The Changing Revenue Landscape

NCSL Legislative Summit, 2018

July 30, 2018
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State Revenue Trends and Volatility

TCJA, South Dakota vs. Wayfair, Sports Betting
Overview

- State fiscal challenges
- Slow economic recovery
- Demographic changes
- Slower tax revenue recovery
- Growing reliance on non-traditional taxes
- Growing revenue volatility
State fiscal challenges

- 10+ years later still feeling the pain of the Great Recession
- Variables that drive revenue hit harder than broader economy, harder than before
- Revenue recovery is very slow
- Employment and wage recovery is slow
  - Major cuts in state-local government employment
- Longer-term spending pressures loom
  - Growing pension liabilities
  - Growing Medicaid costs due to higher recession-related enrollment
- Growing uncertainty due to TCJA and other federal policies
Slow economic recovery

- Employment trends
  - Slow recovery for private sector employment
  - Deep cuts in state-local gov’t jobs
- Personal income trends
  - Slower growth in wages & salaries than in prior recoveries
- Retail sales
  - Weak and slow recovery
- Goods and services
  - Slow recovery in services and non-durable goods
  - High volatility in durable goods
  - Steep declines in energy goods and services, but currently rebounding
Employment trends since the Great Recession: Dire picture for government employment

<table>
<thead>
<tr>
<th>Employment Sector</th>
<th>Employment (in 1,000s)</th>
<th>Recession peak date</th>
<th>Percent change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Dec-07</td>
<td>Jun-18</td>
<td>Peak emp</td>
</tr>
<tr>
<td>Total nonfarm</td>
<td>138,411</td>
<td>148,912</td>
<td>138,419</td>
</tr>
<tr>
<td>Total private</td>
<td>116,035</td>
<td>126,571</td>
<td>116,035</td>
</tr>
<tr>
<td>State and local government</td>
<td>19,620</td>
<td>19,552</td>
<td>19,801</td>
</tr>
<tr>
<td>State government</td>
<td>5,139</td>
<td>5,100</td>
<td>5,214</td>
</tr>
<tr>
<td>State gov education</td>
<td>2,327</td>
<td>2,430</td>
<td>2,383</td>
</tr>
<tr>
<td>State gov, non-education</td>
<td>2,812</td>
<td>2,669</td>
<td>2,830</td>
</tr>
<tr>
<td>Local government</td>
<td>14,481</td>
<td>14,452</td>
<td>14,610</td>
</tr>
<tr>
<td>Local gov education</td>
<td>8,055</td>
<td>7,956</td>
<td>8,119</td>
</tr>
<tr>
<td>Local gov, non-education</td>
<td>6,426</td>
<td>6,496</td>
<td>6,507</td>
</tr>
</tbody>
</table>

Private sector employment recovery much slower compared to past recoveries

Private sector employment in selected recessions

Notes: Data are shown only until the start of the next recession; 1980 & 1981 recessions treated as single recession.
Deep cuts in state-local government jobs; Deeper than any other recession in the last 50 years

State and local government employment in selected recessions

Notes: Data are shown only until the start of the next recession; 1980 & 1981 recessions treated as single recession.
State-local government employment still declining, in contrast to the rebound in private employment

Employment in selected industries in the current recession

Growth in salaries & wages slower compared to past recoveries

Salaries & wages for U.S. since start of recession
Adjusted for inflation

Source: Author's analysis of data from Bureau of Economic Analysis (NIPA Table 2.1).
Notes: Data are shown only until the start of the next recession; 1980 & 1981 recessions treated as single
Personal savings as share of disposable personal income

Sources: Author’s analysis of data from Bureau of Economic Analysis (NIPA Table 2.1).
Real retail sales are weak compared to historical levels

![Real retail sales in selected recessions](image)

**Sources:** Cleveland Federal Reserve Bank (pre-1990 retail sales), U.S. Census Bureau (1990+), Bureau of Labor Statistics (CPI).

