It is well-known that Maine and New Hampshire are polar opposites when it comes to tax policy. Maine has one of the highest tax burdens in the country at 12.6 percent of personal income (6th highest) while New Hampshire has one of the lowest tax burdens at 8.7 percent of personal income (49th highest). These 3.9 percentage points represent one of, if not the, largest tax differentials between any two states in the country and is the basis for “The Great Tax Divide.”

The close geographic proximity of the two states leads to numerous arbitrage opportunities for Mainers to escape their significantly higher tax burden. The most obvious way is through direct cross-border shopping which previous MHPC studies have shown to be occurring up and down the Maine-New Hampshire border.[1] This study builds on this research by utilizing comprehensive retail data from the U.S. Census Bureau over the last 60 years.[2]

More specifically, Mainers are engaging in cross-border shopping in New Hampshire in response to Maine’s higher sales tax, cigarette tax, gasoline tax, bottle tax and alcohol taxes (beer, wine and liquor). Additionally, retailing in New Hampshire was given a significant boost in the early 1990’s when they reformed their tax code instituting the Business Enterprise Tax in place of other job-killing taxes.

Overall, Chart 1 shows that per capita retail sales in the adjacent bordering counties in Maine (Oxford and York) and New Hampshire (Coos, Carroll, Strafford and Rockingham) have been diverging ever since Maine adopted the sales tax in 1951. By 2007, the retail gap was $8,660 per person ($19,976 versus $11,316). If Maine had the same level of retail activity as New Hampshire, retail sales would have been up to $2.2 billion higher—from $2.9 billion to $5.1 billion—and created thousands of retail jobs.[3]
The Source of the Great Tax Divide

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The Sales Tax:

Chart 2 shows Maine’s and New Hampshire’s sales tax rate over the FY 1948 to present time-period examined in this study. Maine’s sales tax was first enacted in 1951 at 2 percent. Over the next 20 years, the sales tax rate steadily rose until hitting 5 percent in 1970—or 2.5 times higher than the original 2 percent tax rate.

For most of the next 40 years, the sales tax rate has stood at 5 percent except for one episode during the 1990’s. The 1991 recession had caused a steep drop-off in state tax revenue and, in response, a temporary increase of 1 percentage point in the sales tax was enacted. The tax increase was to be automatically reversed once certain revenue conditions were met. Those conditions were met in the late 1990’s and early 2000’s resulting in a return to the 5 percent tax rate where it has stayed to this day.

In stark contrast, New Hampshire does not levy a broad-based sales tax which creates a significant incentive for Mainers to shop in New Hampshire. Calculating the differential between the two states is simple because it equals Maine’s sales tax rate. The sales tax savings that Mainers would enjoy by cross-border shopping equals the amount to be spent multiplied by 5 percent—for example, every $100 spent yields $5 in sales tax savings.

The Cigarette Tax:

Chart 3 shows Maine’s and New Hampshire’s cigarette tax rate over the FY 1948 to present time-period examined in this study. Maine’s cigarette tax was adopted in 1941 at 2 cents per pack. Over the next 50 years, Maine’s cigarette tax rate had grown to
33 cents per pack in 1991. However, over the next 20 years Maine’s cigarette tax had soared to $2 per pack where it stands today.

New Hampshire’s cigarette tax, however, has taken a very different trajectory since it was adopted in 1939. Up until FY 1975, New Hampshire’s cigarette tax was based as a percentage of the selling price ranging from 15 percent to 42 percent, yielding an equivalent tax rate similar to Maine’s.[4] In FY 1976 New Hampshire moved to a flat 12 cents per pack and slowly increased to
37 cents per pack by FY 1998. However, starting in FY 2000, New Hampshire’s cigarette tax rate has swiftly moved upwards reaching $1.78 where it stands today.

While both Maine’s and New Hampshire’s cigarette tax have followed the same trajectory, New Hampshire has significantly lagged Maine’s ascent. As a result, a significant cigarette tax gap was created, especially after FY 1990. In addition to the cigarette tax, Maine also levies the sales tax on the purchase price of cigarettes. Since the price of cigarettes includes the cigarette tax, the sales tax results in a double tax—the consumer is paying a tax on a tax. The end result is that the sales tax significantly increases the tax gap.

