

Executive Summary

A “sales tax holiday” is a period of time, usually lasting a few days, during which state sales tax and sometimes local sales taxes are not levied on a set of goods. This report begins with a history of sales tax holidays and a discussion of the major issues surrounding them. The report then focuses on an analysis of sales scanner data from nine tax holidays on computer purchases (all held in August 2007) to determine 1) how the prices consumers paid changed during the holidays, 2) the extent to which consumers shifted their purchases across time to coincide with the reduced tax rate, 3) the extent to which the holidays generated new computer purchases that would not have been made in the absence of the holidays, and 4) the effect of the policy on the sales tax revenue for participating states.

The key findings are:

1. Consumers realize savings during tax holidays. The prices consumers pay for computers during tax holidays decrease at least one-for-one with the reduction in the state sales tax rate, i.e., if the state sales tax rate is six percent, consumers tend to see at least a six percent price reduction.
2. Retailers see a significant increase in sales of targeted items during tax holidays. In 2007, consumers purchased 161 percent more computers in the tax holiday states during the tax holiday week compared to the prior week. There was no such response in the non-holiday states.

3. Tax holidays generate both “new” purchases and consumer timing responses. The data suggest that the purchases of laptops during a tax holiday are primarily a timing response—moving purchases to coincide with the lower tax rate during the tax holiday—while purchases of desktops, particularly cheap desktops, include a greater proportion of purchases that would not have been made in the absence of the tax holiday.
4. Tax holidays introduce opportunities for both non-compliance and tax evasion. Retailers face significant compliance costs when a tax holiday is implemented, providing some retailers with an incentive to not comply with the tax holiday.
5. The data indicate that the nine states that had tax holidays on computers in 2007 collectively lost between \$3.3 and \$5.1 million in sales tax revenue as a result of the week-long tax holiday on computer purchases. The sales tax holidays studied here reduced *aggregate* tax collections 4.18 percent, on average, during the month of the tax holiday. However, there is no evidence that tax holidays lead to significant decreases in tax collections in preceding or succeeding months.

These and other findings are discussed in more detail on the following pages.

Historical Background

New York held the first sales tax holiday in January 1997.¹ New Yorkers had long traveled to New Jersey to make clothing purchases, which are tax-free in the Garden State. In an effort to combat this cross-border shopping behavior, New York City Mayor Rudolph W. Giuliani proposed a year-round exemption of clothing items priced below \$500. The state legislature rejected the proposal but compromised on a one-week sales tax holiday.²



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For the inaugural holiday, most clothing and footwear priced \$500 or less per item were exempt from the state's 4 percent sales tax. Fifty-four of the state's 62 counties suspended their sales tax; New York City suspended its 4 percent sales tax; and the Metropolitan Transit Authority suspended its 0.25 percent levy.³

The policy spread to Florida in 1998 and to Texas in 1999. However, the cross-border shopping concerns outlined above were *not* the driving force behind the decisions to have sales tax holidays in those states.⁴ Rather, a strong economy had generated budget surpluses, and the policy was a mechanism for reducing surpluses in these states that do not have a personal income tax.

Coincident with the down-turn in the economy in the early 2000s, politicians' justifications for tax holidays shifted markedly, particularly once South Carolina exempted school supplies in its inaugural holiday in 2000. Lawmakers' two chief policy goals in creating such holidays are now to reduce the tax burden on families with children and to encourage purchases of certain products in particular or to stimulate the economy more generally. As tax holidays propagated across the country, the set of goods included as tax-exempt expanded to include computers, energy-efficient items, and hurricane preparedness items.

By 2007, 20 states and the District of Columbia held a total of 118 sales tax holidays.⁵ This accounted for nearly half of the 45 states and the District of Columbia that levy some form of sales tax.⁶ At the close of 2007, 12 states and the District of Columbia had 15 holidays that are codified as annual events in their statutes.⁷

Table 1 shows the diffusion of this policy across the states throughout the period. In each year from 2004 through 2007, at least 100 million people lived in a state that had a sales tax holiday. Starting in 1999, this policy affected more than 20 percent of the U.S. population living in a state with a sales tax. This proportion was at least 30 percent between 2004 and 2009.

Due to budgetary concerns, states have repealed sales tax holiday laws or not approved legislation creating tax holidays. For example, explaining the reason Maryland did not have a tax holiday in 2002 after having one in 2001, Maryland State Senator Barbara A. Hoffman, Chairwoman of the Senate Budget and Taxation Committee, said, "The truth is we probably would have [had a sales tax holiday] this year if we had a lot of money."⁸ More recently, Washington, D.C. repealed its two tax holidays in 2009, citing that a repeal of the back-to-school holiday in August would avoid "the loss of an estimated \$640,000 in sales tax revenues in the current fiscal year."⁹ Since peaking at 44 percent in 2006, the proportion of the U.S. population living in a state with a sales tax and a sales tax holiday has declined steadily and was slightly more than 30 percent in 2009.

Characteristics of Sales Tax Holidays

Sales tax holidays vary along three key dimensions: the portion of the tax base that becomes exempt from sales tax during the holiday; the length of the holiday; and when the holiday occurs.¹⁰ Of the 20 holidays in 2007, 15 exempted clothing and footwear from sales tax, 10 exempted school supplies, 7 exempted computers, 6 exempted computer peripheral devices, and 3 exempted books.¹¹ Georgia and Virginia each had holidays exempting energy-efficient appliances and items certified by the federal Energy Star program. Florida had a "hurricane preparedness" holiday that exempted an array of goods, including flashlights, batteries, radios, and portable generators.

