

The Housing Crisis and State and Local Government Tax Revenue: Five Channels

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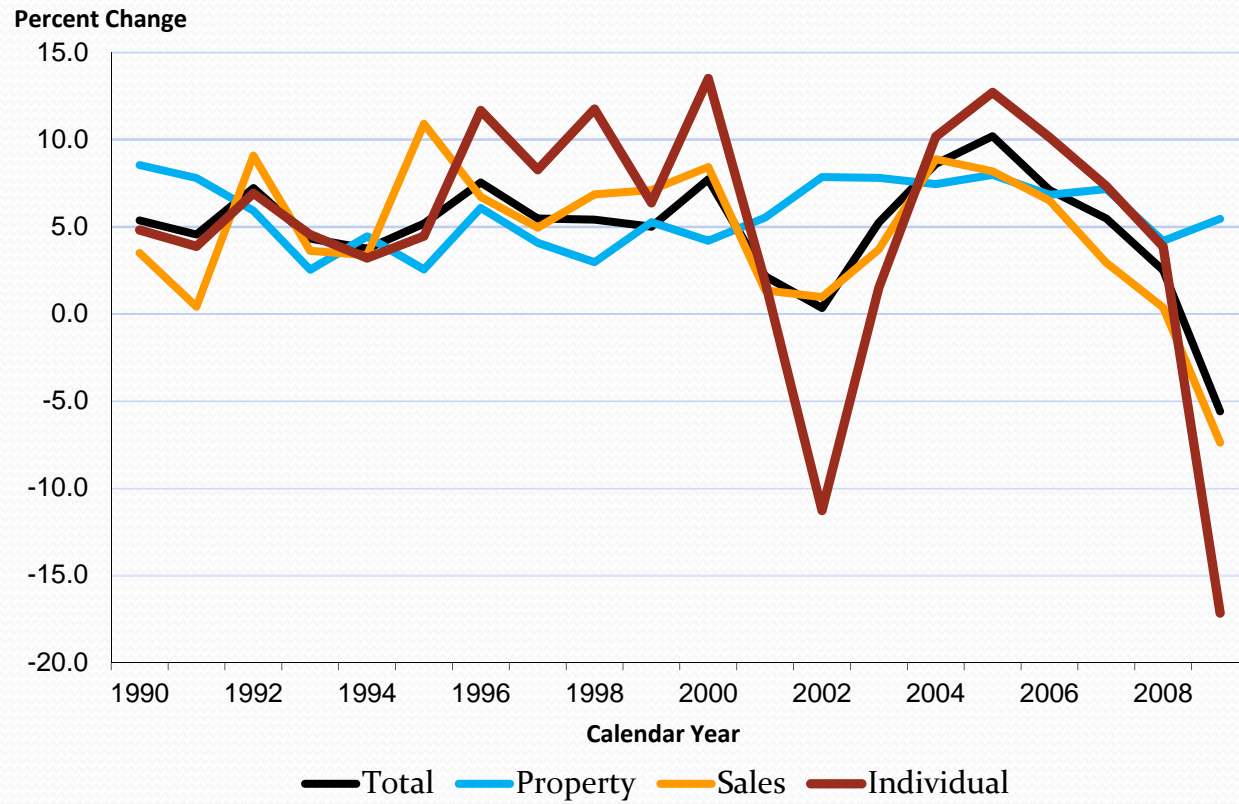
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Motivation

- The housing market experienced the largest contraction since the Great Depression.
 - House prices plunged by nearly 30 percent from 2006 to 2009.
 - Existing home sales fell by 36 percent.
 - The number of new housing starts dropped by 75 percent.
- State and local tax revenues have been hit hard.
 - State and local tax revenues fell by almost 5½ percent in 2009, the first nominal decline since the Great Depression.

Figure 2: State and Local Tax Revenues



Source. Census Bureau, *Quarterly Summary of State and Local Tax Revenue*.



Research Question

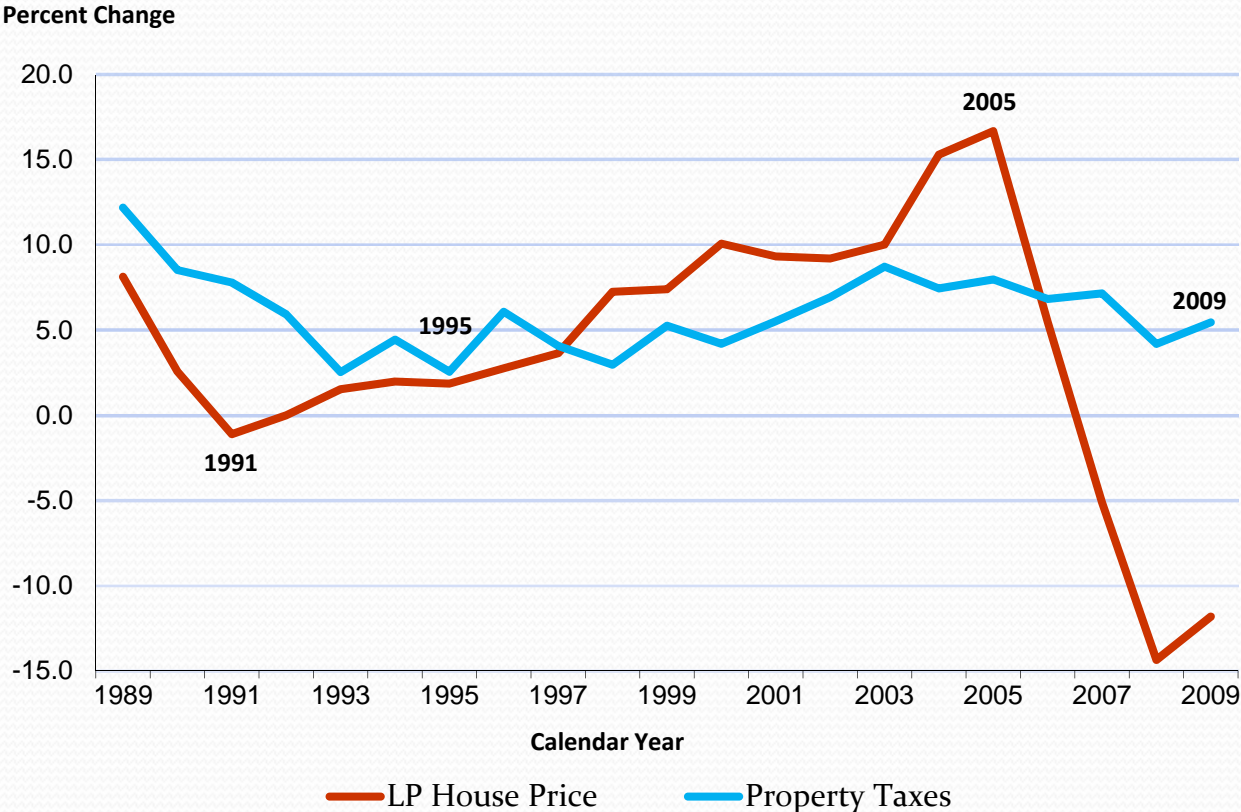
- How important is the impact of the housing market downturn on state and local tax revenues relative to the broader impact of the recession?
- Five Channels:
 - Property tax
 - Real estate transfer tax
 - Direct sales tax (e.g. construction material)
 - Indirect sales tax (e.g. housing wealth effect)
 - Personal income tax (e.g. construction workers and real estate agents)



