

AMAZON AND EMPTY STOREFRONTS, 2015 UPDATE

The Fiscal
and Land Use
Impacts
of Online Retail

September 2016



CIVIC
ECONOMICS

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Essential National Findings: 2015

In 2015, Amazon sold **\$55.6 billion** worth of retail goods nationwide (an increase of 26 percent from 2014), all while avoiding **\$704 million** in sales taxes (an increase of 13 percent). The cost of lost sales taxes falls equally on state and local governments.

These sales are the equivalent of **39,000** retail storefronts (an increase of 26 percent) or **133 million** square feet of commercial space (an increase of 24 percent), which might have paid **\$528 million** in property taxes (an increase of 26 percent).

A total of more than **\$1.2 billion** in revenue (an increase of 18 percent) is lost to state and local governments.

Amazon also operated **75 million** square feet (an increase of 15 percent) of distribution space, employing roughly **111,000** workers (an increase of 15 percent).

Even counting all the jobs in Amazon distribution centers, Amazon sales produced a net loss of **222,000** retail jobs (an increase of 29 percent) nationwide.

EXECUTIVE SUMMARY

The American Booksellers Association and Civic Economics have long collaborated to study and describe the state of independent retail in America, but until last year those efforts have focused on various classes of bricks-and-mortar stores. *Amazon and Empty Storefronts* took that research into a new era. It was designed to provide policymakers and consumers with a better understanding of the impact at the state and local level of the growth of online retail as a substitute for storefront purchases. *Empty Storefronts* addressed 2014 data; this update brings the findings forward through 2015, highlighting the continued growth of Amazon and its impacts on American communities.

As Internet sales have risen unabated in recent years, little attention has been paid to the effects of that growth on American communities. Focusing on the industry leader, Amazon, this report looks at two broad classes of impact: **Fiscal** (relating to public revenue) and **Land Use** (relating to development patterns at the local level). This report looks at calendar year 2015, the last year for which good data is available. This report looks exclusively at Amazon, which likely accounts for only 1/3 or less of total online retail. Given those limitations, these findings should be seen as a sign of far bigger impacts to come.

To determine impacts, Civic Economics quantified Amazon sales at the state level to determine (a) how much sales tax went unpaid at the state and local level and (b) how the shift from bricks-and-mortar stores impacts property tax revenues. Nearly half of all states still collect no sales tax revenue from Amazon sales and others collect only partial sales taxes, producing a nationwide sales tax gap of \$704 million, up from \$625 million in 2014 even though tax fairness efforts made progress in a few states. For 2015, we further allocated sales tax losses between state and local governments in each state using data from the Tax Foundation. Nationally, losses were shared almost evenly between the two levels.

In addition, we estimate that the shift to online sales has resulted in a national reduction in demand for retail space totaling 133 million square feet in 2015, the equivalent of over 39,000 traditional storefronts employing 222,000 workers. These land use changes result in uncollected property taxes of \$528 million dollars.

Together, this \$1.2 billion revenue gap falls on state and local governments across the nation, and thus on the other sources of revenue that will be required to make up the large and growing shortfall. And the reality of constrained demand for retail space will affect every business district and shopping center in America.

STUDY APPROACH

The first step in the analysis was to quantify and allocate Amazon’s retail sales across the states. All statistics cited in this report are based upon calendar year 2015, which is the last full year for which Amazon has reported revenue.

Amazon zealously protects details about its operations. Sales are reported on a quarterly basis but only in very general terms. Total revenue is reported, and broken down into only three categories: Media, Electronics and Other General Merchandise, and Other. We estimate that \$60 billion in Amazon’s 2015 retail sales revenue came from the United States, of which \$55.6 billion might otherwise have occurred in retail stores without online retail.

To allocate that revenue among the states (and District of Columbia), we focused on disposable income as a strong predictor of retail sales. For each state, we calculated its share of total disposable income in the states and allocated Amazon sales on that basis. For example, California has 13% of the nation’s disposable income and was therefore assigned 13% of Amazon revenue, producing an estimate of \$7.3 billion in California retail sales displacement.