**Notes:** Data are shown only until the start of the next recession; 1980 and 1982 recessions are treated as single recession.
Consumption of durable & non-durable goods was hit hard

Source: U.S. Bureau of Economic Analysis, National Income and Product Accounts, Table 2.3.5.
Ageing population: Growth in elderly population as share of total population
Ageing population forecasts

Age 0-18 and age 65+ as share of total population

- Age 0-18
- Age 65+

Graph showing the percentage of the population aged 0-18 and 65+ from 2000 to 2060.
Problems associated with aging population: Lower income and lower income tax for older individuals

- Total income falls for older individuals
  - Retirement income usually less than pre-retirement earnings
  - Aggregate retirement income is growing rapidly, but total income of retirees is lower than before retirement
- Tax breaks! For example:
  - Exclusion of Social Security income, public pensions, private pensions, IRA/401(k) withdrawals
  - Additional personal exemptions and credits for the elderly
  - 36 of 41 states with broad-based income tax provide exclusion for some retirement income (beyond Social Security), or elderly tax credit
    - *NOT: CA, NE, ND, RI, VT*
State taxes & the economy:
States taxes are far more volatile

Year-Over-Year Change in Inflation-Adjusted State Government Taxes and Real GDP
Percent Change of Two-Quarter Moving Averages

Sources: U.S. Census Bureau (tax revenue) and Bureau of Economic Analysis (GDP).
Notes: (1) Percentage change of 2-quarter moving averages; (2) No legislative adjustments; (3) Recession periods are shaded.
Slower tax revenue recovery

- 10+ years after recession start, state-local taxes only 13.4% above prior peak
- State government tax recovery is weak and slow
- Sales taxes: above pre-recession level, but stagnant
- Personal income taxes: stronger recovery, but quite volatile
- Corporate income taxes: NO recovery
- Local property taxes: continued but soft growth
- Oil & coal states hit hard
  - Declines in taxes & employment
- Growing reliance on sin taxes (gambling, marijuana, etc.)
  - Gambling revenues: declines & cannibalization
State & local government tax revenues: Only 13.4% above prior peak

Percent change in state & local government major tax revenue since start of recession
(PIT + CIT + Sales + Property) Four-quarter moving average, adjusted for inflation

Sources: U.S. Census Bureau (taxes) and Bureau of Economic Analysis (GDP).
Notes: Data are shown only until the start of the next recession; 1980 & 1981 recessions are treated as single recession.
Volatile income tax; weak sales tax; stagnant “other” taxes; corporate incomes taxes still below prior peak

Major tax revenues since the start of the 2007 recession
Four-quarter moving average, adjusted for inflation

Sources: U.S. Census Bureau (taxes) and Bureau of Economic Analysis (GDP).
Notes: (1) 4-quarter moving average of inflation-adjusted tax revenue; (2) No adjustments for legislative changes.
State taxes, adjusted for inflation & population growth, still below pre-recession in 22 states

Percent change in 4-quarter moving average of state tax revenues, 2018q1 vs 2007q4
Adjusted for inflation & population change (U.S. average = 2.9%; U.S. median = 2.5%)
State government **sales taxes:** Recovery is extremely weak

State sales tax revenue since the start of the recession
Four-quarter moving average, adjusted for inflation

<table>
<thead>
<tr>
<th>Cumulative % change since start of recession</th>
<th>Years since start of recession</th>
</tr>
</thead>
<tbody>
<tr>
<td>-20%</td>
<td>0</td>
</tr>
<tr>
<td>-10%</td>
<td>1</td>
</tr>
<tr>
<td>0%</td>
<td>2</td>
</tr>
<tr>
<td>10%</td>
<td>3</td>
</tr>
<tr>
<td>20%</td>
<td>4</td>
</tr>
<tr>
<td>30%</td>
<td>5</td>
</tr>
<tr>
<td>40%</td>
<td>6</td>
</tr>
<tr>
<td>50%</td>
<td>7</td>
</tr>
</tbody>
</table>

**Sources:** U.S. Census Bureau (taxes) and Bureau of Economic Analysis (GDP).

**Notes:** 4-quarter moving average of inflation-adjusted tax revenue. Data are shown only until the start of the next recession.
Sales tax base and collections: Shift to services

Goods and services as percentage of personal consumption expenditures

Source: U.S. Bureau of Economic Analysis, National Income and Product Accounts, Table 2.3.5.
State government personal income taxes: Stronger recovery, but volatile