Preview of Findings

- We find that property tax collections have been surprisingly resilient for two reasons.
 1. Assessment values lag market values significantly.
 2. Policy makers tend to offset declines in house prices by raising tax rates.
- We find that the direct impact of the housing downturn on state and local tax revenues is modest relative to the general economic recession.

Figure 4: House Price Appreciation and Property Taxes



Source. LoanPerformance; Census Bureau, *Quarterly Summary of State and Local Tax Revenue*.



Property Tax – Lutz (2008)

- The elasticity of property tax revenue with respect to home prices equals 0.4.
- The effect of house price changes on property taxes does not occur until three years following house price changes.
 - Assessment practice
 - Property tax caps and limits
- Policy makers offset house price changes by adjusting property tax rates.

Figure 5: Distribution of Change in Property Tax Collections

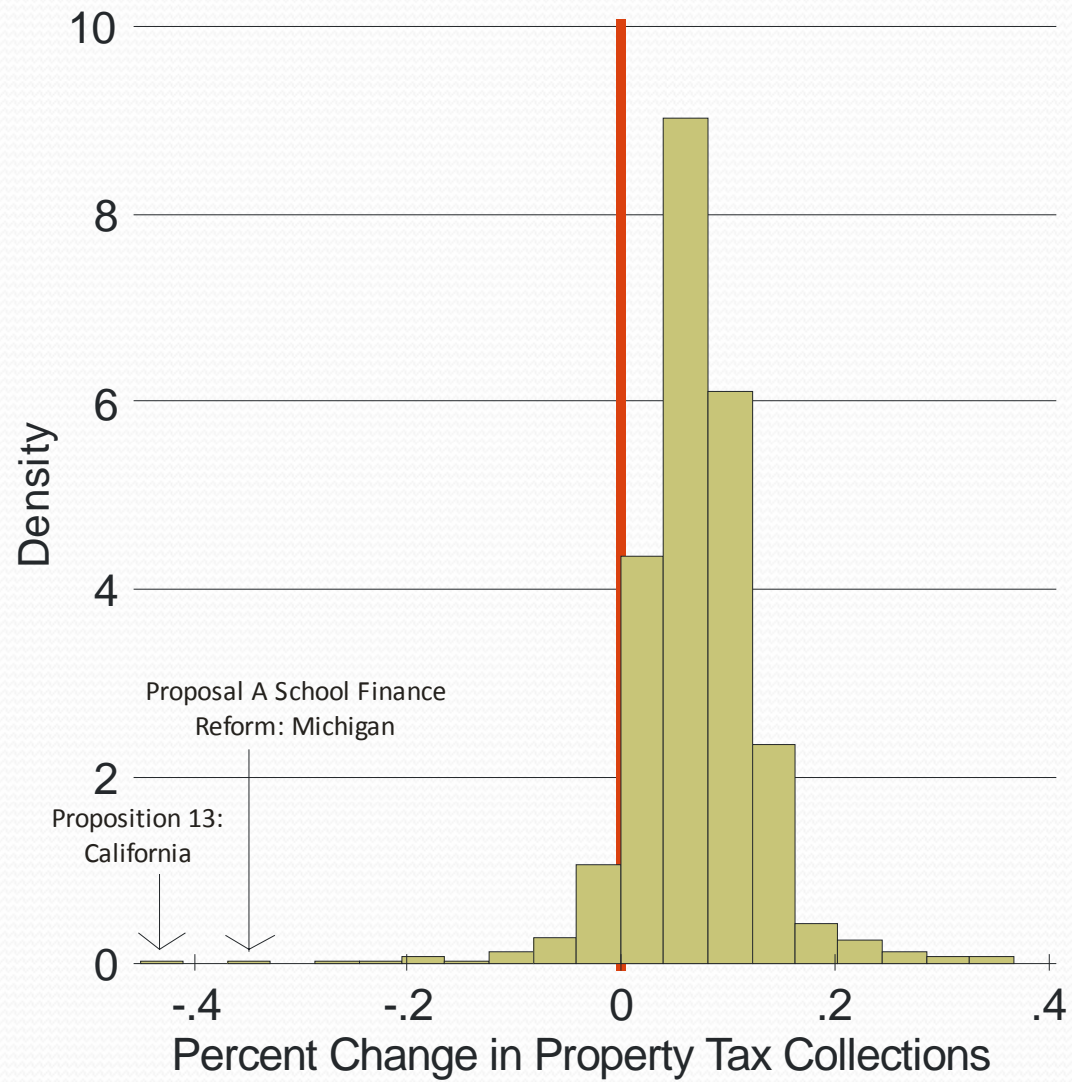
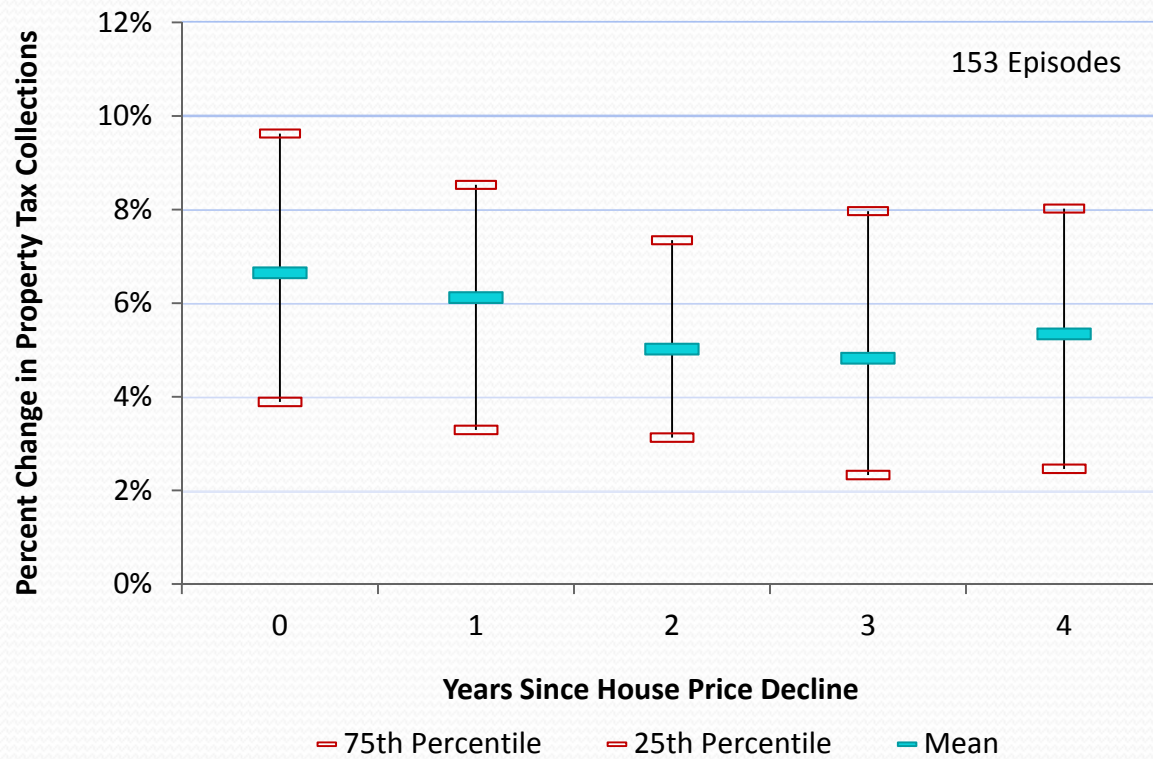
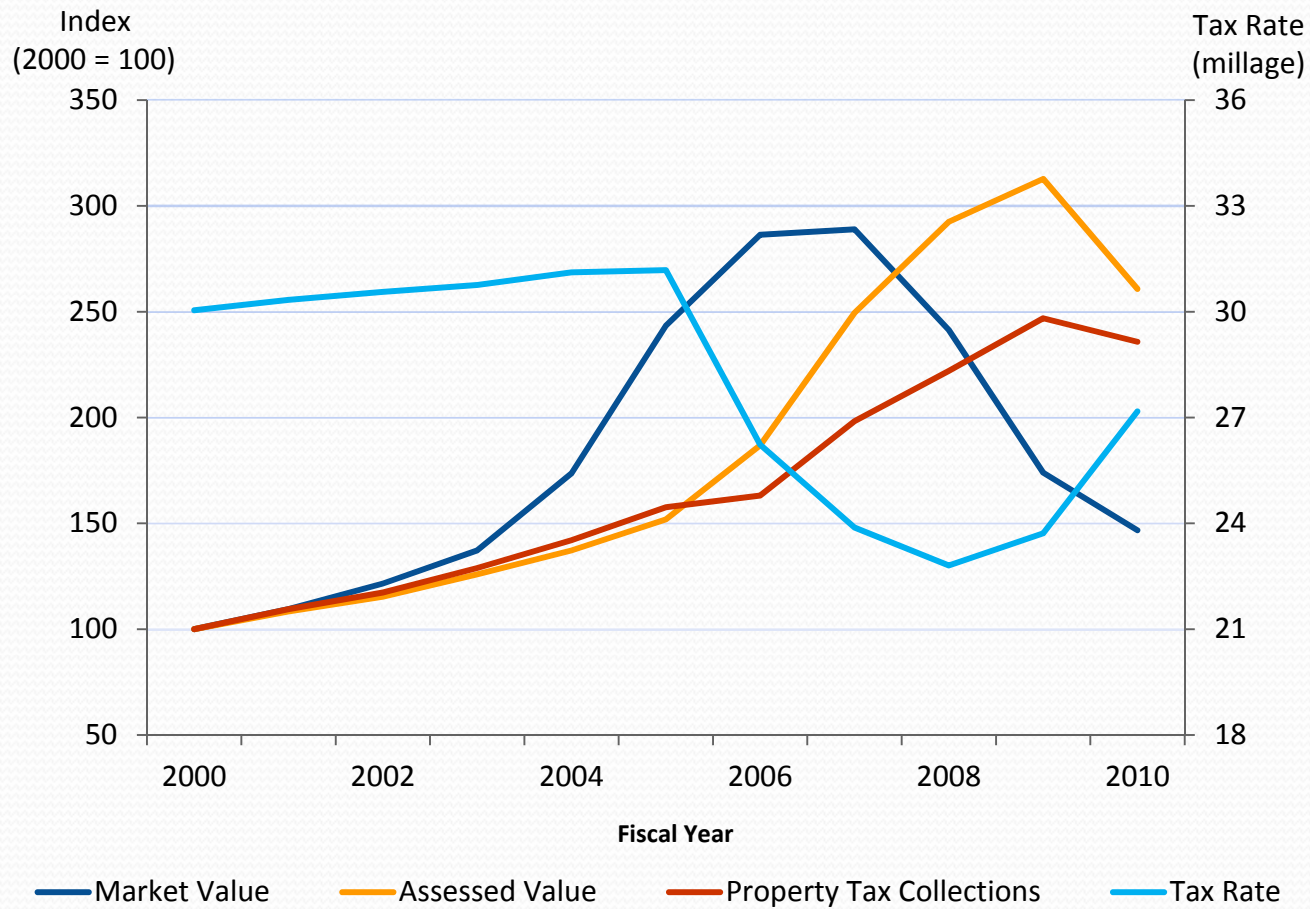