AMAZON SALES BY STATE, 2015

	Amazon Sales (Millions)			
Alabama	\$	711.3	Nebraska	\$ 333.4
Alaska	\$	155.6	Nevada	\$ 450.1
Arizona	\$	994.7	New Hampshire	\$ 272.3
Arkansas	\$	433.4	New Jersey	\$ 1,906.0
California	\$	7,307.2	New Mexico	\$ 300.1
Colorado	\$	994.7	New York	\$ 3,912.0
Connecticut	\$	828.0	North Carolina	\$ 1,505.9
Delaware	\$	166.7	North Dakota	\$ 150.0
Florida	\$	3,306.3	Ohio	\$ 1,856.0
Georgia	\$	1,522.6	Oklahoma	\$ 644.6
Hawaii	\$	255.6	Oregon	\$ 622.4
Idaho	\$	233.4	Pennsylvania	\$ 2,295.0
Illinois	\$	2,272.7	Rhode Island	\$ 194.5
Indiana	\$	1,000.2	South Carolina	\$ 694.6
Iowa	\$	516.8	South Dakota	\$ 144.5
Kansas	\$	489.0	Tennessee	\$ 1,055.8
Kentucky	\$	639.0	Texas	\$ 4,762.2
Louisiana	\$	755.7	Utah	\$ 427.9
Maine	\$	205.6	Vermont	\$ 111.1
Maryland	\$	1,205.8	Virginia	\$ 1,583.7
Massachusetts	\$	1,439.2	Washington	\$ 1,355.9
Michigan	\$	1,544.8	West Virginia	\$ 255.6
Minnesota	\$	989.1	Wisconsin	\$ 961.3
Mississippi	\$	405.6	Wyoming	\$ 116.7
Missouri	\$	961.3	Washington DC	\$ 166.7
Montana	\$	155.6	Total	\$ 55,568.2

Excludes electronic media sales.

Source: Civic Economics

Finally, we estimated sales by retail segment, which was necessary to facilitate land use calculations.

ESTIMATED AMAZON RETAIL SALES, 2015

Retail Segment	\$Millions	%
Computer and Consumer Electronics	\$19,262	34.7%
Apparel and Accessories	\$15,000	27.0%
Books	\$5,991	10.8%
Music /Video	\$1,198	2.2%
Other	\$14,117	25.4%
Total	\$55,568	100.0%

Excludes electronic media sales.

Source: Civic Economics, Amazon Annual Report 2016

IMPACTS AND IMPLICATIONS OF AMAZON GROWTH

As retail sales migrate from storefronts to the Internet, the fiscal impact on state and local governments has come from two sources: sales tax and property tax. The former is well understood, and many states have moved to close the sales tax advantage of online merchants. Losses in property taxes, however, will only grow even as few local governments recognize the challenge.

Fiscal Impact: Sales Taxes

As of January 1, 2016, there were 27 states that charge sales tax on Amazon purchases. Some states force Amazon to collect the full sales tax rate including state and any applicable local levies, while a few others have agreed to only collect the state portion of the sales tax.

Here, we sought to quantify the real value of sales taxes foregone by both state and local governments, reporting those totals by state. Calculating the sales tax revenue lost for a state that does not collect any sales tax involved simply looking at the sales per state and multiplying it by the average combined sales tax rate. For 2015, we allocated these tax losses between state and local governments according to statewide averages as shown at right. In Illinois, for example, Amazon collects and remits the statewide rate but not the myriad local sales taxes around the state.

These calculations of the sales tax gap are for calendar year 2015. The table at right details the sales tax gap by state. Missouri leads all states in this dubious ranking at \$75 million, followed by Alabama, Louisiana, and Oklahoma, which all have gaps over \$50 million. The

AMAZON SALES TAX GAP, 2015 (Millions)