Each of the tax holidays exhibited some form of price cap for the exempted items, except for South Carolina. In most cases, if the price of an item is \$0.01 above the price cap, the entire amount of the good is taxable. The price caps vary depending on the goods in question. The most common price cap on clothing and footwear was \$100 per item in 2007. Price caps varied from \$10 to \$100 per item for school supplies. The price caps for computers ran from \$750 per single purchase in Alabama to \$3,500 per item in Missouri and North Carolina.



Table 1
States with Sales Tax Holidays: 1997-2009

Year	States	Population Affected	Percent
1997	New York (2)	18,656,546	7.0
1998	Florida, New York (2)	34,242,465	12.7
1999	Florida, New York (2), Texas	55,200,366	20.3
2000	Connecticut, Florida, Iowa, New York, Pennsylvania, South Carolina, Texas	78,640,109	28.6
2001	Connecticut, District of Columbia (2), Florida, Iowa, Maryland, Pennsylvania (2), South Carolina, Texas	66,359,882	23.9
2002	Connecticut, District of Columbia, Georgia (2), Iowa, North Carolina, Pennsylvania, South Carolina, Texas, West Virginia	63,799,818	22.7
2003	Connecticut, Georgia, Iowa, New York, North Carolina, South Carolina, Texas, Vermont, West Virginia	71,406,355	25.2
2004	Connecticut, District of Columbia (2), Florida, Georgia, Iowa, Massachusetts, Missouri, New York (2), North Carolina, South Carolina, Texas, Vermont (2), West Virginia	102,364,710	35.8
2005	Connecticut, District of Columbia (2), Florida (2), Georgia (2), Iowa, Louisiana, Massachusetts, Missouri, New Mexico, New York (2), North Carolina, South Carolina, Texas	107,622,572	37.3
2006	Alabama, Connecticut, District of Columbia (2), Florida (3), Georgia, Iowa, Maryland, Massachusetts, Missouri, New Mexico, New York, North Carolina, South Carolina (2), Tennessee, Texas, Virginia	128,600,998	44.2
2007	Alabama, Connecticut, District of Columbia (2), Florida (2), Georgia (2), Iowa, Louisiana, Massachusetts, Missouri, New Mexico, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia (2)	113,088,070	38.5
2008	Alabama, Connecticut, District of Columbia (2), Georgia (2), Iowa, Louisiana (2), Massachusetts, Missouri, New Mexico, North Carolina (2), Oklahoma, South Carolina (2), Tennessee (2), Texas (2), Vermont (2), Virginia (3), West Virginia	98,571,032	33.2
2009	Alabama, Connecticut, Georgia (2), Iowa, Louisiana (3), Mississippi, Missouri (2), New Mexico, North Carolina (2), Oklahoma, South Carolina (3), Tennessee, Texas (2), Vermont, Virginia (3), West Virginia	90,976,003	30.4

Notes:

Numbers in parentheses indicate the number of sales tax holidays the state had that year. "Population Affected" is the combined population of states that had sales tax holidays that year. The final column is the "Population Affected" that year divided by the combined population of states with a sales tax that year. Population data source: U.S. Census Bureau, Intercensal Population Estimates, "Table SA1-3 - Population," Regional Economic Information System, Bureau of Economic Analysis, March 2010. See <<http://www.bea.gov/regional/docs/footnotes.cfm?tablename=SA1-3>> (viewed June 22, 2010).

In 2007, the length of the holidays varied between 2 and 12 days, with the majority of holidays lasting three days. There appears to be a weak relationship between holiday length and the restrictiveness of the price caps. Short holidays tend to have relatively large price caps.

Tax holidays have occurred throughout the year. The District of Columbia had an annual holiday following Thanksgiving in November, and holidays for energy-efficient items in Georgia and Virginia were in early October in 2007. However, the majority of the annual holidays take place in August, usually on the first weekend, and are targeted at parents making back-to-school purchases for their children.

Policy Issues

A tax holiday affects consumers' incentives to purchase particular types of goods. Throughout the year, the tax code gives consumers the incentive to purchase goods and services that are not taxed. A tax holiday eliminates this distortion between the tax holiday goods and goods and services that are never taxed. However, it introduces an incentive to purchase tax holiday goods over the goods that remain taxed.

The price caps create an incentive to purchase particular items within the set of tax holiday goods. For example, suppose shoes priced \$100 or less are tax-exempt during the tax holiday, and suppose the sales tax rate is 5 percent. If a consumer purchases a pair of \$100 shoes during the holiday, he pays \$100. If, instead, he purchases a pair priced at \$100.01, he pays \$105.01. Provided the two pairs of shoes are nearly identical, the tax holiday will induce the consumer to buy the \$100 pair.

Tax holidays affect when consumers make their purchases. Suppose the tax holiday described above is held on Friday, Saturday, and Sunday. If a consumer purchases a pair of \$100 shoes on Thursday night or the following Monday, he pays \$105, but if he purchases them during the tax holiday, he would pay only \$100.¹² Unless the shoes are an urgent need, the tax holiday will induce the consumer to purchase the shoes during the tax holiday to take advantage of the lower tax rate. By their very

nature, *all* tax holidays exhibit this characteristic. Policymakers need to understand the ability and willingness of consumers to shift their purchases across time into the tax holiday because this behavior is an important determinant of how much tax revenue is foregone because of the policy.