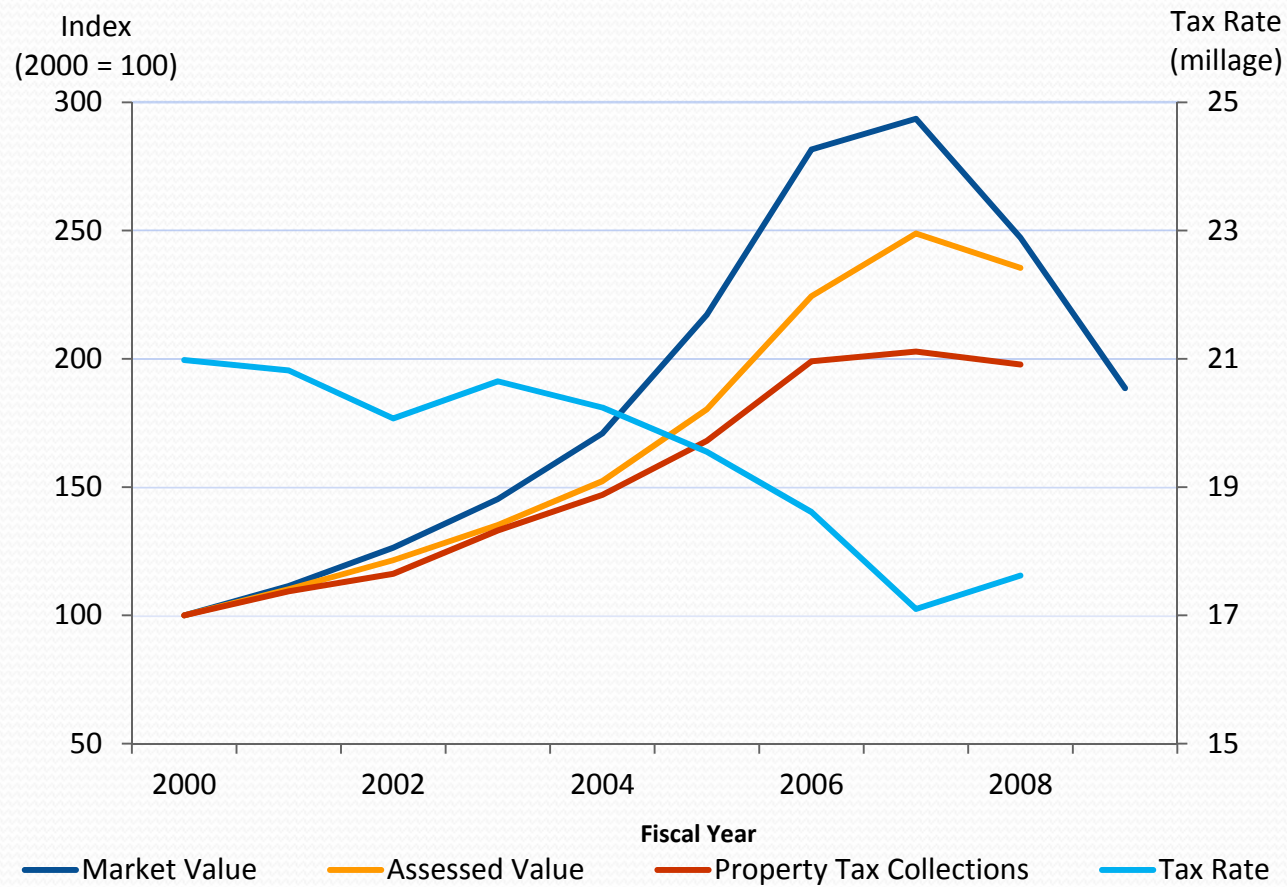
Figure 6: Percent Change in Property Tax Collection Following House Price Declines