State	State Gap	Local Gap	Total Sales Tax Gap
Alabama	\$28.5	\$35.1	\$63.5
Alaska	\$0.0	\$2.8	\$2.8
Arizona	\$0.0	\$25.7	\$25.7
Arkansas	\$28.2	\$12.0	\$40.2
California	\$0.0	\$0.0	\$0.0
Colorado	\$0.0	\$45.2	\$45.2
Connecticut	\$0.0	\$0.0	\$0.0
Delaware	\$0.0	\$0.0	\$0.0
Florida	\$0.0	\$21.5	\$21.5
Georgia	\$0.0	\$0.0	\$0.0
Hawaii	\$10.2	\$0.9	\$11.1
Idaho	\$14.0	\$0.0	\$14.0
Illinois	\$0.0	\$44.8	\$44.8
Indiana	\$0.0	\$0.0	\$0.0
Iowa	\$31.0	\$4.1	\$35.1
Kansas	\$0.0	\$0.0	\$0.0
Kentucky	\$0.0	\$0.0	\$0.0
Louisiana	\$30.2	\$37.9	\$68.1
Maine	\$11.3	\$0.0	\$11.3
Maryland	\$0.0	\$0.0	\$0.0
Massachusetts	\$0.0	\$0.0	\$0.0
Michigan	\$0.0	\$0.0	\$0.0
Minnesota	\$0.0	\$3.4	\$3.4
Mississippi	\$28.4	\$0.3	\$28.7
Missouri	\$40.7	\$34.7	\$75.4
Montana	\$0.0	\$0.0	\$0.0
Nebraska	\$18.3	\$4.4	\$22.8
Nevada	\$0.0	\$0.0	\$0.0
New Hampshire	\$0.0	\$0.0	\$0.0
New Jersey	\$0.0	\$0.0	\$0.0
New Mexico	\$15.4	\$7.1	\$22.5
New York	\$0.0	\$0.0	\$0.0
North Carolina	\$0.0	\$0.0	\$0.0
North Dakota	\$0.0	\$0.0	\$0.0
Ohio	\$0.0	\$25.8	\$25.8
Oklahoma	\$29.0	\$27.6	\$56.6
Oregon	\$0.0	\$0.0	\$0.0
Pennsylvania	\$0.0	\$7.8	\$7.8
Rhode Island	\$13.6	\$0.0	\$13.6
South Carolina	\$0.0	\$0.0	\$0.0
South Dakota	\$5.8	\$2.7	\$8.4
Tennessee	\$0.0	\$0.0	\$0.0
Texas	\$0.0	\$0.0	\$0.0
Utah	\$25.5	\$3.2	\$28.6
Vermont	\$6.7	\$0.2	\$6.8
Virginia	\$0.0	\$0.0	\$0.0
Washington	\$0.0	\$0.0	\$0.0
West Virginia	\$0.0	\$0.3	\$0.3
Wisconsin	\$0.0	\$4.1	\$4.1
Wyoming	\$4.7	\$1.7	\$6.3
DC	\$9.6	\$0.0	\$9.6
Total	\$351.0	\$352.9	\$703.8

Source: Civic Economics, Tax Foundation, Census

AMAZON AND EMPTY STOREFRONTS, 2015 UPDATE

total nationwide sales tax gap for Amazon in 2015 is estimated at \$704 million, up from \$625 million in 2014.

Land Use Impact: Storefronts and Employment

For this study, Civic Economics analyzed three measures on this shift in sales from bricks-and-mortar retailers to the Internet: storefronts, square footage, and employment.

For the first and broadest measure, we calculated sales per square foot for the mix of segments in the study and allocated those “lost” square feet across the states according to their proportion of Amazon sales.

For the second measure, we collected the average sales per establishment in each segment from the Economic Census and calculated the number of stores Amazon sales equate to in each state. While it may be too simple to represent that number as displaced storefronts, it provides a useful gauge of the number of business establishments that might otherwise exist.

Finally, we calculated the loss of jobs associated with this shift. For each segment, we collected Economic Census data for sales per employee to calculate the total sales force that would be associated with Amazon’s retail sales in bricks-and-mortar stores.

In addition, we evaluated the current and developing state of Amazon’s distribution network. Though all retail goods pass through similar facilities, Amazon’s are somewhat more labor intensive. In order to provide conservative estimates, we credited the company for all estimated distribution employment in each state.

