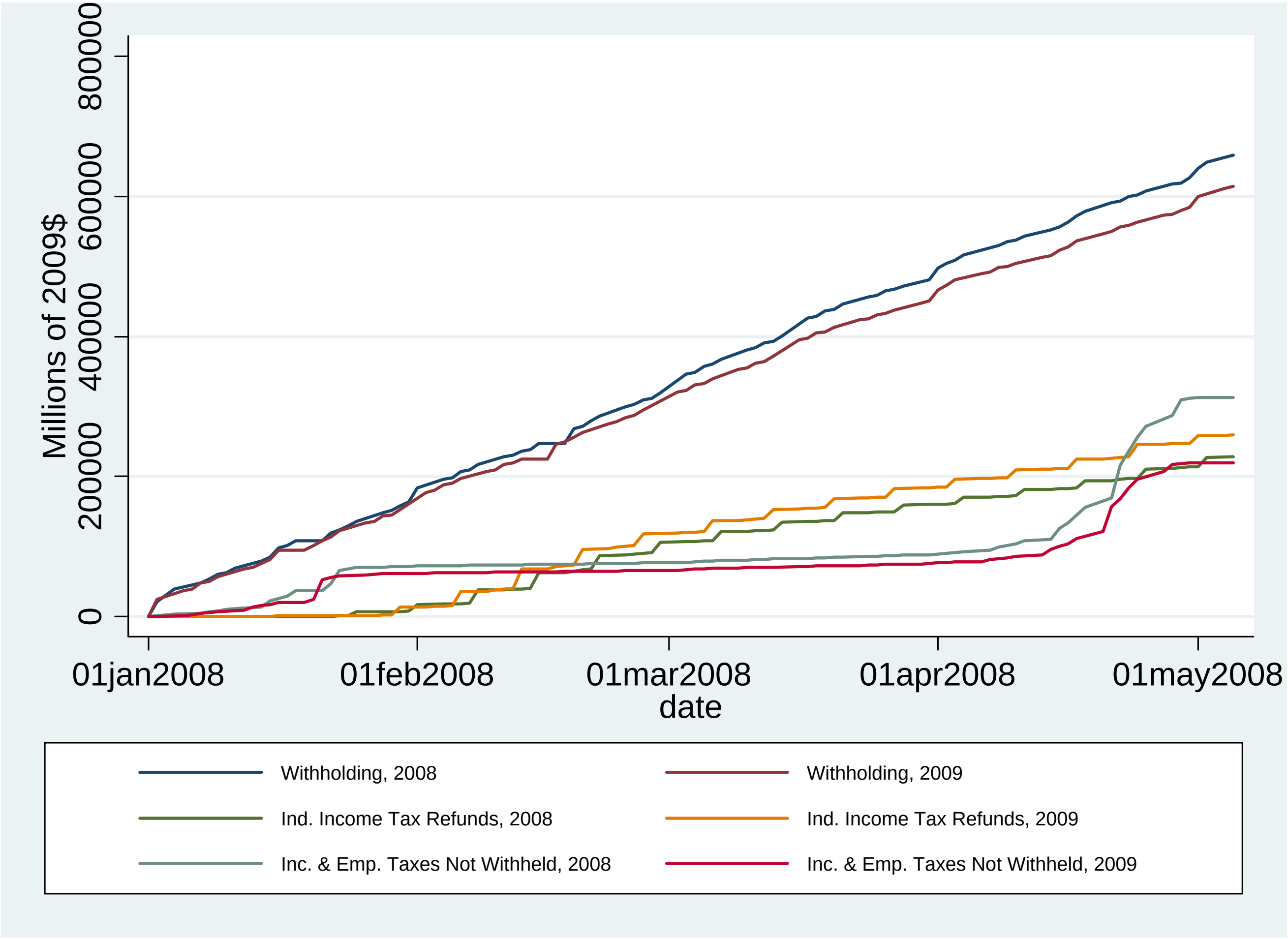
- Who we're taxing:
  - Increasing income dispersion. Progressivity?
  - Progressive states versus less progressive states.
    - Increase in business cycle sensitivity has occurred to a similar degree in states with low and high maximum marginal tax rates.
    - Illinois example
- How we're taxing
  - Policy Responses to economic conditions
  - Did we used to increase tax rates when times were bad to stabilize revenues?
- What we're taxing
  - Capital Gains became a more important share of Adjusted Gross Income
  - Timing is right
  - Both increasing importance and increasing sensitivity
    - Intersection between capital gains taxes (and rate decreases in 1997 and 2003) and financial market performance

Capital Gains as a Share of Adjusted Gross Income

2009 and Beyond

- Obviously not shaping up well.
  - U.S. coincident index -2.3% in Q1 (Year over Year)
- Income Tax Revenues are falling
  - Federal Tax revenues
    - Withholding -6.8% (YTD May 5th)
    - Refunds +15.8% (YTD April 30th)
    - Final Payments -29.8% (YTD May 5th)
      - Usually by this time of year 2/3 paid in

Cumulative Federal Individual Income Tax Revenues and Refunds, 2008 vs. 2009



Policy Options: A Menu

- Change revenue structure towards something more stable
  - Decreasing reliance on corporate income tax may partly be due to volatility
  - Corporate income tax is substantially more volatile than individual (about 2.5x)
- Work to smooth revenues more aggressively
  - Rainy day funds. These may need to be larger than is politically feasible
  - Sell off assets when times are bad (and perhaps buy assets when times are good?)
    - Buy high and sell low?
  - Raise tax rates during bad times
- Run Deficits
  - Maybe the states should be more like the federal government rather than visa versa
- Accept that expenditures will need to be procyclical
  - Make hay while the sun shines
- Ask the Federal Government for help when times are bad
  - 2001 recession and now.