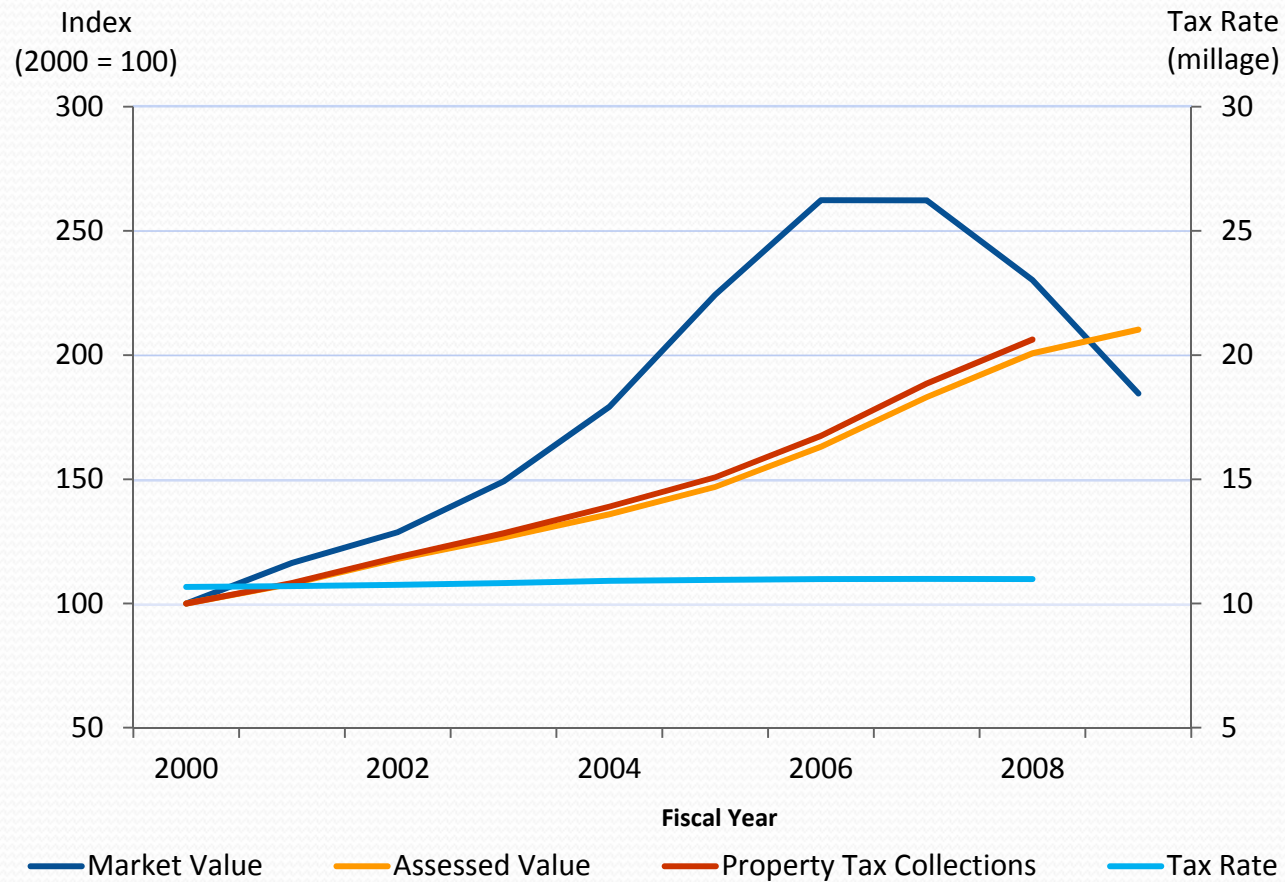
Case Study: Nevada



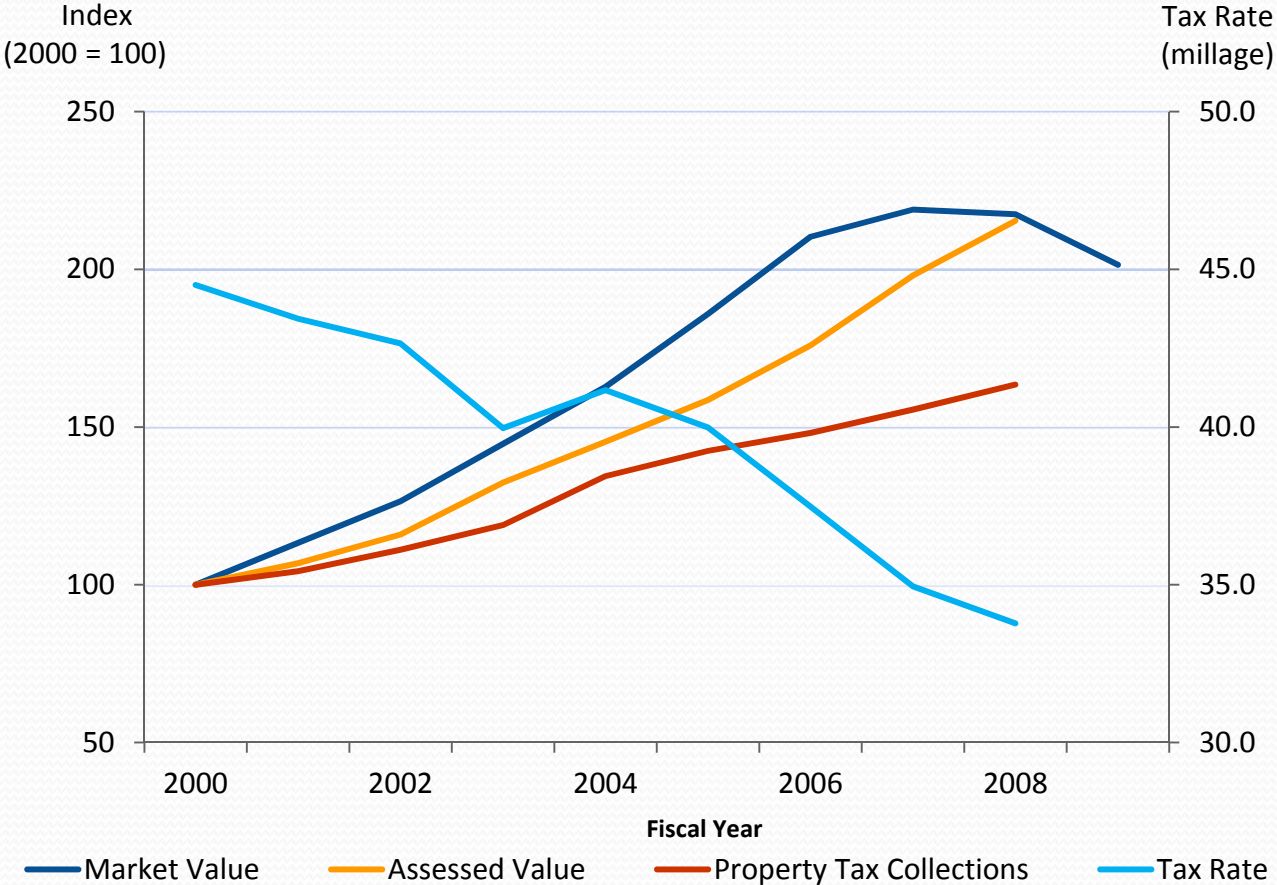
Case Study: Florida



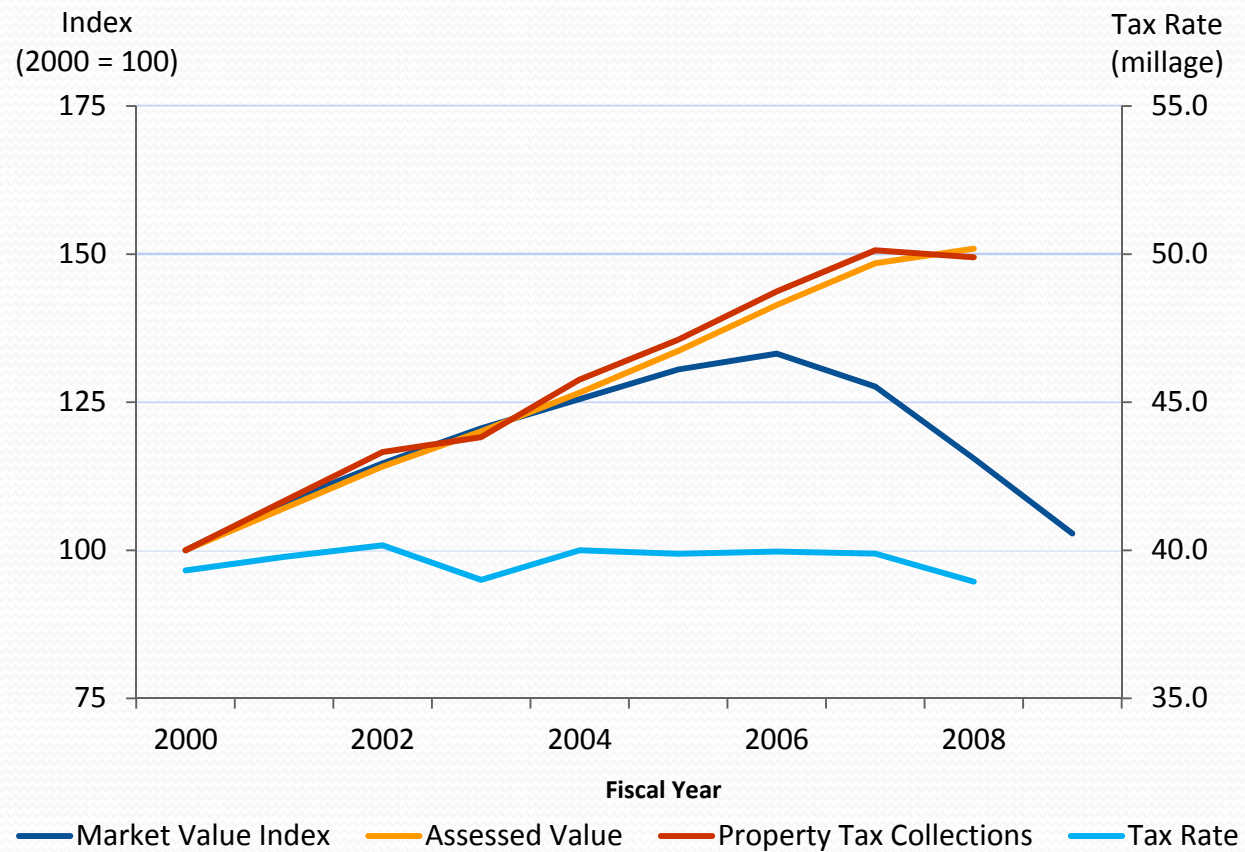
Case Study: California



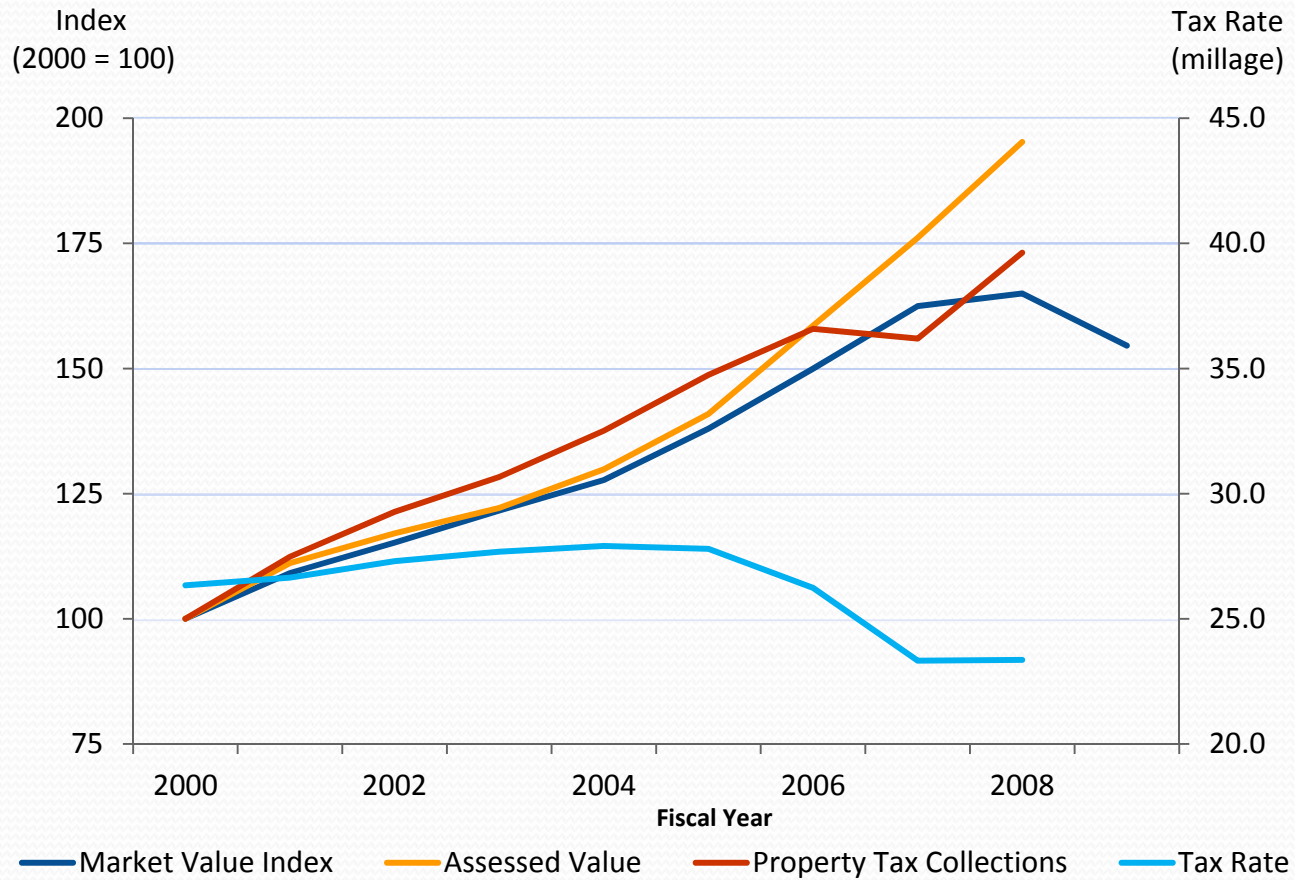
Case Study: New York