Chart 4 shows the cigarette tax gap in terms of the tax savings generated between a carton of cigarettes (10 packs) in Maine and New Hampshire. Prior to FY 1990, the tax savings were relatively modest averaging 83 cents per carton between FY 1985 and FY 1989. Between FY 1990 and FY 2000, the average tax gap had jumped to $2.77 per carton and between FY 2000 and FY 2005 jumped again to an average of $6.17 per carton. When Maine’s cigarette tax went to $2 per pack in FY 2006, the tax gap soared to $14.35 per carton creating a powerful incentive for Mainers to buy cigarettes in New Hampshire.

Since the recent increase in New Hampshire’s cigarette tax to $1.78 per pack, the tax gap has fallen to $5.09 per carton in FY 2010 which, while lower than it has been since FY 2001, is still a significant incentive to shop in New Hampshire. Interestingly, in FY 2010, the Maine sales tax paid on carton of cigarettes ($2.89) is now a greater portion of the tax gap than the cigarette tax itself ($2.20).[5]

Yet, the tax gap could grow once again as New Hampshire is currently considering reducing their cigarette tax by 10 cents to $1.68 per pack.[6] All else being equal, this would increase the total tax gap to $6.24. In support of the cigarette rate decrease, a recent study by William D. Keip, Dr. Gregory Randolph and Dr. Michael Tasto (Southern New Hampshire University) found that the 10 cent decrease in the cigarette tax could result in a net $12.8 million increase in state revenue when taking into account all the interactions with the economy and other taxes.[7]

The Gasoline Tax:

Chart 5 shows Maine’s and New Hampshire’s gasoline tax over the FY 1948 to present time-period examined in this study. Maine’s gasoline tax was adopted in 1923 at a rate of 1 cent per gallon. By FY 2003, the gasoline tax had risen to 22 cents per gallon. However, in FY 2004, Maine’s gasoline tax was indexed to the increase in the rate of inflation.[8] As a consequence, the gasoline tax rate has rapidly risen to 29.5 cents per gallon by FY 2010.
New Hampshire’s gasoline tax, technically called the gasoline road toll, was also first enacted in 1923 at a rate of 1 cent per gallon. New Hampshire’s gasoline tax topped out in FY 1992 at 18 cents per gallon where it stands today.

Prior to FY 2000, Maine’s and New Hampshire’s gasoline tax were virtually even. In FY 2000, Maine increased the gasoline tax to 22 cents and then indexed it to inflation in FY 2004, which has significantly increased the gasoline tax gap with New Hampshire. By FY 2010, Maine’s gasoline tax rate is now 64 percent higher than New Hampshire’s (29.5 cents versus 18 cents). Not only is this tax gap currently providing an incentive to buy gas in New Hampshire, but that incentive automatically grows every year with the rate of inflation.

The Bottle Tax:

Maine enacted its bottle tax in 1976. Today the bottle tax levies a 15 cent “deposit” on wine and liquor and a 5 cent “deposit” on all other types of beverages contained in glass, metal or plastic. In theory, this is not a tax because the charge can be refunded upon return of the empty bottle to a retail store or redemption center. However, if the bottle is not returned then the deposit goes to the state transforming the deposit into a tax.

Or course, there are many other costs associated with the bottle tax other than just the deposit/tax. Retail stores are forced to run a mandated collection program involving the acceptance and storage of used containers, and consumers also have to take time to store and return used containers. These are all costs to the overall economy that are hard to quantify, but real nonetheless.

New Hampshire does not have a bottle tax so retail stores nor consumers face the direct (deposit/tax) or indirect (time and effort) costs of the bottle tax.

Alcohol Taxes:

Both Maine and New Hampshire are control states, which means the state has a monopoly on the wholesaling and retailing of alcoholic beverages such as wine and distilled spirits. As a result, determining the extent of taxation is difficult due to the non-transparency of the tax, which consists of a mix of excise taxes and price mark-ups that end up embedded in the price of the alcoholic beverage.

Anecdotally, however, it is well-known that purchasing alcoholic beverages in New Hampshire is significantly cheaper than in Maine, especially spirits and liqueurs that are only sold in New Hampshire at state-run liquor stores. Future research by The Maine Heritage Policy Center will more deeply explore the price differentials in alcoholic beverages to better gauge the tax gap between Maine and New Hampshire.

