

# PRIME NUMBERS: AMAZON AND AMERICAN COMMUNITIES



EMPTY SHOPS



LOST JOBS



UNPAID TAXES

FEBRUARY 2019



CIVIC ECONOMICS  
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**For the American Booksellers Association**

Dan Cullen, Senior Strategy Officer  
914.406.7560 or [dan@Bookweb.org](mailto:dan@Bookweb.org)

[www.Bookweb.org](http://www.Bookweb.org)

**For Civic Economics**

Matt Cunningham, Partner  
773.251.5926 or [mattc@CivicEconomics.com](mailto:mattc@CivicEconomics.com)  
or  
Dan Houston, Partner  
512.853.9044 or [dhouston@CivicEconomics.com](mailto:dhouston@CivicEconomics.com)

[www.CivicEconomics.com](http://www.CivicEconomics.com)

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Civic Economics and the American Booksellers Association (ABA) are pleased to share this, the third edition of *Prime Numbers: Amazon and American Communities*. This series analyzes available data to quantify the economic and fiscal impacts of Amazon’s retail operations in the United States.











In the *Prime Numbers* series, we estimate Amazon’s total retail sales in the United States, both those sales in which Amazon is the seller and those in which third-parties act as the seller utilizing Amazon’s Marketplace and fulfillment services. From there we estimate state and local taxes paid and unpaid for each state and the District of Columbia, and the displacement of retail shops and jobs from bricks and mortar stores and commercial districts.

For this year, we have added an analysis of the substantial positive local economic advantages provided by independent booksellers compared to chains and, especially, to Amazon.



Finally, we have provided an Addendum that uses newly available tax revenue data from one American state to evaluate our methodology and point the way toward better information for states considering tax policy for online sales.

KEY FINDINGS AT A GLANCE

### PRIME NUMBERS: AMAZON AND AMERICAN COMMUNITIES

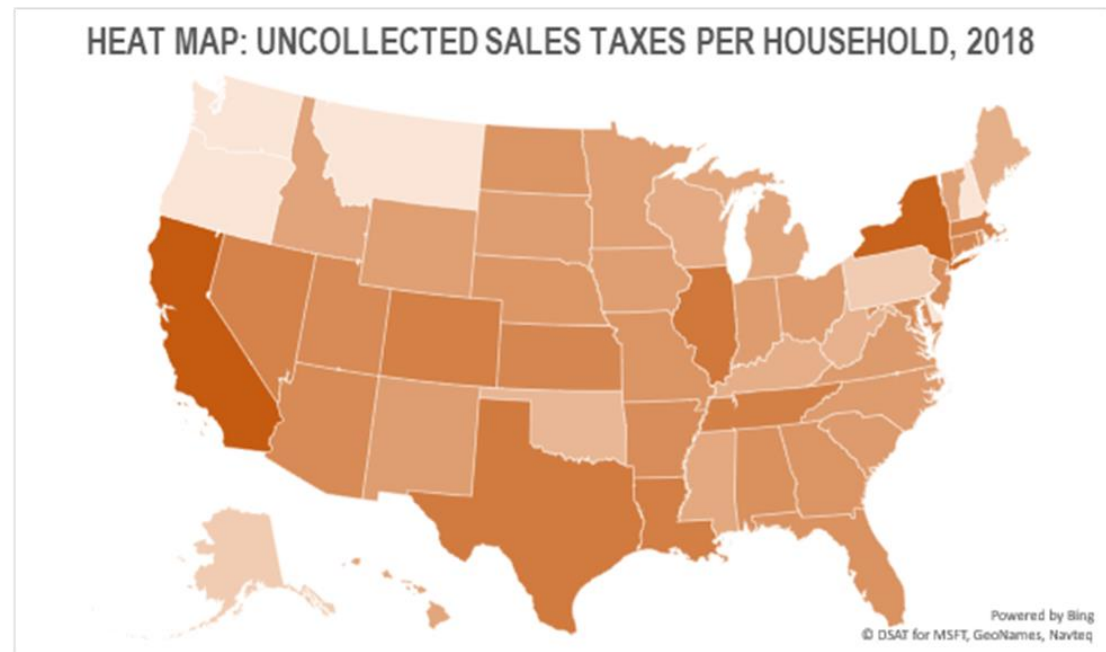
<p>IN <b>2018</b>, AMAZON AND THIRD-PARTY MARKETPLACE VENDORS SOLD</p>  <p><b>\$189 BILLION</b> OF RETAIL GOODS IN THE UNITED STATES</p>	<p>THESE TRANSACTIONS RESULTED IN:</p> <table border="1"><tr><td><p><b>62,000</b></p><p>DISPLACED SHOPS, OR <b>540 MILLION</b> SQUARE FEET</p></td><td><p><b>900,000</b></p><p>DISPLACED RETAIL JOBS</p><p>AMAZON FULFILMENT EMPLOYS 200,000 LEAVING A NET LOSS OF 700,000 RETAIL JOBS</p></td><td><p><b>\$5.5-7.0 BILLION</b></p><p>UNCOLLECTED SALES TAXES</p></td></tr></table>	<p><b>62,000</b></p>  <p>DISPLACED SHOPS, OR <b>540 MILLION</b> SQUARE FEET</p>	<p><b>900,000</b></p>  <p>DISPLACED RETAIL JOBS</p> <p>AMAZON FULFILMENT EMPLOYS 200,000 LEAVING A NET LOSS OF 700,000 RETAIL JOBS</p>	<p><b>\$5.5-7.0 BILLION</b></p>  <p>UNCOLLECTED SALES TAXES</p>
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LEARN MORE AT [CivicEconomics.com/PrimeNumbers](https://CivicEconomics.com/PrimeNumbers)

SOURCE: Prime Numbers: Amazon and American Communities, 2019; Produced by Civic Economics for the American Booksellers Association

### AMAZON SALES TAX AVOIDANCE PER HOUSEHOLD 2018



SOURCE: Prime Numbers 2019, Civic Economics and the American Booksellers Association

## **BACKGROUND**

### **Empty Storefronts Studies (2014-2015)**

Civic Economics has previously analyzed the economic and fiscal impacts of Amazon in reports entitled *Empty Storefronts* (January and September of 2016) and *Prime Numbers* (2018). The former were based on the 2014 and 2015 Amazon Annual Reports, and the latter on the 2016 Annual Report. Both analyzed Amazon's annual sales of retail goods, allocated those sales across states based on disposable income, and estimated the impact of those sales on the following:

- Retail storefronts and square footage displaced
- Retail jobs displaced, including Amazon distribution employment
- State and local sales taxes uncollected on Amazon sales
- Local property taxes lost to displaced storefronts

### **Prime Numbers (2018)**

For 2018, the study was initially conceived as a simple update to the previous *Empty Storefronts* studies to reflect data from the 2016 Annual Report. That annual report, released in the spring of 2017, was the first to provide enough information to develop a credible analysis of sales through Amazon's Marketplace for third-party sellers, providing that key data back through 2014.

In light of that significant and newly available information, Civic Economics and ABA elected to conduct a re-analysis for 2014 and 2015, with an update for 2016, based on an estimate not just of Amazon's own retail sales, as before, but adding in the sales it facilitates through Marketplace.

For 2019, we have carried that analysis forward and timed the report to closely follow the release of Amazon's 2018 Annual Report. Thus, this iteration includes all new data and findings for both 2017 and 2018.

### **Understanding Amazon Third-Party Sales**

Until recent years, the vast majority of items sold through Amazon.com were sold directly by Amazon, in much the same way a conventional retailer manages online sales. That is, the retailer procures the goods for resale, markets them, conducts a sale, and delivers them to consumers.

Amazon's burgeoning Marketplace provides an opportunity for third-party sellers to reach the company's vast customer base. Initially understood as a low-cost way for Amazon to broaden its product mix, it has evolved into the core retail growth strategy at the company and a source of high-margin revenue as sellers are charged fees for storage and movement of their goods.

With Marketplace, third-party sellers in possession of a product can offer it for sale alongside Amazon and other sellers, creating an internal competition around price and delivery time. That competition is particularly fierce for placement in the "Buy Box," by which customers can make a default selection; Marketplace sellers and their consultants have developed sophisticated tools aimed at capturing the Buy Box. Losing that direct link to customers can mean unsold inventory and unanticipated storage charges.

Sellers may elect to handle logistics themselves. However, such sellers generally sacrifice the ability to offer Amazon Prime shipping benefits and may well drop off the search page as a result.

Thus, many sellers elect to deliver their goods to Amazon prior to listing, with subsequent storage and movement of those goods handled by Amazon and billed to the seller.

For most goods, Amazon’s commission is in the range of 15%, with reductions for many pricier items. Sellers further pay storage and shipping fees that vary widely, deducted from the seller’s compensation in addition to sales commissions.

We estimate that Amazon retains an average of 20% of the sales price of Marketplace items including commissions and fees for storage and shipping. That, in turn, drives our estimate of total Marketplace retail sales in the United States.



