

Forecasting Sales Tax Revenue in Tennessee

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THE UNIVERSITY of TENNESSEE 
Center for Business and Economic Research

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Revenue Forecasting in TN

- UT's Center for Business and Economic Research (CBER) provides economic and revenue forecasts for the state
- Revenue forecasts updated regularly and presented to F&A and state's Fiscal Review Committee
 - State-generated projections
 - Representatives from other universities
 - Committee adopts a forecast

Economic Forecast

- Foundation for CBER revenue projections
- Quarterly and annual models
 - Lags and projections of state variables
 - Global Insight data/projections on national drivers
- Most important projection is personal income
 - By statute, revenue growth < personal income growth
 - Most important economic factor affecting revenue

Revenue Forecast

- Ongoing updates and revisions to models
- Separate equations for each tax
- Projections of component aggregates
 - Aggregate sales v. disaggregated sales
 - Judgment
- Projections generally quite accurate when economic conditions are stable

Turning Points

- Always problematic with economic and revenue projections
- Each business cycle is a unique event
 - Changes behavior and tax elasticities
 - Requires additional judgment
- Great Recession
 - Nothing close to this in the historical data
 - Forecasting is like trying to drive forward while looking out your rear-view mirror

Potentially Large Changes in Short-Run and Long-Run Elasticities

- Sources of income
 - Weak employment growth
 - Significant structural unemployment for many years to come
 - Weak real income gains
 - Low inflation so low nominal income growth
 - Deflation risks
 - Inflation risks

Changing Elasticities (cont.)

- Household wealth effects
 - Falling home and potentially other asset values
 - Stock market and bond market risks
- Uses of income
 - Rising savings rate—how much and for how long?
 - Stagnant housing mkt and light vehicle sales
 - Housing mkt recovery “incomplete” by 2019

Changing Elasticities (cont.)

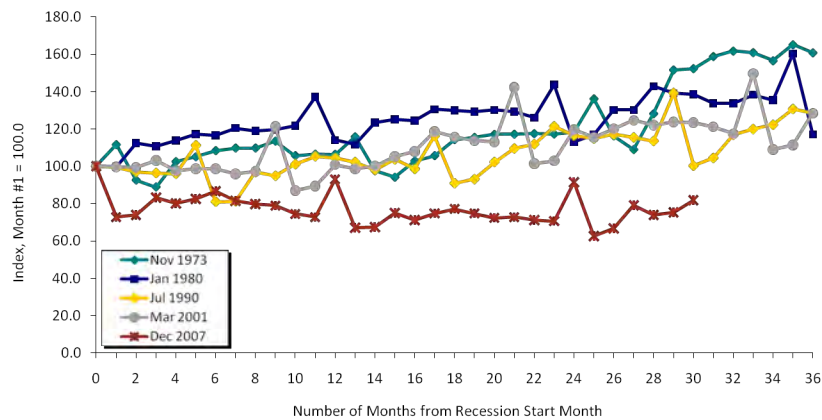
- Business sales tax base
 - Ring study: roughly 1/3 of revenue
- Excess capacity, especially in the near term, so little revenue from construction
 - Commercial
 - Industrial
- Business equipment purchases showing vibrant growth
 - States may have broad or targeted exemptions