New Hampshire’s Business Enterprise Tax:

In 1993, New Hampshire adopted a pioneering new tax called the Business Enterprise Tax (BET). The BET is effectively a type of value-added tax that comprehensively taxes consumption at the business level—as opposed to a retail sales tax which attempts to accomplish the same goal, rather inefficiently, at the point of sale. [9] The BET’s tax base includes all wages and salaries, interest and dividends paid by the business and had an original tax rate of only 0.25 percent. Additionally, the BET is applied as a credit against the Business Profit Tax to avoid double-taxation.

While the BET itself was a major improvement in New Hampshire’s tax code, the BET also reduced and eliminated other less economically efficient taxes on a revenue-neutral basis (meaning no net gain or loss of revenue to state coffers). More specifically, the BET’s revenue was used to accomplish two goals:

- Reduce the Business Profit Tax (New Hampshire’s equivalent to a corporate income tax) from 8 percent to 7 percent; and,
- Eliminate corporate and partnership franchise fees and the bank tax.

While the BET represented major progress toward fundamental tax reform, some of its accomplishments have since been undone. First, the BET rate itself has risen to 0.75 percent and, at the same time, the Business Profit Tax rate has risen to 8.5 percent which is higher now than it was before the reform effort. The higher tax rates have eroded the benefits of the 1993 tax reform effort.
Differences in Economic Performance along the Border

The full economic impact of “The Great Tax Divide” manifests itself in many different metrics. This section will explore two common metrics of economic performance:

Population:

Chart 6 shows the total population of the border counties in Maine and New Hampshire between 1940 and 2008.[10] New Hampshire’s border counties have always been more populous than Maine’s with a population in 1940 of 156,558 people versus 125,212 in Maine. To put it another way, Maine’s border counties had 80 percent of the population as New Hampshire’s border counties.

However, in the nearly 70 years since, population growth on the New Hampshire side of the border has significantly outstripped population growth on the Maine side. In 2008, the population on the New Hampshire side was 501,270 (an increase of 220 percent) while on the Maine side was 258,480 (an increase of 106 percent). As such, Maine’s border counties now have only 52 percent of the population as New Hampshire’s border counties.

Personal Income:

Chart 7 shows the per capita personal income of the border counties in Maine and New Hampshire between 1969 (the earliest date of available data) and 2008 (the latest date of available data) adjusted for inflation (2010 dollars). Per capita personal income in Maine’s border counties has always lagged compared to New Hampshire, though the gap was relatively small in the early 1970’s with Maine at 92 percent of New Hampshire’s level ($16,034 and $17,519, respectively).

Since then, however, the income gap has widened considerably. By 2008, per capita personal income in Maine’s border counties stood at a much lower 81 percent relative to New Hampshire ($36,211 and $44,964, respectively). It is of interest to note that Maine’s income tax (individual and corporate) was adopted in 1969 and, while not discussed in this study, was a major contributor to “The Great Tax Divide.”

Cross-Border Shopping and Retail Sales

Because of Maine’s significant reliance on sales and excise taxes for state revenue, the price of goods and services in Maine is higher relative to New Hampshire. As with any price difference, consumers will find ways to arbitrage the difference, which has
been well-documented in both economic theory and evidence. Dr. Arthur Woolf, in his study of cross-border shopping between Vermont and New Hampshire, puts it succinctly:

“Higher retail prices caused by higher sales tax rates will give consumers an incentive to purchase goods in a political jurisdiction with the lower prices, assuming consumers can make that change at a relatively low cost in terms of time and convenience. As consumer behavior changes in response to price signals, business location decisions will follow. This simple theory predicts that businesses (especially retail establishments) would, over time, migrate into lower cost political jurisdictions if consumers increasingly purchase goods in the lower cost area. Business owners, facing the loss of customers, could either go out of business or move their businesses to the lower-cost (that is, sales-tax-free) area.” [11]

For Mainers, that meant traveling over the border to shop in New Hampshire. And retailers soon followed.[12] [13]

To comprehensively gauge the impact of cross-border shopping, this study draws on the Census of Retail Trade published every five years by the U.S. Department of Commerce’s Census Bureau. Since Maine’s sales tax was first adopted in 1951, all Census’s available since 1948 were used (see Methodology section for more details).

As previously noted, Chart 1 shows the per capita retail sales in the adjacent bordering counties in Maine (Oxford and York) and New Hampshire (Coos, Carroll, Strafford and Rockingham) for the census years from 1948 to 2007. Over the entire time-period, New Hampshire has had higher per capita retail sales. The gap between the two states was relatively modest even as the 2 percent Maine sales tax was adopted in 1951, and increased to 3 percent in FY 1958 and 4 percent in FY 1964.