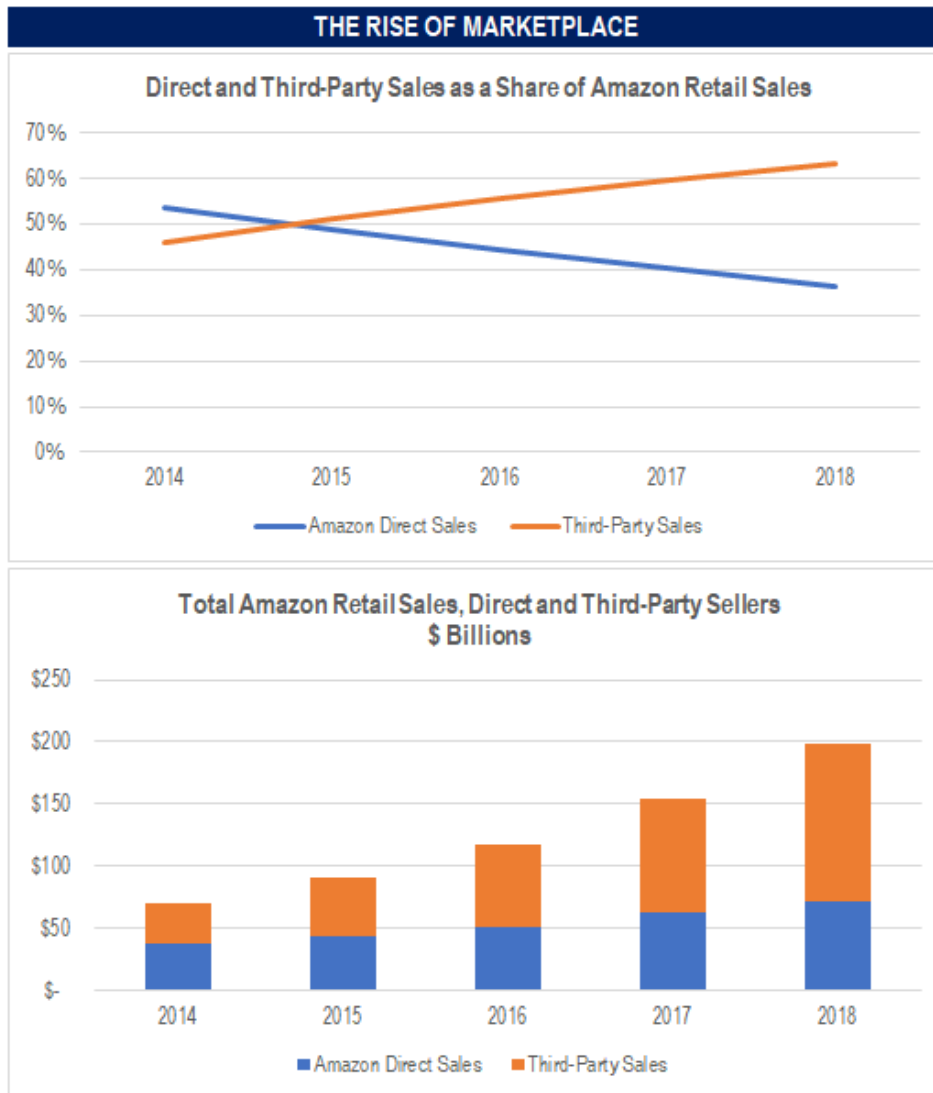
### Estimating Marketplace Retail Sales

Beginning with Amazon’s 2016 Annual Report, new revenue and expense items appeared. The key line item, called *Retail Third-Party Seller Services*, was the first real glimpse at identifying how large Marketplace sales were in relation to those being conducted directly through Amazon. Even though 2016 was the first time this item appeared in the Annual Report, it was also provided for the previous two years, which allowed trends to emerge. Amazon’s third-party service revenue had grown from \$11.7 billion in 2014 to \$16.1 billion in 2015 and increased even more in 2016 to reach \$23.0 billion. So, the revenue Amazon was receiving from third party sellers increased 96% from 2014-16 as Amazon’s direct sales increased 35% in the same time frame.

While the numbers listed above provide a glimpse into the Marketplace sales, they represented global sales and only showed the revenue that Amazon received from the Marketplace transaction and not the actual sales figure that the merchant received, or a consumer paid. To get the results, a few more calculations would be needed.

In order to turn Amazon’s entry for Retail Third-Party Seller Services into actual sales volume we estimated that Amazon was retaining 20% of the total sales price, a figure that is calculated to include a range of commissions and fees that varies among products or various prices and sizes. This would translate into Marketplace sales being five times higher than the reported revenue.

### The Rise and Impact of Marketplace



Source: Amazon Annual Reports, 2016-18, Civic Economics Analysis

Over the last five years, total retail sales with Amazon as the seller increased by a striking 94%. But that near doubling of sales pales beside the growth of third-party sales, which increased more than 300% over the same period.

Marketplace provides Amazon with substantial business advantages. Inventory, rather than costing money, generates fees, a situation other retailers would envy. By bringing sellers into “Fulfillment by Amazon,” which allows Prime shipping and rewards the most competitive sellers with prominent positioning and “Buy Now” placement, the company transforms the costly

overhead of distribution infrastructure into another service business and revenue stream. In addition, with its dominant position in online retail, third-party sellers may feel compelled to sell through Marketplace and to use Fulfillment by Amazon even where they might prefer other arrangements and other service providers.

It should be acknowledged, of course, that Amazon Marketplace provides a new retailing opportunity for those entrepreneurs who have the ability to secure competitively priced inventory, and that many of those entrepreneurs are located in American communities. Many are even existing retail businesses leveraging the Amazon platform to facilitate an online expansion that might otherwise seem impossible. That reality, though, does not impact the findings below, as the study methodology treats online sales as fundamentally in competition with storefront sales and allocates sales tax collections as if Amazon third party vendors were distributed across the states like other online merchants.

It is worth noting that multiple Amazon Books brick-and-mortar “bookstores,” Amazon Go convenience stores, and Amazon Four Star shops are open or in the works across the country. Those openings have accelerated during the study period for *Prime Numbers*, but in-store sales outside of Whole Foods remain an insignificant share of Amazon retail, a share which Amazon does not disclose. Civic Economics will monitor the evolution of this segment for further analysis in the years to come.



## **STUDY APPROACH**

We began the study by using data from the Amazon Annual Reports for 2017 and 2018 to estimate sales by Amazon and its third-party sellers and allocating those sales across the states. We then quantified sales taxes collected and un-collected in each state based on the laws in place in each year. Finally, we estimated the displacement of retail shops and employment in each state.

### **Amazon Sales by State**

The first step in the analysis is to quantify and allocate Amazon's retail sales, both direct and third-party, across the states and for each year from 2014 through 2018. Three steps are required for this allocation:

1. During the study period, Amazon has reported sales figures for North America. Based primarily on the work of other analysts and media reports, Civic Economics estimates that nearly 97% of all North American retail sales through Amazon occur in the United States.
2. Amazon has, since 2014, provided sufficient data for Civic Economics to estimate total third-party sales through Marketplace as described above. Amazon further identifies total sales revenue for its direct retail sales across a few categories. Civic Economics conducts a further analysis to estimate and exclude digital media sales, one category that does not compete directly with brick and mortar retailers.
3. To allocate that revenue among the states and the District of Columbia, we focused on disposable income as a strong predictor of retail sales. For each state and each year, we calculated its share of total disposable income in the states and allocated Amazon sales on that basis.

The table on the following page shows estimated direct and third-party retail sales by state for 2014 through 2018.



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AMAZON RETAIL SALES BY STATE AND SELLER, 2014-18 (\$ Billions)										
	2014		2015		2016		2017		2018	
	Direct	Third-Party	Direct	Third-Party	Direct	Third-Party	Direct	Third-Party	Direct	Third-Party
Alabama	455	390	502	526	588	739	707	1,040	812	1,411
Alaska	98	84	113	118	126	159	150	221	172	300
Arizona	634	544	727	761	860	1,081	1,059	1,558	1,226	2,131
Arkansas	279	239	310	324	362	456	444	654	502	872
California	4,625	3,965	5,720	5,986	6,772	8,515	8,354	12,290	9,754	16,950
Colorado	630	540	755	790	889	1,118	1,088	1,600	1,273	2,212
Connecticut	518	444	671	702	783	984	912	1,342	1,041	1,809
Delaware	105	90	123	128	143	180	171	252	194	338
Florida	2,097	1,798	2,449	2,563	2,911	3,660	3,566	5,246	4,121	7,161
Georgia	972	833	1,120	1,172	1,329	1,671	1,636	2,407	1,887	3,278
Hawaii	164	140	188	197	223	280	269	396	304	528
Idaho	153	131	173	181	203	255	252	371	297	517
Illinois	1,487	1,275	1,759	1,840	2,055	2,584	2,452	3,607	2,842	4,938
Indiana	641	550	755	790	889	1,118	1,068	1,571	1,223	2,125
Iowa	345	295	390	408	452	568	525	772	604	1,049
Kansas	325	279	373	391	435	547	503	740	573	996
Kentucky	413	354	464	486	540	679	636	936	734	1,275
Louisiana	490	420	545	571	627	789	739	1,087	833	1,448
Maine	139	119	155	162	182	229	218	321	253	440
Maryland	792	679	914	957	1,074	1,351	1,306	1,922	1,497	2,602
Massachusetts	937	803	1,157	1,210	1,367	1,719	1,639	2,411	1,903	3,306
Michigan	981	841	1,155	1,209	1,357	1,706	1,635	2,405	1,871	3,252
Minnesota	635	544	759	795	887	1,115	1,073	1,578	1,242	2,158
Mississippi	260	223	283	296	331	416	393	579	444	771
Missouri	623	534	700	732	821	1,032	968	1,424	1,123	1,951
Montana	102	87	117	123	136	171	167	246	197	342
Nebraska	218	187	250	262	292	367	351	516	394	685
Nevada	281	241	329	345	395	497	485	714	576	1,001
New Hampshire	175	150	202	212	240	302	280	412	327	569
New Jersey	1,213	1,040	1,460	1,528	1,708	2,148	2,043	3,005	2,370	4,118
New Mexico	197	169	215	225	249	313	295	435	338	588
New York	2,586	2,217	3,158	3,305	3,684	4,632	4,390	6,458	5,279	9,173
North Carolina	971	832	1,113	1,165	1,313	1,652	1,613	2,373	1,871	3,251
North Dakota	97	83	115	121	129	162	150	220	162	281
Ohio	1,208	1,035	1,376	1,440	1,606	2,020	1,928	2,837	2,209	3,839
Oklahoma	415	356	485	507	552	695	619	911	713	1,239
Oregon	401	344	480	502	568	715	696	1,025	823	1,430
Pennsylvania	1,489	1,276	1,732	1,812	2,020	2,540	2,419	3,559	2,784	4,837
Rhode Island	127	109	144	150	168	211	198	291	228	396
South Carolina	445	382	510	534	603	759	736	1,083	853	1,483
South Dakota	99	85	112	117	128	161	152	224	172	299
Tennessee	675	579	755	791	889	1,118	1,078	1,586	1,254	2,178
Texas	3,031	2,598	3,507	3,669	4,090	5,143	4,818	7,088	5,547	9,639
Utah	273	234	320	335	383	482	473	696	564	980
Vermont	74	63	83	87	97	122	116	170	132	230
Virginia	1,000	858	1,187	1,242	1,393	1,751	1,666	2,451	1,903	3,307
Washington	866	742	1,012	1,059	1,201	1,511	1,511	2,224	1,806	3,138
West Virginia	169	145	184	193	211	265	250	367	285	495
Wisconsin	627	538	721	754	842	1,059	1,006	1,479	1,157	2,010
Wyoming	77	66	89	94	100	125	119	175	136	236
DC	121	104	134	140	159	200	194	285	226	393
Total	35,735	30,635	42,050	44,002	49,364	62,070	59,519	87,561	69,029	119,957

SOURCES: Civic Economics; Amazon Annual Reports for 2014-2018

## **STATE AND LOCAL SALES TAXES**

The rise of online retail has had significant fiscal impacts at the state and local level across the United States. Over the years covered by this study, various states endeavored to increase sales tax collections on Amazon sales, culminating in Amazon's nationwide agreement in 2017 to collect state and local sales taxes on all direct sales nationwide. Though that alleviated the problem to an extent, the continued growth of third-party sales, for which Amazon does not automatically collect sales taxes, has again set the company on a path of rising tax avoidance.

### **Marketplace and Sales Taxes**

Amazon's Marketplace has been referred to as "the wild west of retail," and with good reason. As the company works to streamline the offerings of competing sellers, a parallel industry of consultants has sprung up to track prices and logistical considerations along with the peculiarities of Amazon's fee structure (storage fees rise in October, for example, in preparation for holiday inventory).

