

## **Appendix E**

### **The Cross-Border Issue: An Ongoing Analysis Affecting Multiple Taxes**

#### **Introduction**

Act 157 mandated an analysis of “cross-border tax policies and competitiveness with neighboring states, including: (A) impacts on the pattern of retailing, the location of retail activity, and retail market share; (B) impacts of retail sales tax rates and other related excise taxes, including on tobacco products, and to the extent data is available, on alcohol and gasoline; and (C) the impact by business size, to the extent data is available.”

This study is a continuation of an ongoing set of analyses and source data development that the Joint Fiscal Office and Tax Department have pursued in response to ongoing revenue analyses and forecasting and a succession of legislative requests for economic and revenue impacts associated with regional tax rate differentials for various revenue categories.<sup>2</sup> While it advances some of the prior analyses in substantive ways, there is still further research and study necessary to fully quantify the economic and revenue effects of various tax rate differentials between Vermont and neighboring tax jurisdictions.

The importance of understanding cross-border tax rate differentials is underscored by the fact that only two of Vermont’s 14 counties (Washington and Lamoille) do not border another state or province, and no place in the state is more than about a one-hour drive to a state or provincial border.

The most significant tax rate differentials have generally been between Vermont and New Hampshire; however, differentials also have existed between Vermont and New York and, to a lesser extent, Vermont and Massachusetts at times. Analysis of variations in tax policy between Vermont and Quebec, Canada, were not included in this study segment. The tax that is most affected by rate differentials between Vermont and New Hampshire is the Sales and Use Tax, first implemented in Vermont in 1969 at rate of 3 percent and steadily increased over time to its present rate of 6 percent (in effect since 2003); New Hampshire is one of four U.S. states with no state or local general sales tax.<sup>3</sup> Accordingly, and consistent with the Act 157 directive emphasizing study of retail industry impacts, this study focused primarily on this tax and cross-border impacts with New Hampshire.

Other taxes that were considered in this analysis include cigarette taxes, which are analyzed on a more regular basis in response to frequent tax rate changes, gasoline taxes and taxes on alcoholic beverages.

#### **Summary of Findings to Date**

While tax rate differentials can result in important behavioral economic effects, there are many other state, industry, and local conditions that affect relative economic and demographic conditions in neighboring border areas.

Vermont’s 255 mile border with New Hampshire is porous, with 29 vehicular bridges across the Connecticut River. It is clear that the steadily increasing state sales tax differential over the past

---

<sup>2</sup> See, for example, the Tax Reports section of the JFO website at [http://www.leg.state.vt.us/ifo/revenue\\_tax.aspx](http://www.leg.state.vt.us/ifo/revenue_tax.aspx), “Sales Tax on Selected Services Report – January 2016,” and in the Issue Briefs section, “Revenue Impacts Associated With Proposed Cigarette Tax Rate Changes - April 2013.”

<sup>3</sup> The others are Delaware, Montana and Oregon. Although Alaska has no state sales tax, there are local general sales taxes of up to 7%.

47 years, ranging from 3 percent to 6 percent, has contributed to shopping and development patterns that have shifted significant retailing activity from Vermont to New Hampshire. The sales tax differential alone, however, is not the single or perhaps even the most significant causal factor in this outcome. The total economic and fiscal impacts associated with this development differential are equally complex.

Trends in retailing over the past 50 years — including the ascendancy of ever-larger so-called “big box” stores and more recently, the rise of the internet and associated tax-free shopping with quick, low cost, home delivery — have radically affected retailing, warehousing, delivery, and the relative importance of state tax policies.

The ever-growing share of sales over the study period at large retailing chains such as Walmart, Home Depot, Costco, Lowe’s, Staples, etc. has driven many smaller retailers out of business, and concentrated sales in smaller geographic areas, often outside of historical downtown shopping districts. In recent years, e-commerce retailing has been growing rapidly, and now represents more than 8 percent of all retail sales and an even higher share of the Vermont sales tax base. It has been cutting into sales at “brick and mortar” stores (especially “regional” and “super-regional” centers<sup>4</sup>), causing the closure of hundreds of malls across the country. It has even driven Walmart to announce the closure of 154 U.S. stores earlier this year and prompted its \$3 billion purchase of Jet.com, in an effort to offset slowing store sales with a heightened e-commerce presence. While Vermont tax avoidance through internet purchases has impacted state sales and use revenues, it has also removed some of the incentive to shop in New Hampshire and impacted retailers there accordingly.

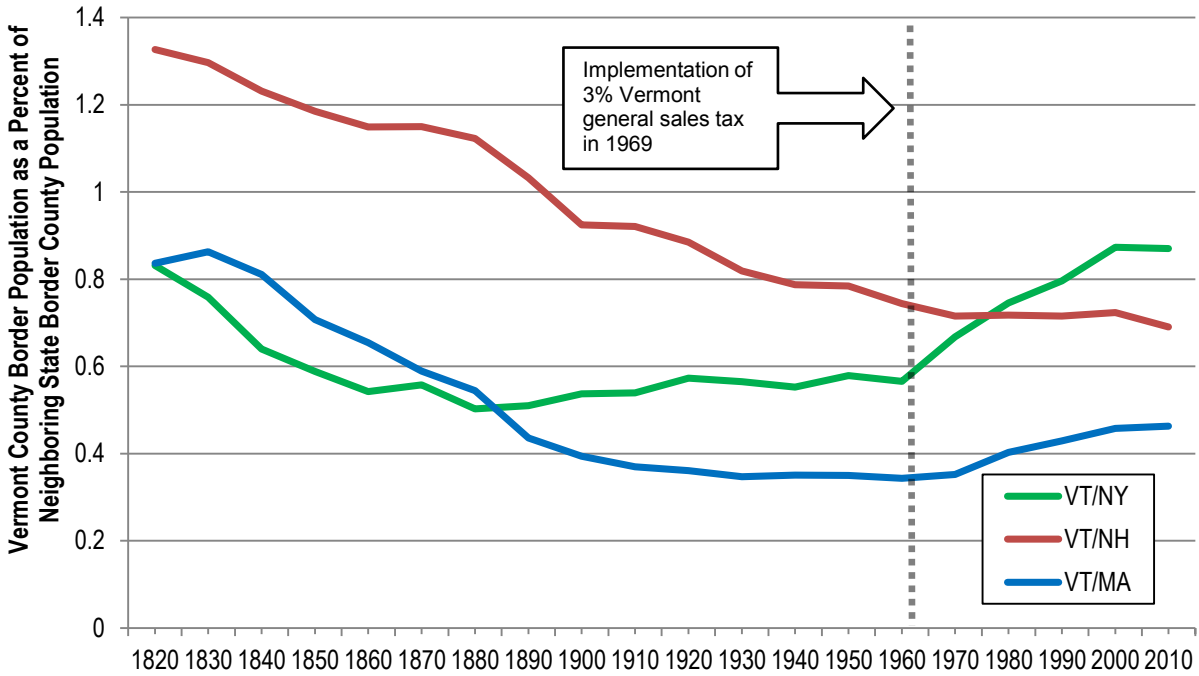
Demographics also matter. Historical population settlement patterns affected the siting and growth of towns along the Connecticut River, which have persisted over hundreds of years — well before any sales tax existed. As the chart on the following page illustrates, the relative size of the population of Vermont border counties has steadily declined relative to New Hampshire border counties over the last 200 years. Since retail sales are closely linked to population, it would not be surprising to find that retail development would follow such population shifts and not necessarily cause them. In fact, since 1969, the Vermont-to-New Hampshire ratio of population has been either flat or declining more slowly than in any of the preceding 150 years. The aging of the population in both states will also affect retail sales, reducing sales relative to overall population. It will also probably increase the value to consumers of home delivery options offered by internet shopping.