However, the retail gap began to widen after FY 1968 when Maine’s sales tax rate was increased to 4.5 percent and shortly thereafter, in FY 1970, to 5 percent. These tax rate increases likely represent the point at which the transaction costs of traveling to New Hampshire dropped below the tax savings of shopping in New Hampshire.

The retail gap jumped again when Maine raised the sales to 6 percent in FY 1992 in response to the 1991 recession. Although other factors discussed previously may have also played a role—the tax differential in the cigarette tax began to widen in the early 1990’s and New Hampshire also adopted the Business Enterprise Tax.

The 2000’s saw the retail gap begin to shrink primarily in response to the sales tax rate reduction to 5.5 percent in FY 1999 and then back to 5 percent in FY 2001. The retail gap hit its high watermark in 2002 at $9,832 with Maine’s level of per capita retail
sales at only 52 percent of New Hampshire’s ($10,447 and $20,279, respectively). The shrinkage of the retail gap since then has reduced the gap to $8,660, with Maine’s level at 57 percent of New Hampshire’s ($11,316 and $19,976, respectively).

Despite the recent rebound in 2007, this analysis shows that for every $1 spent per person in New Hampshire, only $0.57 cents is spent in Maine. This difference is significant. In fact, if Maine had the same level of retail activity as New Hampshire, retail sales would have been up to $2.2 billion higher—from $2.9 billion to $5.1 billion—and created thousands of retail jobs.

Conclusion: Boosting Maine’s Retail Competitiveness

This study strongly suggests that Maine’s sales and excise taxes are on the back-side of the Laffer Curve. Put simply, lowering Maine’s sales and excise taxes would likely increase retail sales to the point where greater business performance would increase other tax collections, such as the individual and corporate income tax, which would more than offset the lower sales and excise tax revenue. The surge in the retail gap following the sales tax rate going up to 6 percent, and the subsequent closing of the gap following the drop in the sales tax rate to 5 percent, reveals the extreme sensitivity of cross-border shopping to the level of taxation.

In the future, it appears we can expect the retail gap to plateau or even to continue to slightly shrink. The rationale for such an outlook has to do with the dramatic decline in the cigarette tax differential dropping by more than half from $14.40 in FY 2007 to $5.09 in FY 2010—assuming New Hampshire doesn’t lower their cigarette tax. Additionally, gasoline prices have soared since 2007 which not only discourages long-distance shopping trips, but also mitigates the growing differential in the gas tax.[14]

Nonetheless, only policy changes can ensure that the retail gap does in fact recede. The first, and least expensive, step to take is to adjust Maine’s excise tax rates (cigarette, alcohol and gasoline) to New Hampshire’s and eliminate the bottle tax. Secondly, the sales tax rate should be lowered to at least 4 percent which is the point at which, historically, the retail gap began to significantly widen. Of course, it’s not 1963 and there are far more people living on the border today creating many more opportunities for Mainers to engage in cross-border shopping. As such, the sales tax should be put on a path toward its eventual elimination to permanently end the phenomena.[15] Full sales tax elimination could be accomplished with further tax rate reductions, to say 3 percent, and the adoption of a more economically efficient Business Enterprise Tax to fund the difference.[16]

Finally, be sure to visit our Web site, www.mainepolicy.org, to view our interactive map showing the location of every big-box store (Walmart, Home Depot and Lowes) along the Maine-New Hampshire border. You will discover that there is a 40-plus mile “retail desert” on the Maine side of the border, with the sole exception of Sanford, Maine (with a Walmart and Lowes).[17]

Methodology

This study draws on the Census of Retail Trade (CRT) which is published every five years by the U.S. Department of Commerce’s Census Bureau. The data was collected for every available CRT between 1948 and 2007. However, the data cannot be used “as-is” because of the shift in industrial classifications between the 1992 and 1997 CRT moving from the Standard Industrial Classification (SIC) to the North American Industrial Classification System (NAICS). This necessitated several changes to ensure consistency of the data over time:

- First, for years up to and including 1992, retail sales are net of Miscellaneous Store Retailers. After 1992, NAICS breaks down Miscellaneous Store Retailers. As such, retail sales are net of Miscellaneous Store Retailers, Sporting Goods, Hobby and Musical Instruments and Nonstore Retailers.