In addition, Amazon has left sales tax collection decisions up to the sellers, who must affirmatively choose to ask Amazon to collect sales tax on their behalf from purchasers in states where they recognize a nexus. As one might imagine, the potential for sales tax avoidance is built into the system, particularly with regard to small sellers with limited physical presence around the United States. Estimating the proportion of sales taxes due and collected by independent sellers would require a substantial additional study well beyond the scope of this report.

Fortunately, in December of 2017 the General Accounting Office released a report with the pithy title: *SALES TAXES: States Could Gain Revenue from Expanded Authority, but Businesses Are Likely to Experience Compliance Costs*<sup>1</sup>. There, GAO analysts reviewed available data for three online third-party marketplaces (which we believe to be eBay, Etsy, and Amazon Marketplace) to develop a meaningful estimate of sales tax compliance and potential.

Building from the assumption that third-party sellers consistently collect and remit sales taxes for the states in which they are based, the GAO arrives at the following estimate:

"Third-party sellers in three marketplaces studied (including Amazon) likely collect and remit between 14% and 33% of potential sales taxes to state and local authorities."

Though we suspect this may substantially overstate the sales tax compliance practices of Amazon's third-party sellers, we have applied these numbers as the range of sales taxes likely collected at the state and local levels.

For this analysis of 2014 through 2018, we have identified the states in which Amazon was and was not collecting state and/or local taxes on each kind of sales in each year. During the course of the study period, state sales tax collection policies were evolving with regard to Amazon. Some states were forcing 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.

Starting in April 2017, Amazon started collecting full state and local taxes for their own sales; this change is reflecting in our findings. However, this still left out collections from third party

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<sup>1</sup> <https://www.gao.gov/assets/690/688437.pdf>

merchants, which as we showed earlier, has long since overtaken Amazon's direct sales and are growing at a faster rate..

In June 2018, in *South Dakota v. Wayfair*, the United States Supreme Court affirmed the ability of states to enforce sales and use tax regulations on online retailers selling into the state (with some limitations).

Beginning in 2018, some states have passed laws that have required Amazon to collect sales tax from third party sales. Washington began collecting such taxes on January 1, 2018 followed by Pennsylvania (April 2018), Oklahoma (July 2018), Minnesota (October 2018), New Jersey (November 2018), and Connecticut (December 2018). Alabama and Iowa started collecting third party sales tax on the first day of 2019, and we anticipate many more states will do the same in the coming year.

### **State by State Sales Tax Tables**

The tables that follow account for all of these factors and include estimated sales for Amazon and Marketplace transactions, accounting for local tax policies at the time. For a closer look at the revenue experience in one state, read the Addendum to this report, which reviews Oklahoma Use Tax collections before and after the change in policy.

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POTENTIAL SALES TAX COLLECTED AND UNCOLLECTED						
2018 (\$ Millions)						
	Sales in State		Collected		Uncollected	
	Direct	Third-Party	At 14% Rate	At 33% Rate	At 14% Rate	At 33% Rate
Alabama	811.7	1410.6	91.8	116.2	110.4	86.0
Alaska	172.4	299.6	3.8	4.8	4.5	3.5
Arizona	1226.1	2130.7	127.0	160.7	152.6	118.9
Arkansas	501.6	871.6	58.7	74.3	70.5	55.0
California	9753.8	16949.9	1035.6	1310.7	1244.9	969.8
Colorado	1272.9	2212.0	119.0	150.6	143.1	111.4
Connecticut	1041.1	1809.1	90.4	110.4	90.6	70.6
Delaware	194.5	338.0	0.0	0.0	0.0	0.0
Florida	4120.6	7160.8	348.4	440.9	418.8	326.2
Georgia	1886.6	3278.5	167.7	212.2	201.6	157.1
Hawaii	303.9	528.2	16.4	20.8	19.8	15.4
Idaho	297.3	516.7	22.3	28.2	26.8	20.9
Illinois	2841.8	4938.4	307.4	389.0	369.5	287.9
Indiana	1223.1	2125.5	106.4	134.7	128.0	99.7
Iowa	603.7	1049.1	51.0	64.6	61.3	47.8
Kansas	573.0	995.8	61.8	78.3	74.3	57.9
Kentucky	734.0	1275.5	54.8	69.3	65.8	51.3
Louisiana	833.4	1448.3	103.8	131.4	124.8	97.2
Maine	253.4	440.3	17.3	21.9	20.8	16.2
Maryland	1497.5	2602.3	111.7	141.4	134.3	104.6
Massachusetts	1902.6	3306.4	147.8	187.1	177.7	138.5
Michigan	1871.4	3252.1	139.6	176.7	167.8	130.7
Minnesota	1242.0	2158.3	149.2	172.1	103.4	80.6
Mississippi	443.8	771.2	39.0	49.4	46.9	36.5
Missouri	1122.8	1951.2	112.1	141.9	134.7	105.0
Montana	196.7	341.8	0.0	0.0	0.0	0.0
Nebraska	394.0	684.6	33.7	42.7	40.6	31.6
Nevada	576.3	1001.4	58.3	73.8	70.1	54.6
New Hampshire	327.4	568.9	0.0	0.0	0.0	0.0
New Jersey	2369.6	4117.8	234.3	277.5	195.5	152.3
New Mexico	338.3	587.9	32.2	40.8	38.8	30.2
New York	5278.7	9173.3	557.2	705.2	669.8	521.8
North Carolina	1871.0	3251.3	161.7	204.6	194.3	151.4
North Dakota	161.9	281.3	13.7	17.3	16.5	12.8
Ohio	2209.2	3839.2	196.4	248.5	236.1	183.9
Oklahoma	712.9	1238.8	126.4	136.9	47.5	37.0
Oregon	823.0	1430.2	0.0	0.0	0.0	0.0
Pennsylvania	2783.5	4837.2	417.2	414.7	65.9	68.5
Rhode Island	227.6	395.6	19.8	25.1	23.8	18.6
South Carolina	853.2	1482.6	78.2	98.9	94.0	73.2
South Dakota	172.0	299.0	13.7	17.3	16.5	12.8
Tennessee	1253.6	2178.4	147.4	186.6	177.2	138.1
Texas	5546.6	9638.8	563.4	713.0	677.2	527.6
Utah	563.7	979.7	47.5	60.1	57.0	44.4
Vermont	132.2	229.8	10.2	12.9	12.2	9.5
Virginia	1903.0	3307.1	133.2	168.6	160.1	124.7
Washington	1805.7	3137.9	453.8	453.8	0.0	0.0
West Virginia	285.0	495.2	22.6	28.6	27.1	21.1
Wisconsin	1156.9	2010.5	78.0	98.7	93.7	73.0
Wyoming	135.9	236.2	9.2	11.7	11.1	8.6
DC	226.0	392.8	16.2	20.5	19.4	15.1
<b>Total</b>	<b>69,028.9</b>	<b>119,957.4</b>	<b>6,907.5</b>	<b>8,445.1</b>	<b>7,037.4</b>	<b>5,499.7</b>

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POTENTIAL SALES TAX COLLECTED AND UNCOLLECTED						
2017 (\$ Millions)						
	Sales in State		Collected		Uncollected	
	Direct	Third-Party	At 14%Rate	At 33%Rate	At 14%Rate	At 33%Rate
Alabama	706.6	1039.6	76.4	94.2	80.2	62.5
Alaska	150.3	221.2	2.7	3.4	3.9	3.2
Arizona	1059.2	1558.3	99.8	124.2	116.2	91.7
Arkansas	444.4	653.7	41.6	53.1	60.6	49.0
California	8354.3	12290.5	854.4	1052.4	896.3	698.3
Colorado	1087.9	1600.4	98.4	121.2	103.2	80.4
Connecticut	912.4	1342.3	69.9	86.1	73.3	57.1
Delaware	171.4	252.1	0.0	0.0	0.0	0.0
Florida	3565.6	5245.6	281.7	348.1	305.2	238.8
Georgia	1636.4	2407.4	138.1	170.2	144.9	112.9
Hawaii	268.9	395.5	11.8	15.0	17.1	13.9
Idaho	252.2	371.0	15.3	19.5	22.3	18.0
Illinois	2451.5	3606.5	244.0	303.2	280.1	220.8
Indiana	1067.7	1570.8	90.1	111.0	94.6	73.7
Iowa	524.7	771.9	43.0	53.0	45.1	35.2
Kansas	502.9	739.8	52.2	64.3	54.8	42.7
Kentucky	636.3	936.0	46.0	56.7	48.3	37.6
Louisiana	738.7	1086.8	88.9	109.5	93.3	72.7
Maine	218.3	321.2	12.1	15.4	17.6	14.2
Maryland	1306.3	1921.8	94.5	116.4	99.2	77.3
Massachusetts	1639.0	2411.3	123.5	152.2	129.6	101.0
Michigan	1634.9	2405.1	118.3	145.7	124.1	96.7
Minnesota	1072.6	1578.0	94.6	116.5	99.2	77.3
Mississippi	393.3	578.6	28.0	35.7	40.7	33.0
Missouri	967.9	1423.9	91.9	113.2	96.4	75.1
Montana	167.3	246.1	0.0	0.0	0.0	0.0
Nebraska	350.9	516.2	29.1	35.8	30.5	23.8
Nevada	485.1	713.7	46.7	57.5	49.0	38.2
New Hampshire	280.3	412.4	0.0	0.0	0.0	0.0
New Jersey	2042.8	3005.2	172.4	212.4	180.9	140.9
New Mexico	295.5	434.7	22.4	28.7	32.7	26.5
New York	4390.0	6458.4	449.5	553.7	471.6	367.4
North Carolina	1613.2	2373.3	134.2	165.3	140.8	109.7
North Dakota	149.7	220.2	12.2	15.1	12.8	10.0
Ohio	1928.5	2837.0	160.7	199.2	179.6	141.1
Oklahoma	619.3	911.1	55.1	70.5	80.3	65.0
Oregon	696.5	1024.6	0.0	0.0	0.0	0.0
Pennsylvania	2419.1	3558.9	183.3	226.2	195.7	152.8
Rhode Island	197.9	291.1	16.7	20.6	17.5	13.7
South Carolina	736.4	1083.4	64.2	79.1	67.4	52.5
South Dakota	152.3	224.0	11.6	14.3	12.2	9.5
Tennessee	1078.0	1586.0	123.0	151.5	129.0	100.5
Texas	4818.1	7088.1	474.7	584.7	498.0	388.0
Utah	472.9	695.7	38.6	47.5	40.4	31.5
Vermont	115.6	170.1	8.6	10.6	9.0	7.0
Virginia	1666.1	2451.0	113.1	139.3	118.7	92.5
Washington	1511.5	2223.6	162.6	200.3	170.6	132.9
West Virginia	249.7	367.4	18.8	23.2	20.0	15.6
Wisconsin	1005.6	1479.4	64.8	80.0	69.7	54.4
Wyoming	119.2	175.3	6.5	8.3	9.5	7.7
DC	193.7	285.0	13.4	16.5	14.1	11.0
<b>Total</b>	<b>59,519.0</b>	<b>87,561.3</b>	<b>5,199.5</b>	<b>6,420.6</b>	<b>5,596.1</b>	<b>4,375.0</b>