Tax Collections by Source: FY2007-FY2011

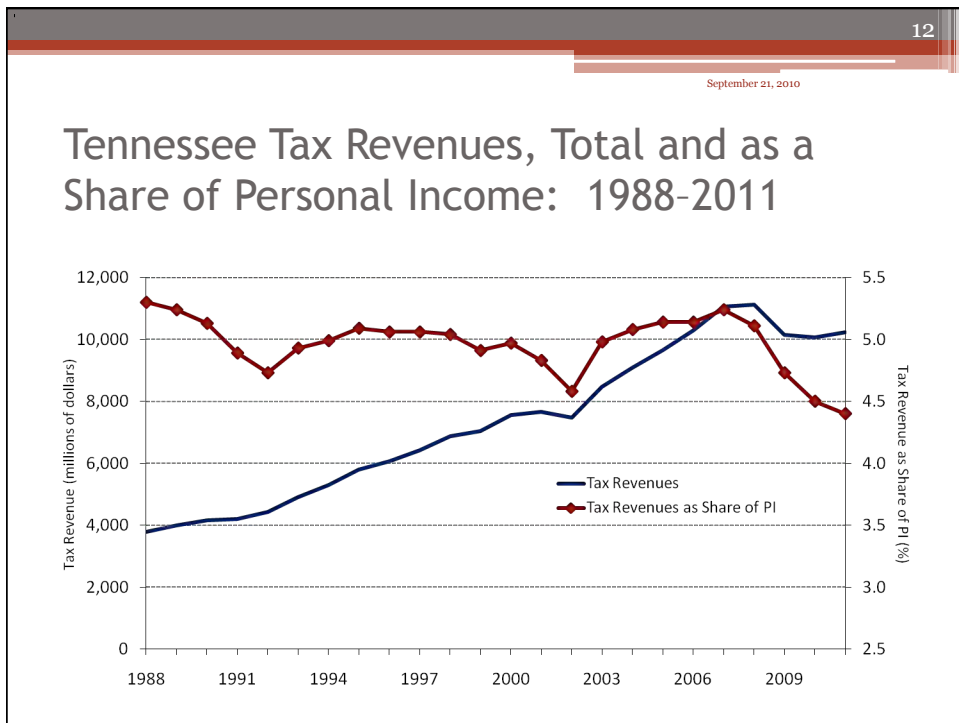
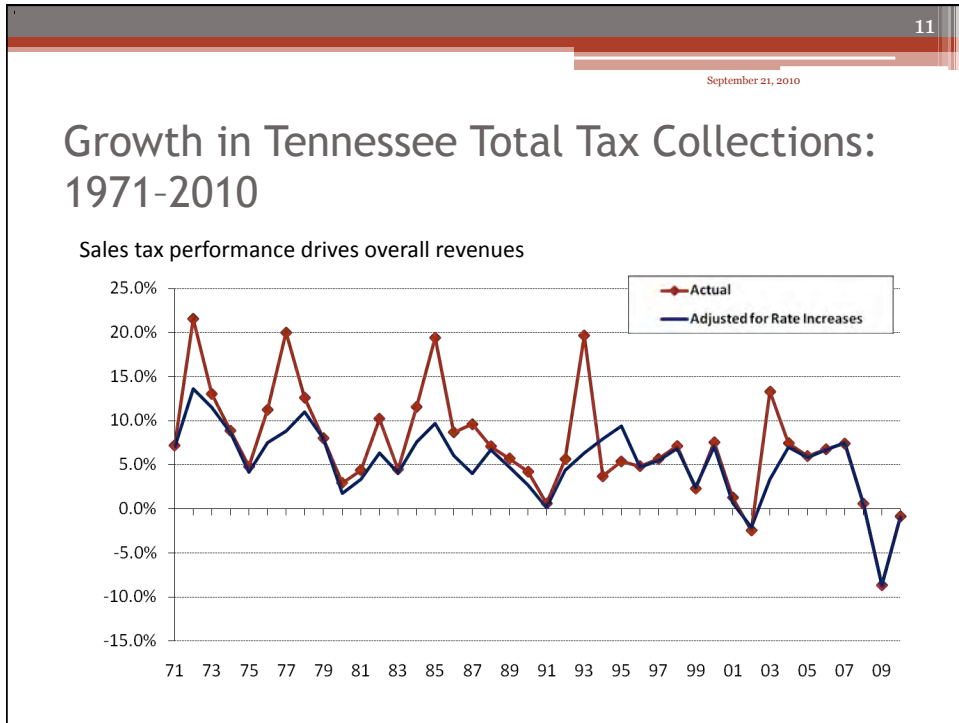
(billions of dollars)