AMAZON SPACE, SHOP, AND JOB DISPLACEMENT, 2015

	Square Feet (Millions)	Equivalent Shops	Jobs, Including Amazon Dist.
Alabama	1.7	495	(4,273)
Alaska	0.4	108	(935)
Arizona	2.4	692	889
Arkansas	1.0	302	(2,604)
California	17.5	5,085	(32,611)
Colorado	2.4	692	(5,976)
Connecticut	2.0	576	(1,418)
Delaware	0.4	116	1,088
Florida	7.9	2,301	(15,831)
Georgia	3.7	1,060	(6,073)
Hawaii	0.6	178	(1,536)
Idaho	0.6	162	(1,402)
Illinois	5.5	1,582	(10,146)
Indiana	2.4	696	2,336
Iowa	1.2	360	(3,105)
Kansas	1.2	340	(2,549)
Kentucky	1.5	445	5,135
Louisiana	1.8	526	(4,540)
Maine	0.5	143	(1,235)
Maryland	2.9	839	(7,244)
Massachusetts	3.5	1,002	(7,487)
Michigan	3.7	1,075	(8,655)
Minnesota	2.4	688	(4,238)
Mississippi	1.0	282	(2,437)
Missouri	2.3	669	(5,775)
Montana	0.4	108	(935)
Nebraska	0.8	232	(2,003)
Nevada	1.1	313	1,671
New Hampshire	0.7	189	(1,541)
New Jersey	4.6	1,326	(6,820)
New Mexico	0.7	209	(1,803)
New York	9.4	2,722	(23,503)
North Carolina	3.6	1,048	(8,716)
North Dakota	0.4	104	(901)
Ohio	4.5	1,292	(11,150)
Oklahoma	1.5	449	(3,873)
Oregon	1.5	433	(3,739)
Pennsylvania	5.5	1,597	(862)
Rhode Island	0.5	135	(1,168)
South Carolina	1.7	483	(796)
South Dakota	0.3	101	(868)
Tennessee	2.5	735	904
Texas	11.4	3,314	(19,181)
Utah	1.0	298	(2,571)
Vermont	0.3	77	(668)
Virginia	3.8	1,102	(5,897)
Washington	3.3	944	(2,001)
West Virginia	0.6	178	(1,536)
Wisconsin	2.3	669	(1,752)
Wyoming	0.3	81	(701)
DC	0.4	116	(1,002)
Total	133.3	38,669	(222,033)

Source: Civic Economics

We estimate total Amazon distribution employment in 2015 was approximately 111,000, of which 90,000 were full time.

It should be noted that our Amazon employment estimate for 2015 is lower than for 2014. This is the result of better data availability rather than any productivity change on Amazon's part. In 2014, we estimated total Amazon distribution employment at 134,000; had we used the new methodology, it would have been 96,000. As a result of that change, our estimate for the net loss of retail jobs in 2014 would have been 172,000.

Fiscal Impact: Property Tax

Above, we discuss the very real displacement of retail space from communities to the Internet. This displacement has contributed to a slowdown in the occupancy and development of commercial space. This, in turn, has an invisible but certain impact on an essential source of revenue for most states, cities, and schools: property taxes.

The displacement of retail square footage has a very real cost when calculating the effect that Amazon has upon tax revenue. The retail square footage that is being lost is generally valued at much higher rates than distribution centers that are located on the periphery of cities.

To calculate lost property tax revenue, we applied a common assessment rule of thumb for valuing revenue producing properties. The formula divides the total net income (assumed to be 5% of revenues) by the capitalization rate (assumed to be 7%) which gave a corresponding property value. This formulation provides a reasonable estimate when looking at the larger picture at the national and even state level. Statewide average property tax rates were then applied using estimates from the Tax Foundation.

Displaced retail space imposes hefty property tax cost of approximately \$525 million in 2015, up from \$420 million in 2014. Looking at the breakdowns by state, Texas is estimated to have the largest loss of revenue, with almost \$70 million being lost annually due the reduction of retail space associated with sales lost due to Amazon. However, all 50 states are losing revenue for the same reason.

We have been unable to come to a credible estimate of the property taxes associated with distribution facilities due to the complexities of state industrial property assessment and taxation. However, as virtually all retail goods pass through similar facilities, we would anticipate very little difference in industrial property tax impacts between Amazon and conventional retailers.