Other state policies, especially those affecting new construction and development, such as Act 250, which was enacted about a year after the first Vermont sales tax, may have been as or more impactful with respect to retail store development along the New Hampshire and Vermont border as the sales tax rate differential. Walmart and other “big box” developments have been actively opposed in almost every Vermont location in which they have been proposed. Act 250 provisions to limit sprawl, among other considerations, have delayed, added mitigation costs or prevented building permit approval in many locations. Given the option to quickly develop in a nearby location with a less restrictive permitting regimen, New Hampshire offers an easy choice. All six Walmart stores along the Connecticut River border are located on the New Hampshire side of the river.

---

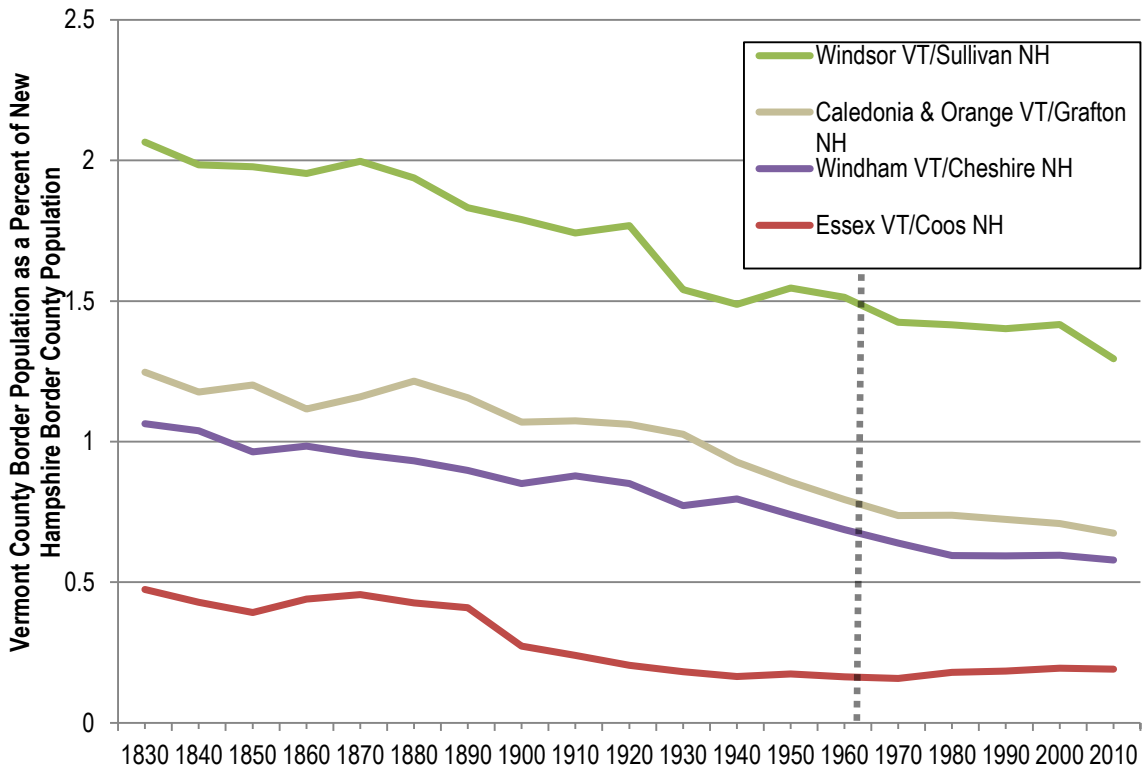
<sup>4</sup> See CBRE research at [www.cbre.us](http://www.cbre.us) and [www.cbre.us/AssetLibrary/CBRE\\_ARC\\_Retail\\_VF.pdf](http://www.cbre.us/AssetLibrary/CBRE_ARC_Retail_VF.pdf) as well as research by the International Council of Shopping Centers at [www.icsc.org/research](http://www.icsc.org/research). “Community” and “neighborhood” retail stores were the least affected brick and mortar market segment.

### Population in Vermont Border Counties Relative to Border Counties in NH, MA and NY



Source: U.S. Census Bureau

### Population in Vermont Border Counties Relative to Opposing New Hampshire Border Counties



Source: U.S. Census Bureau

Maine, which also has a long border with New Hampshire, and has had a comparable sales tax differential for longer than Vermont<sup>5</sup>, has 25 Walmart stores, one for every 53,000 residents, whereas Vermont (with the opening of the newest store in Derby in November of 2016) now has six, one for every 104,000 residents. New Hampshire has one Walmart store for every 43,000 residents.

Big box retail development, however, is not an unambiguous economic “good.” Unlike exporting industries, retail trade is highly local. Wages in the industry are among the lowest in the economy and workers often depend upon public assistance despite full time employment. The efficiencies of large retailers means that fewer employees are needed for the same level of retail sales and thus total sectoral employment in a region can decline, or grow less quickly, despite new retail development.

Supporting industries for large national or international chains also tend to be less local. The lawyers, accountants, and other administrative support services associated with large retailing are often concentrated at corporate locations outside of the region instead of utilizing local resources. Lastly, as smaller local retailers are displaced and retailing centers move out of older downtown areas, shuttered stores can contribute to a broader economic collapse in these downtown areas, affecting many other sectors, including the increasingly important tourism industry.

Employment impacts from these development patterns can be overstated. Border area jobs at new retail developments, despite being counted in some data sources by place of work, are available, of course, to all. If a retail development is close enough to a state border to attract out-of-state shoppers, it can also attract out-of-state workers. Such job opportunities for Vermont border residents exist from the construction through the operation of such stores, despite their locations on the east shore of the River.

In fact, as detailed in the commuting workflows table, more than 22,000 workers commute across the Connecticut River between Vermont and New Hampshire each day. Following longstanding population concentrations, the net flows are higher into Vermont at the southern part of the river and higher into New Hampshire at the middle and northern sections. The largest flows into New Hampshire are in Grafton County, in the Hanover-Lebanon area, from Windsor and Orange Counties, Vermont, from which more than 8,500 workers commute. The largest flows into Vermont are from Cheshire County, New Hampshire, into Windham County, Vermont, where more than 3,000 workers commute. About 1800 workers flow from Sullivan, New Hampshire, to Windsor County and about 900 in the opposite direction. Though much smaller in size, about 1,000 workers commute from Essex County, Vermont, to either Coos (about 650) or Grafton (about 350) Counties in New Hampshire. In total, about 8,900 workers travel from New Hampshire to Vermont to work and about 13,400 workers from Vermont to New Hampshire. Regardless of the sales tax rate, these flows affect shopping patterns in the two states and reinforce the existing population advantage of the largest border communities.

---

<sup>5</sup> Maine’s first general sales tax was introduced in 1957 at 3% and was raised to 5% by the time Vermont first enacted a general sales tax in 1969. It was raised to 6% in 1991, before being lowered to 5.5% in 1998 and then 5% in 2000. There are, of course, many other factors that have affected retailing patterns between Maine and New Hampshire, which have not been analyzed in this study.