**PRIME NUMBERS: AMAZON AND AMERICAN COMMUNITIES**  
February 2019

POTENTIAL SALES TAX COLLECTED AND UNCOLLECTED						
2016 (\$ Millions)						
	Sales in State		Collected		Uncollected	
	Direct	Third-Party	At 14%Rate	At 33%Rate	At 14%Rate	At 33%Rate
Alabama	588.0	739.3	62.0	74.6	57.0	44.4
Alaska	126.5	159.0	0.4	0.9	4.7	4.1
Arizona	859.6	1080.8	60.6	77.6	99.5	82.5
Arkansas	362.3	455.6	5.9	14.0	70.1	62.1
California	6772.2	8515.4	675.4	812.6	621.0	483.8
Colorado	888.9	1117.7	78.4	94.3	72.1	56.2
Connecticut	782.9	984.4	58.5	70.3	53.8	41.9
Delaware	142.9	179.7	0.0	0.0	0.0	0.0
Florida	2910.6	3659.8	208.8	255.1	228.8	182.5
Georgia	1329.3	1671.4	109.4	131.7	100.6	78.4
Hawaii	222.6	279.8	1.7	4.0	20.1	17.8
Idaho	202.9	255.1	2.2	5.1	25.5	22.5
Illinois	2055.4	2584.4	159.8	202.2	241.6	199.1
Indiana	889.1	1117.9	73.2	88.1	67.3	52.4
Iowa	452.1	568.4	36.2	43.5	33.2	25.9
Kansas	434.9	546.8	44.0	53.0	40.5	31.5
Kentucky	540.1	679.1	38.1	45.9	35.0	27.3
Louisiana	627.4	788.9	73.6	88.6	67.7	52.8
Maine	181.8	228.6	1.8	4.1	20.8	18.4
Maryland	1074.2	1350.7	75.8	91.2	69.7	54.3
Massachusetts	1367.4	1719.4	100.5	120.9	92.4	72.0
Michigan	1356.9	1706.2	95.7	115.2	88.0	68.6
Minnesota	886.6	1114.8	76.2	91.7	70.1	54.6
Mississippi	331.0	416.2	4.1	9.7	48.7	43.1
Missouri	821.0	1032.3	76.0	91.4	69.9	54.4
Montana	136.2	171.2	0.0	0.0	0.0	0.0
Nebraska	291.7	366.8	23.6	28.4	21.7	16.9
Nevada	395.4	497.1	37.1	44.6	34.1	26.6
New Hampshire	239.9	301.7	0.0	0.0	0.0	0.0
New Jersey	1708.1	2147.8	140.6	169.2	129.3	100.7
New Mexico	248.9	312.9	3.3	7.8	39.1	34.6
New York	3683.6	4631.7	367.4	442.1	338.5	263.8
North Carolina	1313.4	1651.5	106.6	128.2	98.0	76.3
North Dakota	128.6	161.7	10.3	12.3	9.4	7.3
Ohio	1606.3	2019.7	112.5	139.9	146.3	118.9
Oklahoma	552.4	694.6	8.6	20.3	101.7	90.1
Oregon	568.3	714.6	0.0	0.0	0.0	0.0
Pennsylvania	2020.1	2540.1	143.8	174.4	145.4	114.8
Rhode Island	167.9	211.1	13.8	16.6	12.7	9.9
South Carolina	603.4	758.7	51.2	61.7	47.2	36.8
South Dakota	128.2	161.1	9.6	11.5	8.8	6.8
Tennessee	889.2	1118.1	98.9	119.0	90.8	70.7
Texas	4090.4	5143.2	393.0	472.8	361.4	281.5
Utah	383.1	481.7	30.5	36.6	28.0	21.8
Vermont	96.9	121.8	7.0	8.5	6.5	5.0
Virginia	1392.7	1751.2	92.2	110.9	84.8	66.1
Washington	1201.5	1510.7	125.8	151.4	116.1	90.5
West Virginia	211.0	265.3	15.0	18.2	15.0	11.8
Wisconsin	841.9	1058.6	50.1	61.0	52.7	41.8
Wyoming	99.6	125.3	1.0	2.2	11.2	9.9
DC	158.7	199.5	10.7	12.9	9.9	7.7
<b>Total</b>	<b>49,363.7</b>	<b>62,069.8</b>	<b>3,970.9</b>	<b>4,836.4</b>	<b>4,206.9</b>	<b>3,341.4</b>

**PRIME NUMBERS: AMAZON AND AMERICAN COMMUNITIES**  
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POTENTIAL SALES TAX COLLECTED AND UNCOLLECTED						
2015 (\$ Millions)						
	Sales in State		Collected		Uncollected	
	Direct	Third-Party	At 14%Rate	At 33%Rate	At 14%Rate	At 33%Rate
Alabama	502.5	525.8	6.6	15.6	85.6	76.7
Alaska	112.7	118.0	0.3	0.7	3.8	3.4
Arizona	727.0	760.8	49.5	61.4	73.2	61.3
Arkansas	309.8	324.2	4.2	9.9	54.7	49.0
California	5720.4	5985.8	556.2	652.6	436.5	340.1
Colorado	755.2	790.3	30.2	41.5	85.7	74.5
Connecticut	670.9	702.0	48.8	57.3	38.3	29.9
Delaware	122.5	128.2	0.0	0.0	0.0	0.0
Florida	2449.0	2562.7	170.8	203.3	162.9	130.5
Georgia	1119.6	1171.5	90.1	105.7	70.3	54.7
Hawaii	188.0	196.7	1.2	2.8	15.5	13.9
Idaho	172.8	180.8	1.5	3.6	19.8	17.7
Illinois	1758.8	1840.4	132.2	162.5	179.1	148.9
Indiana	754.9	790.0	60.6	71.1	47.6	37.0
Iowa	389.9	408.0	3.9	9.2	50.4	45.1
Kansas	373.4	390.7	36.8	43.2	29.0	22.6
Kentucky	464.3	485.9	31.9	37.5	25.1	19.5
Louisiana	545.5	570.8	8.0	18.8	103.4	92.6
Maine	154.7	161.9	1.2	2.9	16.2	14.5
Maryland	914.2	956.6	62.9	73.8	49.4	38.5
Massachusetts	1156.6	1210.3	82.9	97.3	65.1	50.7
Michigan	1155.2	1208.8	79.5	93.2	62.4	48.6
Minnesota	759.4	794.6	63.0	74.0	50.6	39.6
Mississippi	282.9	296.1	2.9	6.9	38.0	34.0
Missouri	699.8	732.2	8.1	19.0	104.6	93.7
Montana	117.4	122.9	0.0	0.0	0.0	0.0
Nebraska	250.3	261.9	2.5	5.9	32.7	29.3
Nevada	329.3	344.6	30.0	35.2	23.8	18.6
New Hampshire	202.3	211.7	0.0	0.0	0.0	0.0
New Jersey	1460.3	1528.1	117.2	137.5	92.0	71.7
New Mexico	215.1	225.1	2.4	5.6	30.9	27.6
New York	3158.2	3304.7	307.1	360.4	241.6	188.3
North Carolina	1113.1	1164.7	88.1	103.3	69.1	53.8
North Dakota	115.2	120.5	8.9	10.5	7.0	5.5
Ohio	1375.8	1439.6	93.5	113.0	107.5	88.0
Oklahoma	484.7	507.2	6.3	14.8	81.5	73.0
Oregon	479.7	501.9	0.0	0.0	0.0	0.0
Pennsylvania	1731.8	1812.1	120.0	141.8	104.7	82.9
Rhode Island	143.7	150.3	1.5	3.5	19.1	17.1
South Carolina	509.9	533.6	42.2	49.5	33.2	25.9
South Dakota	111.8	117.0	1.0	2.4	13.5	12.1
Tennessee	755.5	790.6	81.9	96.1	64.2	50.0
Texas	3506.7	3669.5	328.5	385.4	257.8	200.9
Utah	320.2	335.1	3.2	7.5	41.1	36.8
Vermont	82.7	86.6	0.7	1.8	9.7	8.7
Virginia	1186.5	1241.6	76.6	89.9	60.1	46.8
Washington	1011.9	1058.9	103.3	121.2	81.4	63.5
West Virginia	184.3	192.9	12.8	15.1	11.0	8.7
Wisconsin	720.6	754.0	41.7	49.5	38.0	30.3
Wyoming	89.4	93.5	0.7	1.7	9.2	8.2
DC	134.0	140.2	1.1	2.7	14.6	13.1
<b>Total</b>	<b>42,050.3</b>	<b>44,001.7</b>	<b>3,004.5</b>	<b>3,618.1</b>	<b>3,311.1</b>	<b>2,697.6</b>