State personal income tax revenue since the start of the recession
Four-quarter moving average, adjusted for inflation

Sources: U.S. Census Bureau (taxes) and Bureau of Economic Analysis (GDP).
Notes: 4-quarter moving average of inflation-adjusted tax revenue. Data are shown only until the start of the next recession.
April-June personal income tax collections are very volatile
State personal income taxes: Shortfalls last April; windfalls (?) this April

Year-Over-Year Nominal Percent Change; April 2017 vs. April 2018

Source: Individual state data, analysis by the author.
Income shifting and capital gains

- In concept, taxpayers can shift many kinds of income, but…:
  - “Regular” wages – not so easy - work less now, more later
  - Bonus wages – easier – firms could shift out of q4 into q1 or vice versa
  - IRA distributions – maybe not so hard
  - Dividends - boards of closely held firms could delay payouts
  - Capital gains - easiest - defer stock sales (rearrange assets); concentrated – 70% of cap gains claimed by just 0.7% of taxpayers
Capital gains: Big contributor to income tax volatility

Capital Gains as Percentage of GDP

Capital gains are loosely related to the stock market

Percent Change in Capital Gains Realizations vs S&P 500, by Tax Year

State government corporate income taxes: There is NO recovery

State corporate income tax revenue since the start of the recession
Four-quarter moving average, adjusted for inflation

Cumulative % change since start of recession

Years since start of recession

Sources: U.S. Census Bureau (taxes) and Bureau of Economic Analysis (GDP).
Notes: 4-quarter moving average of inflation-adjusted tax revenue. Data are shown only until the start of the next recession.
Local government property taxes: Continued growth

Local government property tax revenue since the start of the recession
Four-quarter moving average, adjusted for inflation

Sources: U.S. Census Bureau (taxes) and Bureau of Economic Analysis (GDP).
Notes: 4-quarter moving average of inflation-adjusted tax revenue. Data are shown only until the start of the next recession.
Continued Growth in Housing Prices and in Local Property Taxes

Sources: U.S. Census Bureau (tax revenue) and Federal Housing Finance Agency, House Price Indexes data.
Oil and trouble
Oil & coal states: State tax revenues rebounding after 7 consecutive quarterly declines

<table>
<thead>
<tr>
<th>Year-Over-Year Percent Change in State Taxes</th>
<th>Non-oil states</th>
<th>Oil states</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014Q1</td>
<td>5.6%</td>
<td>5.8%</td>
</tr>
<tr>
<td>2015Q1</td>
<td>5.5%</td>
<td>5.5%</td>
</tr>
<tr>
<td>2015Q2</td>
<td>7.6%</td>
<td>4.9%</td>
</tr>
<tr>
<td>2015Q3</td>
<td>4.9%</td>
<td>3.8%</td>
</tr>
<tr>
<td>2015Q4</td>
<td>4.2%</td>
<td>-0.1%</td>
</tr>
<tr>
<td>2016Q1</td>
<td>-0.1%</td>
<td>2.6%</td>
</tr>
<tr>
<td>2016Q2</td>
<td>-6.1%</td>
<td>1.9%</td>
</tr>
<tr>
<td>2016Q3</td>
<td>-12.7%</td>
<td>3.6%</td>
</tr>
<tr>
<td>2016Q4</td>
<td>-11.3%</td>
<td>3.2%</td>
</tr>
<tr>
<td>2017Q1</td>
<td>-10.4%</td>
<td>4.5%</td>
</tr>
<tr>
<td>2017Q2</td>
<td>-7.4%</td>
<td>2.4%</td>
</tr>
<tr>
<td>2017Q3</td>
<td>-6.1%</td>
<td>7.3%</td>
</tr>
<tr>
<td>2017Q4</td>
<td>-12.7%</td>
<td>13.5%</td>
</tr>
<tr>
<td>2018Q1</td>
<td>-11.3%</td>
<td>12.9%</td>
</tr>
</tbody>
</table>

Source: Author's analysis of Census Bureau data.
Oil & coal states:
Despite recovery, state taxes still below 2015 q1 levels
Oil & coal states:
Employment is also still below peak levels

