Queen Anne's County
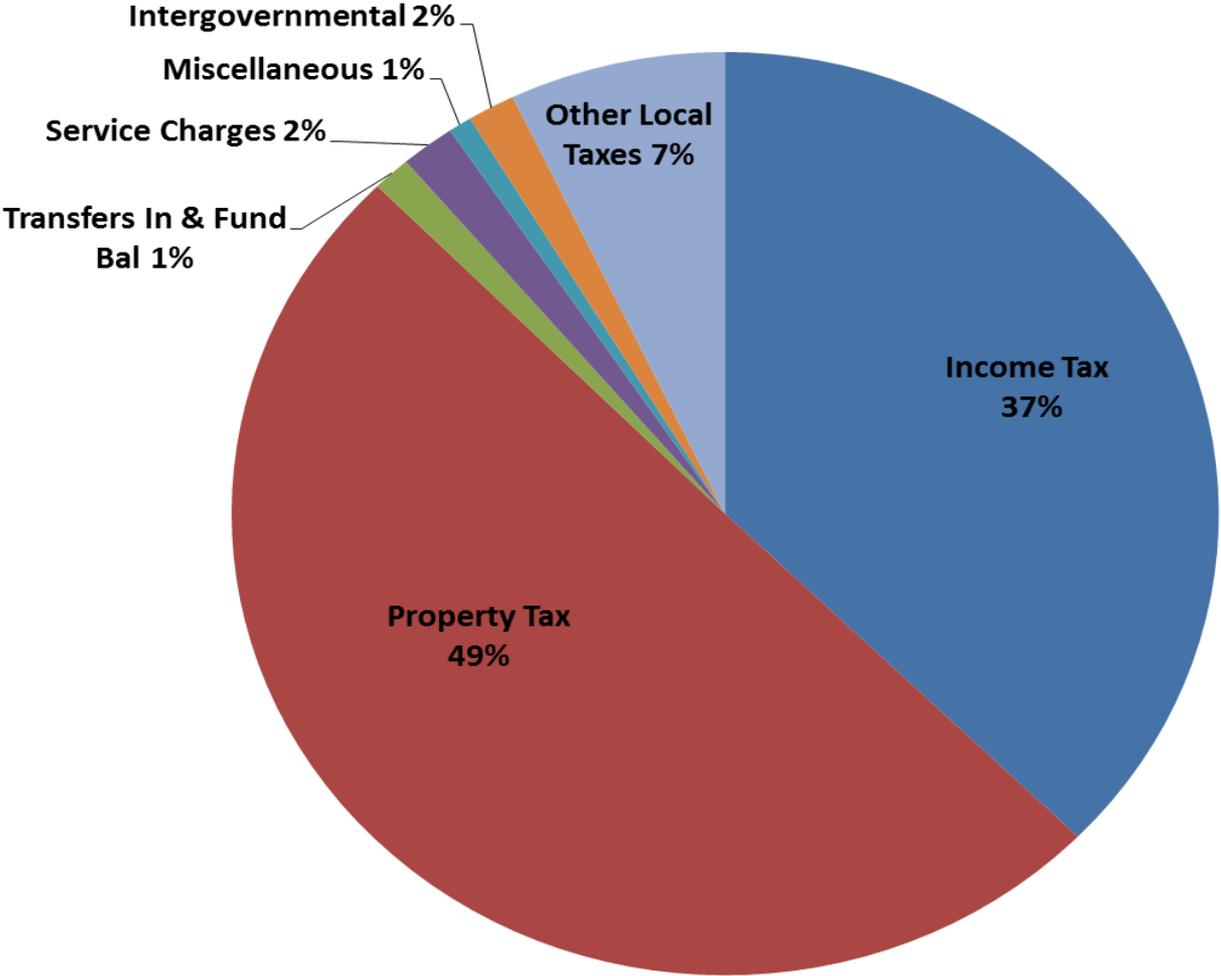
Predicting Unpredictable Revenue Streams
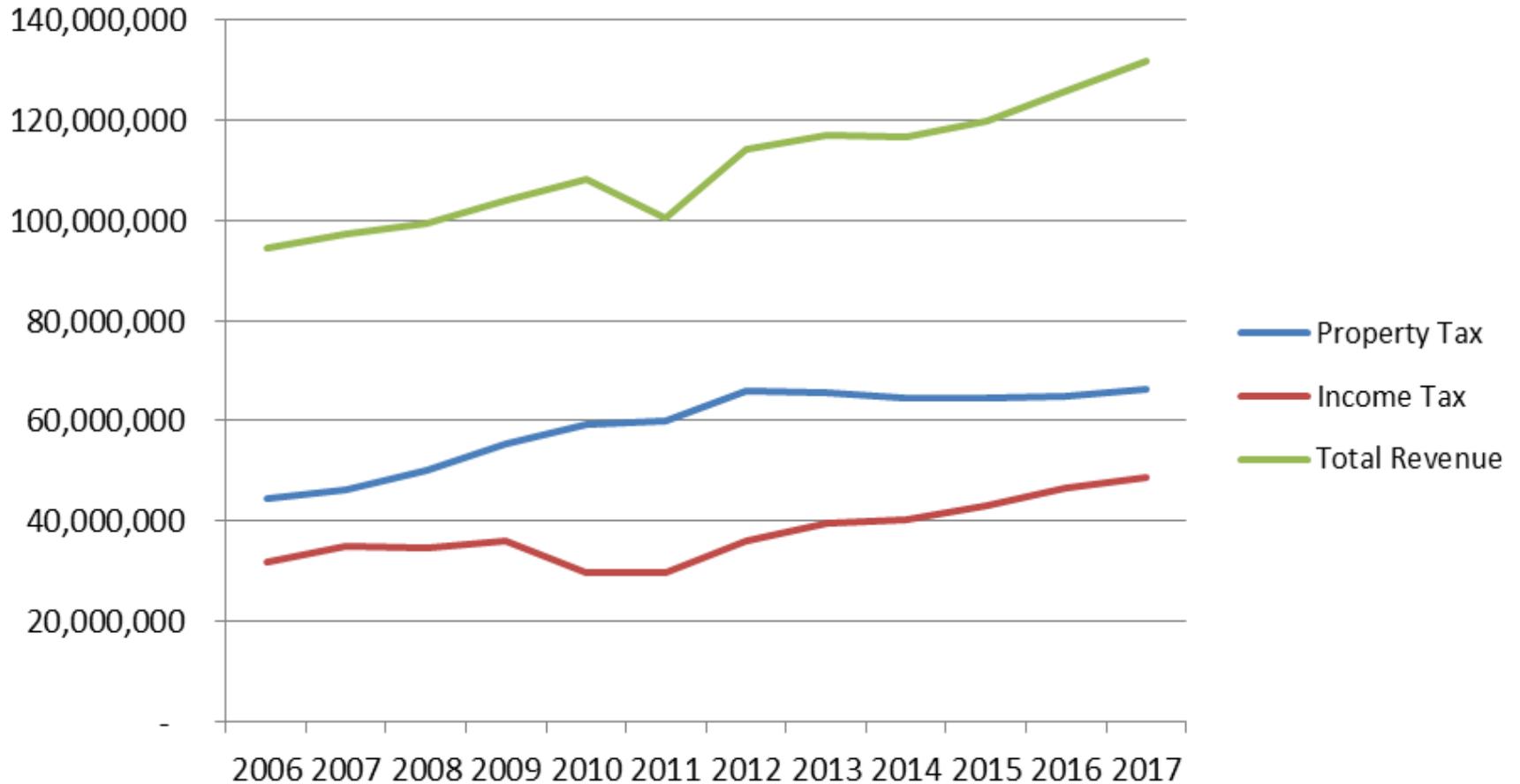
Jonathan R. Seeman
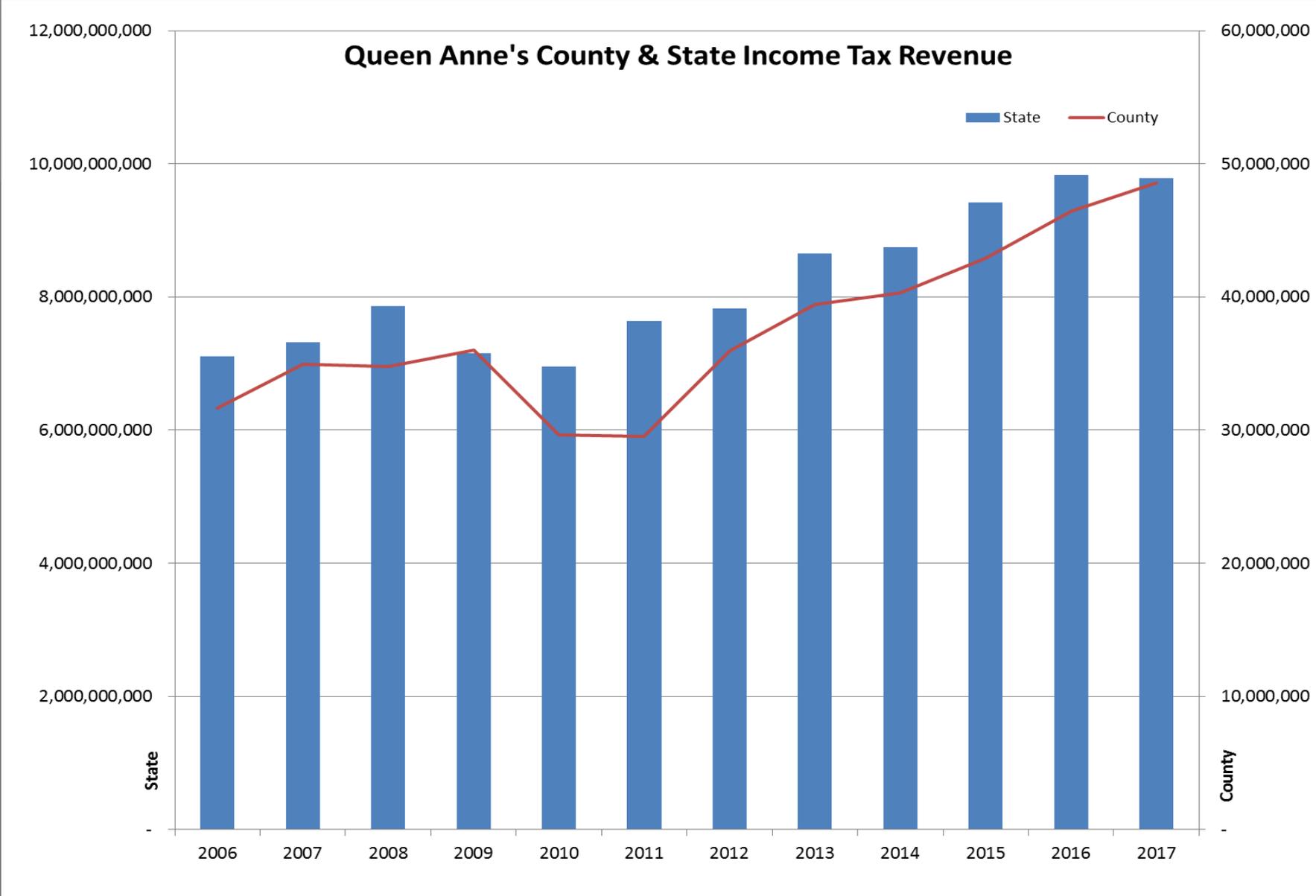
Director, Office of Budget, Finance & Information Technology

TOTAL PROPOSED BUDGET $138,061,406

- Intergovernmental 2%
- Miscellaneous 1%
- Service Charges 2%
- Transfers In & Fund Bal 1%
- Other Local Taxes 7%
- Income Tax 37%
- Property Tax 49%