**PRIME NUMBERS: AMAZON AND AMERICAN COMMUNITIES**  
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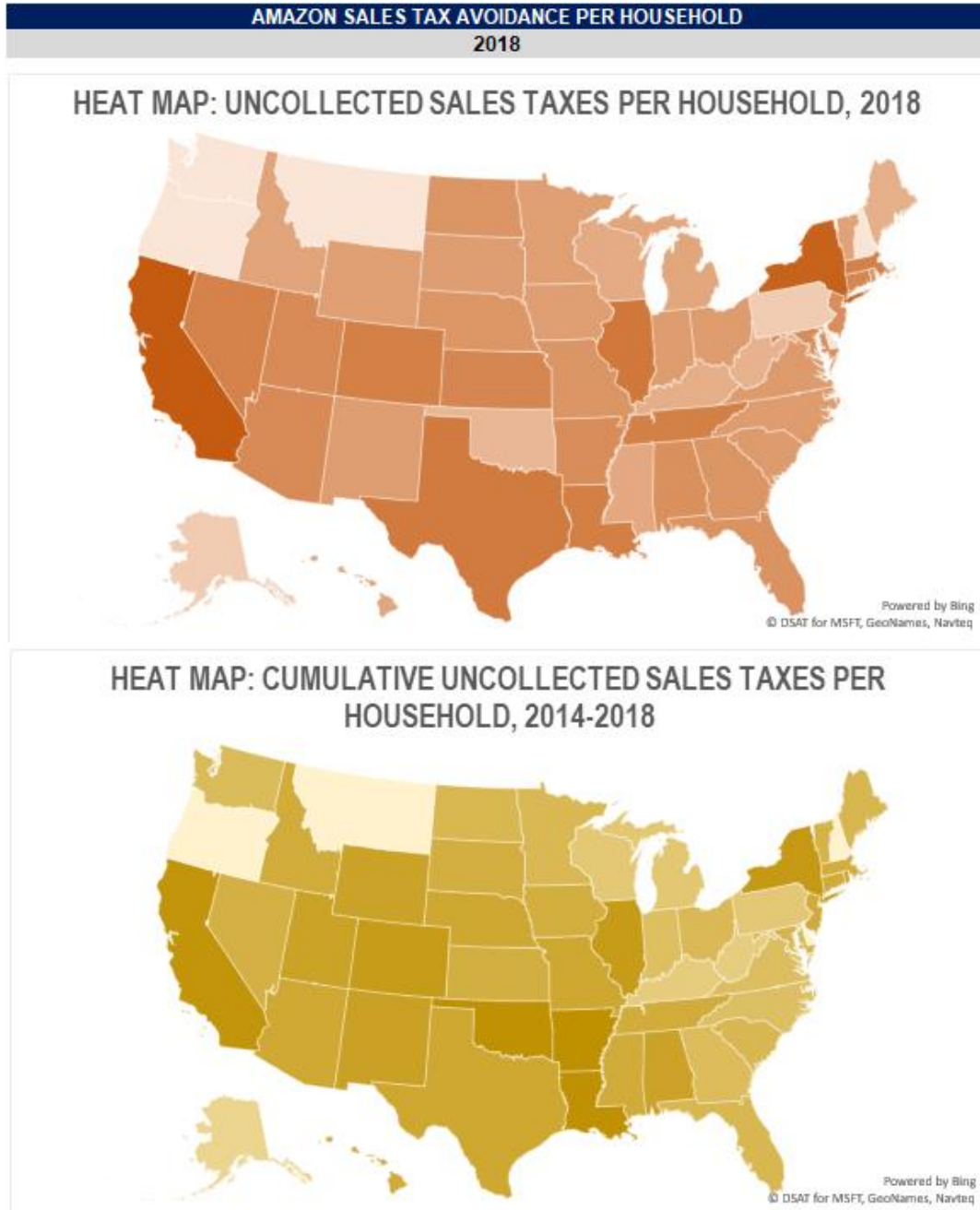
POTENTIAL SALES TAX COLLECTED AND UNCOLLECTED						
2014 (\$ Millions)						
	Sales by Seller		Collected		Uncollected	
	Direct	Third-Party	At 14% Rate	At 33% Rate	At 14% Rate	At 33% Rate
Alabama	455.2	390.2	4.9	11.5	70.6	64.0
Alaska	97.7	83.8	0.2	0.5	3.0	2.7
Arizona	634.4	543.9	41.8	50.2	54.6	46.2
Arkansas	279.3	239.5	3.1	7.3	45.0	40.8
California	4,625.4	3,965.3	439.3	503.2	289.2	225.3
Colorado	630.0	540.1	5.6	13.3	81.4	73.8
Connecticut	517.9	444.0	36.8	42.2	24.2	18.9
Delaware	105.1	90.1	0.0	0.0	0.0	0.0
Florida	2,096.8	1,797.6	142.5	165.3	116.4	93.7
Georgia	971.7	833.0	76.4	87.5	50.0	38.9
Hawaii	163.6	140.3	0.9	2.0	12.4	11.2
Idaho	153.2	131.3	1.1	2.6	16.0	14.5
Illinois	1,486.8	1,274.6	107.1	126.5	112.9	93.6
Indiana	641.4	549.8	50.3	57.6	33.1	25.8
Iowa	344.6	295.5	2.8	6.6	40.7	36.8
Kansas	325.0	278.6	31.3	35.8	20.6	16.0
Kentucky	412.6	353.7	27.7	31.8	18.3	14.2
Louisiana	489.6	419.7	5.3	12.5	76.6	69.5
Maine	138.7	118.9	0.9	2.2	13.3	12.0
Maryland	791.9	678.9	53.2	61.0	35.0	27.3
Massachusetts	936.7	803.0	65.6	75.1	43.2	33.6
Michigan	981.5	841.4	66.0	75.5	43.4	33.8
Minnesota	634.9	544.3	51.3	58.8	33.8	26.3
Mississippi	260.1	223.0	2.2	5.2	32.0	29.0
Missouri	622.7	533.8	5.9	13.8	84.8	76.9
Montana	102.0	87.4	0.0	0.0	0.0	0.0
Nebraska	217.9	186.8	1.8	4.2	25.9	23.4
Nevada	281.2	241.1	25.0	28.6	16.5	12.8
New Hampshire	175.1	150.1	0.0	0.0	0.0	0.0
New Jersey	1,213.5	1,040.3	95.1	109.0	62.6	48.8
New Mexico	197.5	169.3	1.8	4.2	25.7	23.3
New York	2,585.9	2,216.8	245.6	281.3	161.7	126.0
North Carolina	971.1	832.5	75.0	86.0	49.4	38.5
North Dakota	97.0	83.2	7.4	8.4	4.8	3.8
Ohio	1,207.7	1,035.3	79.8	93.8	80.4	66.3
Oklahoma	415.3	356.0	4.4	10.3	63.3	57.4
Oregon	401.0	343.8	0.0	0.0	0.0	0.0
Pennsylvania	1,488.9	1,276.4	100.7	116.0	74.7	59.3
Rhode Island	126.6	108.5	1.1	2.5	15.4	14.0
South Carolina	445.3	381.8	3.9	9.1	55.9	50.6
South Dakota	99.1	84.9	0.7	1.6	10.0	9.1
Tennessee	675.0	578.6	71.5	81.9	47.1	36.7
Texas	3,030.6	2,598.1	277.3	317.7	182.5	142.2
Utah	273.4	234.4	2.2	5.2	31.8	28.8
Vermont	73.6	63.1	0.5	1.3	7.8	7.1
Virginia	1,000.5	857.7	63.1	72.3	41.5	32.4
Washington	866.0	742.4	86.3	98.9	57.1	44.5
West Virginia	169.5	145.3	11.4	13.1	7.8	6.1
Wisconsin	627.4	537.8	35.5	41.0	27.8	22.3
Wyoming	76.6	65.7	0.5	1.2	7.2	6.5
DC	120.9	103.6	0.8	2.0	12.1	10.9
<b>Total</b>	<b>35,735.2</b>	<b>30,635.2</b>	<b>2,413.6</b>	<b>2,837.4</b>	<b>2,419.5</b>	<b>1,995.6</b>

**PRIME NUMBERS: AMAZON AND AMERICAN COMMUNITIES**  
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<b>CUMULATIVE SALES TAX COLLECTION</b>				
<b>2014-18 (\$ Millions)</b>				
	<b>At 14% Rate</b>		<b>At 33% Rate</b>	
	<b>Collected</b>	<b>Uncollected</b>	<b>Collected</b>	<b>Uncollected</b>
Alabama	241.8	403.9	312.1	333.6
Alaska	7.4	20.0	10.3	17.0
Arizona	378.6	496.2	474.1	400.7
Arkansas	113.5	300.9	158.6	255.8
California	3560.8	3487.9	4331.4	2717.3
Colorado	331.6	485.5	420.9	396.3
Connecticut	304.4	280.2	366.3	218.3
Delaware	0.0	0.0	0.0	0.0
Florida	1152.2	1232.1	1412.5	971.8
Georgia	581.7	567.4	707.2	441.9
Hawaii	32.0	84.9	44.7	72.2
Idaho	42.4	110.3	59.0	93.7
Illinois	950.5	1183.2	1183.4	950.3
Indiana	380.6	370.5	462.5	288.6
Iowa	136.9	230.8	176.9	190.8
Kansas	226.1	219.2	274.5	170.8
Kentucky	198.6	192.5	241.1	150.0
Louisiana	279.6	465.9	360.8	384.7
Maine	33.3	88.7	46.6	75.4
Maryland	398.1	387.5	483.8	301.9
Massachusetts	520.3	508.0	632.6	395.7
Michigan	499.1	485.7	606.4	378.4
Minnesota	434.3	357.2	513.0	278.4
Mississippi	76.2	206.3	106.9	175.6
Missouri	293.9	490.4	379.3	405.0
Montana	0.0	0.0	0.0	0.0
Nebraska	90.7	151.3	117.0	124.9
Nevada	197.1	193.4	239.8	150.7
New Hampshire	0.0	0.0	0.0	0.0
New Jersey	759.7	660.3	905.6	514.5
New Mexico	62.1	167.1	87.1	142.2
New York	1926.8	1883.2	2342.7	1467.3
North Carolina	565.6	551.7	687.5	429.8
North Dakota	52.5	50.6	63.6	39.4
Ohio	642.9	749.9	794.5	598.3
Oklahoma	200.8	374.4	252.8	322.4
Oregon	0.0	0.0	0.0	0.0
Pennsylvania	964.9	586.3	1073.1	478.2
Rhode Island	52.9	88.6	68.3	73.2
South Carolina	239.7	297.7	298.3	239.0
South Dakota	36.6	61.0	47.2	50.3
Tennessee	522.8	508.3	635.1	395.9
Texas	2036.9	1977.0	2473.7	1540.2
Utah	121.8	198.4	156.8	163.4
Vermont	27.1	45.2	34.9	37.4
Virginia	478.2	465.2	581.0	362.4
Washington	931.8	425.3	1025.7	331.4
West Virginia	80.5	80.9	98.1	63.3
Wisconsin	270.1	281.9	330.1	221.8
Wyoming	17.9	48.2	25.1	41.0
DC	42.3	70.1	54.5	57.8
	<b>21,495.9</b>	<b>22,570.9</b>	<b>26,157.5</b>	<b>17,909.3</b>

The heat maps below illustrate the per household concentration of uncollected sales taxes in the states. The lightest colored states do not collect state or local sales taxes (or, in the case of Washington state, collected all sales taxes from Amazon in 2017 and 2018); the deepest colored states have lost the most of Amazon and Marketplace sales tax collection policies.

Note the change in Oklahoma's standing, then read the *Addendum* to this report. Every state in this map can make a similar charge from worst to first in fair sales tax practices.



SOURCE: *Prime Numbers 2019*, Civic Economics and the American Booksellers Association

## **DISPLACEMENT OF RETAIL SHOPS AND EMPLOYMENT**

As retail activity moves from commercial centers to warehouses, communities and developers are only beginning to deal with the accompanying shift in demand for space. As described above, this study treats most Amazon and Marketplace sales as being in competition with brick and mortar retailers, excluding only the portion of media sales that are now largely digital.

Civic Economics analyzed three measures on the ongoing shift in sales from bricks-and-mortar retailers to the Internet: Retail Storefronts, Retail Square Footage, and Retail Store Employees.

For storefronts, we applied average sales per American retail establishment from the Economic Census using American Fact Finder<sup>2</sup> and calculated the number of stores Amazon sales equate to in each state. For this study period, that figure was \$3 million.