A tax holiday affects consumers' decisions about where to shop. Consider a jurisdiction with no sales tax and an adjacent jurisdiction with a sales tax. The tax codes create an incentive for consumers to travel to the no-tax jurisdiction to purchase goods. The tax holiday eliminates this incentive, as in the case of New York and New Jersey that was outlined above. Alternatively, if the jurisdictions have positive but unequal tax rates, a tax holiday in either jurisdiction can *increase* the incentive to purchase goods in the lower-tax jurisdiction.¹³

Tax holidays introduce non-trivial compliance costs for retailers. Retailers must determine which of their goods qualify for the tax exemption during the holiday, which may be difficult, even with guidance from the state's taxing authority. Retailers with multiple locations must determine which county and local sales taxes are repealed during the holiday. Retailers must also train their staff to relay this information to consumers, who may not necessarily comprehend the finer distinctions of the exemptions; reprogram their registers *twice*; and make appropriate adjustments to accounting systems.

In addition, tax holidays introduce opportunities for non-compliance and tax evasion. Confusion over which items qualify for the tax exemption may cause non-compliance. Further, because tax holidays last fewer days than the tax-reporting period, it is plausibly easier for retailers to report on paper that sales occurred during the tax holiday, even if, in truth, they occurred outside the holiday. This evasion occurs at a time when the state already anticipates smaller tax remittance payments from retailers as a consequence of the holiday and thus would be difficult to detect.

Because the twin goals of a tax holiday are to encourage purchases that otherwise would not be made and to reward those who are already going to purchase the exempted goods,



policymakers need estimates of what portion of sales is “new” purchases and what portion is a shift in the timing of planned purchases. Further, they need estimates of these responses by the income class of consumers. This will determine the revenue impact of the policy and whether the policy has been successfully targeted at low-to-middle income families. Policymakers should then ask themselves whether there is a more efficient way of achieving the same outcome.

Local officials that are given the option to suspend local sales taxes during the holiday should carefully consider this option. It is not clear, from the local government’s perspective, whether or not it is optimal to participate in the state sales tax holiday. The answer likely depends on the degree of cross-jurisdictional shopping that is likely to occur.

Methodology

The data used in the analysis below were generated through check-out scans when consumers purchased computers. These “scanner data” come from the market research company The NPD Group, Inc. and span the 30 weeks between May 6, 2007 and December 1, 2007. During this period, nine states held tax holidays on computers.¹⁴ Eight of the holidays occurred on the first weekend in August; Massachusetts’ holiday occurred one week later. The data contain the number of units sold and the average pre-tax price of a large number of computer models, broken out by the state and week in which the model was purchased and whether the model was a desktop or a laptop computer.

Computers that sold positive quantities each week in a two-week window on either side of the tax holiday (spanning a five-week period from late July to mid-August) were examined. There are 6,177 computer models in this sample, 1,262 of which are in the tax holiday states.

Findings

Consumer Savings

For the five-week period, the mean pre-tax price was \$854.37—\$677.65 for desktops and \$934.99 for laptops; the median pre-tax price was \$791.53. Roughly 19 percent of the sample (1,171 models) was tax-exempt during the tax holidays. During the tax holidays, the state sales tax rate on computers eligible for the holiday decreased by 4.76 percentage points, on average. In addition, the pre-tax price of computers decreased 0.29 percent, on average, during the tax holidays. While the decrease in the pre-tax price is not statistically significant, it does suggest that the prices consumers pay during tax holidays decrease at least one-for-one with the reduction in the sales tax rate.

There is weak evidence that during tax holidays retailers lower the pre-tax prices of desktops but do not change the pre-tax prices of laptops. One plausible rationalization of the evidence is as follows. Since desktops are less expensive than laptops on average, potential purchasers of (cheap) desktop computers are sitting on the fence between buying and not buying a desktop. When the tax rate is lowered during the tax holiday, retailers lower their pre-tax prices in an effort to get the prices just below the maximum price those consumers are willing to pay for a desktop. This behavior on the part of retailers during the tax holiday induces purchases of desktops that would not be made in the absence of the tax holiday.

Laptop customers, on the other hand, are less likely to be on the fence of purchasing or not purchasing a computer, let alone a laptop. Therefore, retailers do not lower their pre-tax prices on laptops. If this story is correct, it suggests that the purchases of laptops during a tax holiday are primarily a timing response and that purchases of desktops, particularly cheap desktops, are likely to include a greater proportion of “new” purchases.

Consumers purchasing the average desktop computer priced between \$250 and \$500 in the tax holiday states could expect to save \$29 during the holiday, compared to only \$7 if they bought the average laptop in this price group. Pre-tax prices decreased 1.33 percent, on average, for these desktops but increased 3.71

percent, on average, for these laptops. The evidence, though only suggestive, supports the notion that retailers are lowering prices of desktops to induce purchases that otherwise would not be made in the absence of the tax holidays.

The evidence thus far points to pre-tax prices staying the same or decreasing slightly during tax holidays. This is not because retailers in general do not change their prices. The data indicate there are significant amounts of short-term price fluctuations around the tax holidays. Only 5.4 percent of the computer models in the holiday states and 7.7 percent of the models in the non-holiday states did not change prices during the week of the holiday.