**AMAZON PROPERTY TAX GAP, 2015
Lost Retail
Property Tax
(Millions)**

State	Property Tax (Millions)
Alabama	\$ 2.6
Alaska	\$ 1.2
Arizona	\$ 9.3
Arkansas	\$ 1.8
California	\$ 39.0
Colorado	\$ 9.7
Connecticut	\$ 9.6
Delaware	\$ 0.5
Florida	\$ 27.8
Georgia	\$ 10.7
Hawaii	\$ 1.1
Idaho	\$ 1.7
Illinois	\$ 29.3
Indiana	\$ 11.9
Iowa	\$ 7.7
Kansas	\$ 7.5
Kentucky	\$ 3.3
Louisiana	\$ 1.8
Maine	\$ 1.6
Maryland	\$ 7.5
Massachusetts	\$ 24.3
Michigan	\$ 20.2
Minnesota	\$ 13.4
Mississippi	\$ 2.1
Missouri	\$ 9.5
Montana	\$ 1.1
Nebraska	\$ 4.2
Nevada	\$ 2.7
New Hampshire	\$ 3.6
New Jersey	\$ 25.7
New Mexico	\$ 1.3
New York	\$ 47.8
North Carolina	\$ 8.4
North Dakota	\$ 1.6
Ohio	\$ 20.6
Oklahoma	\$ 3.5
Oregon	\$ 3.9
Pennsylvania	\$ 28.3
Rhode Island	\$ 3.0
South Carolina	\$ 5.0
South Dakota	\$ 1.5
Tennessee	\$ 6.7
Texas	\$ 68.3
Utah	\$ 2.6
Vermont	\$ 1.4
Virginia	\$ 7.6
Washington	\$ 8.9
West Virginia	\$ 1.4
Wisconsin	\$ 12.3
Wyoming	\$ 0.5
DC	\$ 0.9
Total	\$ 528.0

Source: Civic Economics, Tax Foundation

CONCLUSION

As we stated in the 2014 analysis, this study should not be read as tilting at the vast windmill that is Amazon. As with the big box stores that preceded it, individuals and communities are likely prepared to accept tradeoffs for the convenience that Amazon offers. We do not believe, though, that Americans yet comprehend the nature of the tradeoffs to come.

While sales tax fairness initiatives have made a difference in some states, in others the sales tax gap has yet to be closed, and all states face an ever-widening property tax gap. The result is a growing budget shortfall for communities and states nationwide. We also hope this study will contribute to a reasoned consideration of the potentially more impactful land use challenges presented.

American communities have adapted to monumental changes in the retail sector before, but our adaptations have not always been successful. This wave of change will go beyond who owns the store and how it is managed, it will see the store relocate to remote industrial parks and delivery vans. Managing these changes will be a defining challenge for 21st Century American communities.

As these changes crept in over the last 20 years, the impacts were hard to detect. However, the country has reached a tipping point, and as shown below, change has become dramatic even on an annual basis.

AMAZON AND EMPTY STOREFRONTS, 2014-15 CHANGE SUMMARY

	2014	2015		
Amazon Retail Displacement Sales	\$44,092.0	\$55,568.2	^	26%
Fiscal Impacts				
Total Sales Tax Lost (Millions)	\$625.4	\$703.8	^	13%
Total Property Tax Lost (Millions)	\$419.8	\$528.0	^	26%
Total Revenue Lost (Millions)	\$1,045.1	\$1,231.9	^	18%
Total Revenue Lost Per Household	\$8.99	\$10.60	^	18%
Land Use Impacts				
Total Sq Footage Displaced (Millions)	107.3	133.3	^	24%
Total Stores Displaced	30,983	38,669	^	25%
Total Net Employees Displaced *	172,000	222,000	^	29%

2014 estimates of Amazon distribution network employment have been revised down from the previous report as a result of better information and a consequent methodological change.