For square footage, we used national average sales per square foot across all retail and allocated those “lost” square feet across the states according to their proportion of Amazon sales. For this study period, that figure is \$350.

Finally, we calculated the loss of jobs associated with these stores, using Economic Census data for sales per American retail employee to calculate the total sales force that might have been supported in bricks-and-mortar stores. For this study period, that figure is \$209,000.

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. To provide conservative estimates, we credited the company with all estimated distribution employment in each state.

Civic Economics builds estimates of Amazon employment by state from two reliable sources. The first is the Amazon warehousing information meticulously maintained by logistics consulting firm MWPVL International<sup>3</sup> of Montreal. The second is Amazon itself, as the company provides frequently updated, round numbers for direct jobs it claims to have created in each state<sup>4</sup>. In order to build an estimate of employment actually related to the distribution of retail goods, we compare square footage and claimed employment in those states with Amazon distribution facilities but no other major company facilities.

For 2018, we estimate total Amazon distribution was approximately 200,000 direct jobs across roughly 127 million square feet of distribution space dedicated to retail goods. That works out to one employee per 638 square feet. This formulation not only provides a total employment estimate consistent with Amazon’s own public figures, it neatly captures the ever-increasing efficiency of its facilities. In 2016, we estimated one employee per 575 square feet. Moreover, for the first time we find that only Kentucky enjoys a miniscule employment gain from Amazon activity in the state. With the arrival of the Amazon air facility outside Cincinnati, it is likely that Kentucky will retain that distinction in the coming years.

Finally, we allocated displaced retail space and jobs across the states according to the same disposable income measure used to estimate total sales.

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<sup>2</sup> <https://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml>

<sup>3</sup> [http://www.mwpvl.com/html/amazon\\_com.html](http://www.mwpvl.com/html/amazon_com.html)

<sup>4</sup> <https://www.aboutamazon.com/investing-in-the-u-s>

**PRIME NUMBERS: AMAZON AND AMERICAN COMMUNITIES**  
February 2019

AMAZON TOTAL SALES AND IMPACTS BY STATE (2018)								
WITH OFFSETS FOR AMAZON DISTRIBUTION FACILITIES AND EMPLOYMENT								
2018								
	Amazon Sales \$ Millions	Space Displacement				Job Displacement		
		Displaced Shops	Displaced Space <i>Million Square Feet</i>	Amazon Space	Net Space Displaced	Jobs Displaced	Amazon Jobs	Net Jobs Displaced
Alabama	2222.3	734	6.3	0.4	6.0	10,629	568	10,062
Alaska	471.9	156	1.3	0.0	1.3	2,257	-	2,257
Arizona	3356.8	1,109	9.6	5.4	4.1	16,055	8,540	7,516
Arkansas	1373.2	453	3.9	0.0	3.9	6,568	-	6,568
California	26703.7	8,818	76.3	17.6	58.7	127,723	27,537	100,187
Colorado	3484.9	1,151	10.0	2.7	7.3	16,668	4,207	12,461
Connecticut	2850.2	941	8.1	2.0	6.1	13,632	3,197	10,435
Delaware	532.5	176	1.5	1.2	0.3	2,547	1,941	606
Florida	11281.5	3,726	32.2	5.9	26.4	53,959	9,197	44,762
Georgia	5165.0	1,706	14.8	3.5	11.3	24,704	5,443	19,261
Hawaii	832.1	275	2.4	0.0	2.4	3,980	-	3,980
Idaho	814.0	269	2.3	0.0	2.3	3,894	-	3,894
Illinois	7780.1	2,569	22.2	6.3	15.9	37,212	9,949	27,263
Indiana	3348.6	1,106	9.6	6.3	3.3	16,016	9,869	6,147
Iowa	1652.7	546	4.7	0.0	4.7	7,905	-	7,905
Kansas	1568.8	518	4.5	2.6	1.9	7,503	4,005	3,499
Kentucky	2009.4	664	5.7	6.2	-0.4	9,611	9,684	(73)
Louisiana	2281.7	754	6.5	0.0	6.5	10,913	-	10,913
Maine	693.6	229	2.0	0.0	2.0	3,318	-	3,318
Maryland	4099.8	1,354	11.7	4.3	7.4	19,609	6,736	12,873
Massachusetts	5209.0	1,720	14.9	1.4	13.5	24,915	2,192	22,723
Michigan	5123.5	1,692	14.6	3.1	11.6	24,506	4,820	19,685
Minnesota	3400.3	1,123	9.7	1.4	8.4	16,264	2,139	14,125
Mississippi	1214.9	401	3.5	0.0	3.5	5,811	-	5,811
Missouri	3074.0	1,015	8.8	0.3	8.4	14,703	546	14,157
Montana	538.5	178	1.5	0.0	1.5	2,575	-	2,575
Nebraska	1078.6	356	3.1	0.0	3.1	5,159	-	5,159
Nevada	1577.7	521	4.5	2.5	2.0	7,546	3,900	3,646
New Hampshire	896.3	296	2.6	0.0	2.6	4,287	-	4,287
New Jersey	6487.4	2,142	18.5	9.1	9.4	31,029	14,320	16,710
New Mexico	926.3	306	2.6	0.0	2.6	4,430	-	4,430
New York	14452.1	4,773	41.3	1.5	39.8	69,124	2,383	66,741
North Carolina	5122.3	1,692	14.6	1.5	13.1	24,500	2,424	22,075
North Dakota	443.2	146	1.3	0.0	1.3	2,120	-	2,120
Ohio	6048.5	1,997	17.3	4.3	13.0	28,930	6,677	22,253
Oklahoma	1951.6	644	5.6	0.3	5.3	9,335	470	8,864
Oregon	2253.2	744	6.4	1.2	5.3	10,777	1,816	8,961
Pennsylvania	7620.8	2,517	21.8	8.1	13.7	36,450	12,673	23,777
Rhode Island	623.2	206	1.8	0.0	1.8	2,981	-	2,981
South Carolina	2335.8	771	6.7	2.4	4.3	11,172	3,741	7,431
South Dakota	471.0	156	1.3	0.0	1.3	2,253	-	2,253
Tennessee	3432.0	1,133	9.8	4.7	5.1	16,415	7,346	9,069
Texas	15185.5	5,015	43.4	12.5	30.9	72,632	19,525	53,106
Utah	1543.4	510	4.4	1.0	3.4	7,382	1,562	5,820
Vermont	362.0	120	1.0	0.0	1.0	1,732	-	1,732
Virginia	5210.1	1,721	14.9	3.7	11.2	24,920	5,785	19,135
Washington	4943.5	1,633	14.1	3.1	11.0	23,645	4,836	18,809
West Virginia	780.2	258	2.2	0.0	2.2	3,731	-	3,731
Wisconsin	3167.4	1,046	9.0	1.5	7.5	15,150	2,352	12,798
Wyoming	372.2	123	1.1	0.0	1.1	1,780	-	1,780
DC	618.8	204	1.8	0.0	1.8	2,960	-	2,960
<b>Total</b>	<b>188,986.2</b> <i>\$ Millions</i>	<b>62,410</b>	<b>540.0</b> <i>Million Square Feet</i>	<b>127.8</b>	<b>412.2</b>	<b>903,918</b>	<b>200,381</b> <i>At 1 per 638 sq. ft.</i>	<b>703,537</b>

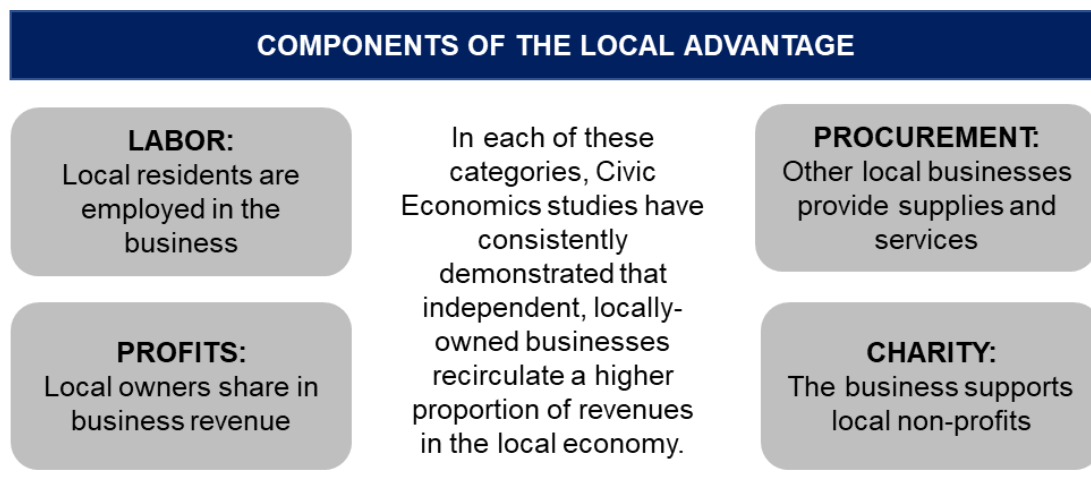
## ENHANCED IMPACT OF INDEPENDENTS

Over the past 15 years, Civic Economics has often analyzed the comparative economic impact of independent, locally-owned businesses and their chain competitors. Built from surveys of independent businesses in various sectors or geographies and an analysis of publicly held competitors, our data-driven findings have been consistent:

*Independent businesses provide their communities with substantial, quantifiable economic benefits relative to their chain competitors, and modest changes in purchasing habits can produce meaningful impacts. The benefits are even more substantial compared to online competitors such as Amazon.*

### Methodology

The effort to quantify the impact of retailers begins with examining the four major activities in which firms create local impact by recirculating revenues in the region in which they were earned.



*Learn more at [www.CivicEconomics.com/retail.html](http://www.CivicEconomics.com/retail.html)*

Spending on local **labor** generally comprises a larger share of operating costs for a locally-owned establishment than for an outlet of a national chain; online retailers may have little or no local labor force. While chains consolidate administrative functions such as bookkeeping and marketing at national headquarters, independents often carry out those functions in-house, resulting in a larger share of sales paid to area residents as wages and benefits. The difference is clear on the sales floor, too. Upon entering an independent store, particularly in the book business, a knowledgeable employee will often walk with you to the relevant shelves and discuss the choices available. At Barnes & Noble, any assistance beyond general directions may be hard to come by. Amazon bypasses the storefront completely having all operations take place in the headquarters, sporadically placed distribution centers, and data centers that do not require large numbers of employees to operate.

Secondly, **profits** earned by resident ownership of independent retailers will remain in the local economy. These profits may be reinvested locally, whether through further investment in the independent business or in the community at large. Purchases at chain and online outlets



generate profits for the corporation, which then either reinvests in global operations or distributes a portion of profits to shareholders. In either case, chain store profits returning to the local economy are nominal at best. The same holds true for Amazon.