## Commuting Flows between Vermont and New Hampshire, Average 2009 - 2013

Place of Residence		Place of Work		Workers in Commuting Flow
New Hampshire	Cheshire County	Vermont	Addison County	5
New Hampshire	Cheshire County	Vermont	Chittenden County	32
New Hampshire	Cheshire County	Vermont	Orange County	8
New Hampshire	Cheshire County	Vermont	Rutland County	21
New Hampshire	Cheshire County	Vermont	Windham County	3,050
New Hampshire	Cheshire County	Vermont	Windsor County	168
New Hampshire	Coos County	Vermont	Caledonia County	75
New Hampshire	Coos County	Vermont	Chittenden County	7
New Hampshire	Coos County	Vermont	Essex County	256
New Hampshire	Coos County	Vermont	Lamoille County	10
New Hampshire	Coos County	Vermont	Orange County	12
New Hampshire	Coos County	Vermont	Orleans County	55
New Hampshire	Coos County	Vermont	Washington County	13
New Hampshire	Grafton County	Vermont	Caledonia County	399
New Hampshire	Grafton County	Vermont	Chittenden County	32
New Hampshire	Grafton County	Vermont	Essex County	27
New Hampshire	Grafton County	Vermont	Orange County	694
New Hampshire	Grafton County	Vermont	Rutland County	44
New Hampshire	Grafton County	Vermont	Washington County	21
New Hampshire	Grafton County	Vermont	Windham County	29
New Hampshire	Grafton County	Vermont	Windsor County	1,683
New Hampshire	Sullivan County	Vermont	Caledonia County	5
New Hampshire	Sullivan County	Vermont	Chittenden County	30
New Hampshire	Sullivan County	Vermont	Orange County	59
New Hampshire	Sullivan County	Vermont	Windham County	296
New Hampshire	Sullivan County	Vermont	Windsor County	1,862
<b>New Hampshire</b>	<b>All Counties</b>	<b>Vermont</b>	<b>All Counties</b>	<b>8,893</b>
Vermont	Caledonia County	New Hampshire	Belknap County	3
Vermont	Caledonia County	New Hampshire	Carroll County	12
Vermont	Caledonia County	New Hampshire	Coos County	50
Vermont	Caledonia County	New Hampshire	Grafton County	901
Vermont	Caledonia County	New Hampshire	Hillsborough County	20
Vermont	Caledonia County	New Hampshire	Rockingham County	1
Vermont	Essex County	New Hampshire	Belknap County	2
Vermont	Essex County	New Hampshire	Coos County	653
Vermont	Essex County	New Hampshire	Grafton County	346
Vermont	Essex County	New Hampshire	Merrimack County	2
Vermont	Essex County	New Hampshire	Rockingham County	6
Vermont	Orange County	New Hampshire	Belknap County	6
Vermont	Orange County	New Hampshire	Coos County	5
Vermont	Orange County	New Hampshire	Grafton County	2,670
Vermont	Orange County	New Hampshire	Merrimack County	6
Vermont	Orange County	New Hampshire	Strafford County	2
Vermont	Orange County	New Hampshire	Sullivan County	58
Vermont	Windham County	New Hampshire	Cheshire County	1,212
Vermont	Windham County	New Hampshire	Grafton County	92
Vermont	Windham County	New Hampshire	Hillsborough County	12
Vermont	Windham County	New Hampshire	Merrimack County	7
Vermont	Windham County	New Hampshire	Rockingham County	5
Vermont	Windham County	New Hampshire	Sullivan County	94
Vermont	Windsor County	New Hampshire	Carroll County	24
Vermont	Windsor County	New Hampshire	Cheshire County	140
Vermont	Windsor County	New Hampshire	Grafton County	6,082
Vermont	Windsor County	New Hampshire	Hillsborough County	18
Vermont	Windsor County	New Hampshire	Merrimack County	20
Vermont	Windsor County	New Hampshire	Strafford County	12
Vermont	Windsor County	New Hampshire	Sullivan County	933
<b>Vermont</b>	<b>All Counties</b>	<b>New Hampshire</b>	<b>All Counties</b>	<b>13,394</b>

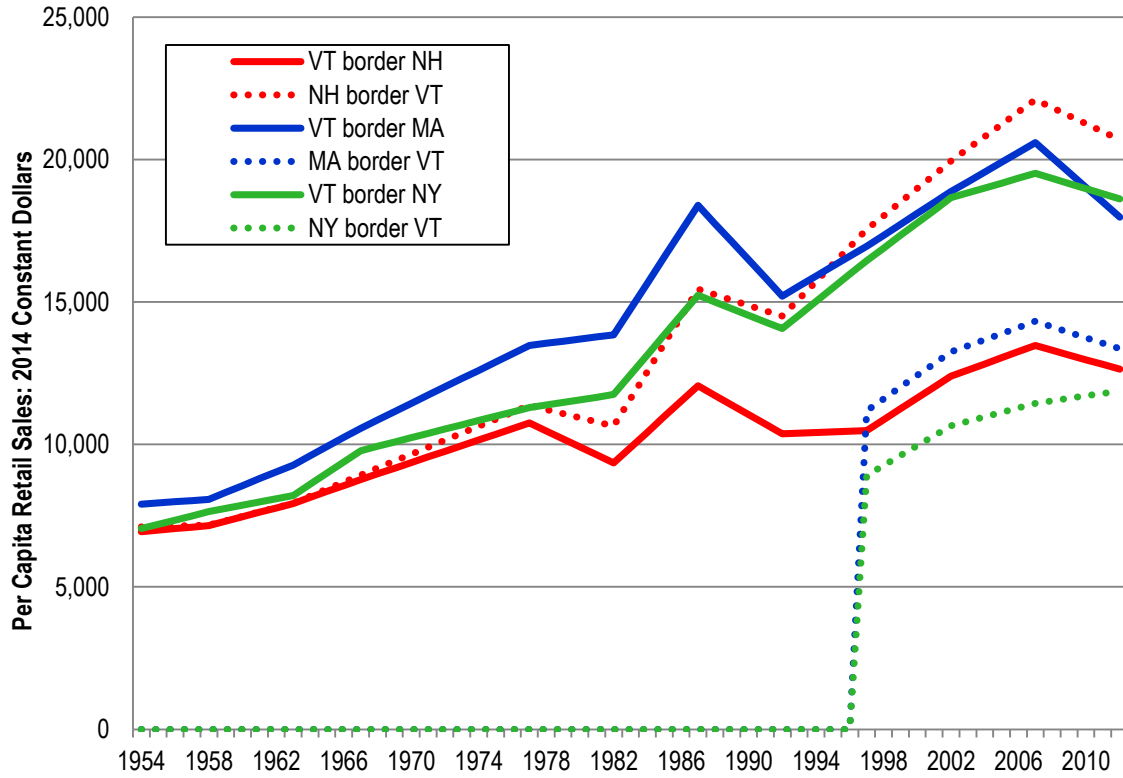
Although much of this analysis (and almost all prior similar analyses) is based on county-level data, the introduction of lower-level town information provides a more complete understanding of some of the variances between the border regions compared. For example, much of the economic and population growth in the New Hampshire border counties has taken place in the three towns near the intersection of Interstates 89 and 91: Hanover, Lebanon and Plainfield. This area also has two significant economic anchors, Dartmouth College and the large Dartmouth-Hitchcock Medical Center. These two enterprises are notable for their lack of sensitivity to business cycles, their relatively high levels of employee pay and associated demand for local supplying and related businesses. Between 1990 and 2015, average annual compound total employment growth in the Vermont border counties was 0.1 percent per year, while it was 0.2 percent per year in the New Hampshire border counties. However, excluding the towns of Hanover, Lebanon and Plainfield, the growth rate in the New Hampshire counties was identical to those in Vermont, at 0.1 percent per year.