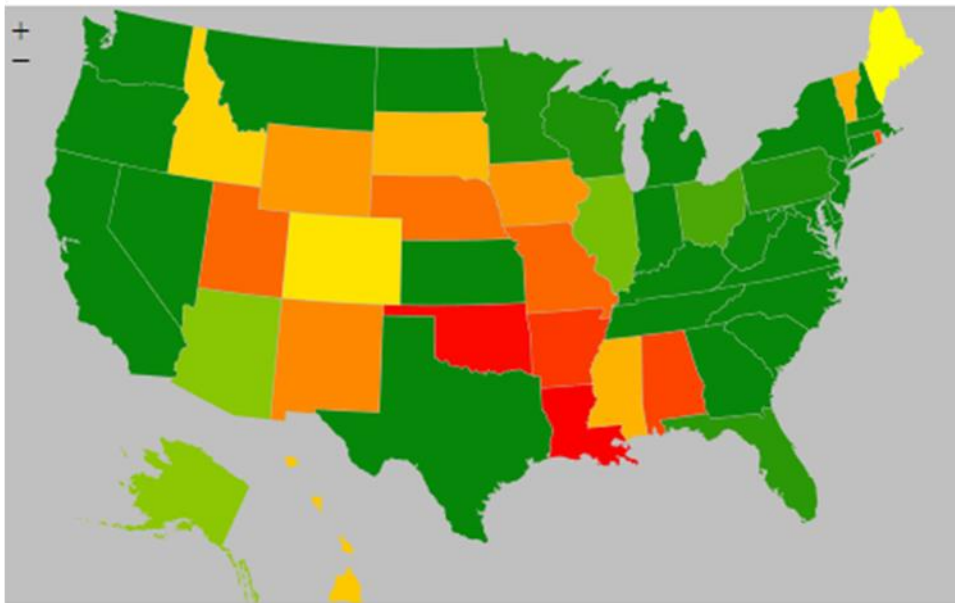
Source: Civic Economics

AMAZON AND EMPTY STOREFRONTS, 2015 UPDATE

STATE-LEVEL SUMMARY TABLE	FISCAL IMPACTS				LAND USE IMPACTS		
	Sales Tax Gap (Millions)	Property Tax Gap (Millions)	Combined Tax Gap (Millions)	Per Household	Square Feet (Millions)	Equivalent Shops	Net Jobs Including Distribution
Alabama	\$ 63.5	\$ 2.6	\$ 66.1	\$ 35.89	1.7	495	-4,273
Alaska	\$ 2.8	\$ 1.2	\$ 4.0	\$ 15.76	0.4	108	-935
Arizona	\$ 25.7	\$ 9.3	\$ 35.0	\$ 14.65	2.4	692	889
Arkansas	\$ 40.2	\$ 1.8	\$ 42.0	\$ 37.09	1.0	302	-2,604
California	\$ -	\$ 39.0	\$ 39.0	\$ 3.09	17.5	5,085	-32,611
Colorado	\$ 45.2	\$ 9.7	\$ 54.9	\$ 27.45	2.4	692	-5,976
Connecticut	\$ -	\$ 9.6	\$ 9.6	\$ 7.11	2.0	576	-1,418
Delaware	\$ -	\$ 0.5	\$ 0.5	\$ 1.40	0.4	116	1,088
Florida	\$ 21.5	\$ 27.8	\$ 49.3	\$ 6.83	7.9	2,301	-15,831
Georgia	\$ -	\$ 10.7	\$ 10.7	\$ 3.01	3.7	1,060	-6,073
Hawaii	\$ 11.1	\$ 1.1	\$ 12.2	\$ 27.19	0.6	178	-1,536
Idaho	\$ 14.0	\$ 1.7	\$ 15.7	\$ 26.84	0.6	162	-1,402
Illinois	\$ 44.8	\$ 29.3	\$ 74.1	\$ 15.50	5.5	1,582	-10,146
Indiana	\$ -	\$ 11.9	\$ 11.9	\$ 4.76	2.4	696	2,336
Iowa	\$ 35.1	\$ 7.7	\$ 42.8	\$ 34.76	1.2	360	-3,105
Kansas	\$ -	\$ 7.5	\$ 7.5	\$ 6.72	1.2	340	-2,549
Kentucky	\$ -	\$ 3.3	\$ 3.3	\$ 1.95	1.5	445	5,135
Louisiana	\$ 68.1	\$ 1.8	\$ 69.8	\$ 40.63	1.8	526	-4,540
Maine	\$ 11.3	\$ 1.6	\$ 12.9	\$ 23.41	0.5	143	-1,235
Maryland	\$ -	\$ 7.5	\$ 7.5	\$ 3.46	2.9	839	-7,244
Massachusetts	\$ -	\$ 24.3	\$ 24.3	\$ 9.58	3.5	1,002	-7,487
Michigan	\$ -	\$ 20.2	\$ 20.2	\$ 5.28	3.7	1,075	-8,655
Minnesota	\$ 3.4	\$ 13.4	\$ 16.8	\$ 7.94	2.4	688	-4,238