Queen Anne's County Revenues

Queen Anne's County & State Income Tax Revenue
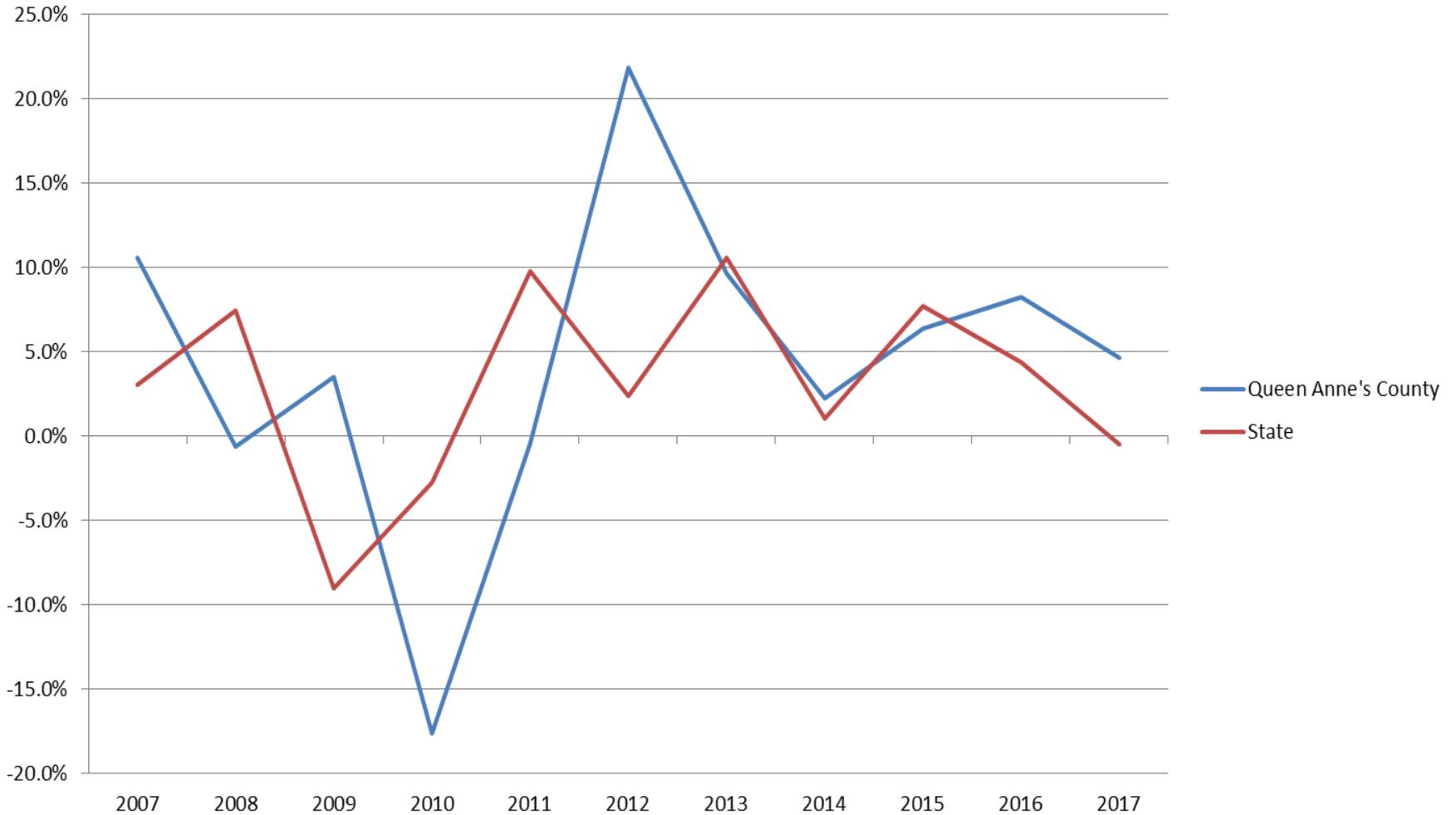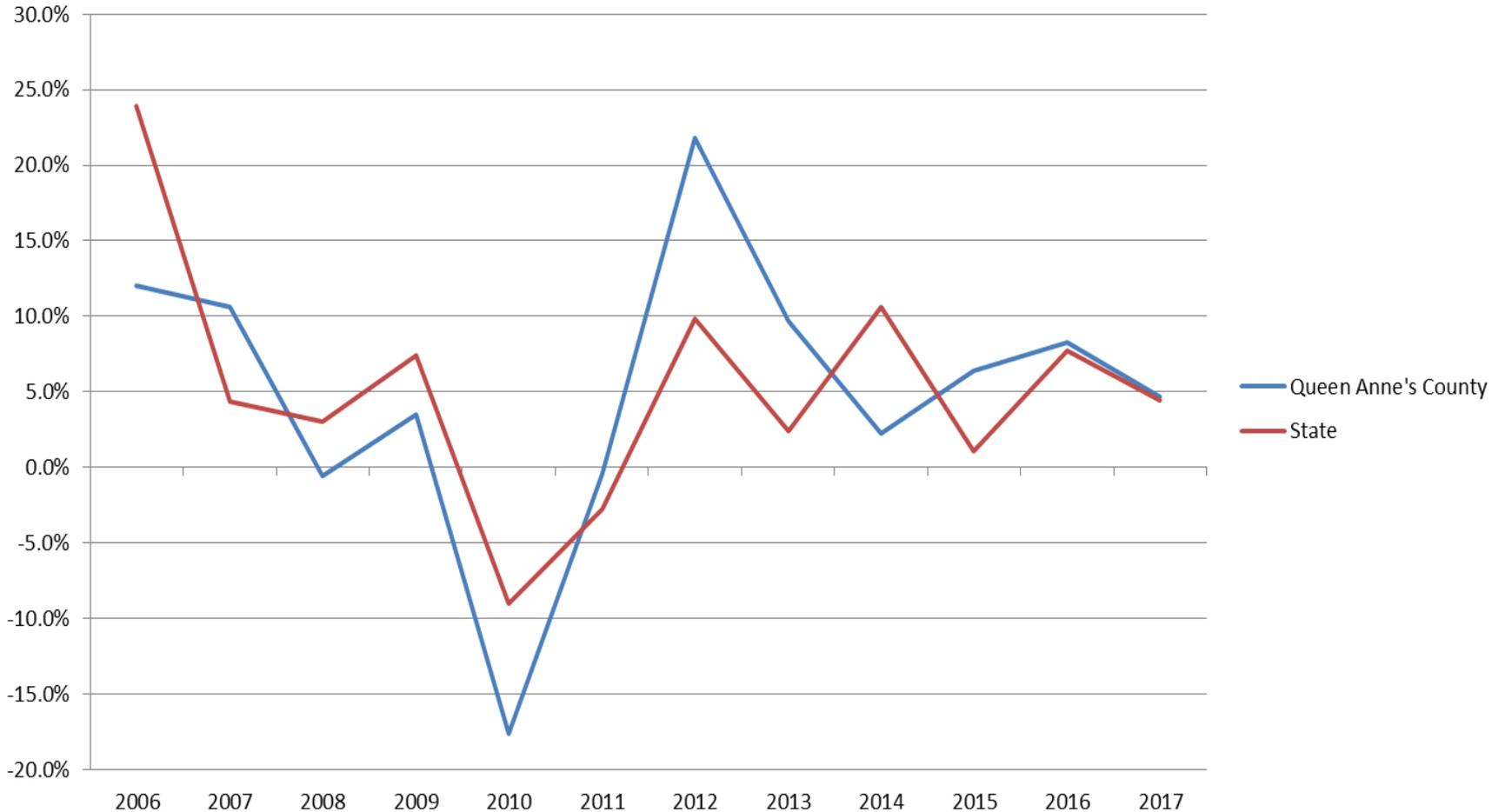
Queen Anne's County & State Income Tax Percentage Change

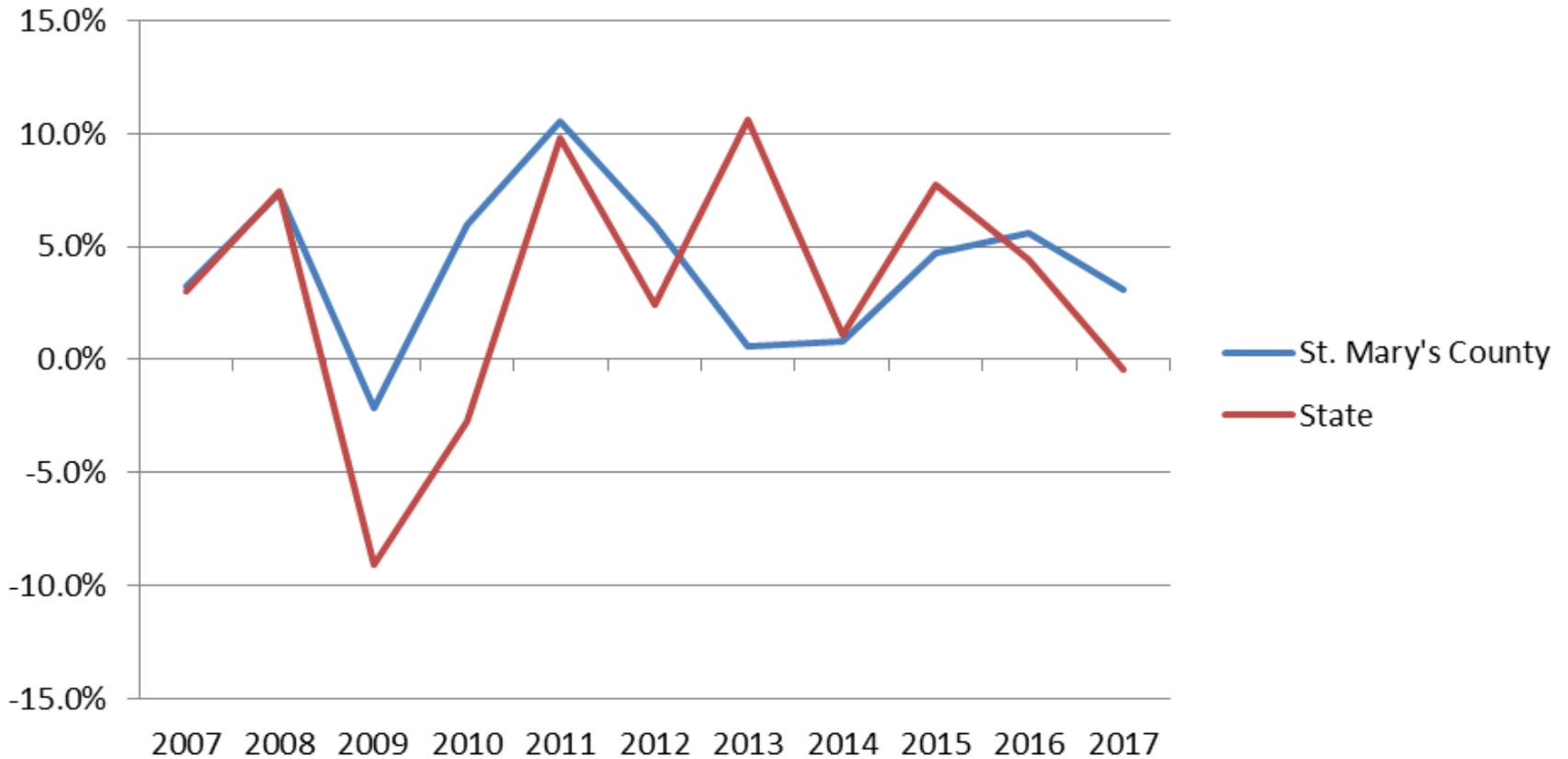**Income Tax Percentage Change**
*State Income Tax Adjusted by One Year