These and other local statistics underscore the fact that with the exception of a few areas, most of the towns on both sides of the Connecticut River have seen better days. Many have lost key manufacturing sectors, from specialty machinery and tool-making to paper and textile production. Few are now among the most vibrant or fastest growing in either New Hampshire or Vermont, but neither are they the worst performing. The towns in the northernmost region tend to be the most economically distressed – with no border town in either Coos County, New Hampshire, or Essex County, Vermont, registering an average annual unemployment rate over the last 20 years below their respective state unemployment rate over the same period.

In analyzing retail sales impacts from sales tax differentials many studies focus on per capita retail sales, as defined by the U.S. Census Bureau, sometimes adjusted for relative income levels. While this is relevant information, it is not definitive with respect to causality or as a basis for estimation of sales tax revenue loss. As noted above, there are many factors that affect this metric, of which the sales tax differential is but one. Personal income is another important determinant of retail demand. Because per capita personal income was relatively constant between New Hampshire and Vermont border counties over the study period (see chart on the following page), no adjustments were made to other comparative measures of retail demand. However, further analysis, especially more in depth study of bordering New York counties, should include an income adjustment.

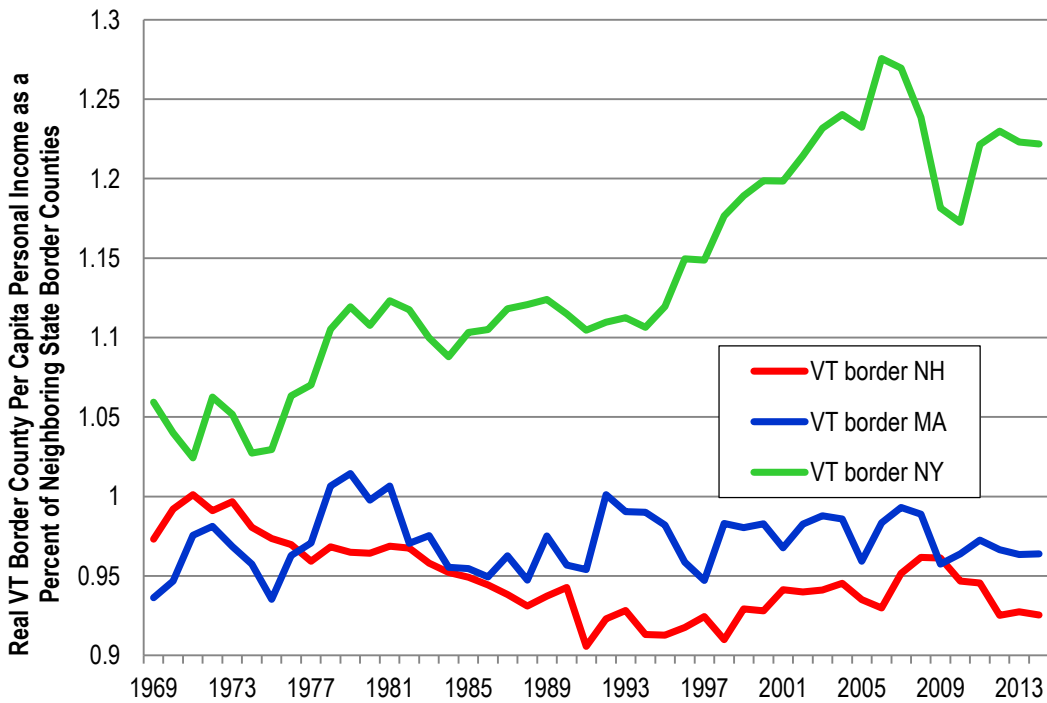
Retail sales, as defined by the Census Bureau, includes many items that are not taxable under the Vermont Sales and Use Tax. More than half of total retail sales are in categories that are excluded from the Vermont Sales Tax, and it is impossible to estimate all state exclusions using Census data. The analysis of these data at the county level is also fraught with imprecision. Counties are irregular in shape and composition and may or may not be dominated by a border relationship with another state. Rensselaer County in New York, for example, borders Bennington County, Vermont, but retailing patterns are far more affected by its western border with Albany County, New York. Clinton County, New York, which includes the city of Plattsburgh with a population of about 20,000, borders Vermont's most populous county, Chittenden, and yet because the border is a wide lake with lengthy and very limited transportation crossings, only 11 workers commute from Chittenden to Clinton (along with 80 from Grand Isle to Clinton — where there is one bridge), versus more than 6,000 workers who cross the Connecticut River across numerous bridges and an interstate highway from Windsor County, Vermont to Grafton County, New Hampshire each day.

### Per Capita Retail Sales – VT and Neighboring State Border Counties



Source: U.S. Census Bureau, Census of Retail Trade, Population Estimates.

### Real Per Capita Personal Income – VT Border Counties as a Percentage of Neighboring State Border Counties



Source: U.S. Department of Commerce Bureau of Economic Analysis

Based only on Census per capita retail sales, Bennington County registers the highest level in the state at \$22,604 in sales per person in 2012, more than \$2,500 above second place Chittenden County. While one could conclude that this is due to penny-pinching New Yorkers who wish to save 2 percent on sales taxes flocking to Vermont, tax base data at the town level from the Vermont Tax Department reveal that it is more likely due to price-insensitive tourists flocking to the ski towns of Manchester and Winhall (both of which add an additional 1 percent local option tax to the 6 percent State Sales Tax), Dorset, and Peru. Underscoring the importance of winter tourism, at a town level, the highest per capita retail sales (on a Vermont taxable sales basis) are in towns hosting or near large ski resorts (see statewide maps located at the end of the appendix).

The town of Bennington is clearly a retail center in its region, but its per capita taxable retail sales (at \$9,062 per year over the past 10 years) are not higher than the Connecticut River border towns of Brattleboro (\$9,384) or St. Johnsbury (\$9,611) and only marginally above other much smaller river towns like Bradford (\$8,518), Fairlee (\$7,742) and Hartford (\$7,213). Among the top per capita retailing areas in the state are the large retailing centers in Williston (especially), Rutland Town, Berlin/Montpelier/Barre, South Burlington, Rutland Town and City, and St. Albans Town and City. However, on a per capita basis, 11 of the top 25 retailing towns are associated with the ski resorts at Mt. Snow, Stratton, Bromley, Killington, Okemo, Sugarbush, Mad River Glen, Stowe and Jay Peak. State tourism research has shown that winter tourists tend to spend more than other seasonal tourists and it is validated in these data.

This analysis suggests that even though there are clearly Vermont sales tax losses to New Hampshire, there are substantial sales tax gains from out-of-state visitors that may offset this loss in whole or part. Although further research is required to estimate this component of the retail trade sector in Vermont, per capita retail trade in the three border states examined was only higher in New Hampshire (at \$19,690 in 2012), with New York (\$12,810) and Massachusetts (\$13,956) below Vermont's level of \$15,859.

The relative intensity of Vermont town retailing activity can be seen in the series of charts on the following pages, plotting each town's share of population to its share of retail sales (as measured by Tax Department taxable sales). Towns with a higher share of taxable retail sales than population will be in the upper left section of each chart (above the red dividing line), and those with lower shares of retail sales than population will be in the lower right section of the charts (below the red dividing line). The three charts start with a view encompassing all towns, using a scale of 10 percent on each axis, and then zooming in to 3.5 percent on each axis so as to reveal more detail, and finally an expanded view of the smaller towns with less than a 2 percent share of retail sales and population.