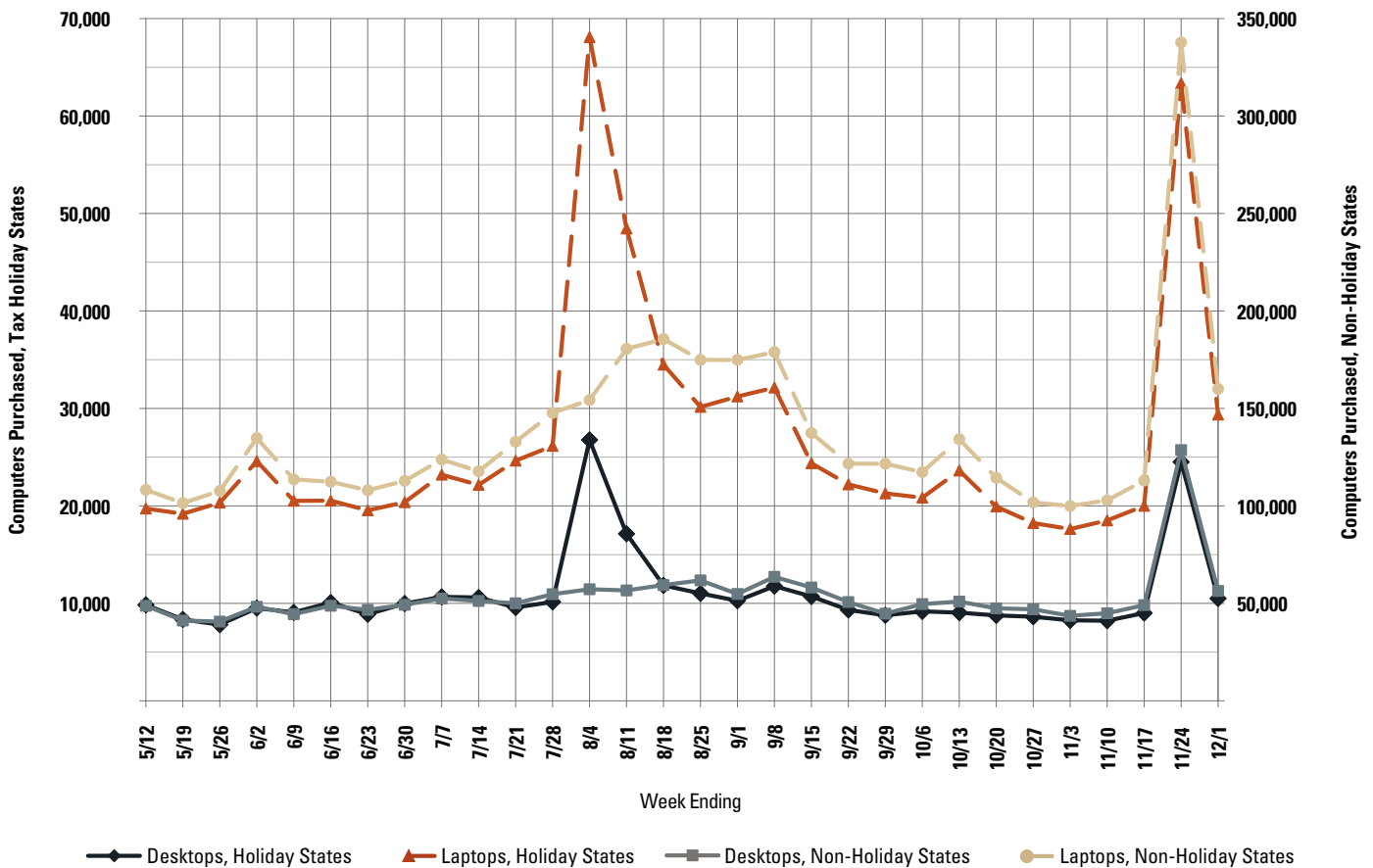
Finally, the data indicate that if a computer model is priced near the price cap, it is more likely to be below the cap than above it. Retailers are aware of the price caps and are pricing computers

just below the cap during the holiday week; consumers are more likely to purchase a computer just below the price cap than just above it. However, this phenomenon exists in weeks outside the tax holiday too, perhaps because the price caps occur at psychological price points, e.g., \$750, \$1,000, and \$1,500.

Retail Sales

Figure 1 plots purchases of desktops and laptops in states with tax holidays on computers and in states without tax holidays on computers. Consumers purchased 58,599 (161 percent) more computers in the tax holiday states during the week ending August 4—the week of most of the tax holidays on computers—compared to the prior week. Increased purchases in Georgia, North Carolina, and Tennessee accounted for roughly two-thirds of this increase. There was no such response in the non-tax holiday states during the same weeks, though there

Figure 1
By Computer Type and State, Computers Purchased
Source: Author's calculations using data from the NDP Group.





was a continuation of a seasonal increase in laptop purchases in the non-holiday states during the week ending August 11.