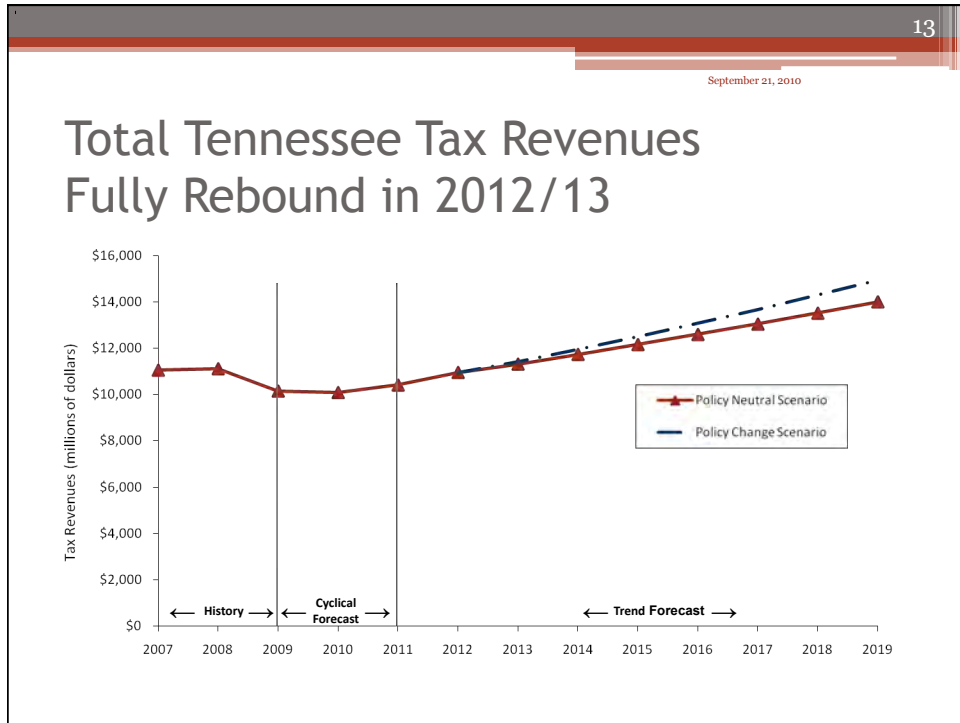
	FY07	FY08	FY09	Est. FY10	Est. FY11	Ann. Avg. Growth FY07-FY11	Percentage of FY11 TOTAL
Sales	6.83	6.87	6.34	6.13	6.25	-2.2	61.1%
Franchise & Excise	1.74	1.65	1.32	1.45	1.48	-4.0	14.5%
Gas, Motor Fuel, Gas Inspect.	0.85	0.85	0.82	0.82	0.83	-0.6	8.1%
Motor Vehicle Registrations	0.26	0.26	0.25	0.24	0.25	-1.0	2.4%
Privilege	0.32	0.29	0.26	0.23	0.24	-6.9	2.3%
Gross Receipts	0.27	0.30	0.31	0.34	0.32	4.3	3.1%
Other Tax Revenue	0.71	0.94	0.87	0.85	0.86	4.9	8.4%
TOTAL	10.98	11.16	10.17	10.06	10.23	-1.8	100.0%
Federal Funds	9.39	9.59	10.95	12.92	12.37	7.13	—

Tennessee Monthly Sales & Use Tax Revenue Indexed to Beginning of Recession



Source: Calculated by CBER using data from the Tennessee Department of Revenue.





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Base Funding Reductions: FY2009-FY2010

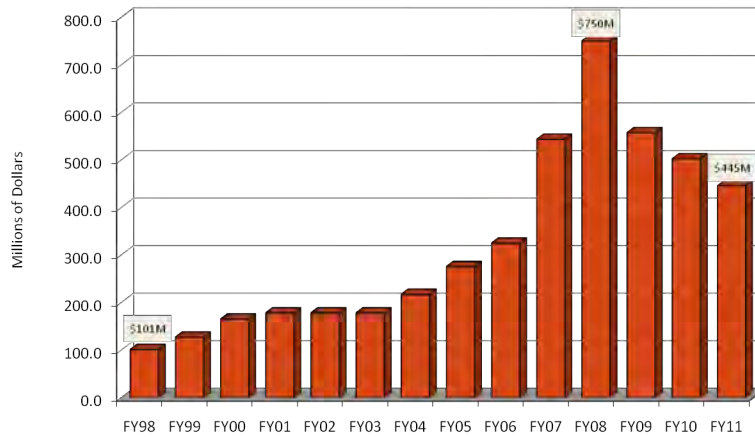
(millions of dollars)

	FY09	FY10	FY11	TOTAL	Percentage of Appropriations
Education (K-12)	-9.4	-68.9	-34.8	-113.1	-3.0%
Higher Education	-56.0	-181.7	-69.8	-307.5	-19.2%
TennCare	-87.7	-255.6	-200.5	-543.8	-20.2%
Human Services	-5.8	-11.8	-5.4	-23.0	-12.5%
Mental Health	-4.0	-22.8	-6.2	-33.0	-18.4%
Correction	-17.3	-64.3	-6.4	-88.0	-13.2%
Other Programs	-98.5	-148.8	-88.1	-335.4	-15.9%
	-278.7	-753.9	-411.2	-1443.8	-12.9%

Note: Discretionary Base excludes K-12 Basic Education Program, dedicated funds, statutory positions, and various poverty programs.

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Rainy Day Fund Balance



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