St. Mary's County & State Income Tax Percentage Change

Washington County Income Tax Percentage Change
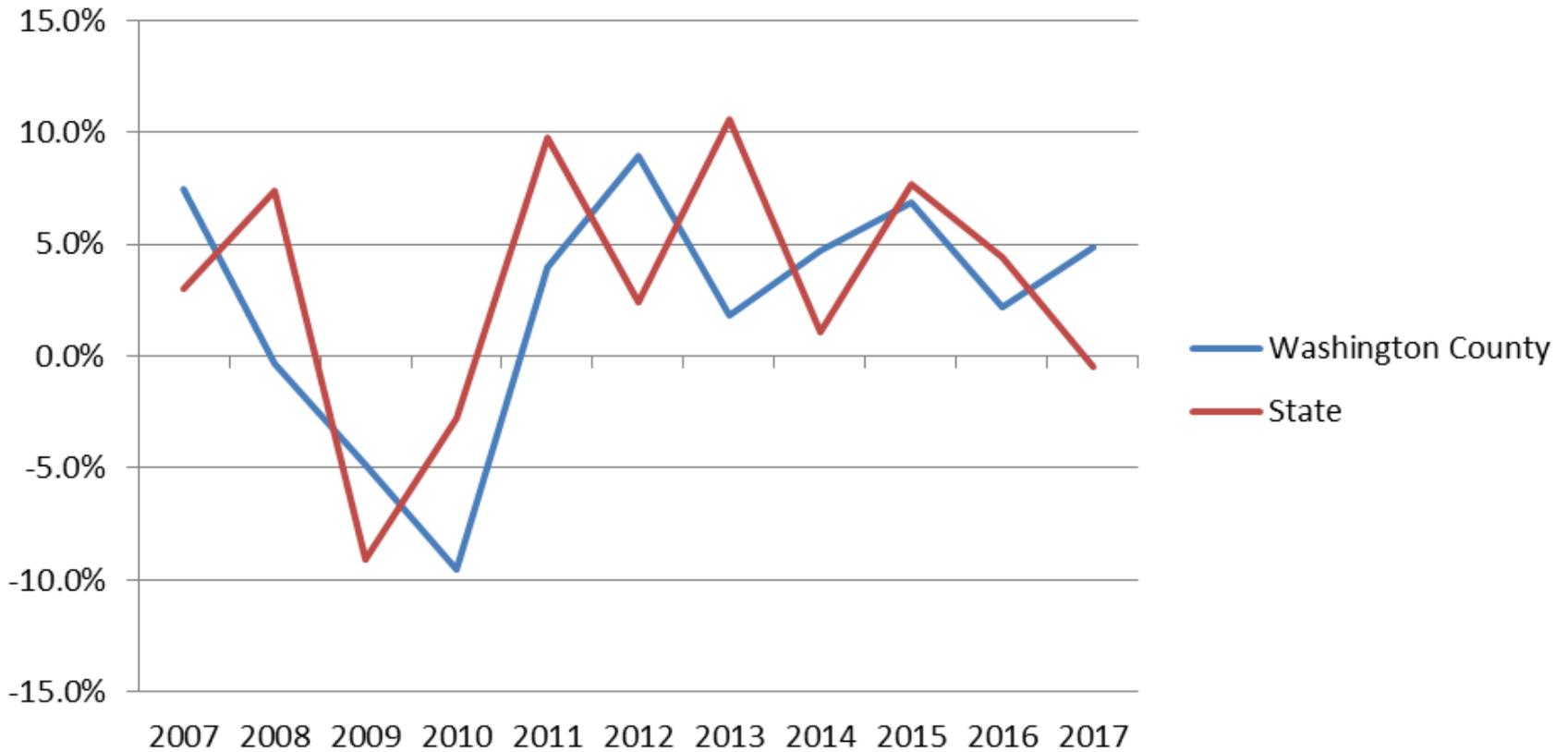
Howard County & State Income Tax Percentage Change
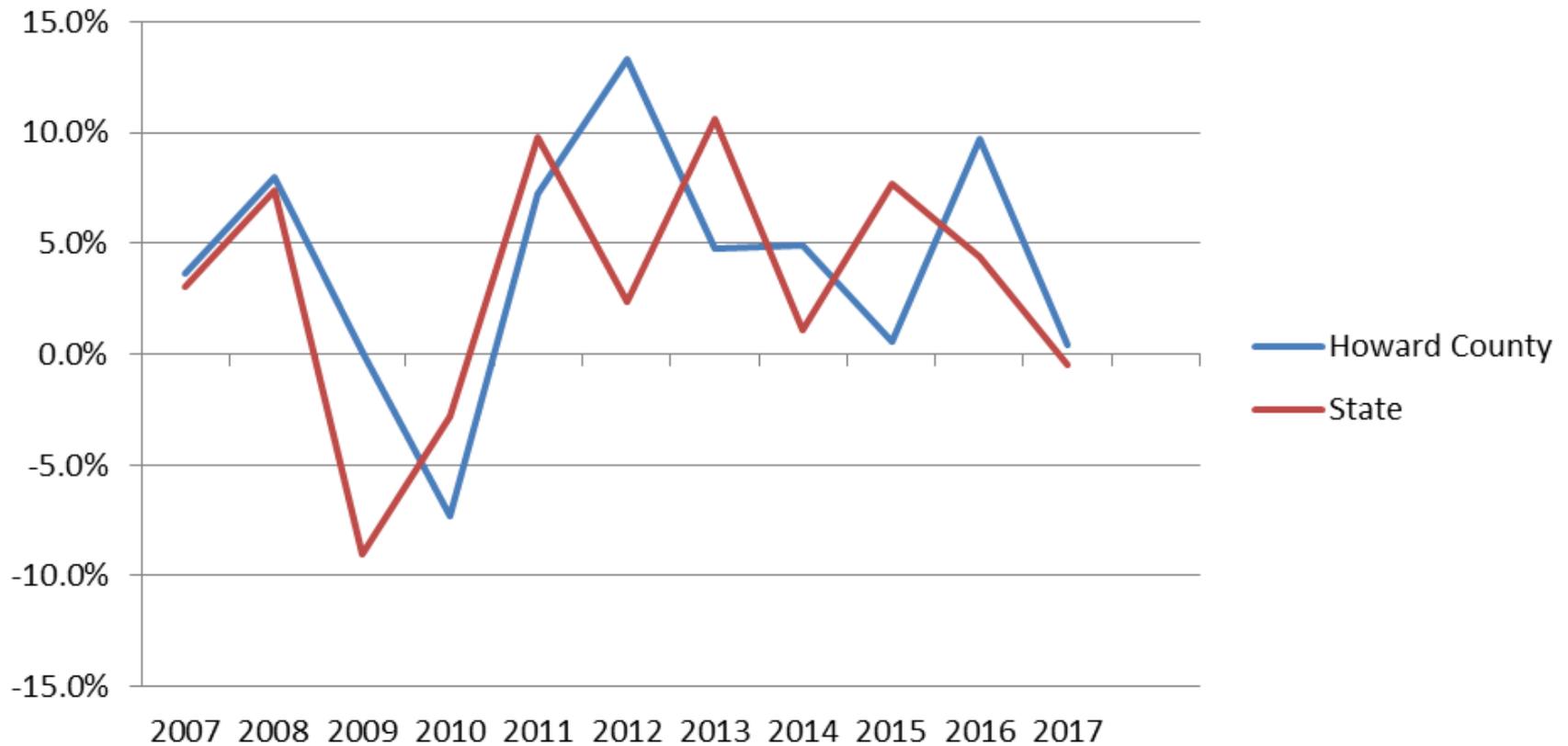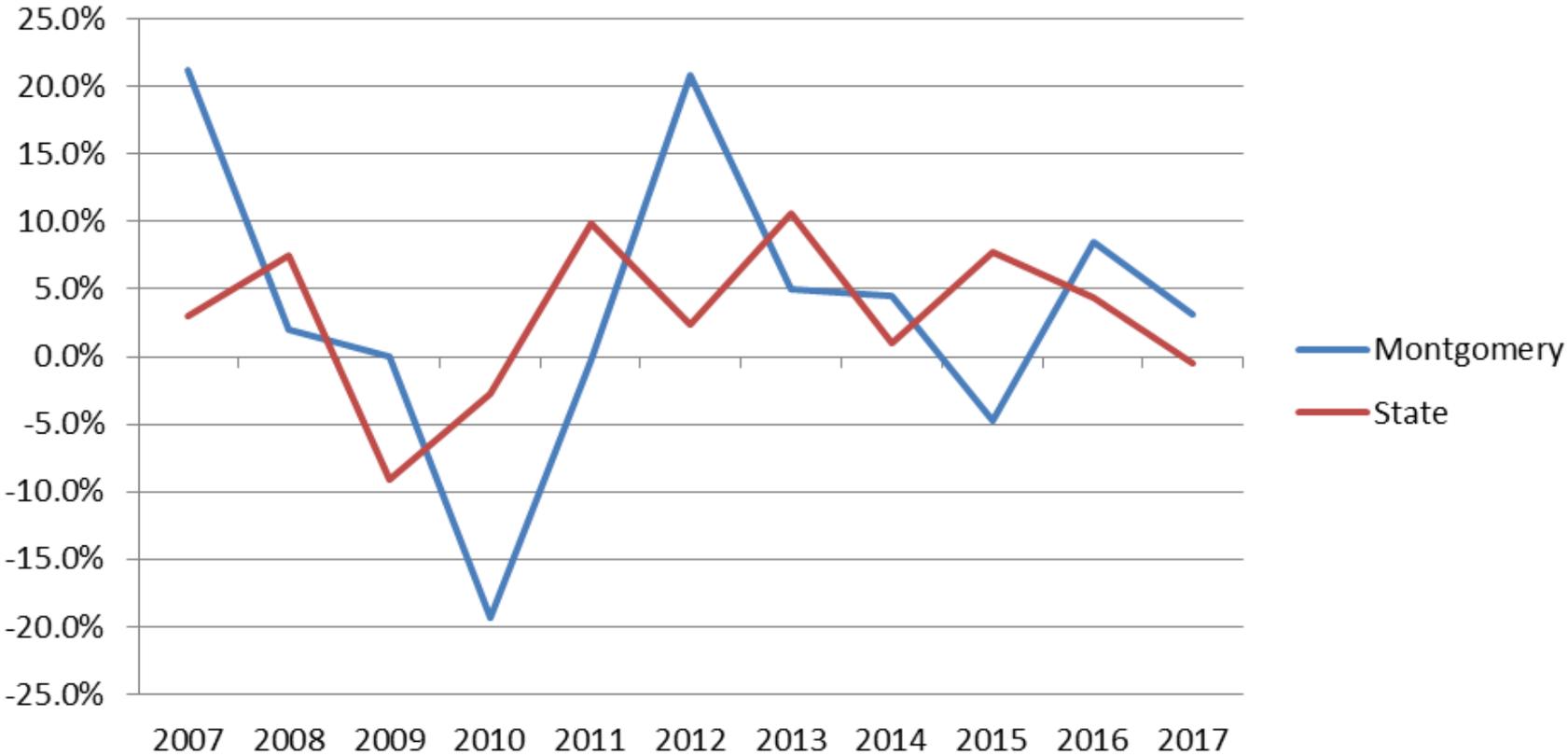
Frederick County & State Income Tax Percentage Change
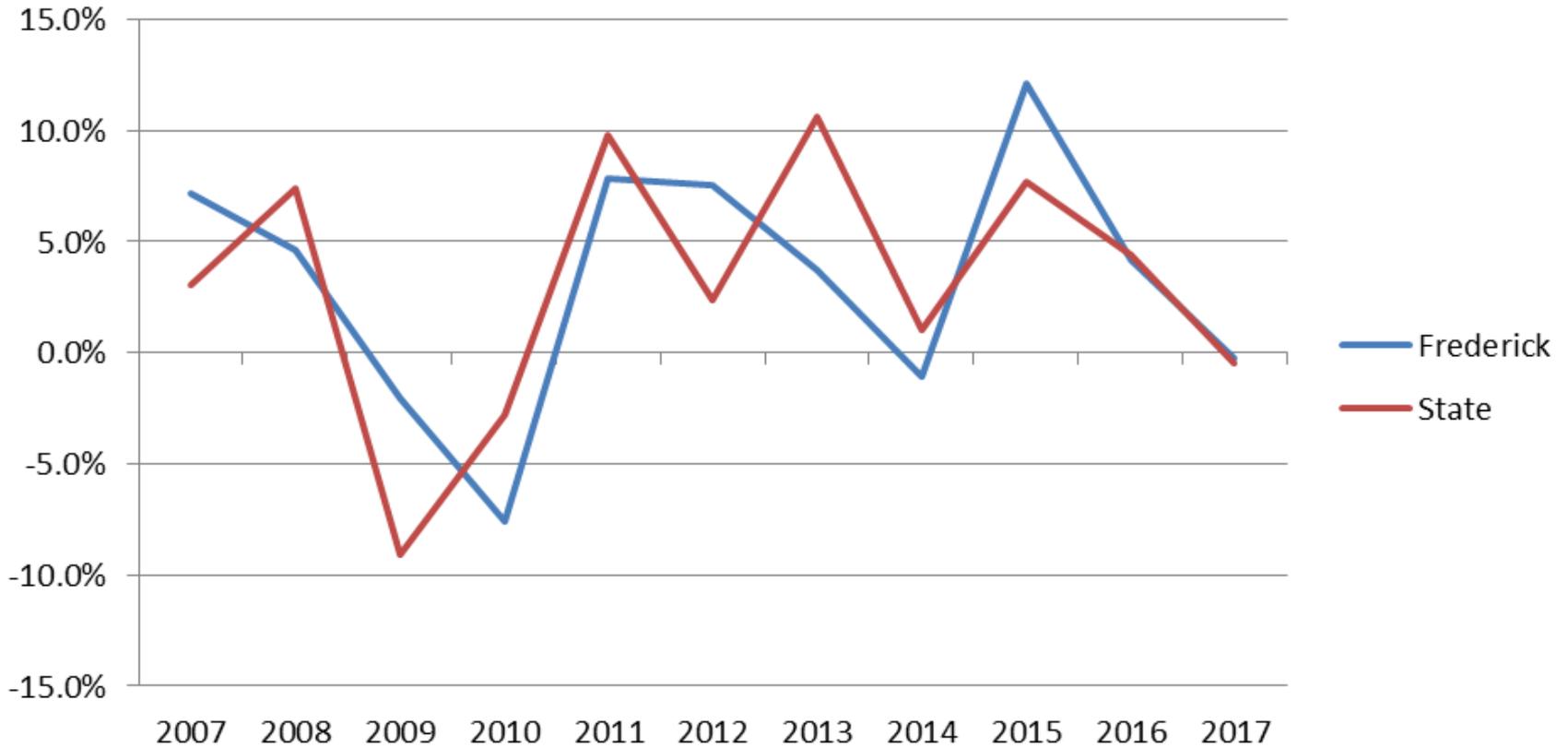