Case Study: Michigan



Case Study: Texas

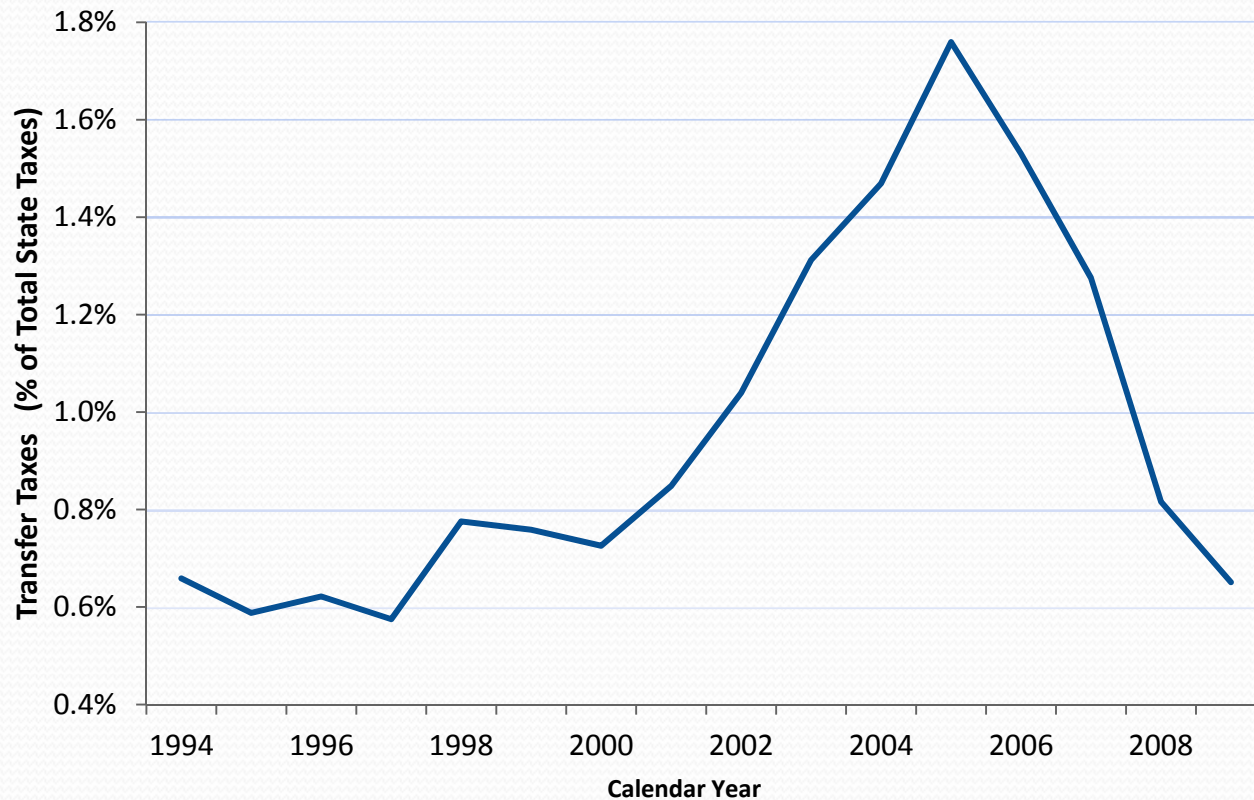




Four Non-Property Tax Channels

- We conduct two exercises to gauge the impact of each of the four channels on state tax revenues.
 1. “Peak Year” method:
 - ❖ Compare state tax revenue in 2009 with that in 2005
 2. “Trend Growth” method:
 - ❖ Compare state tax revenue in 2009 with the counterfactual level of taxes in 2009 implied by the 1995-2002 trend
- We first focus on national aggregates and then show heterogeneity across states.