Source: Author’s analysis of Bureau of Labor Statistics data.
Gambling fever
Gambling Landscape Since Great Recession

- 10+ states legalized lottery, casino, and racino operations
- Raise revenue in response to poor state fiscal conditions
- Stimulate economic development
- Counteract interstate competition for gambling revenue
- Attract tourism & keep gambling residents & tax dollars in-state
More Gambling, Not Much More Revenues Since The Great Recession

Real State & Local Government Gambling Revenue, FYs 2008-2015

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>Sub-total</td>
<td>$27.7</td>
<td>$26.7</td>
<td>$27.2</td>
<td>$26.7</td>
<td>$28.0</td>
<td>$28.6</td>
<td>$28.2</td>
<td>$28.1</td>
</tr>
<tr>
<td>Lottery</td>
<td>$18.2</td>
<td>$17.5</td>
<td>$17.9</td>
<td>$17.4</td>
<td>$18.4</td>
<td>$18.6</td>
<td>$18.4</td>
<td>$18.2</td>
</tr>
<tr>
<td>Casino</td>
<td>$5.4</td>
<td>$4.9</td>
<td>$4.9</td>
<td>$5.0</td>
<td>$5.2</td>
<td>$5.5</td>
<td>$5.4</td>
<td>$5.4</td>
</tr>
<tr>
<td>Racino</td>
<td>$2.8</td>
<td>$2.9</td>
<td>$3.0</td>
<td>$3.1</td>
<td>$3.2</td>
<td>$3.2</td>
<td>$3.2</td>
<td>$3.3</td>
</tr>
<tr>
<td>Pari-mutuel</td>
<td>$1.1</td>
<td>$1.1</td>
<td>$1.3</td>
<td>$1.1</td>
<td>$1.1</td>
<td>$1.1</td>
<td>$1.1</td>
<td>$1.0</td>
</tr>
<tr>
<td>Indian casinos</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
</tr>
</tbody>
</table>

Billions

FY 2008 - FY 2015
Wide Regional Disparity in Lottery Revenue Growth Rates

Compound Annual Growth Rates for Real Lottery Revenues, FY 2008-2015

Sources: Author's analysis of lottery revenue from state lottery financial reports.
Wide Regional Disparity in Tax and Fee Revenues from Casinos and Racinos

Cumulative Percent Change in Inflation-Adjusted Casino and Racino Taxes and Fees, By Region

- Northeast
- Midwest
- South
- West

Cumulative real percent change

FY 2008 - FY 2015
Steep Declines in Casino and Racino Tax & Fee Revenues in Early Adopter States

Cumulative Percent Change in Inflation Adjusted Casino and Racino Taxes and Fees, All States vs. Late Adopter States

Sources: Author’s analysis of data retrieved from state gaming regulatory agencies.
Notes: The following three states - Kansas, Maryland and Ohio, are identified as late adopter states since all three states started casino/racino operations after FY 2008.
Lessons from gambling revenues: Short-term relief, long-term disappointment

- Gambling expansion brings in more revenue, until a saturation point is reached
- Stiff inter-state competition for the same pool of customers
  - Significant increases in tax and fee revenues in newly adopted casino and racino states
  - Significant declines in tax and fee revenues in the older casino and racino states
- Some new revenue represents a shift, rather than net growth
- Future growth in gambling revenue will not keep pace with tax revenue, or spending
- If gambling revenue is intended to support part of the overall budget, gaps may emerge in future years
- Gambling is a slow-growing revenue source & not a solution in the never-ending quest to balance the budget
Recap: Slow revenue recovery & growing revenue volatility

- The revenue recovery is weak & prolonged compared to previous recessions
- Differing fiscal, tax & economic structures play important roles
- State tax revenues increasingly more reliant on economically sensitive taxes
- Income taxes rely more heavily on volatile income – capital gains, bonuses
- Sales tax bases are eroding (taxation of goods & services sold over the Internet)
- Many services hard to tax: politically, legally, administratively
- Higher reliance on more regressive taxes
- Demographic changes and taxes
- Single-year cash balance is the goal (gimmicks, one-time solutions)
- No serious multi-year financial planning
Thank you!

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With many thanks to my former colleague, Donald Boyd

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