In the first chart, the dominance of the retail clustering in Williston is apparent. Over the most recent 10 years of available data (2005 to 2014), Williston has accounted for nearly 10 percent of all taxable real<sup>6</sup> retail sales in the entire state, with only 1.4 percent of the state's population. South Burlington is the second largest retailing center, with more than 8 percent of all state taxable sales and a 2.6 percent state population share. On the lower side of the red line on the chart, Burlington has a large retailing share, at 5.5 percent, however, its population share is even larger, at 6.7 percent, so it is a net "loser" in retailing services relative to its population. In the second chart, Essex is in a similar position, with a relatively large retail share (2.6 percent),

---

<sup>6</sup> Constant 2014 dollar retail sales are calculated using the Implicit Price Deflator for Personal Consumption Expenditures.



but an even larger population share (at 3.2 percent). The constellation of smaller towns is depicted in the third chart.

Variations in the relative economic performance between border regions, including retail trade, are caused by a variety of historical geographic, population, industry, technology and political factors. Sales tax differentials definitely affect regional retail sales and related shopping patterns, but are not the only or even the most important determinant shaping these patterns. Among state public policies, development and permitting regimens may be as impactful as sales tax variations. Retail establishments tend to be in close proximity to population centers and clustered, emphasizing the importance of convenience in shopping. Price points at which “inconvenience” is fully offset will vary by individual shoppers, the time and expense (fuel price primarily) required to travel to lower price locations, and actual retail prices, which are not always identical to tax rate differentials.

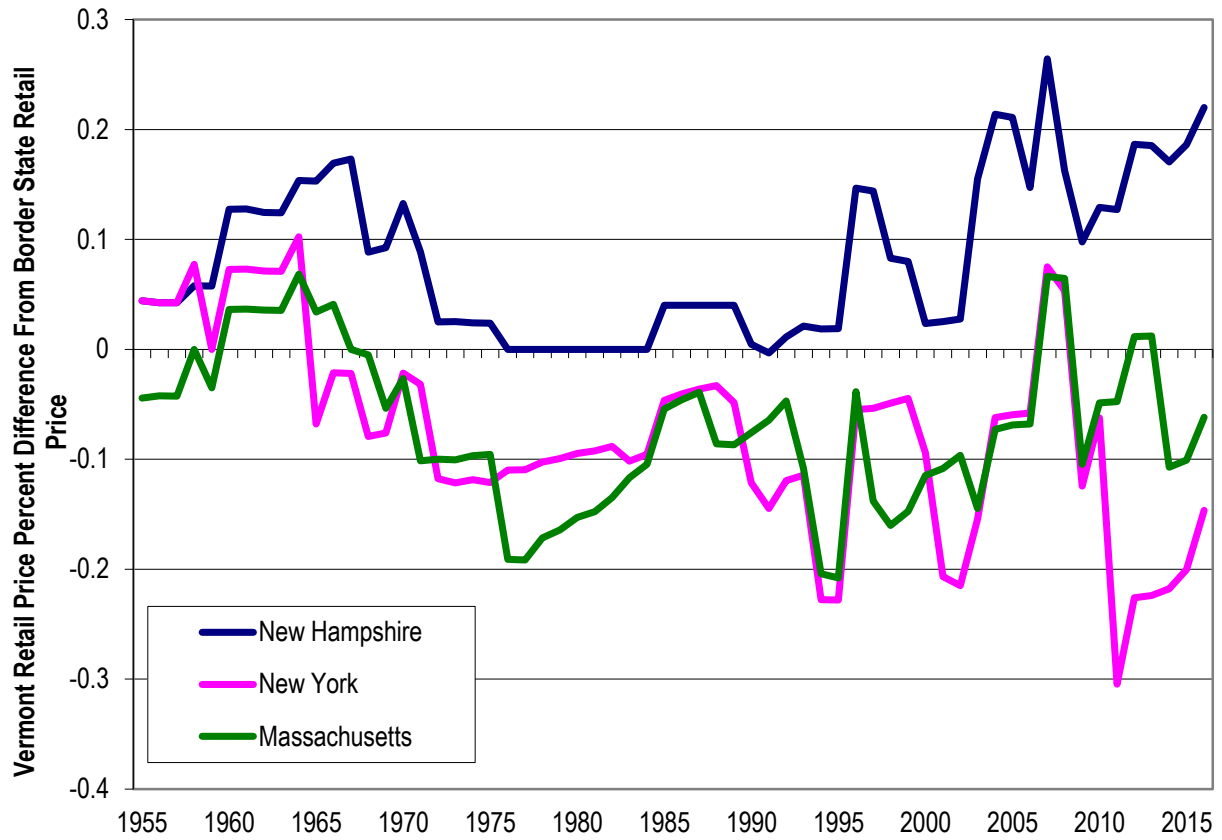
Net fiscal impacts from losses to lower tax rate jurisdictions include direct sales tax collection losses, lost property taxes on retail infrastructure, corporate tax revenues from retail businesses, and some indirect loss of related businesses due to the clustering tendency of retail building. Employment effects, direct construction spending effects, indirect and induced spending, however, can take place regardless of which side of the border a development occurs, and can result in employment and related tax revenue for Vermont even if the place of employment is in New Hampshire. Negative externalities associated with some retail development may also be avoided, while the shopping convenience and price advantages associated with larger retailers can be enjoyed from both sides of the border.

#### **Other Taxes and Cross-Border Issues**

Other taxes are also affected by tax rate differentials, such as cigarette, liquor and motor fuel taxes. While not the primary focus of this study, each has different cross border substitution dynamics.

Cross-border effects associated with cigarette taxation are monitored more frequently, since states have been changing rates (usually raising them) rapidly in the past 15 years. In Vermont, there have been eight tax rate changes during this period (from \$0.44 to \$3.08 per pack), four in New York (from \$1.21 to \$4.35), three in Massachusetts (from \$0.76 to \$3.51) and seven in New Hampshire (from \$0.37 to \$1.78), including one short-lived \$0.10-per-pack price decrease in 2011.

**Figure 1 Border State Cigarette Price Differentials Relative to Vermont – Expressed as a Percentage of Retail Price**



Source: Orzechowski and Walker, Vermont Joint Fiscal

This tax rate decrease in New Hampshire revealed another important aspect of tax rate differentials and their impact on cross border sales: rate changes are not always passed on to the consumer at the retail level. In this instance, there were reports that wholesalers raised prices by nearly the entire tax rate cut, resulting in very little price change at the retail level. There are clearly instances when profit maximization would not lead wholesalers or retailers to pass on an entire tax rate differential to consumers. This is why it is important to measure the actual effects of retail price differentials when possible, and not just tax rate variations. Accordingly, the chart on the following page is based on cigarette prices reported at the retail level rather than a simple rate difference.

Gasoline prices along the Vermont-New Hampshire border also reflect this phenomenon. Despite lower effective gasoline tax rates in New Hampshire, retail prices at stations in New Hampshire near the Vermont border are close to or often even above those at nearby Vermont stations. Further from the Vermont border, New Hampshire prices tend to be lower. Also of importance, the location of Interstate 91 on the Vermont side of the Connecticut River gives Vermont an advantage in attracting gasoline sales from both local and through traffic. For this reason, per capita measures of gasoline sales have not exhibited the same kind of cross border variation seen in other retail sales sectors. Permitting of gas station construction along the major interstate highways has not been encumbered to the extent that big box retailing has, allowing the development of a local sales infrastructure for motor fuels and related convenience store goods.