- Second, for years up to and including 1992, liquor stores had to be added back into the Food Stores sector in order to conform to the new NAICS classifications.

- Third, the pre-NAICS industry “Furniture and Home Furnishings Stores” was broken down into “Furniture and Home Furnishings Stores” and “Electronics and Appliance Stores” under NAICS. As such, the two NAICS classification were added together to maintain continuity with SIC.
Notes and Sources:


[2] This study owes many thanks to the pioneering efforts of Dr. Arthur Woolf, Associate Professor at the University of Vermont, who first developed the methodology to calculate the difference in retail activity. His study examined the divergence of retail activity in the adjacent border counties in Vermont and New Hampshire. His findings are very similar to those in this study. For more information, see: Woolf, Arthur, “The Unintended Consequences of Public Policy Choices: The Connecticut River Valley Economy as a Case Study,” Northern Economic Consulting, Inc., November 2010. [http://www.vermonttiger.com/files/unintended-consequences-2-1.pdf](http://www.vermonttiger.com/files/unintended-consequences-2-1.pdf)

[3] Since some of New Hampshire’s higher retail sales are driven by their higher per capita income and cross-border shoppers from other states, the elimination of all cross-border shoppers from Maine would not fully equalize retail sales between the them. As such, the $2.2 billion estimated increase in Maine’s retail represents the maximum increase in retail sales if all taxes were equalized to New Hampshire.


[5] Ibid.


[8] Maine’s gasoline tax rate only moves with positive changes in the Consumer Price Index (CPI). Should the index fall, the gasoline tax rate stays the same. Also, it is an economically dubious practice to index the tax of gasoline which itself is a component of the CPI. And since the price of gasoline is inclusive of the tax, increasing the tax also increases the inflation rate, albeit in a miniscule way. So if the CPI goes up, Maine’s gasoline tax goes up, which drives up the CPI . . . and so on.


[10] Population data between 1940 and 1970 were taken from the respective decennial census with interpolations for the intervening years between the census. Population data post-1970 is from the Bureau of Economic Analysis (BEA). BEA has not yet incorporated the population results from the 2010 decennial census. As a result, the data series ends in 2008 and is still subject to revision. The revisions will likely show a slightly slower population growth in New Hampshire’s border counties between 2000 and 2010 and a slightly higher population growth in Maine’s border counties.


[12] Maine state law stipulates that any out-of-state purchase to be brought back to the state is subject to the “use” tax which is the same rate as the general sales tax. However, the use tax raises very little revenue due to noncompliance. As a result, Maine’s income tax form now includes a line for taxpayers to estimate their use tax—see line 31 in the 2010 income tax form. The effect on compliance has been minimal.

[13] Certainly sales tax free internet sales are also booming; however, there is no good data on the total number of transactions conducted over the internet.
[14] The gasoline tax is a fixed amount, so when gasoline prices rise the gasoline tax falls a percentage of the price of gasoline. This diminished importance of the gasoline tax itself also diminishes the tax gap between Maine and New Hampshire.

[15] There are many other good reasons for eliminating the sales tax besides minimizing cross-border shopping. First, eliminating the sales tax would end tax pyramiding; which occurs when businesses buy from each other and is especially harmful to Maine’s small businesses. Second, eliminating the sales tax would also eliminate all associated tax compliance costs which are also harmful to Maine’s small businesses. Third, eliminating the sales tax would remove all costs to the state for enforcement. Finally, Maine’s economy does benefit from cross-border shoppers from Canada, depending on the strength of the dollar, so eliminating the sales tax would increase the incentive for Canadians to cross-border shop in Maine.

[16] Given that Maine’s economy is more reliant on services provided by government and not-for-profits than New Hampshire’s, Maine’s Business Enterprise Tax should include them in the tax base thus providing for the lowest rate possible.

[17] Sanford bucks the trend for a couple of reasons. First, it is the geographic cross-roads for York county and has seen a population boom as the coastal regions reach saturation. Second, the retail corridor along the border in southern New Hampshire is, or close to, complete build-out putting real estate prices at a premium. Finally, there are no big-box stores along I-95 until Biddeford (40-plus miles from the border) suggesting that as long as travel time is reasonable, Mainers still prefer to shop in New Hampshire—Sanford benefits from not being directly off of the interstate.