Mississippi	\$ 28.7	\$ 2.1	\$ 30.8	\$ 28.16	1.0	282	-2,437
Missouri	\$ 75.4	\$ 9.5	\$ 84.8	\$ 35.93	2.3	669	-5,775
Montana	\$ -	\$ 1.1	\$ 1.1	\$ 2.70	0.4	108	-935
Nebraska	\$ 22.8	\$ 4.2	\$ 27.0	\$ 36.89	0.8	232	-2,003
Nevada	\$ -	\$ 2.7	\$ 2.7	\$ 2.67	1.1	313	1,671
New Hampshire	\$ -	\$ 3.6	\$ 3.6	\$ 6.96	0.7	189	-1,541
New Jersey	\$ -	\$ 25.7	\$ 25.7	\$ 8.07	4.6	1,326	-6,820
New Mexico	\$ 22.5	\$ 1.3	\$ 23.8	\$ 31.08	0.7	209	-1,803
New York	\$ -	\$ 47.8	\$ 47.8	\$ 6.59	9.4	2,722	-23,503
North Carolina	\$ -	\$ 8.4	\$ 8.4	\$ 2.24	3.6	1,048	-8,716
North Dakota	\$ -	\$ 1.6	\$ 1.6	\$ 5.46	0.4	104	-901
Ohio	\$ 25.8	\$ 20.6	\$ 46.4	\$ 10.16	4.5	1,292	-11,150
Oklahoma	\$ 56.6	\$ 3.5	\$ 60.1	\$ 41.45	1.5	449	-3,873
Oregon	\$ -	\$ 3.9	\$ 3.9	\$ 2.54	1.5	433	-3,739
Pennsylvania	\$ 7.8	\$ 28.3	\$ 36.1	\$ 7.29	5.5	1,597	-862
Rhode Island	\$ 13.6	\$ 3.0	\$ 16.6	\$ 40.52	0.5	135	-1,168
South Carolina	\$ -	\$ 5.0	\$ 5.0	\$ 2.78	1.7	483	-796
South Dakota	\$ 8.4	\$ 1.5	\$ 10.0	\$ 30.46	0.3	101	-868
Tennessee	\$ -	\$ 6.7	\$ 6.7	\$ 2.68	2.5	735	904
Texas	\$ -	\$ 68.3	\$ 68.3	\$ 7.58	11.4	3,314	-19,181
Utah	\$ 28.6	\$ 2.6	\$ 31.2	\$ 34.84	1.0	298	-2,571
Vermont	\$ 6.8	\$ 1.4	\$ 8.2	\$ 31.90	0.3	77	-668
Virginia	\$ -	\$ 7.6	\$ 7.6	\$ 2.49	3.8	1,102	-5,897
Washington	\$ -	\$ 8.9	\$ 8.9	\$ 3.37	3.3	944	-2,001
West Virginia	\$ 0.3	\$ 1.4	\$ 1.7	\$ 2.28	0.6	178	-1,536
Wisconsin	\$ 4.1	\$ 12.3	\$ 16.4	\$ 7.15	2.3	669	-1,752
Wyoming	\$ 6.3	\$ 0.5	\$ 6.8	\$ 30.24	0.3	81	-701
DC	\$ 9.6	\$ 0.9	\$ 10.5	\$ 39.38	0.4	116	-1,002
Total	\$ 703.8	\$ 528.0	\$ 1,231.9	\$ 10.60	133.3	38,669	-222,033