Cigarette tax avoidance in Vermont can be approximated by analyzing detailed health statistics on the prevalence of smoking and expected consumption based on various state populations relative to actual sales. The most recent estimates of cross-border net gain/loss to surrounding states indicate an approximate 20 percent loss to New Hampshire, at least a 12 percent gain from New York, and about a 7 percent net gain from Massachusetts and other out-of-state visitation.

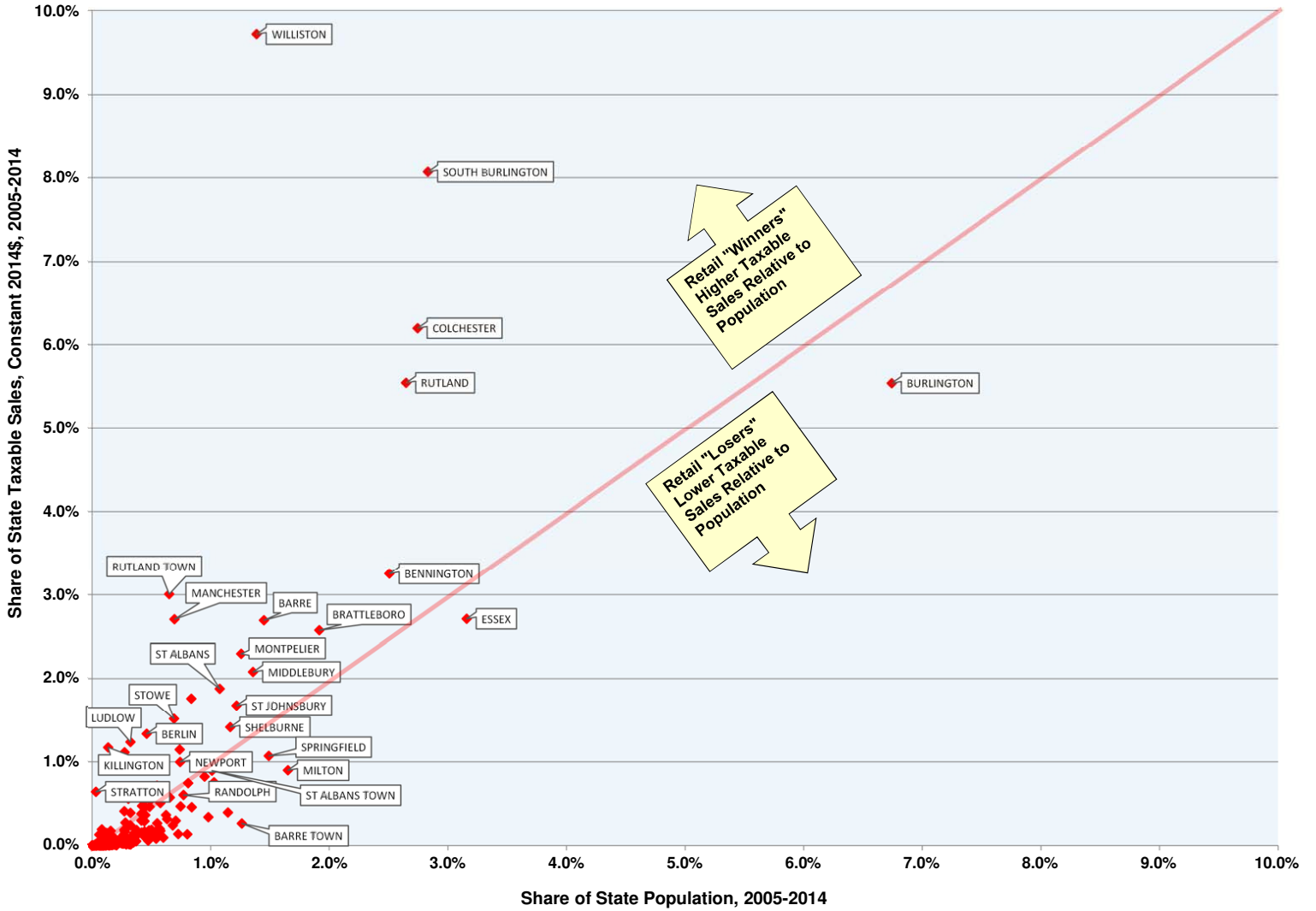
Few states are as aggressive in marketing liquor to bordering state residents as New Hampshire. State liquor stores are strategically placed near state borders with convenient access from major transportation arteries. Unfortunately, the New Hampshire state monopoly on liquor sales does not allow the release of detailed industry statistics from the federal sources used for other retail sales analyses. Even at the state level these data are suppressed. Although it is possible to access and organize this information from public sources at the New Hampshire State Liquor Commission, it would require data development work beyond the means of this study.

### **Data Sources Utilized**

The source data traditionally used in cross-border analyses is county-level data from the detailed Economic Census of Retail Trade performed every five years, which provides county data on sales, employment, and wages by industry, and County Business Patterns, which provides annual county data on the number of establishments, employment, and payroll by industry. We have expanded these data sources with county- and town-level data from the Bureau of Labor Statistics for employment, unemployment and labor force, annual U.S. Census population estimates at the town and county levels, and the development of Vermont Tax Department data at the town and county levels for gross sales, taxable sales, and use tax receipts. At the time of this writing, some of these data sources are still being vetted and “cleaned,” however, the use of town level data provides insights into economic and retailing patterns that are sometimes obscured by higher level county data. Each of these data sources has strengths and weaknesses, especially in relatively small geographic areas, such as the border areas of Vermont, New York, New Hampshire, and Massachusetts. Many publicly available data sources have suppressed data due to this; however, new Vermont Tax Department data has been provided without suppression for re-aggregation and analysis as presented herein.