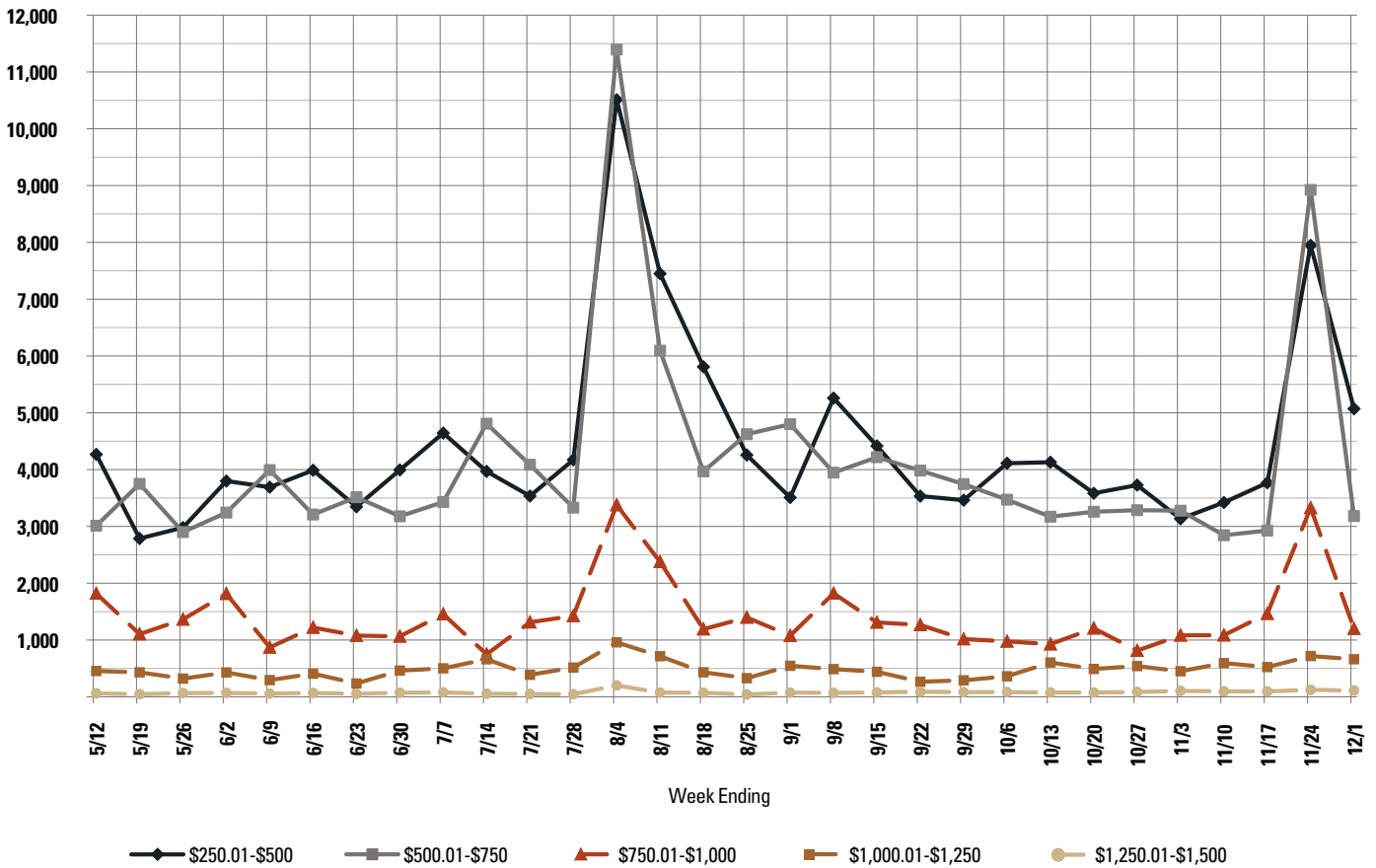
Consumers purchased 9.3 and 7.5 percent more desktops and laptops, respectively, in the tax holiday states during the week ending August 4 than sold in those states during the week ending November 24, which included the Friday and Saturday after Thanksgiving, routinely regarded as one of the busiest shopping weeks of the year. In contrast, consumers purchased 55.5 percent fewer desktops and 54.3 percent fewer laptops in the non-tax holiday states during the week ending August 4 than they purchased in those states during the week of Thanksgiving.

Desktop purchases in the holiday states decreased slightly relative to the non-holiday states in the week prior to most of the tax holidays, indicating that some consumers delayed their

purchases to take advantage of the tax holidays. Similarly, after the week ending August 18, the plot for the holiday states lies slightly below that of the non-holiday states, indicating that some consumers moved their purchases forward into the tax holiday weekends. However, the area between the two plots outside the holidays is small relative to its value during the holidays, which suggests that, although there is modest timing behavior in the desktop market, the tax holidays induced a relatively sizeable number of purchases that would not have been made in the absence of the holidays.

This contrasts with the market for laptops. The plot for the holiday states lies everywhere below the series for the non-holiday states except for the tax holiday weeks. This is particularly pronounced in the weeks after the tax holidays and before the Labor Day holiday (the week ending September 8).

Figure 2
By Price Group, Desktops Purchased in Tax Holiday States
Source: Author's calculations using data from the NDP Group.