Wicomico County & State Income Tax Percentage Change
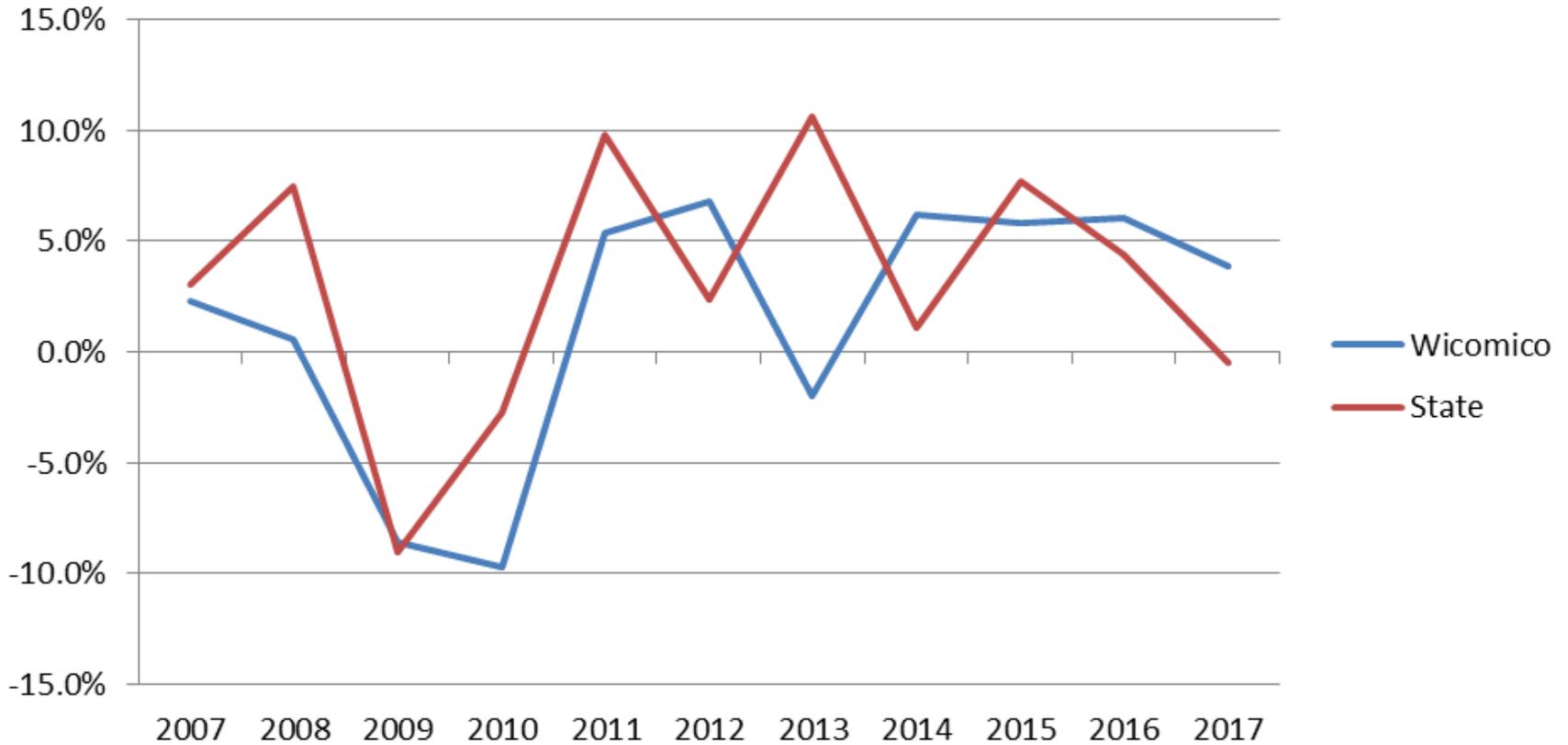
Dorchester County & State Income Tax Percentage Change
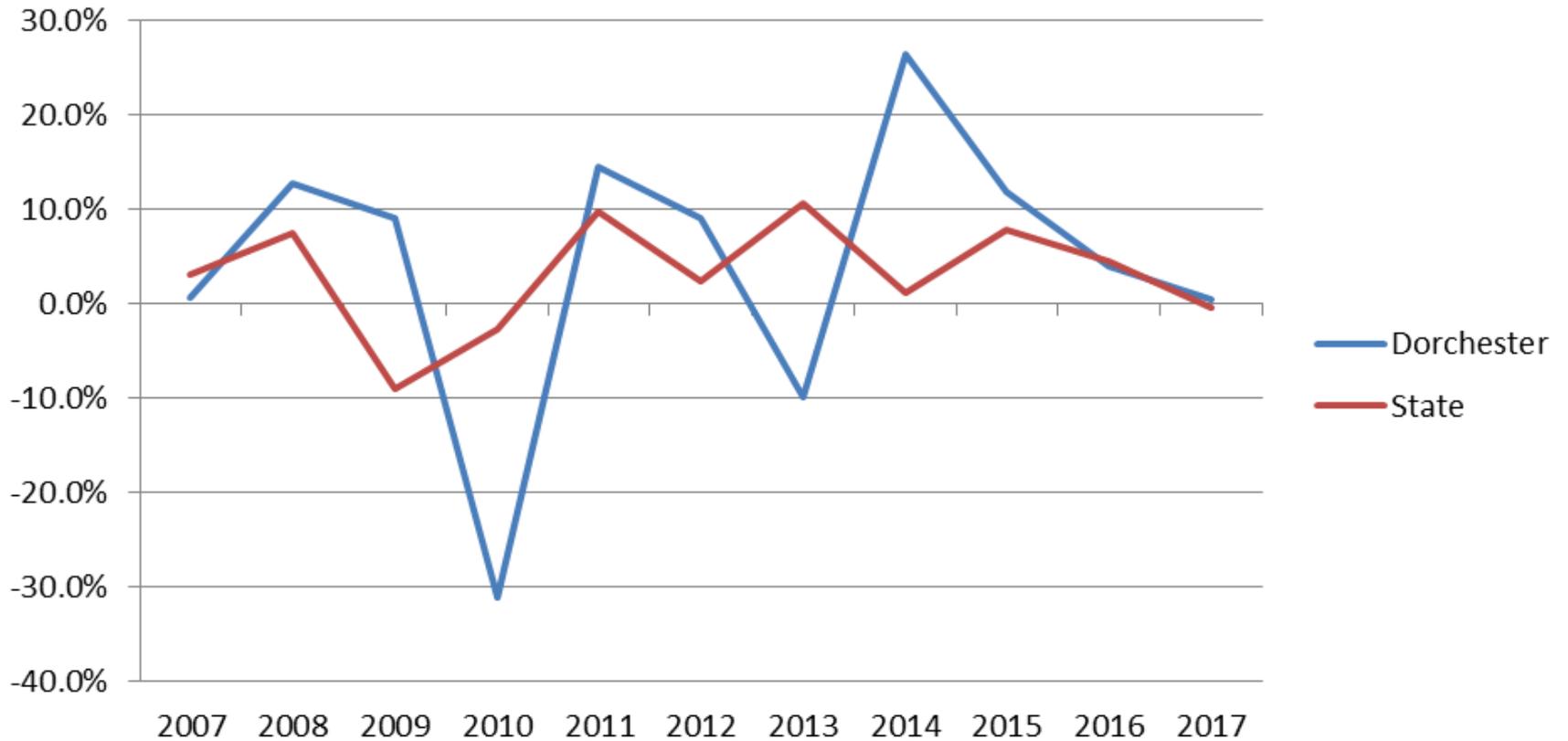
Income Tax Percentage Change (Eastern Shore)
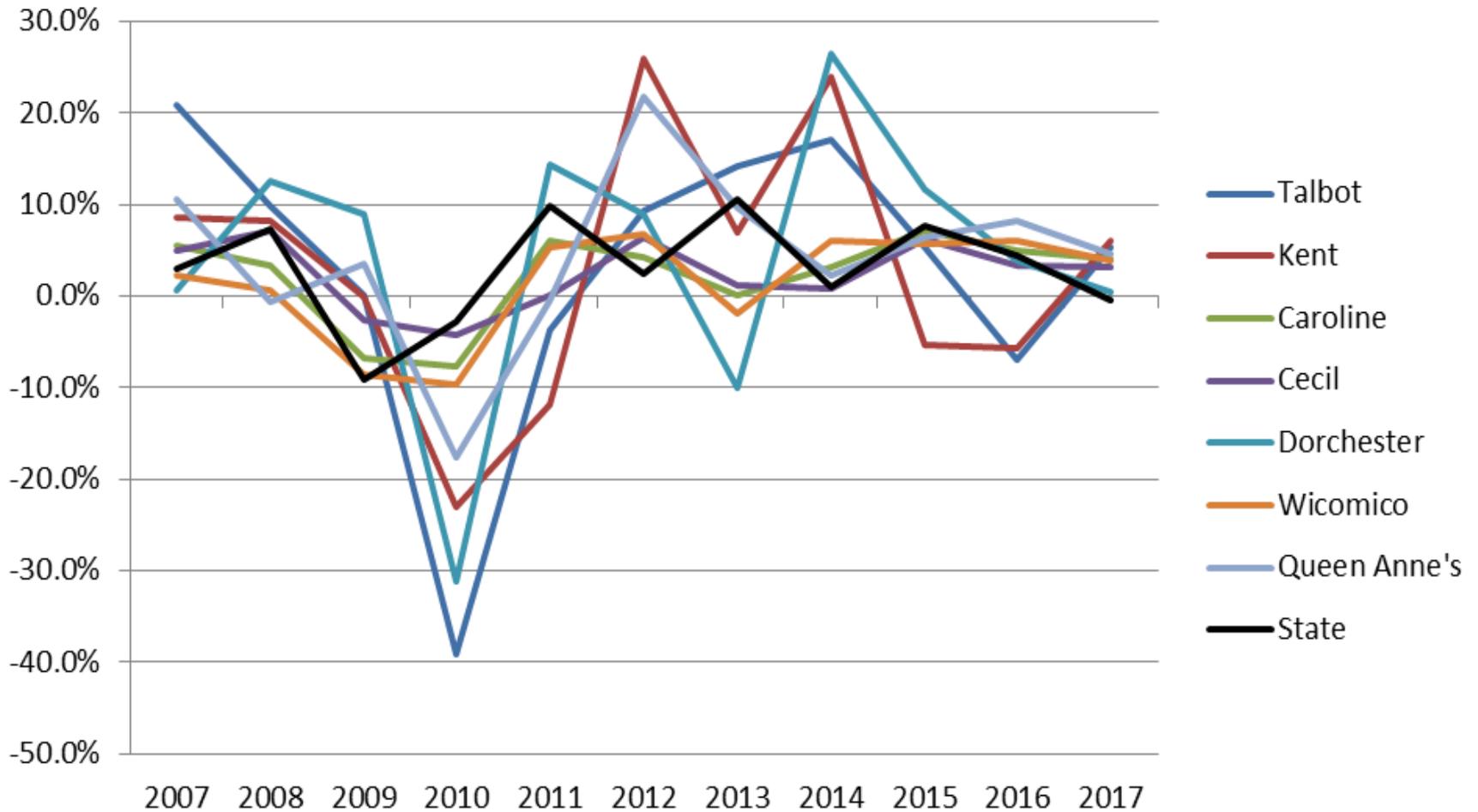
Income Tax Percentage Change (Western Shore)
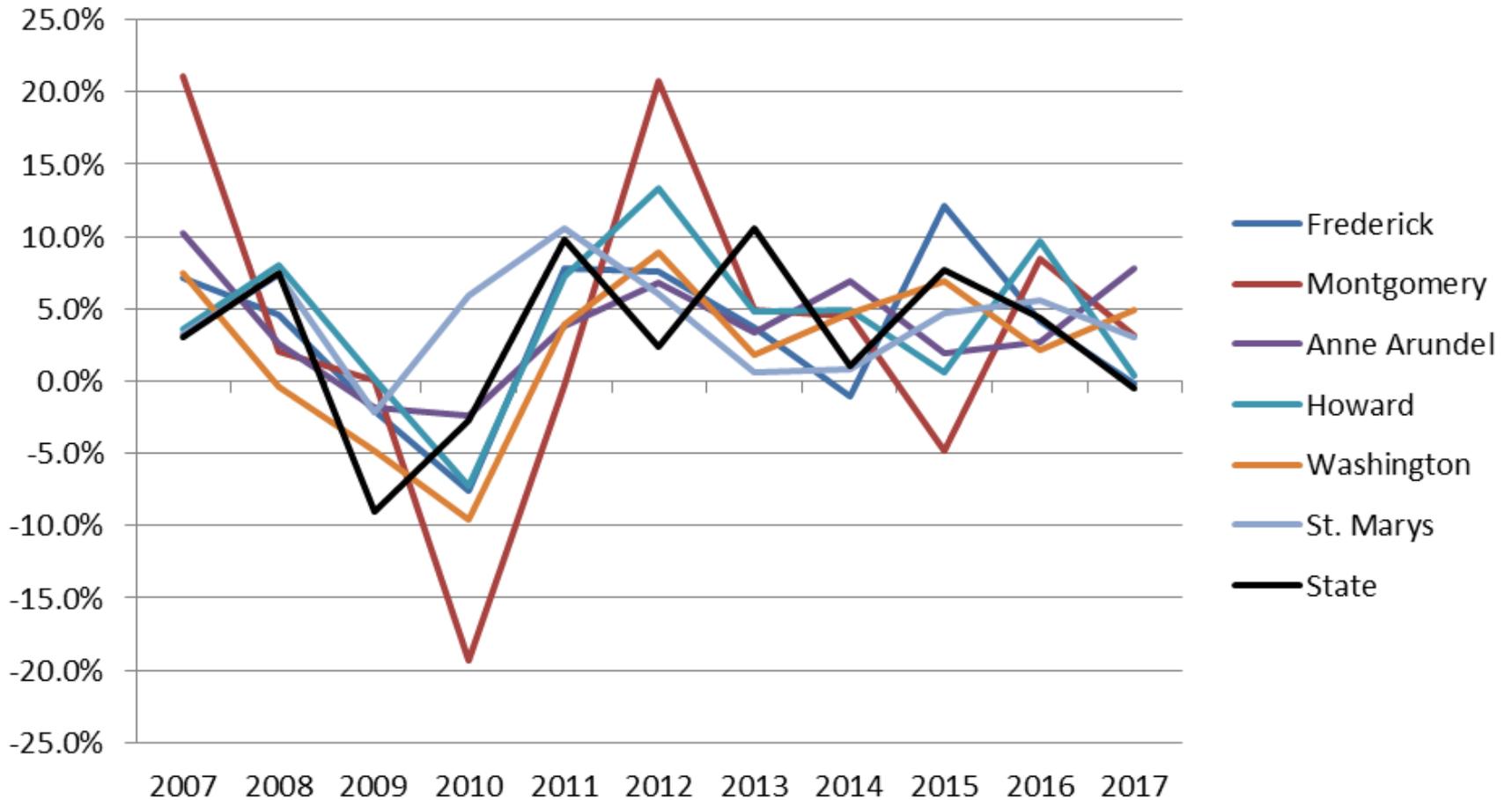
Queen Anne's County Household Income Distribution