Source: Civic Economics

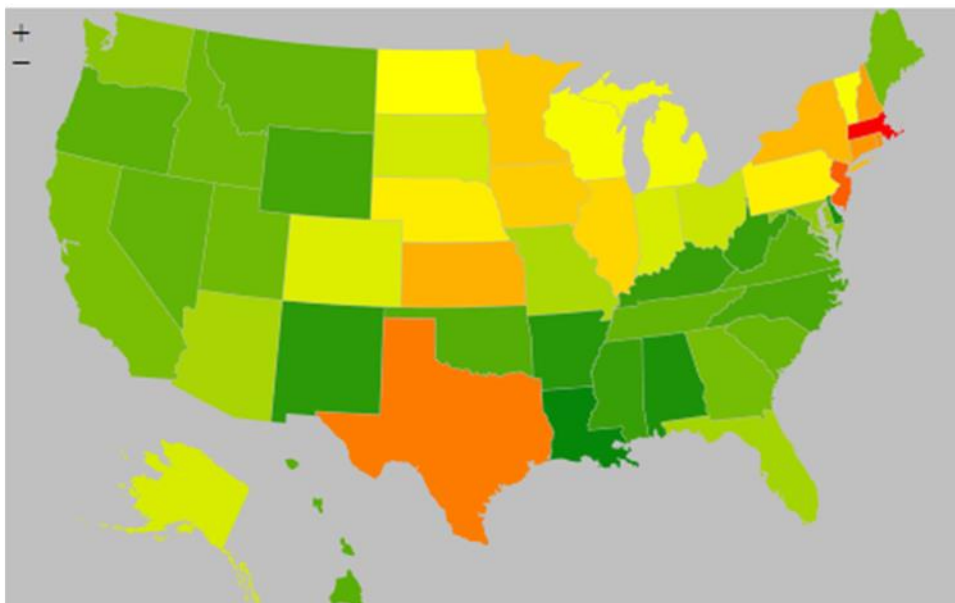
HEAT MAP: SALES TAX LOSS PER HOUSEHOLD, 2015



Lowest Sales Tax Loss per HH
Greatest Sales Tax Loss per HH

Source: Civic Economics

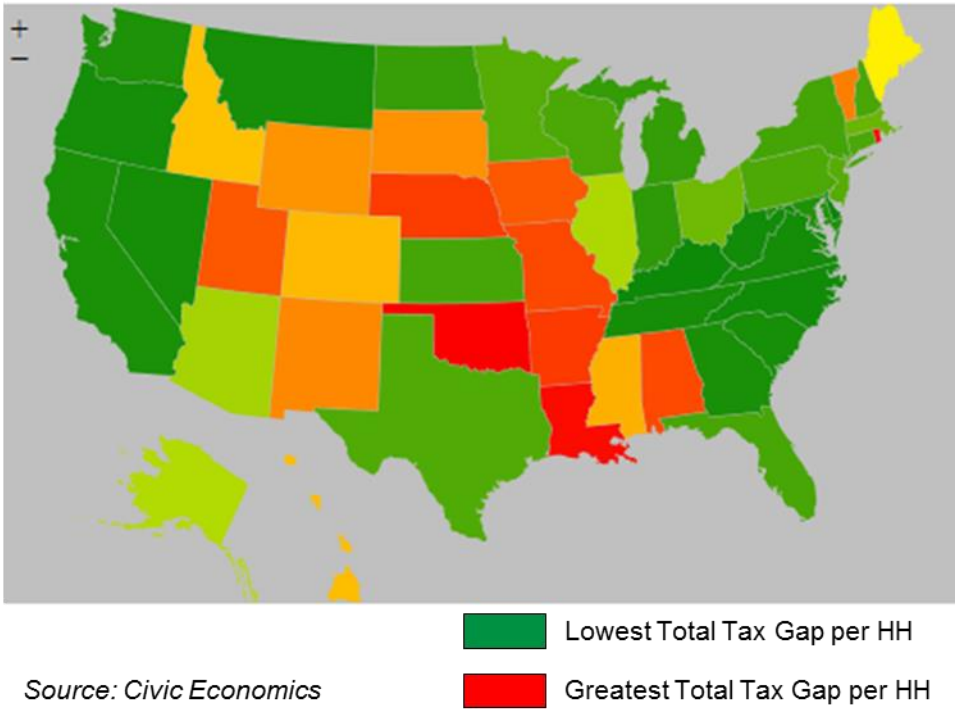
HEAT MAP: PROPERTY TAX LOSS PER HOUSEHOLD, 2015



Lowest Property Tax Loss per HH
Greatest Property Tax Loss per HH

Source: Civic Economics

HEAT MAP: TOTAL TAX GAP PER HOUSEHOLD, 2015



SALES TAX FAIRNESS STATUS AT END OF 2015