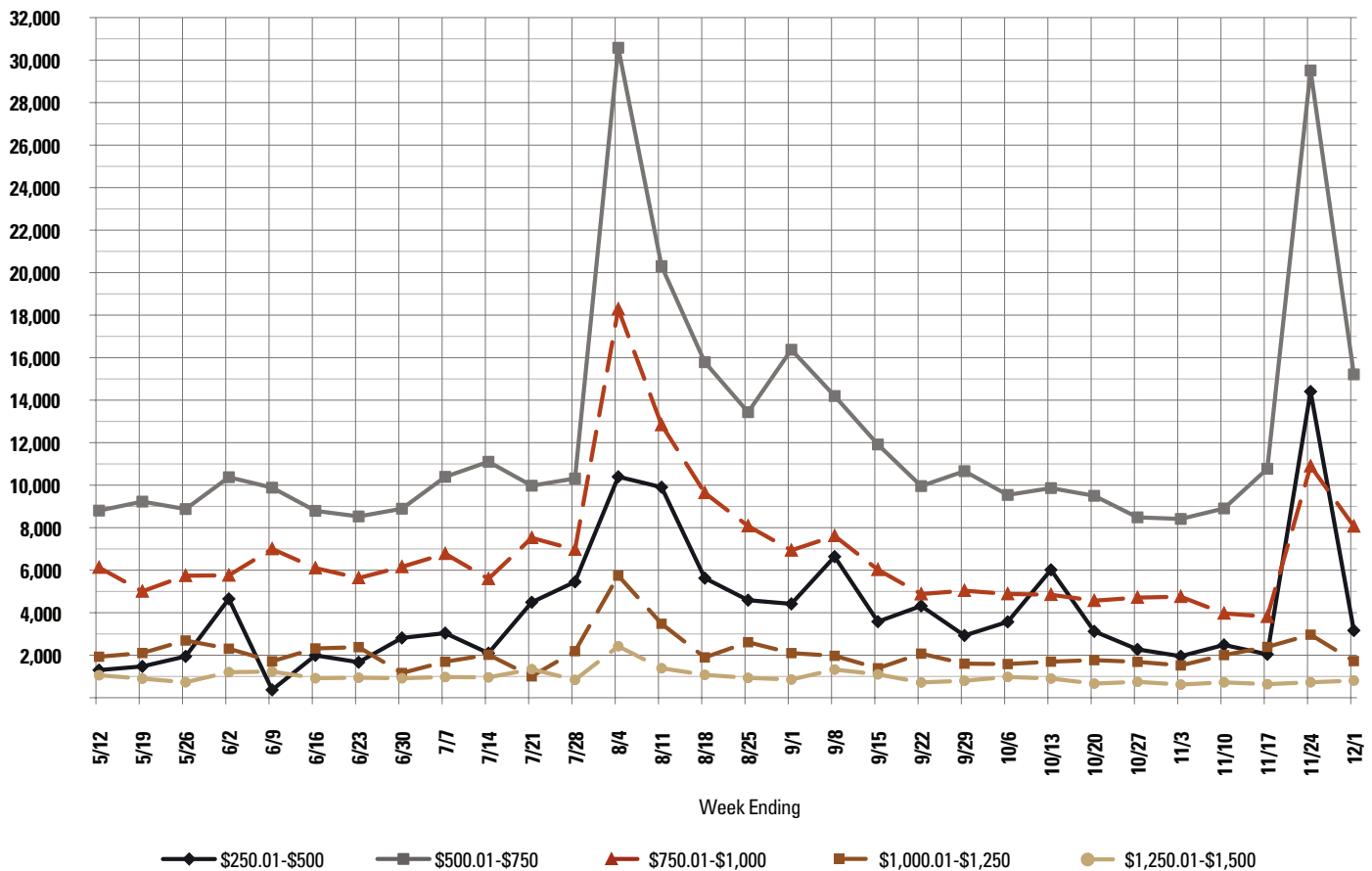


The tax holidays on laptops appear to have induced a relatively large timing response and a more modest increase in purchases that would not have been made in the absence of the holidays.

Figure 2 and Figure 3 plot, respectively, the desktop and laptop purchases in the tax holiday states into 5, \$250 price groups. Consumers purchased large numbers of relatively inexpensive computers during the tax holidays. Compared to one week earlier, consumers purchased substantially more desktops in the \$500-\$750 and \$250-\$500 price ranges during the tax holidays; purchases increased by 8,064 units (242 percent) and 6,339 units (152 percent), respectively. In the laptop market, purchases in the \$500-\$750 range increased by 20,265 units (196 percent), and purchases in the \$750-\$1,000 range increased by 11,318 units (162 percent).

In order to tease out the effect of the tax holidays on computer purchases, Table 2 presents the quantity of computers sold in each of the holiday states and the predicted number of computers that would have been sold if purchases in the holiday states mimicked purchases in non-holiday states.¹⁵ The difference between the actual and predicted purchases in the week of the tax holiday (the 1-week impact in Table 2) yields an upper bound on the timing response, while the difference between the actual and predicted purchases over the 30-week horizon is an upper bound on the number of additional computer purchases that would not have otherwise been made in the absence of the holiday. Columns four through six replicate the first three columns but are scaled to be the number of computers purchased per 10,000 people to control for differing population levels across the states.

Figure 3
By Price Group, Laptops Purchased in Tax Holiday States
Source: Author's calculations using data from the NDP Group.





As an example, consumers in Alabama purchased 4,527 more computers (168 percent) during the tax holiday week than they would have in the absence of the policy. Over the 30-week horizon, they purchased 8,957 more computers (12.4 percent) than they would have if there had not been a tax holiday. Therefore, the timing effect accounts for up to 50.5 percent

(4,527/8,957) of the increase in computer purchases in Alabama over this period.

Timing explains 90 percent of the increase in purchases over the 30-week horizon in South Carolina—which had no price cap—and 82 percent in Georgia and North Carolina. On the low end of the spectrum, timing explains only 37.3 percent and

Table 2
The Effect of Tax Holidays on Computer Purchases

1-week Impact						
State	Quantity Sold	Predicted Quantity	Effect	Per 10,000 People		
				Quantity Sold	Predicted Quantity	Effect
Alabama	7,216	2,689	4,527	15.6	5.8	9.8
Georgia	21,244	6,391	14,853	22.3	6.7	15.6
Louisiana	5,948	3,479	2,469	13.9	8.1	5.8
Massachusetts	11,692	5,525	6,167	18.1	8.6	9.5
Missouri	10,356	3,995	6,361	17.6	6.8	10.8
New Mexico	2,735	1,065	1,670	13.9	5.4	8.5
North Carolina	19,039	6,329	12,710	21.0	7.0	14.0
South Carolina	8,435	3,620	4,815	19.1	8.2	10.9
Tennessee	13,713	3,534	10,179	22.3	5.7	16.6
Total	100,378	36,627	63,751	19.2	7.0	12.2
30-week impact						
Alabama	81,319	72,362	8,957	175.7	156.4	19.3
Georgia	206,242	188,035	18,207	216.1	197.0	19.1
Louisiana	97,964	93,291	4,673	228.2	217.3	10.9
Massachusetts	160,904	146,186	14,718	249.5	226.7	22.8
Missouri	115,249	109,387	5,862	196.1	186.1	10.0
New Mexico	35,322	30,846	4,476	179.3	156.6	22.7
North Carolina	198,059	182,482	15,577	218.6	201.4	17.2
South Carolina	98,302	92,974	5,328	223.0	210.9	12.1
Tennessee	110,146	95,459	14,687	178.9	155.0	23.9
Total	1,103,507	1,011,022	92,485	210.6	193.0	17.6

Notes:

The one-week impact columns are for the week ending August 11th in Massachusetts and August 4th in all other states. The two-week impact columns are for the weeks ending August 11th and August 18th in Massachusetts and August 4th and August 11th in all other states. The results are aggregated for desktops and laptops priced between \$250 and \$1,500. Kentucky serves as the control state for Alabama, Louisiana, and South Carolina; Michigan for Georgia and North Carolina; Indiana for Missouri and Tennessee; Washington for Massachusetts; and Nebraska for New Mexico. See Cole (2009) for more details.