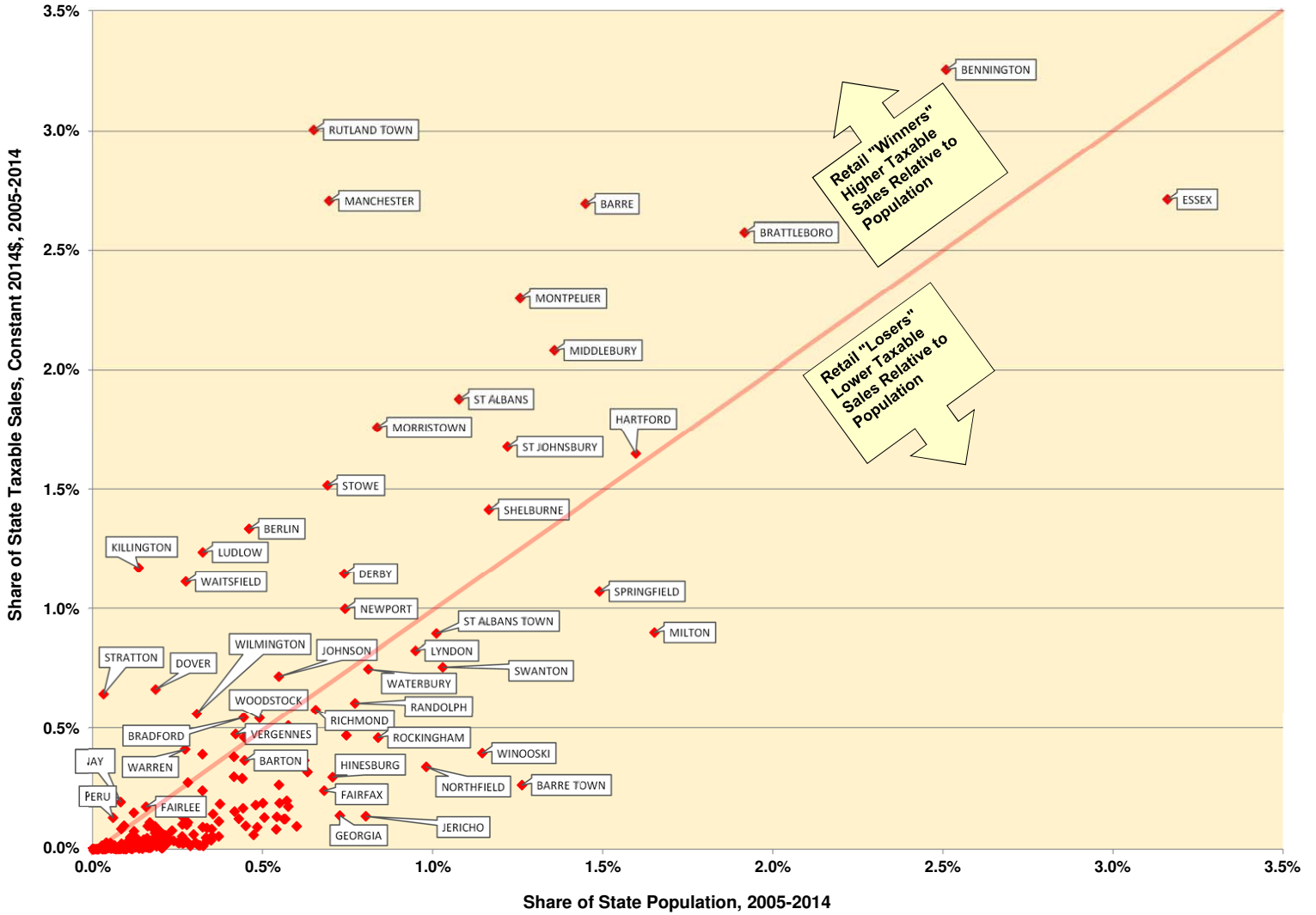
# Vermont Taxable Sales Share vs. Population Share

(Town Population and Taxable Sales: Sources: VT Tax Dept. and JFO)



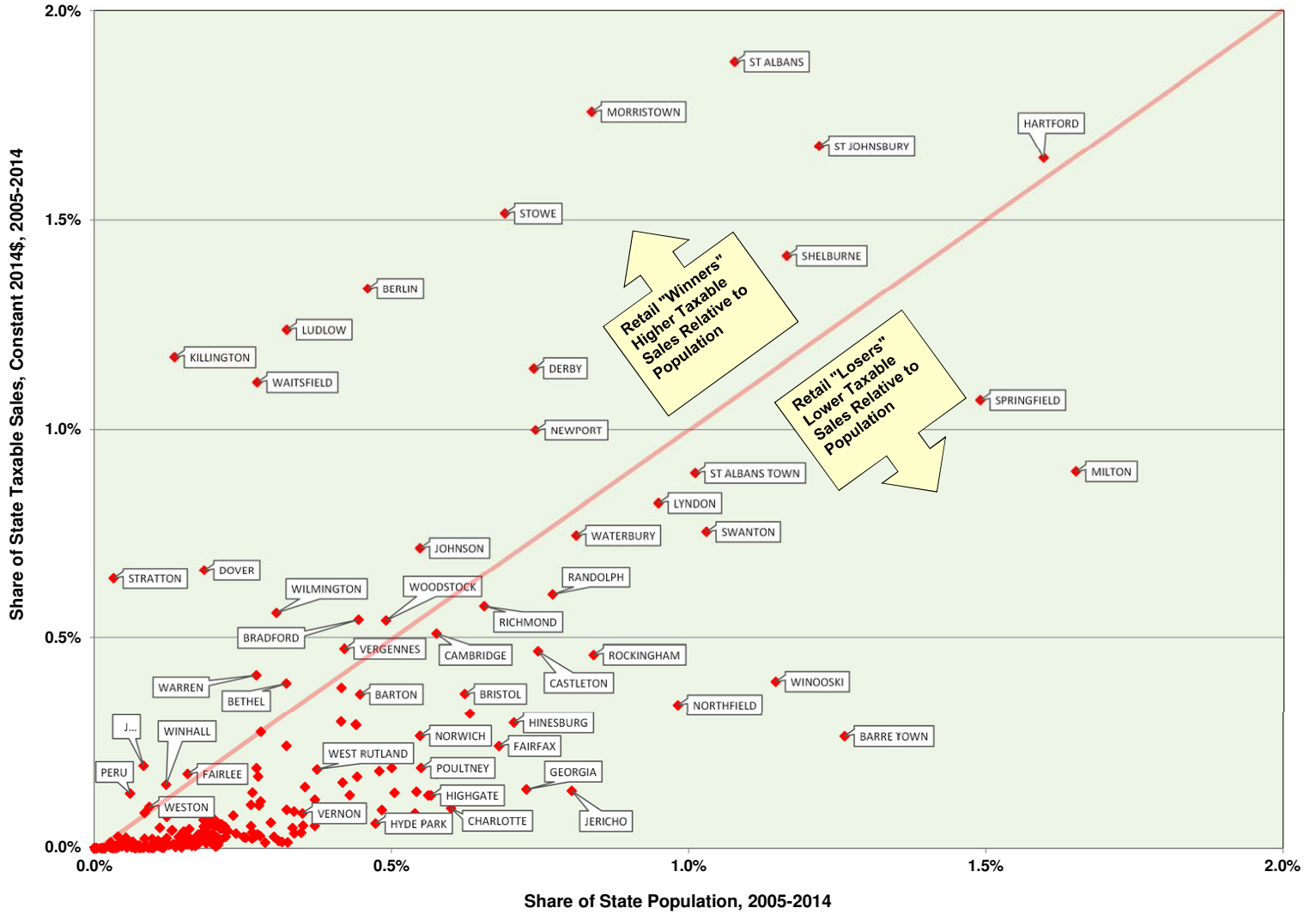
# Vermont Taxable Sales Share vs. Population Share

(Towns With Less Than 3.5% of State Population and Taxable Sales: Sources: VT Tax Dept. and JFO)