Queen Anne's County Percentage Change in Income Tax Revenue & Unemployment

Percentage Change CPI & Queen Anne's County Income Tax

Legend:
- County % Change Income Tax
- CPI % Change
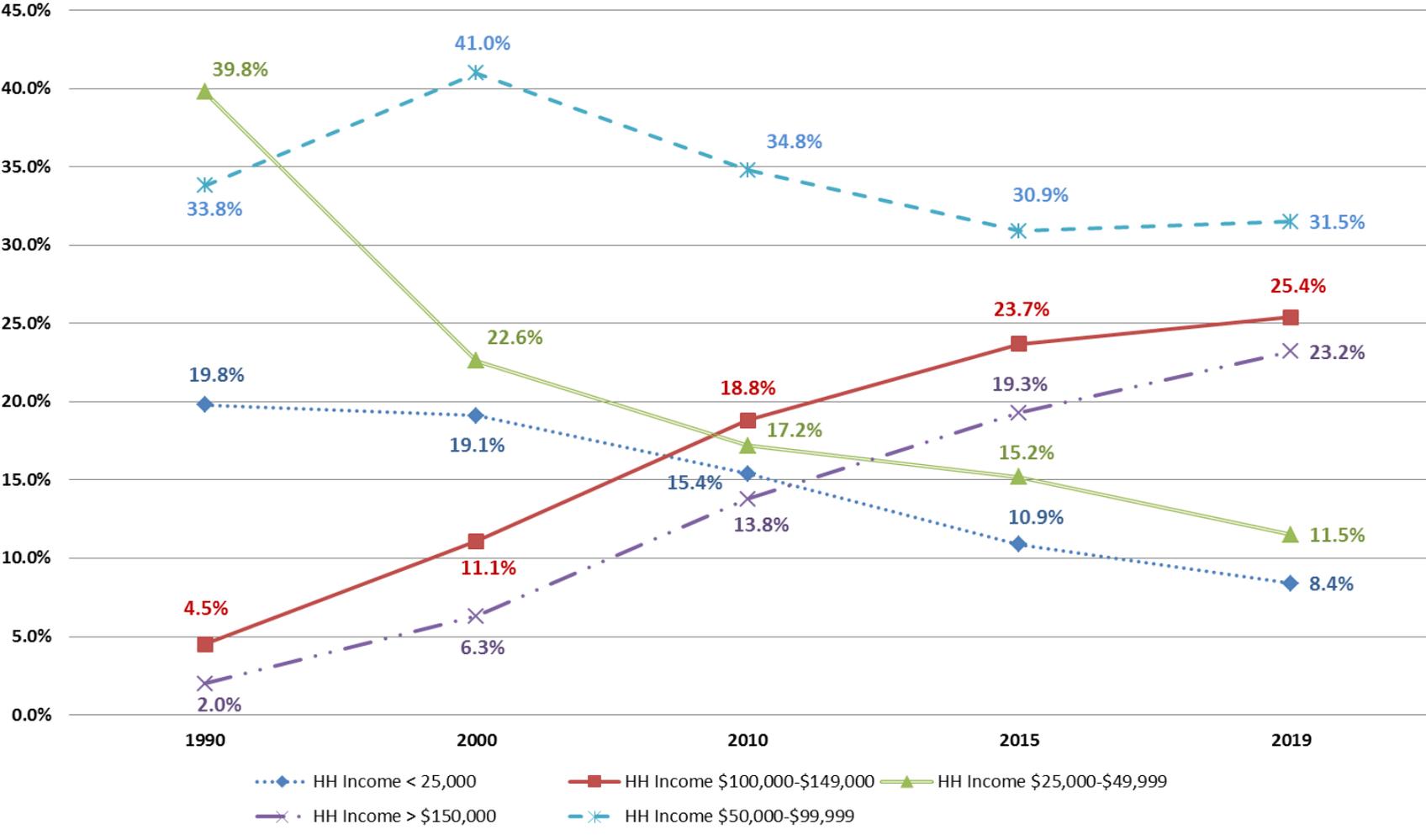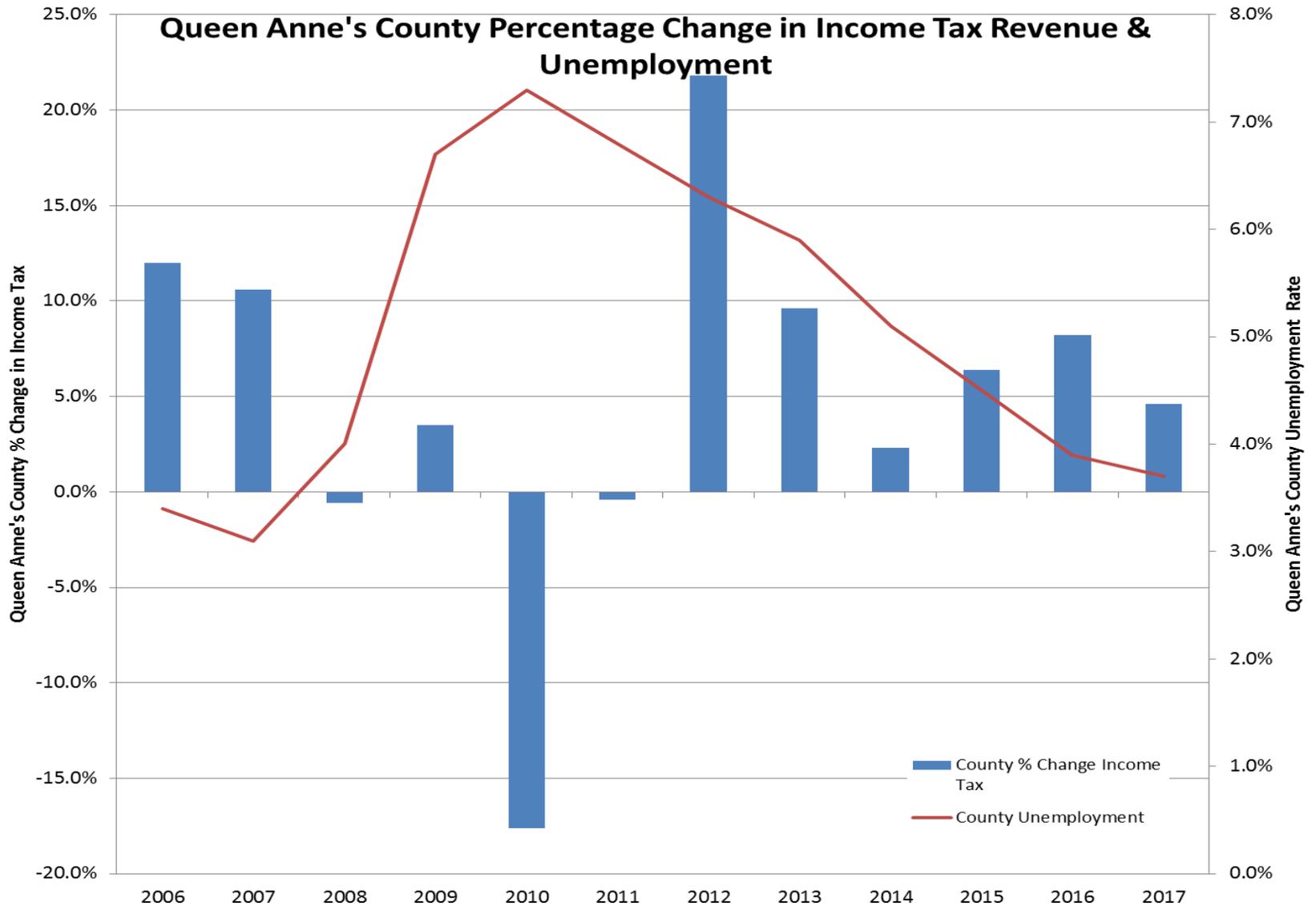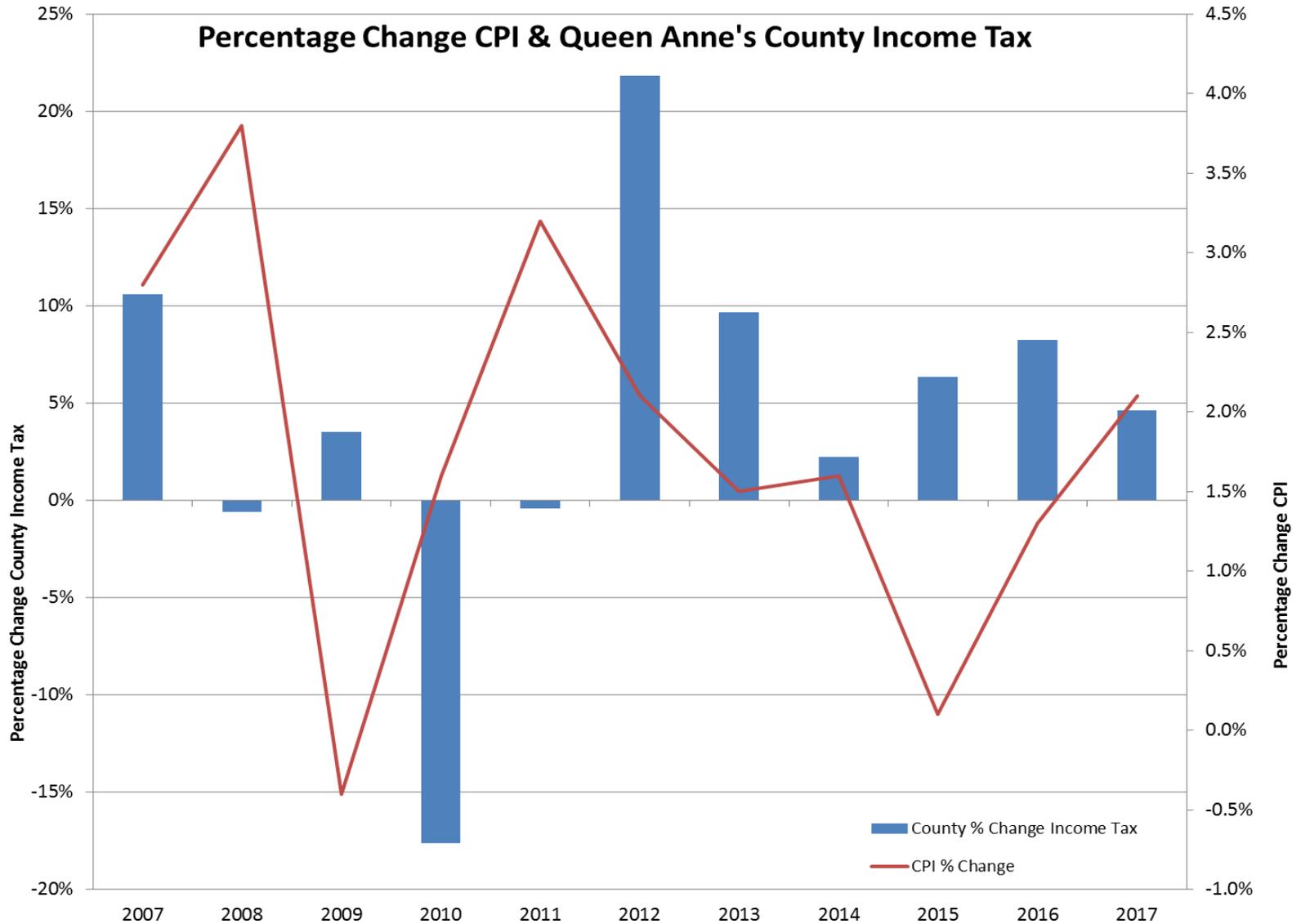
Income Tax & Oriole Victories Percentage Change
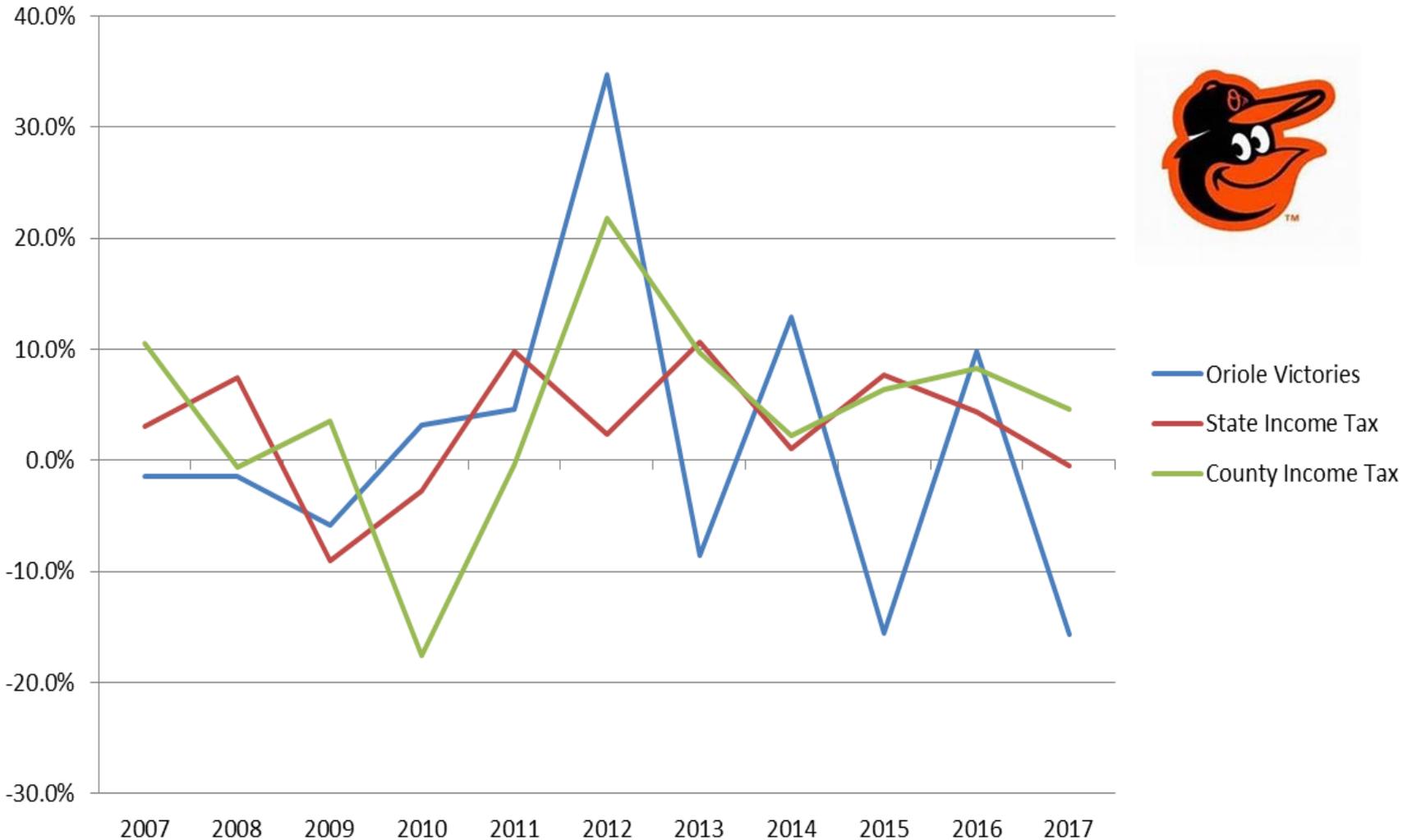
Queen Anne's County Income Tax Distributions as Percentage of Actual (Current Year Estimate)
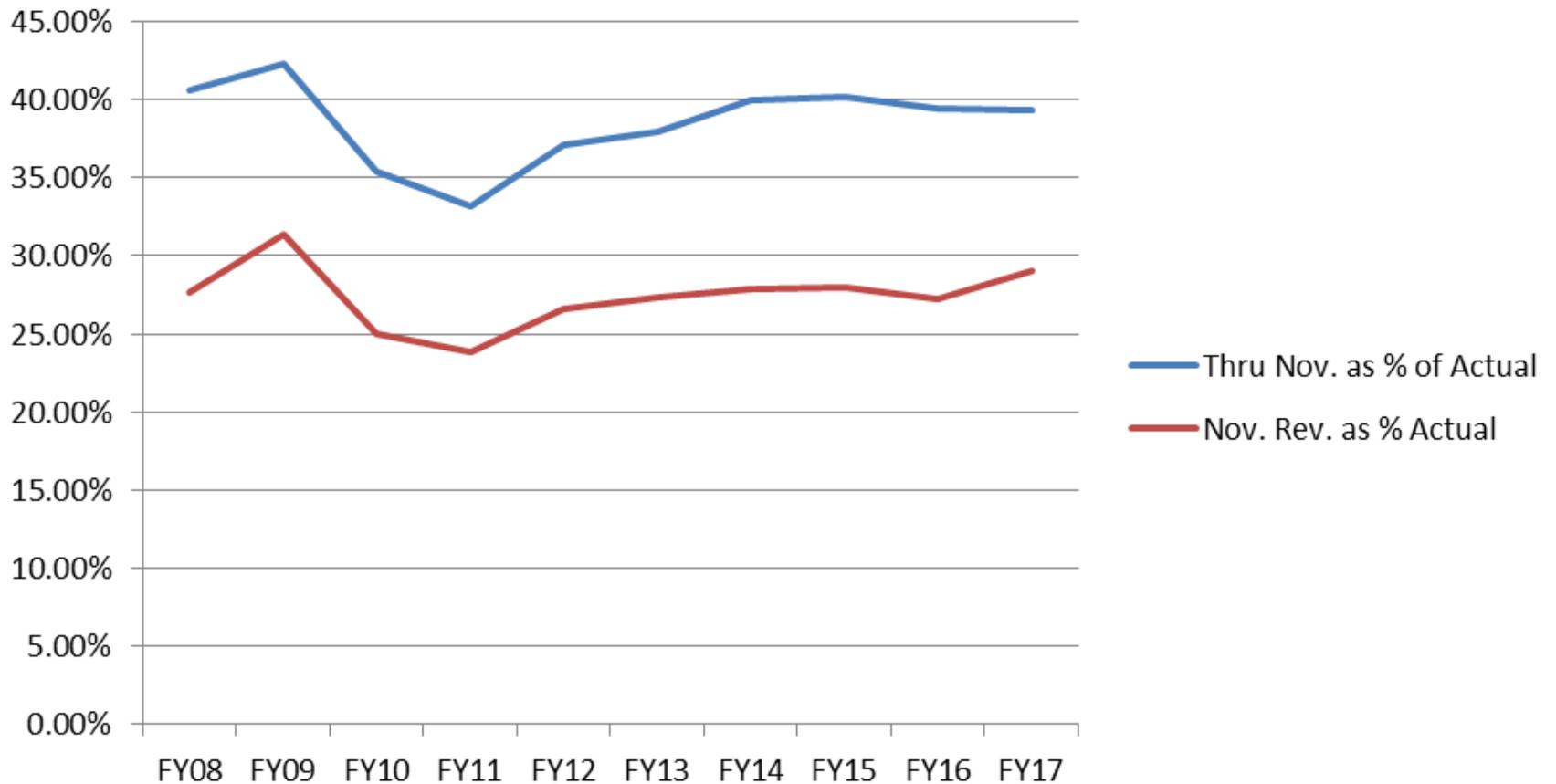
Property Tax Considerations

- SDAT provides constant yield assessable base in February, used for calculation of property tax for budget year
- Property tax estimates are predictable for budget year; less so for outyears

Other considerations in property tax calculations
- Enterprise Zones
- Tax Credits
- Municipal Rebate
- Tax Increment Financing
- New Development

Property & Income Tax Variance

Fiscal Year	Property Tax Budget	Actual	% Variance	Income Tax Budget	Actual	% Variance
2006	43,106,992	44,630,519	3.5%	27,888,290	31,633,987	13.4%
2007	44,465,440	46,180,114	3.9%	30,088,290	34,980,663	16.3%
2008	48,200,170	49,975,236	3.7%	35,973,956	34,767,725	-3.4%
2009	54,396,626	55,337,698	1.7%	36,000,993	35,988,334	0.0%
2010	59,326,899	59,204,132	-0.2%	36,033,311	29,647,125	-17.7%
2011	59,934,809	60,061,951	0.2%	32,980,024	29,527,496	-10.5%
2012	65,852,256	65,881,777	0.0%	31,100,000	35,969,879	15.7%
2013	65,415,329	65,516,659	0.2%	32,428,656	39,438,906	21.6%
2014	63,889,716	64,666,451	1.2%	38,984,963	40,326,921	3.4%
2015	64,108,847	64,643,520	0.8%	41,878,992	42,889,715	2.4%
2016	64,979,662	64,912,515	-0.1%	44,767,650	46,424,552	3.7%
2017	66,145,298	66,466,862	0.5%	46,448,552	48,578,044	4.6%