41.9 percent of the increased purchases in New Mexico and Massachusetts, respectively.

On a per capita basis, the tax holiday induced the largest response in Tennessee, where consumers purchased 16.6 more computers per 10,000 people during the week ending August 4th than they would have absent the holiday. Though Tennessee did not have the largest price cap, unsurprisingly, states with low price caps had smaller quantity responses. Alabama and New Mexico had the two most restrictive caps and had the fourth and second lowest per capita quantity responses, respectively.

Louisiana had a relatively generous cap on the first \$2,500 of each computer purchase but the lowest quantity response at 5.8 extra computers per 10,000 people during the tax holiday. Similarly, Massachusetts had a price cap of \$2,500 and experienced the third lowest quantity response. At first blush, these results seem odd, given the generosity of the price caps. However, the holidays in these states covered all consumer purchases of non-titled personal property priced \$2,500 or less. With the wider array of tax-free goods from which to choose,

consumers in these states may have opted to increase purchases of other goods at greater rates than they did for computers.

Tax Revenue Losses

During the week of the tax holiday, computer purchases increased dramatically. If all the purchases made during the tax holiday were due to a timing response, the revenue lost as a result of the policy was at its maximum.¹⁶ The difference between the actual revenue raised and the revenue that would have been raised if consumers made the identical purchases during the tax holiday and the sales tax rate had been in effect is an upper bound on the tax revenue lost on computers because of the tax holidays.

Table 3 provides estimates of the revenue loss on computers due to the tax holidays in 2007. The revenue loss from the tax holidays is substantial. In dollar terms, Tennessee experienced the largest decrease in tax revenue, nearly \$0.7 million. It also had the largest sales tax rate among the tax holiday states at seven percent. Not surprisingly, the states with the largest

Table 3
Estimates of State Sales Tax Revenue Loss Due to Tax Holidays on Computers

State	Week of Tax Holiday			August 2007			30-week Period		
	Tax Rev. (\$s)	Counterfactual Tax Rev. (\$s)	% Dif.	Tax Rev. (\$s)	Counterfactual Tax Rev. (\$s)	% Dif.	Tax Rev. (\$s)	Counterfactual Tax Rev. (\$s)	% Dif.
Alabama	58,745	193,323	-69.6	367,269	501,848	-26.8	2,170,410	2,304,988	-5.8
Georgia	11,277	598,643	-98.1	738,594	1,325,959	-44.3	5,250,404	5,837,770	-10.1
Louisiana	55	179,414	-100.0	329,953	511,212	-35.5	2,752,924	2,944,683	-6.5
Massachusetts	150	407,334	-100.0	717,040	1,124,224	-36.2	5,311,961	5,719,144	-7.1
Missouri	0	310,011	-100.0	465,773	775,784	-40.0	3,106,149	3,416,160	-9.1
New Mexico	13,205	96,017	-86.2	188,264	271,076	-30.5	1,225,290	1,308,102	-6.3
North Carolina	0	545,493	-100.0	743,830	1,289,323	-42.3	5,137,388	5,682,882	-9.6
South Carolina	0	362,013	-100.0	547,796	909,809	-39.8	3,655,804	4,017,817	-9.0
Tennessee	10,046	686,738	-98.5	737,204	1,413,896	-47.9	4,794,667	5,471,359	-12.4
Total	93,478	3,378,986	-97.2	4,835,723	8,123,131	-40.5	33,404,997	36,702,905	-9.0

Notes:
The counterfactual tax revenue is computed by multiplying the state sales tax rate by the price and quantity of computers sold in the state during the period in question. The tax holiday week is the week ending August 11th in Massachusetts and the week ending August 4th in all other states. See Cole (2009) for more details.



price caps—South Carolina, North Carolina, and Missouri—generated no sales tax revenue from computer sales during their tax holidays, and Alabama, which had the most restrictive price cap, raised the most tax revenue during its tax holiday. The state governments that had tax holidays on computers in 2007 collectively lost \$3.3 million in sales tax revenue because of these policies.¹⁷

Because tax revenue statements are published monthly, it is possible to determine how much revenue was lost in August 2007. By construction, the dollar amount of the revenue loss is the same as it was during the week of the tax holiday. However, the percentage loss in tax revenue takes on a slightly different interpretation. It assumes that all the purchases were going to be made in August, but consumers moved those purchases into the week of the tax holiday. Under this assumption, the sales tax revenue generated from computer sales declined 27 percent in Alabama and 48 percent in Tennessee. Similarly, if the timing behavior occurred over the entire 30-week period, the tax loss was 5.8 percent in Alabama and 12.4 percent in Tennessee. South Carolina was the median state, losing nine percent of its sales tax revenue from computers.

Using a separate dataset of monthly, state-level tax collections, it is possible to determine the aggregate impact of sales tax holidays on sales and use tax collections. The policy reduces collections by 4.2 percent, on average, during the month of the tax holiday. Consumer timing behavior accounts for up to half of this decrease in tax collections. The shifting of purchases appears largely to be isolated to the month of the holiday. There is no evidence that tax holidays lead to decreases in sales and use tax collections in preceding or succeeding months.