Real Estate Transfer Tax



Source. Census Bureau, *Quarterly Summary of State and Local Tax Revenue*.



Real Estate Transfer Tax

- Peak Year Method:

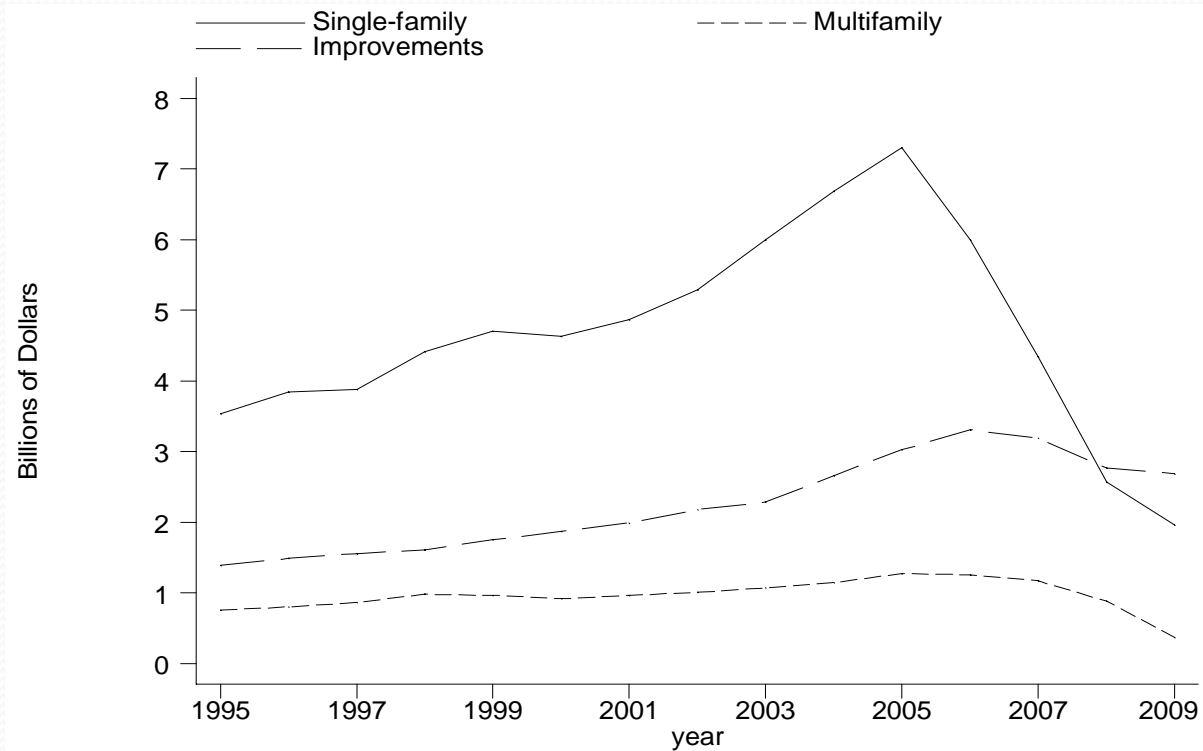
State government transfer tax revenue declined by \$6 billion (or 49 percent) from 2005 to 2009.

- Trend Growth Method:

State government transfer tax receipts would have been \$5 billion (or 110 percent) higher in 2009 if house prices and transaction volumes continued the 1995-2002 trend.

Direct Sales Tax

Figure 11: State Sales Tax Revenues from Material Inputs to Residential Construction





Direct Sales Tax

- Peak Year Method:

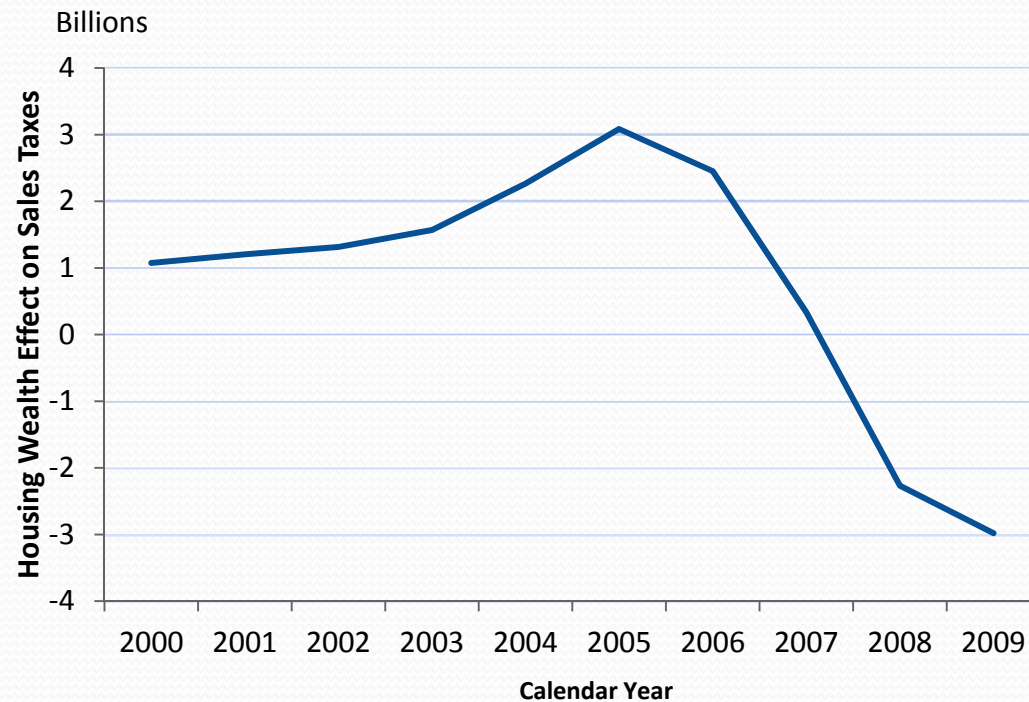
State tax revenues from sales of construction materials declined by \$6.6 billion (or 57 percent) from 2005 to 2009.