Queen Anne's County Budget vs. Actual Percentage Variance

Queen Anne's County Recordation & Transfer Tax Revenue
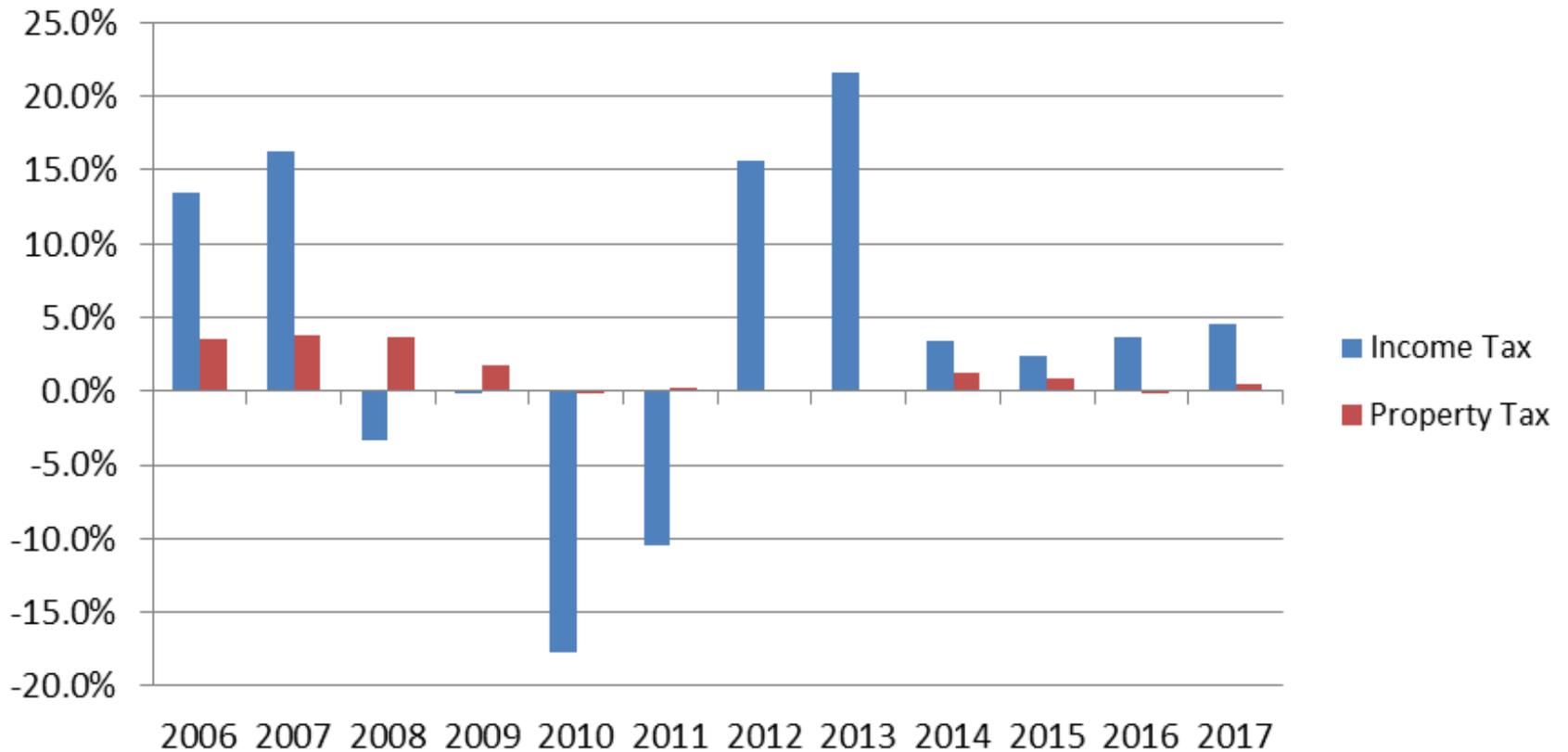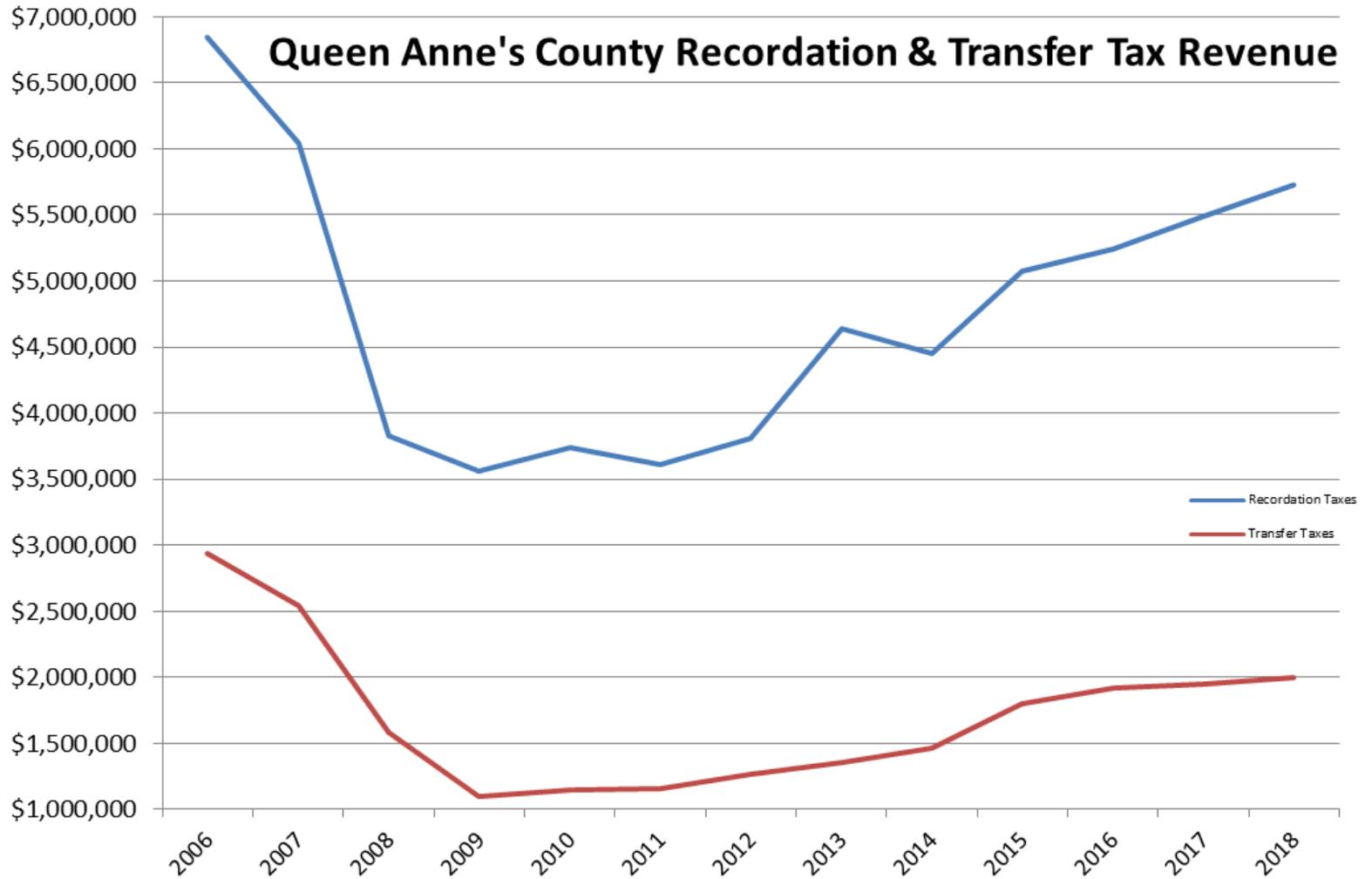
Queen Anne's County Transfer & Recordation Percentage Change
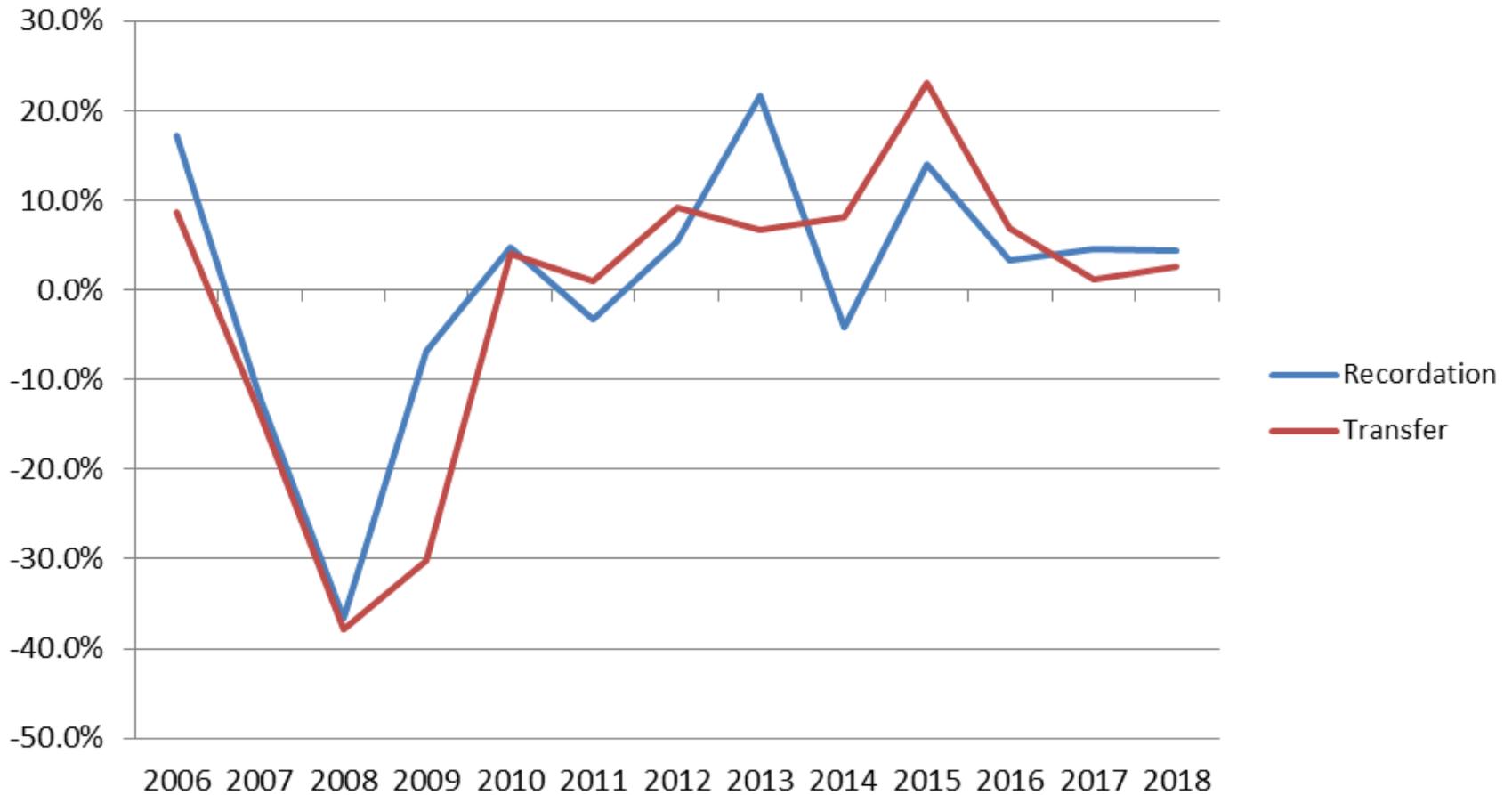
Queen Anne's County Fund Balance
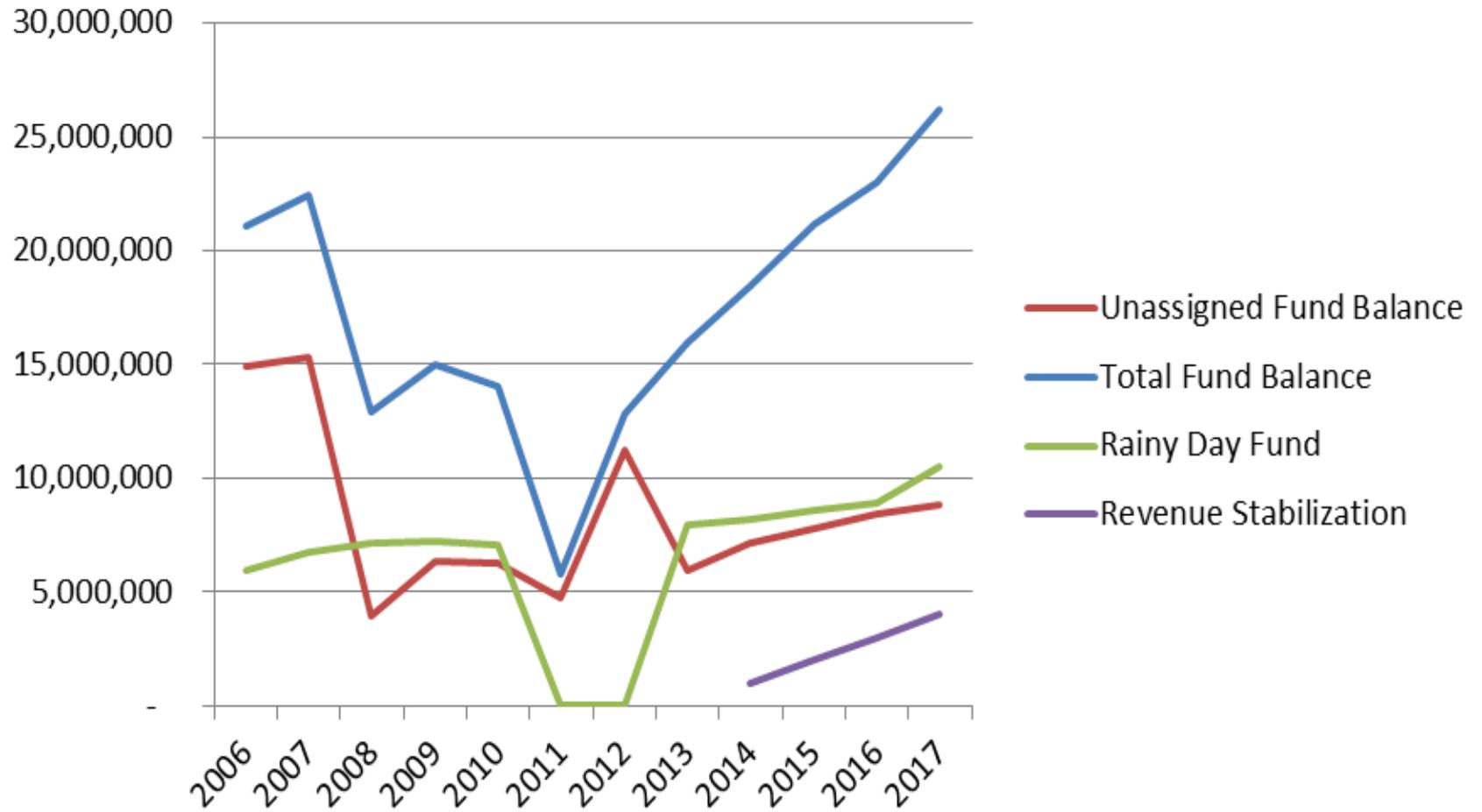
Notes for Smaller Counties