Finally, the importance of the timing behavior is reinforced when one examines the impact of extending the length of a tax holiday. Increasing the duration of a tax holiday by one day does not have a statistically significant effect on sales and use tax collections. Instead, it appears the existence of a tax holiday matters more than the length of time it covers.

Conclusion

The sales tax holiday—a transitory reduction in a state’s sales tax base lasting only a few days—is a popular state tax policy. While it began as a way to keep New Yorkers from travelling to New Jersey to purchase clothing that was tax-free year-round, the policy is now used to reduce the tax burden on families by exempting clothing and school supplies from tax and to encourage the purchase of certain goods such as computers, energy-efficient appliances, and hurricane preparedness items.

Scanner data on computer purchases indicate the prices consumers pay for computers fell at least one-for-one with the reduction in the sales tax during tax holidays in 2007. Thus, the tax holidays do appear to be achieving policymakers’ goal of reducing consumers’ tax burden on computers.

Tax holidays appear to induce purchases of computers that otherwise would not have been made in the absence of the holiday—particularly inexpensive desktops. However, a large portion of consumer purchases appear to be purchases that are shifted across time to coincide with the lower tax rates. This appears to be the case more for laptops than desktops.

Though the policy may be achieving the goals of policymakers, it comes at a substantial revenue cost. On average, sales and use tax collections decrease 4.2 percent during months containing tax holidays. Up to half of the revenue loss is due to consumers’ timing their purchases within the month to exploit the lower tax rate during the tax holiday. In addition, tax holidays create significant compliance costs for retailers and present opportunities for retailers to evade sales taxes. Ultimately, sales tax holidays are probably not the most efficient way of achieving policymakers’ goals. If these goals are indeed worth pursuing, given the foregone tax revenue, two alternative policies should be considered: (1) maintaining the same broad tax base but reducing the sales tax rate a small amount and (2) exempting the targeted goods from sales tax throughout the year, such as an exemption on purchases of groceries.

About the Author

All opinions expressed herein are those of the author and do not necessarily reflect the views of the Department of the Treasury.

This policy brief summarizes three chapters from the dissertation of Adam J. Cole, titled “Sales Tax Holidays: Timing Behavior and Tax Incidence.” Adam J. Cole is a financial economist in the Office of Tax Analysis at the U.S. Department of the Treasury in Washington, D.C. His research focuses on various aspects of taxation and has been published in *State Tax Notes*. He holds a B.S.B.A. and M.A. from the University of Arkansas and an M.A. and Ph.D. from the University of Michigan, all in economics.

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End Notes

¹ Much of what immediately follows draws directly from Cole (2008).

² “Small business report; government watch; retailers look to merchandise January’s clothing tax holiday: test may lead to a permanent cut,” *Crain’s New York Business* (New York, NY), Dec. 9, 1996, News, p. 28.

³ Lisa W. Foderaro, “Stores gear up for week of tax relief,” *The New York Times* (New York, NY), Jan. 18, 1997, Late Edition - Final, Section 1, p. 27.

⁴ Concerns of consumers’ crossing borders to shop, however, are a recurring theme in press accounts when other states weighed bills that would establish sales tax holidays, particularly when those states border a state with a sales tax holiday and the state without one has a substantial population living near the border.

⁵ Cole (2008) details each of these holidays.

⁶ Alaska, Delaware, Montana, New Hampshire, and Oregon do not levy a sales tax.

⁷ These states were Alabama, Connecticut, Iowa, Louisiana, Missouri, New Mexico, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, and Virginia. The District of Columbia and Virginia have two annual sales tax holidays each. Virginia’s Energy Star sales tax holiday is annual through 2011.

⁸ Fick, Laura. “Md. sales tax holiday unlikely in 2002,” *The Daily Record* (Baltimore, MD). March 27, 2002.

⁹ Office of Tax Revenue, District of Columbia. “District of Columbia Repeals August Sales Tax Holiday.” July 20, 2009. Information was retrieved from <http://newsroom.dc.gov/show.aspx/agency/otr/section/2/release/17654> on March 5, 2010.

¹⁰ For details, see Cole (2008) or “Sales Tax Holiday Details 2007-2009” from the Tax Policy Center at <http://www.taxpolicycenter.org/taxfacts/displayafact.cfm?Docid=578>.

¹¹ For this discussion, I set aside Massachusetts’ holiday, which exempted almost all tangible personal property priced at \$2,500 or less per item, and Louisiana’s holiday, which exempted the first \$2,500 per item of nearly all tangible personal property purchases.

¹² This crucially assumes retailers do not charge different prices before, during, and after the holiday.

¹³ Consider the following example. Suppose one jurisdiction has a four percent tax rate and the other jurisdiction has a six percent tax rate. In the absence of the tax holiday, the tax differential is two percentage points. The tax differential during a tax holiday is four or six percentage points, depending on which jurisdiction has the holiday.

¹⁴ The states were Alabama, Georgia, Louisiana, Massachusetts, Missouri, New Mexico, North Carolina, South Carolina, and Tennessee.

¹⁵ The following results are sensitive to the choice of comparison state but in ways that are not easily discernable or predictable.

¹⁶ Given the assumption that the response of consumers is purely a timing response, the revenue loss in percentage terms decreases as the window around the tax holiday increases.

¹⁷ The reporting weeks for the data span Sunday through Saturday. The holidays often take place Friday through Sunday, thereby covering two reporting weeks. Treating the holidays as lasting two reporting weeks, Tennessee lost \$1 million, and the states collectively lost \$5.1 million.

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