Third, locally-owned businesses commonly **procure** goods and services locally that national chains arrange with national distributors. An independent business may hire local accountants, lawyers, and information technology firms among others. At the chains, these services are provided at a corporate facility or outsourced to other firms that may be located anywhere in the world. Local businesses also more often procure a variety of goods from other local businesses, whether for resale or for in-house use. In a bookshop, for example, there are often shelves of locally produced products, or a featured collection of works by local authors and publishers.

A smaller yet significant share of the local advantage is **charitable giving**. Local resident owners are more likely to contribute to local causes of interest to their families and employees. We have found many booksellers and other independent retailers fail to even account for charitable giving in full, so ingrained is it in the culture of the firm. National chains, by contrast, more often support non-local causes. And when they do support local organizations, the cost of the marketing campaign around the donation may even exceed the value of any gift.

Occupancy costs (rent, utilities, etc.) are not included in the analysis because, traditionally, all retailers face such expenditures and the payees are often non-local. For Amazon, those local expenditures are entirely erased. Were occupancy costs included, the difference in local recirculation between brick and mortar retailers and Amazon would obviously grow.

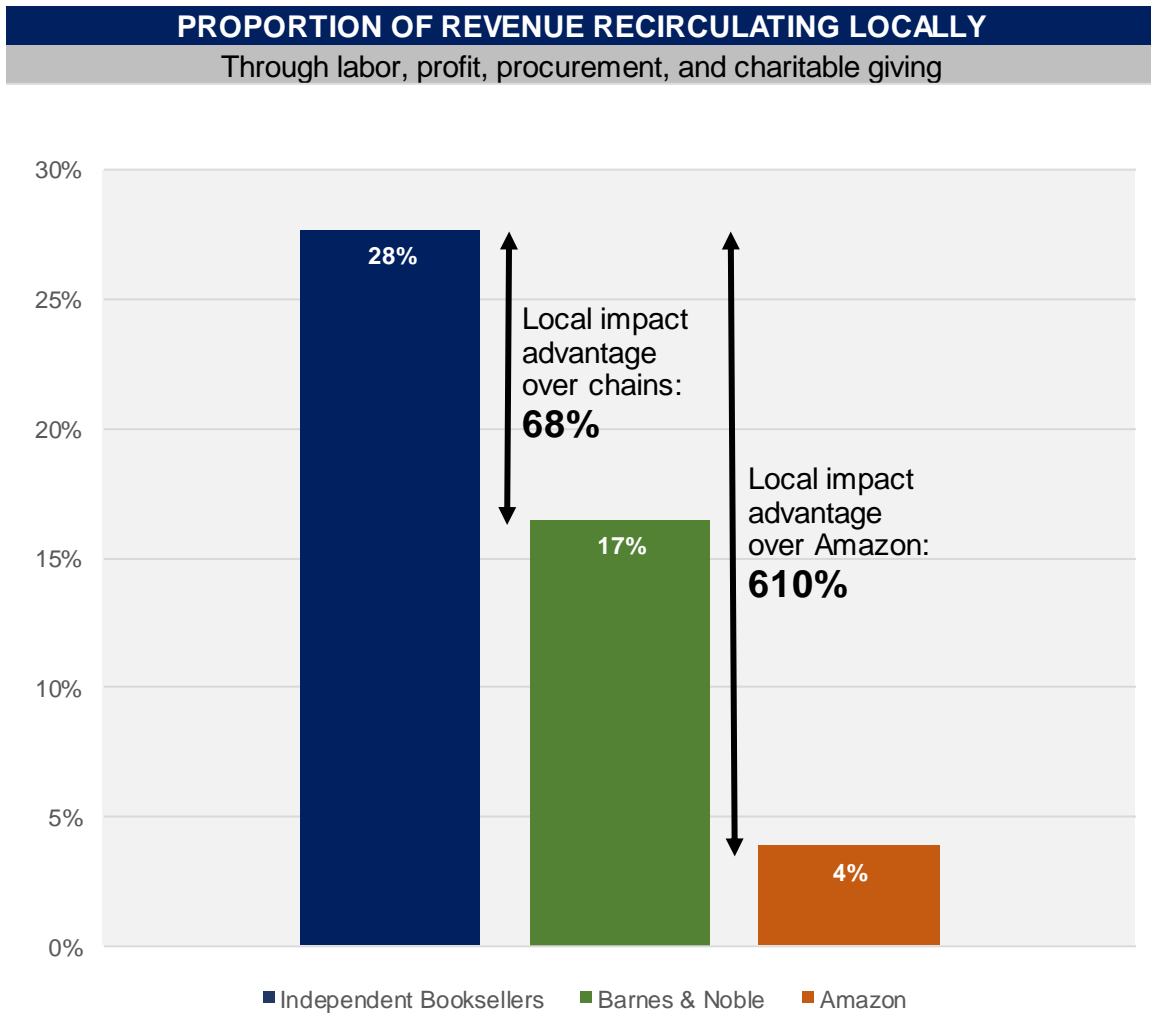
To study independent businesses, Civic Economics must typically conduct surveys or interviews, asking questions about sensitive financial information. Fortunately, with the American Booksellers Association, we were able to review the most recent results of the ABACUS survey of ABA members, providing aggregated and anonymous statistics on financial aspects of the bookselling business. For a chain competitor, we selected Barnes & Noble and analyzed its most recent annual report. Finally, we further analyzed Amazon's business practices based on the same research that underlies the rest of the *Prime Numbers* series.

## Findings

Culling ABACUS data for booksellers of medium profitability, we found that approximately 28% of all revenue immediately recirculates in the local economy (22% on labor and profit alone). That compares favorably with Barnes & Noble, which returns only about 17% locally, and Amazon, which recirculates less than 4% of the sales revenue it earns in a typical American metropolitan area.



The chart below illustrates the stark disparity of local impact among these three booksellers.



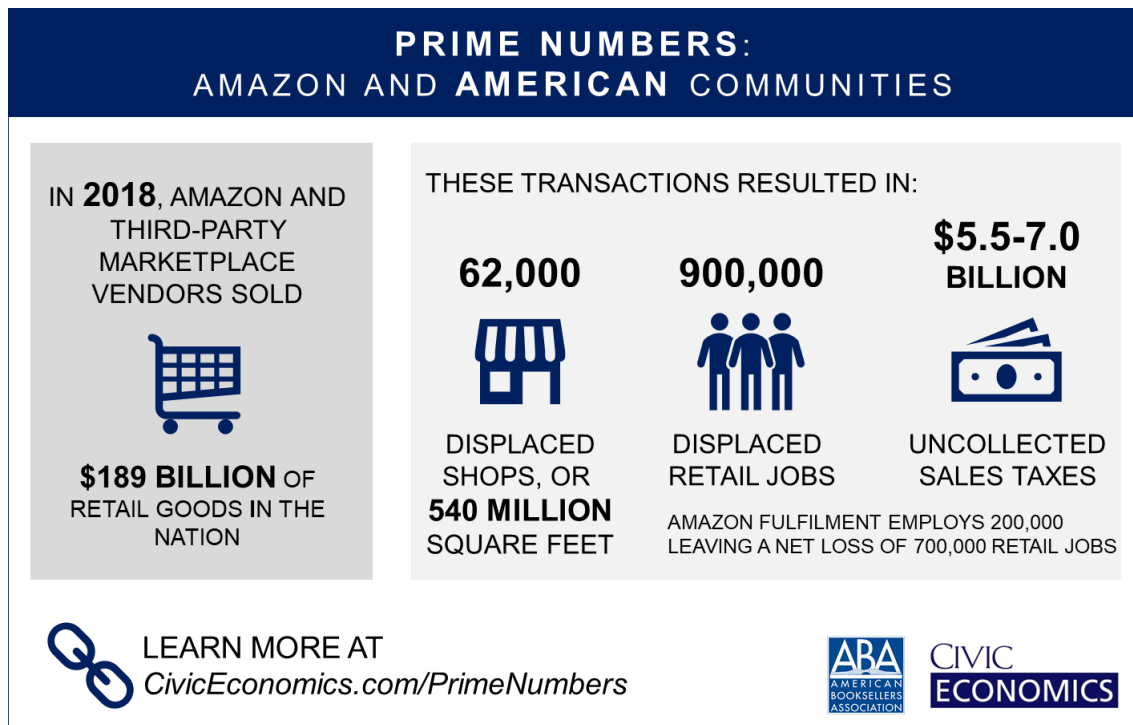
SOURCES: American Booksellers Association, Abacus survey of members, 2018; Barnes & Noble 10-K, 2017; Amazon analysis by Civic Economics

This analysis uses survey data for the segment of independent booksellers reporting average profitability. For those with higher profits, local recirculation of revenues rises to 31.4%. While such stores may be more labor efficient, expending a smaller proportion of revenue on employees, the additional profits more than make up the difference in local impact.

## CONCLUSION

From *Empty Storefronts: The Fiscal and Land Use Impacts of Online Retail* (January 2016) through two iterations of *Prime Numbers: Amazon and American Communities* (April 2018 and February 2019), Civic Economics and the American Booksellers Association have sought to provide a valuable resource to American policymakers at the state and local level as they seek to respond to and plan around the explosive growth of online retail, particularly Amazon.

*Prime Numbers* is unlike most Amazon analyses because it drills deeply into just one part of the Amazon portfolio: the retail sale of tangible goods in the United States. The growth of Amazon Web Services and the media services that complement Prime subscriptions are interesting but not in our sights here. The intense focus on retail has given us the opportunity to develop a strong, detailed model of how the company's sales activities impact land use, employment, and tax revenues on a state by state basis.



SOURCE: *Prime Numbers: Amazon and American Communities*, 2019; Produced by Civic Economics for the American Booksellers Association

**Land use** remains an area of concern. The “retail apocalypse” has received ample attention in the media, but only here will you find detailed estimates of the real impact in your state. As online sales move retail activity from shopping centers and business districts to outlying industrial parks, communities must develop realistic plans for dealing with the shift.

**Jobs** in retail are shifting right along with sales, moving from storefronts in our neighborhoods to warehouses on the fringe. Moreover, despite the frequent media coverage of the jobs Amazon creates in fulfilment centers from coast to coast, only here will you find a data-driven accounting of the vast displacement of retail work and the substantial, measurable net loss of jobs it brings.

The analysis in this report on the enhanced economic impact of independent booksellers shows how valuable retail entrepreneurs are to the vitality of their local economies.

**Sales tax** revenues present the most pressing challenge to state and local policymakers, as they work to ensure fair taxation of Amazon and other retailers and gain a measure of control over the dwindling sales tax revenue on which many communities depend. Again, *Prime Numbers* is there to provide meaningful guidance on the state of online retail sales taxes paid and avoided in every state.

The Addendum to this report analyzes newly available data from one state to test our estimates and renews our confidence that this methodology is the best way for states and local governments to quantify and correct the loss of sales tax revenue attributable to Amazon.