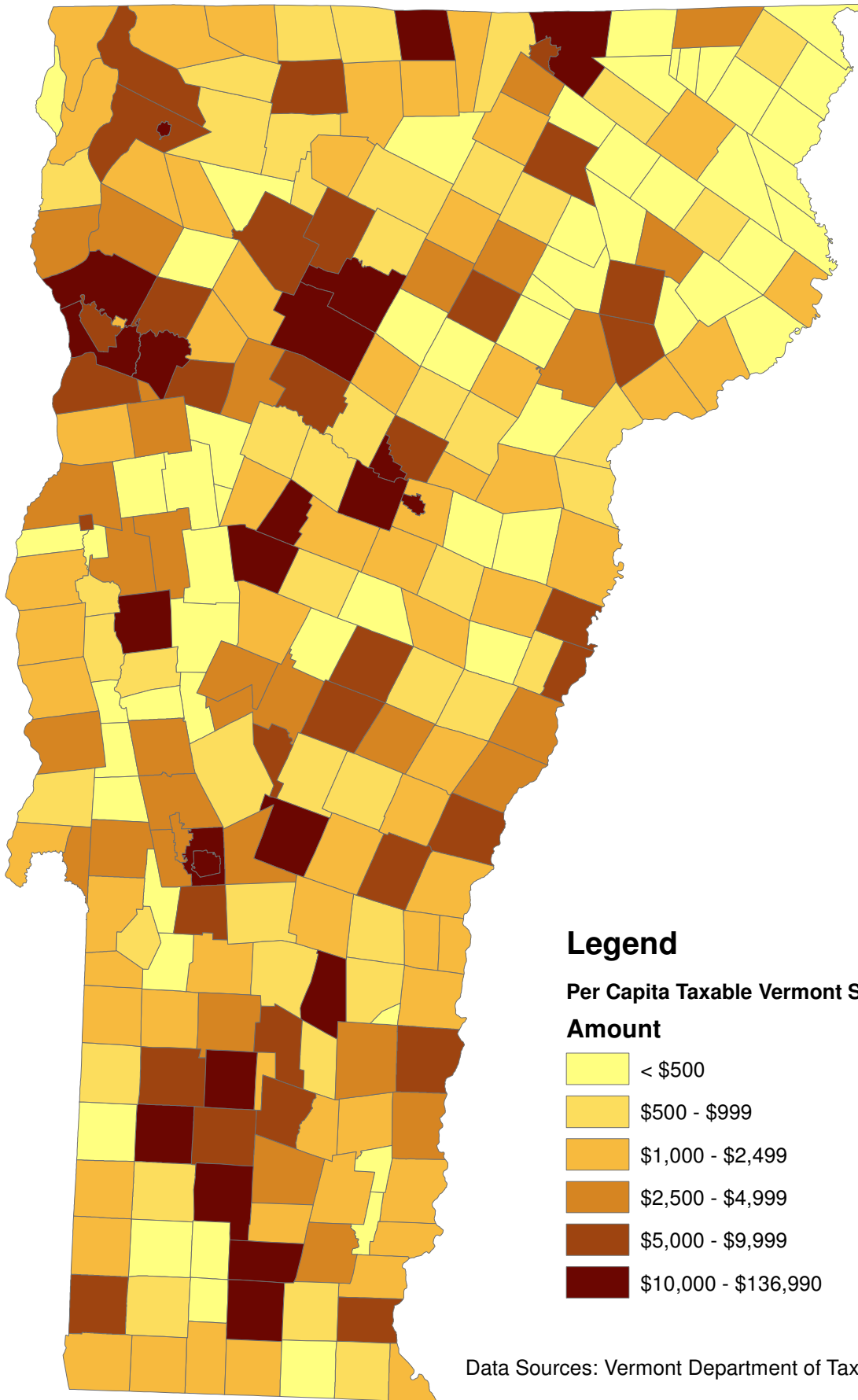
# Vermont Taxable Sales Share vs. Population Share

(Towns With Less Than 2% of State Population and Taxable Sales: Sources: VT Tax Dept. and JFO)



# Per Capita Taxable Vermont Sales

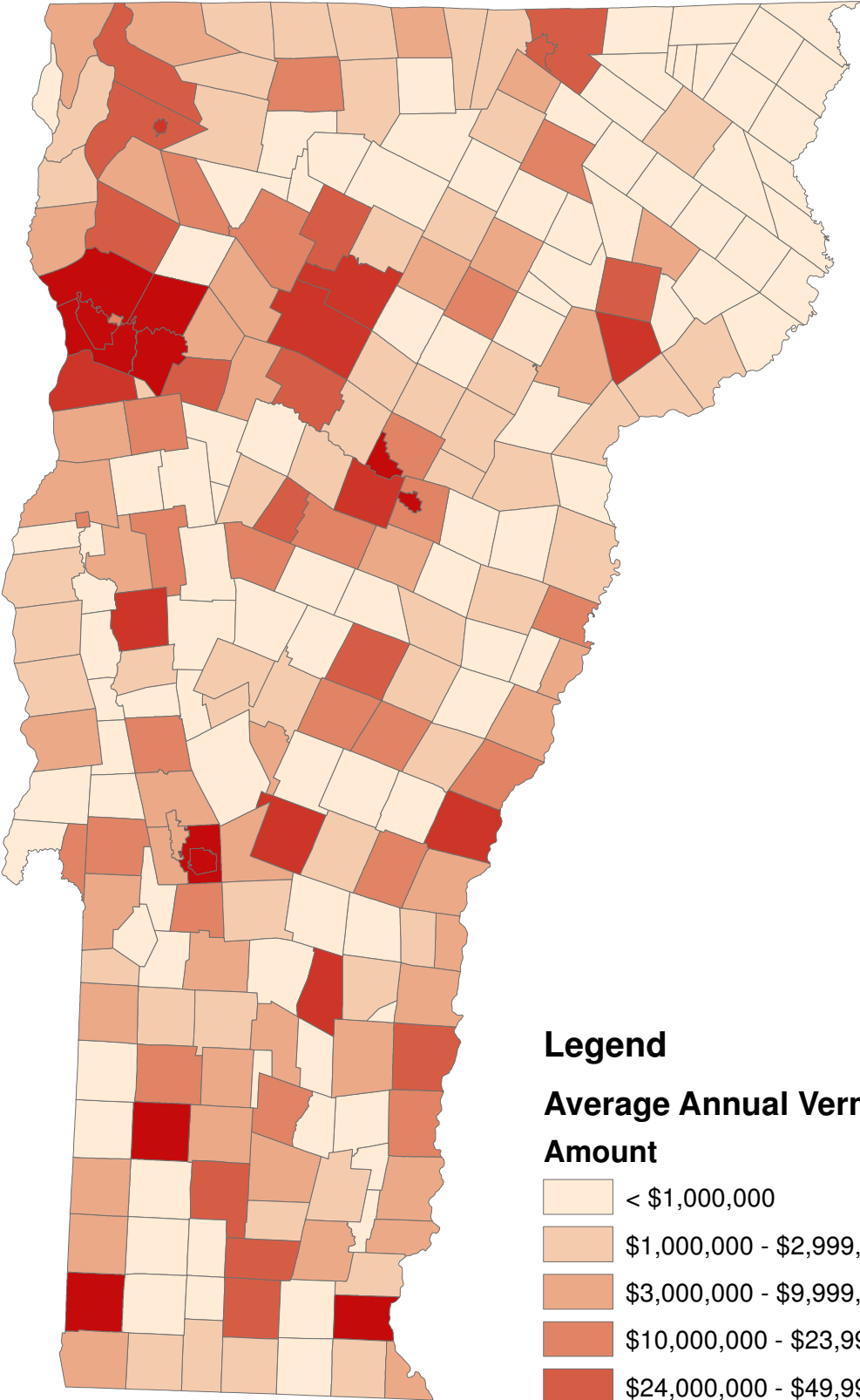
2014 Constant Dollars, for the 10 Year Period from 2005 to 2014



Data Sources: Vermont Department of Taxes and U.S. Bureau of the Census

# Average Annual Vermont Taxable Retail Sales

2005-2014, Constant 2014 Dollars



### Legend

### Average Annual Vermont Taxable Retail Sales Amount

- < \$1,000,000
- \$1,000,000 - \$2,999,999
- \$3,000,000 - \$9,999,999
- \$10,000,000 - \$23,999,999
- \$24,000,000 - \$49,999,999
- \$50,000,000 - \$99,999,999
- \$100,000,000 - \$424,020,146

Data Source: Vermont Department of Taxes