- Resources-staffing
- Volatility
- Sensitivity to change, development
- Approaches to forecasting
  - Trend analysis
  - Data analytics, forecasts (or call Andy)
  - Form a committee! (e.g. Spending Affordability Committee)

Politics and Estimating

- Pitfalls of overestimating (shortfalls, budget cuts)

- Pitfalls of underestimating (potential surpluses, conservative forecasting)

- Surpluses, fund balance and taxpayers

- Surpluses, fund balance and ratings

A Few General Points About Estimating

- Volatility, capping growth, and estimating to achieve the same result (restrained growth)

- Conservative estimates may produce surpluses by limiting budget growth, but resulting fund balances, stability in fiscal management and meeting your revenue estimates weigh heavily in ratings

- Is intuition involved or is it all analytics?

- Counties often use State income tax estimates as a benchmark—taking the BRE estimate and generally moderating growth (because of uncertainty and volatility)

Maryland Counties Income Tax Average Percentage Change 2013-2016

* Income Tax Rate Increase
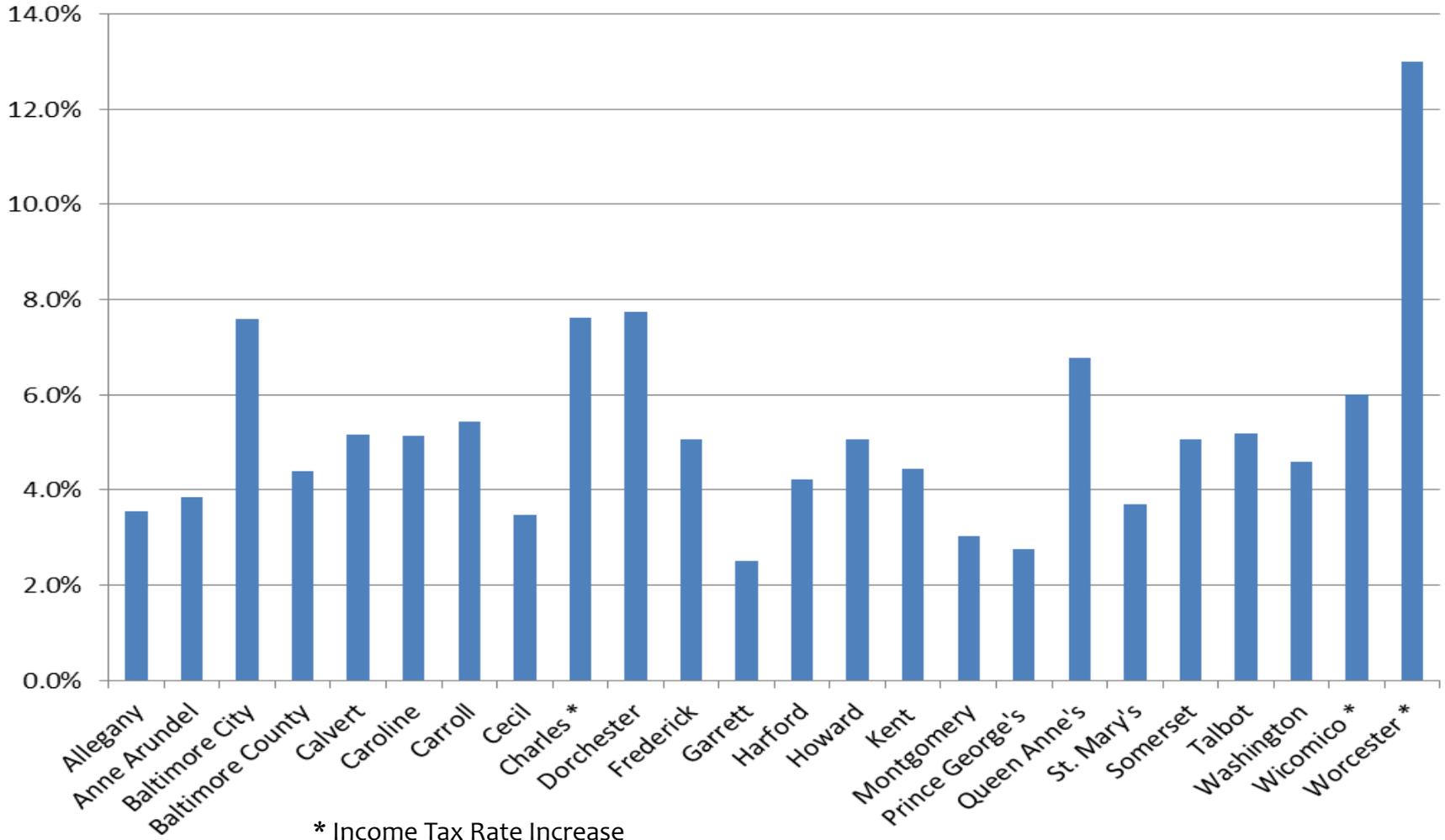
Why Simple is Better

Why do simple methods tend to outperform more complex ones? Forecasting science luminary Spyros Makridakis believes it is because complex methods try to find patterns that aren't really there by creating a tight statistical "fit" to historical data. These false patterns are then projected forward. Conversely, simple methods ignore such patterns and just extrapolate trends.

* From: Spyros Makridakis, Robin M. Hogarth and Anil Gaba, "Why Forecasts Fail. What to Do Instead," MIT Sloan Management Review, Winter 2010.

Forecast Assumptions

- Salaries 2.0-2.5% (COLA, Pay for Performance)
- Fringe Benefits 5.0%
- Operating 1.0%
- Debt per six year capital program
- Transfers to capital, Other Funds, Aging, etc. 1.0-2.0%
- OPEB per 10 year plan
- Board of Education 2.0-2.5%
- College/Library 2.0%
- **Property tax 2.0-2.8%**
- **Income tax 2.5%-3.5%**
- **Other revenues (transfer/recordation) 1.0-2.0%**

Multi- Year Revenue Forecast

GENERAL FUND REVENUE FORECAST

REVENUES	Actual					Budgeted		Projected			
	FY13	**FY14**	**FY15**	**FY16**	**FY17**	**FY18**	**FY19**	**FY20**	**FY21**	**FY22**	**FY23**
Taxes											
Local Property Tax	65,516,659	64,666,451	64,643,520	64,912,515	66,466,862	67,425,242	69,341,149	71,227,772	73,052,327	75,097,792	76,599,748
Local Income Tax	39,438,906	40,326,921	42,889,715	46,424,552	48,578,044	49,436,992	51,536,447	52,313,240	53,621,071	54,961,598	56,335,638
Admission and Amusement Taxes	160,516	155,336	155,396	169,679	156,872	170,000	170,000	171,700	171,700	173,417	173,417
Recordation Taxes	3,100,826	2,978,677	3,399,247	4,036,356	5,321,128	4,817,700	5,327,551	5,508,964	5,591,598	5,675,472	5,760,604
Transfer Taxes	675,532	730,587	1,797,855	1,923,016	1,944,544	1,936,427	2,002,880	2,022,909	2,043,138	2,063,570	2,084,205
Highway User	478,900	466,734	518,326	611,835	601,355	769,614	531,866	631,250	637,563	643,938	650,378
Franchise Fee	-	-	-	-	477,220	470,000	481,992	486,812	491,680	496,597	501,563
Hotel Taxes	470,139	447,970	-	-	599,868	535,000	614,865	621,013	627,223	633,496	639,831
Licenses and Permits	1,004,774	1,080,891	615,401	624,570	617,124	630,000	645,200	645,845	652,303	658,826	665,414
Intergovernmental	2,588,810	2,256,950	2,117,843	2,309,515	2,275,157	2,361,692	2,159,409	2,309,125	2,343,762	2,378,918	2,414,602
Miscellaneous Revenue	996,008	1,015,716	1,167,897	1,052,075	1,379,435	728,019	910,000	975,000	975,000	975,000	975,000
Charges for Current Services	2,574,951	2,252,711	2,170,142	2,265,561	2,785,966	2,423,481	2,458,120	2,496,731	2,534,182	2,572,194	2,610,777
Investment Income	73,201	53,640	56,231	92,664	259,884	60,000	150,000	150,000	150,000	150,000	150,000
Subtotal - Revenues	**117,079,222**	**116,432,584**	**119,531,573**	**124,422,338**	**131,463,459**	**131,764,167**	**136,329,479**	**139,560,360**	**142,891,547**	**146,480,819**	**149,561,177**
Transfers In	22,608	40,370	268,376	1,268,187	257,491	1,050,000	1,050,000	1,000,000	1,000,000	1,000,000	1,000,000
Fund Balance	-	-	-	-	-	1,202,000	681,927	500,000	500,000	500,000	500,000
TOTAL REVENUES	**117,101,830**	**116,472,954**	**119,799,949**	**125,690,525**	**131,720,950**	**134,016,167**	**138,061,406**	**141,060,360**	**144,391,547**	**147,980,819**	**151,061,177**
% Change in Revenues before											
Transfers in and Fund Balance	4.59%	-0.55%	2.66%	4.09%	5.66%	0.23%	3.46%	2.37%	2.39%	2.51%	2.10%
% Change in Total Revenues	2.51%	-0.54%	2.86%	4.92%	4.80%	1.74%	3.02%	2.17%	2.36%	2.49%	2.08%