As always, we hope *Prime Numbers* finds its way into the hands of state and local leaders nationwide. More than ever, policy choices must be built from good data, and we look forward to another year of helping citizens, reporters, elected officials, and booksellers to get the word out.

**PRIME NUMBERS ONLINE**

Download this report and state-by-state summaries at:

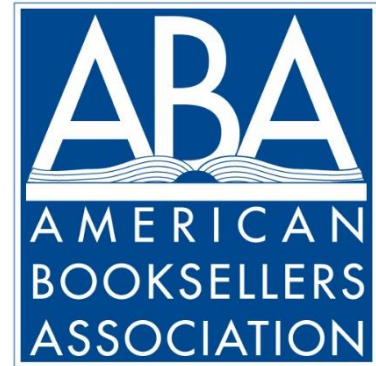
**<http://www.civiceconomics.com/primenumbers.html>**

## **ABOUT THE AMERICAN BOOKSELLERS ASSOCIATION**

Founded in 1900, the American Booksellers Association is a national not-for-profit trade organization that works to help independently owned bookstores grow and succeed. ABA's core members are key participants in their communities' local economy and culture, and to assist them, ABA provides education, information, business products, and services; creates relevant programs; and engages in public policy and industry advocacy. The Association actively supports and defends free speech and the First Amendment rights of all Americans. A volunteer board of 11 booksellers governs the Association. ABA is headquartered in White Plains, NY.

333 Westchester Avenue  
Suite S202  
White Plains, NY 10604

Phone: 800-637-0037  
E-mail: [info@bookweb.org](mailto:info@bookweb.org)  
[www.bookweb.org](http://www.bookweb.org)



## ABOUT CIVIC ECONOMICS



Civic Economics, established by Matt Cunningham and Dan Houston in 2002, provides a data-driven approach to business and community initiatives with a wide range of goals. We are noted for the innovative application of industry-standard tools and the development of proprietary methodologies that provide credible guidance and evidence to our clients, often addressing novel situations.

Our practice is thematically and geographically broad, but we have developed substantial depth in economic impact analysis, as well as the economics of local and regional retail, land use planning, and gaming.

From offices in Chicago and Tulsa, Civic Economics serves all North America, from Florida to Alaska and California to Maine, with occasional forays across the border and overseas. We have served some of the wealthiest enclaves in America and some of the poorest, and our clients run from small nonprofits to large corporations and state governments.

Civic Economics provides our clients with credible analyses of current issues, expressed in a clear and concise fashion, to provide relevant information to the public and policymakers. For further information about the firm, its people, and its practice, we invite you to visit [CivicEconomics.com](http://CivicEconomics.com).

For more information about the firm and this study, please contact:

Matt Cunningham, Partner  
[mattc@civiceconomics.com](mailto:mattc@civiceconomics.com)  
773.251.5926

or

Dan Houston, Partner  
[dhouston@civiceconomics.com](mailto:dhouston@civiceconomics.com)  
512.853.9044

## **ADDENDUM: A TAX REVENUE CASE STUDY**

Prime Numbers is distinct from the typical analysis of Amazon financial because Civic Economics is interested in particular slices of the Amazon empire. We are looking only at the sale of tangible goods in competition with brick and mortar retailers in the United States. And of those sales, we need to distinguish between those sales made by Amazon directly and those for which Amazon is the facilitator of a third-party sale through Marketplace.

With the release of Amazon's 2017 Annual Report in early 2018, Civic Economics was able to begin estimating Amazon's retail sales by third-party sellers participating in the Marketplace program. As noted elsewhere in this report, we build that estimate from Amazon's reported fee revenue for providing the services associated with Marketplace, and consistently describe our estimates as such.

So, it caught our eye that one state might have a useful dataset to check those estimates. Oklahoma, which previously topped the *Prime Numbers* charts of states with the largest revenue losses from Amazon, has recently enacted two changes in how online sales are taxed in the state:

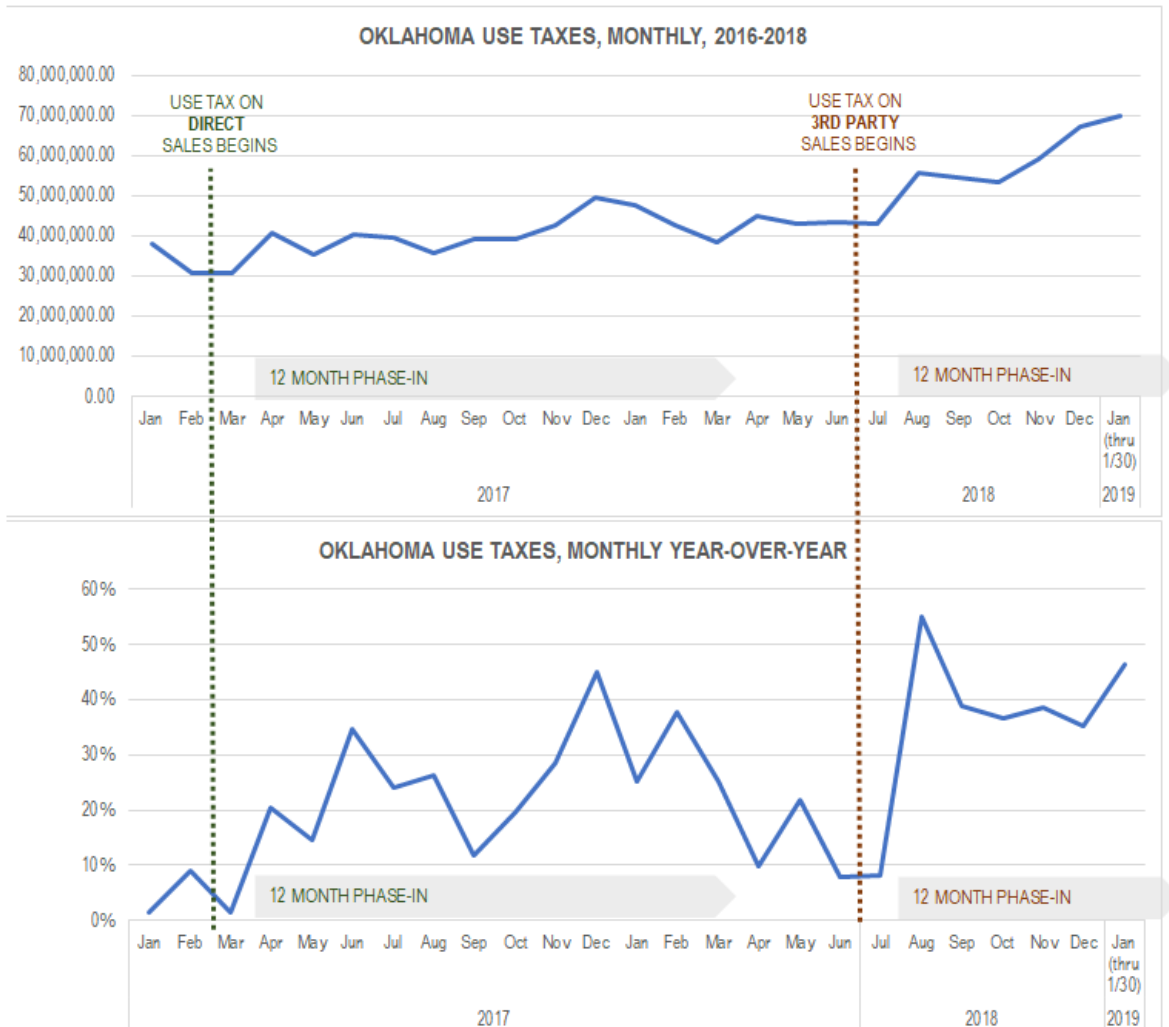
- Effective in March of 2017, Oklahoma began collecting Use Tax (equivalent to Sales Tax rates) from Amazon for sales in which it was the seller. Other large online retailers are also subject to this policy.
- Effective July of 2018, Oklahoma began collecting Use Tax on Amazon's Marketplace sales, in cases where the third-party seller earns more than \$10,000 per year in the state. Other large marketplace facilitators are subject to this tax but, as of early 2018, none has yet begun complying.

Oklahoma provides transparent daily reporting of its tax collections by tax category. Our hunch was that this provided the opportunity to chart use tax revenues over time and identify the portion of those revenues associated with these changes. We have charted that data on the following page, back through 2017.

The first thing that jumps out from the charts is how clearly these policy changes impacted revenue. Each change produced a noticeable bump in use tax collections, as expected. Because other online retailers were impacted by the March 2017 change, Amazon's share of that revenue remains beyond analysis. But the later change, effective the first day of Oklahoma's fiscal year and to date effecting only Amazon, presents an analytical opportunity.

The increase in use tax revenues following July 1, 2018 can be quantified as a monthly year-over-year change. In addition, we can factor out the growth in Amazon's own direct sales during that period (using the national number, 13%), which continue to contribute to the increase in revenue. And finally, as a proxy for growth in use tax revenue associated with economic conditions, we can factor out a growth rate equivalent to that experienced by sales tax revenues (5.6%).

**CASE STUDY: CHANGING AMAZON TAX POLICY IN OKLAHOMA**



SOURCE: Oklahoma Tax Commission, Taxpayer Access Point: [https://oktap.tax.ok.gov/oktap/Web/\\_/](https://oktap.tax.ok.gov/oktap/Web/_/)

For now, we would hesitate to estimate precisely how much revenue the new tax has brought in. Other factors will be at work in monthly revenue, Oklahoma’s staggered use tax reporting periods introduce fluctuations throughout the year, and the marketplace facilitator law only applies to a subset of third-party sellers, a subset that will change over time.

However, we will say that the marketplace facilitator law appears to have produced \$50-60 million dollars in use tax revenues in the six months it has been in force, of which roughly half is the state share with the remainder going to local governments. At Oklahoma’s average tax rate, that revenue would be associated with \$600 million or more in sales into the state by covered third-party sellers. Annualized based on the proportion of sales Amazon typically achieves in the second half of the calendar year, total tax revenue for all of 2018 would have been greater than \$100 million, on taxable Marketplace sales exceeding \$1.1 billion.

For this *Prime Numbers* study, our methodology estimated that all Amazon third-party sellers achieved just over \$1.2 billion in sales in Oklahoma in 2018. Given the gaps in both available



data and in the applicability of the state's policy change, we believe this analysis broadly supports our current estimates of Amazon retail sales by state.

Perhaps more importantly for policymakers, this case study indicates that *Prime Numbers* can provide broad guidance in predicting the future revenue potential of marketplace facilitator laws in other states. Indeed, when Oklahoma considered the law, legislative staff estimated total 2019 annual revenue at just \$20 million, illustrating a near total lack of information. This report, and future updates, will provide states and cities with a more reliable understanding of the revenue implications of taxing Amazon sales fairly.