- Trend Growth Method:

State tax revenues from sales of construction materials would have been \$8.8 billion (or 64 percent) higher in 2009 had spending continued its 1995-2002 trend.

Indirect Sales Tax

Figure 12: Housing Wealth Effect on State Sales Tax Revenue



- We assume $MPC=0.03$ and we allow the housing wealth effect to phase-in over three years: 60 percent in the first year, 90 percent in the second year, and 100 percent in the third year.



Indirect Sales Tax

- Peak Year Method:

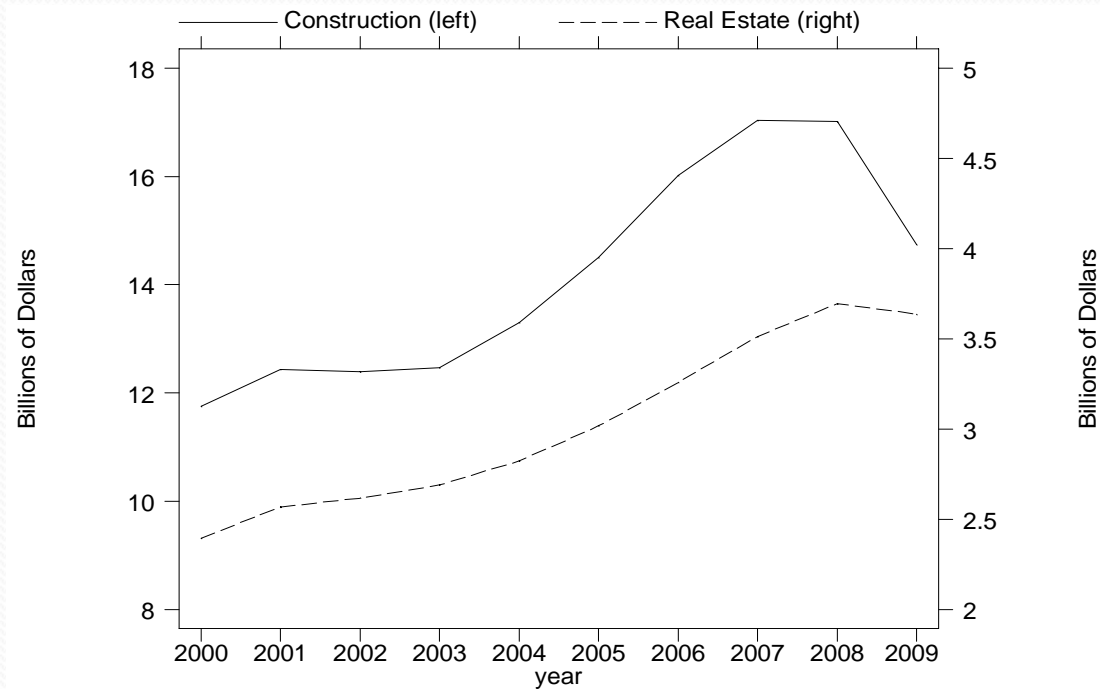
State sales tax revenues due to the housing wealth effect on consumption declined by \$2.5 billion from 2005 to 2009.

- Trend Growth Method:

State sales tax revenues due to the housing wealth effect on consumption would have been \$4.5 billion higher had house prices and construction activity continued their 1995-2002 trend.

Personal Income Tax

Figure 13: State Income Tax Revenues from the Construction and Real Estate Industries



- We use 'taxsim to calculate the average state income tax burden for construction workers and real estate agents in each state in each year.



Personal Income Tax

- Peak Year Method:

State personal income tax revenues from housing-related industries declined by \$0.9 billion (or 5 percent) from 2005 to 2009.

- Trend Growth Method

State personal income tax revenues from housing-related industries would be \$8.3 billion (or 37 percent) higher in 2009 had average wages and employment in these industries continued their 1995-2002 trend.

Heterogeneity across States

Peak Year Method

Table 2: Peak Year Method

State	2009 housing - 2005 housing (\$millions)					(2009 housing - 2005 housing) / (2005 total) (%)				
	transfer	direct sales	indirect sales	personal income	total	transfer	direct sales	indirect sales	personal income	total
FL	-3,438	-1,357	-375	0	-5,170	-70	-7	-2	.	-13
NV	-100	-238	-99	0	-437	-59	-8	-3	.	-7
AZ	0	-430	-88	-64	-583	.	-8	-2	-2	-5
VA	-377	-112	-78	-90	-658	-54	-3	-2	-1	-4
MN	-134	-136	-81	-110	-461	-43	-3	-2	-2	-3
IA	-2	-13	5	37	27	-12	-1	0	2	1
MS	0	-21	6	46	31	.	-1	0	4	1
KS	0	-17	0	56	39	.	-1	0	3	1
ND	0	5	4	7	17	.	1	1	3	1
LA	0	-11	18	163	170	.	0	1	7	2
TOTAL	-5,902	-6,591	-2,458	863	-14,088	-49	-3	-1	0	-2

Heterogeneity across States

Trend Growth Method

Table 3: Trend Growth Method

State	2009 housing - predicted 2009 housing (\$millions)					(2009 housing - predicted 2009 housing)/ (2009 total) (%)				
	transfer	direct sales	indirect sales	personal income	total	transfer	direct sales	indirect sales	personal income	total
FL	-1,966	-1,368	-248	0	-3,581	-161	-8	-1	.	-11
CO	0	-139	-109	-471	-719	.	-7	-5	-11	-9
MN	-391	-294	-247	-548	-1,480	-235	-7	-6	-8	-9
MI	-431	-259	-558	-582	-1,829	-343	-3	-6	-10	-8
DC	-310	-4	-5	-45	-363	-187	0	-1	-4	-7
AK	0	0	0	0	0	0
WY	0	1	1	0	2	.	0	0	.	0
LA	0	-16	-12	40	13	.	-1	0	1	0
ND	0	7	-2	4	10	.	1	0	1	0
HI	2	-9	68	60	121	7	0	3	5	3
TOTAL	-4,943	-8,835	-4,566	-8,331	-26,676	-110	-4	-2	-4	-4



Conclusions

- Property Tax
 - Historical data and case studies suggest that it is quite unlikely that property tax collections will fall *steeply* in the next a few years.
 - Even if property taxes do decline, the significant lag between this event and housing market downturn provided time for the general economy to recover.
- Four Non-Property Tax Channels
 - The direct impact of the housing market downturn on state tax revenues has been modest.