# STABILITY & CHANGE



# DRAFT – PUBThree Demographic Trends and TheirDATE TBDImplications for Vermont's State Revenue

Vermont has had a remarkably steady population count for over a decade. Within that stability, however, three significant changes are impacting how Vermonters earn, spend, and live. Those impacts, in turn, will reduce revenue from personal income and consumption taxes while increasing the number, and size, of property tax adjustments.

# **Vermont Tax Structure Commission**

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# EXECUTIVE SUMMARY

Vermont has a remarkably stable population, at least in terms of total numbers. The state had 620,000 people in 2004, 626,000 in 2010, and still 626,000 in 2018. At least two projections suggest little movement over the next decade (p4). But within that stability lies significant change. Three trends in particular stand out:

- More Seniors, Fewer Children and Fewer Working-age Adults 2017 marked the first time that Vermont had as many seniors (65+) as children (<18). Proportionally Vermont has one of the nation's largest populations of Baby Boomers. When the youngest Boomers reach retirement age in 2029, more than one in four Vermonters will be seniors. Only Maine will have a higher proportion (p5).
- 2) More Metropolitan, Less Rural Vermont is one of the most rural states in the nation, but its population is shifting from rural areas to its one metropolitan region. Since 2000, three counties around Burlington have grown by more than eight percent, while the <u>other 11 counties have either lost</u> population or are virtually unchanged (p7).
- 3) More Households with Fewer People The number of people per household continues to decrease nationally and even more rapidly in Vermont. Notably, <u>all 14 of Vermont's counties have grown in terms of households</u> since 2010, even as ten shrank in terms of population. The trend is particularly acute in owner-occupied housing units, in which <u>one-person households</u> are now more prevalent in <u>Vermont than in any other state in the Northeast (p9).</u>

These demographic trends impact public finance. On the spending side, health care and retirement costs increasingly loom large. On the revenue side, the trends will impact all three of Vermont's major revenue sources: personal income tax, sales tax, and property tax. Specifically, we find:

- Less Revenue from Personal Income Tax An aging population portends a slowdown in taxable income, leading to a decrease or less growth in revenue from personal income taxes. Younger Baby Boomers (age 55-64) currently account for more than a fifth of tax returns and more than a quarter of personal income tax dollars. As the state's most populous age cohort retires over the coming decade, their decreasing incomes will no longer contribute a disproportionately high share of income tax revenue. Even with higher per capita incomes among the smaller age cohorts following behind them, a growing gap in revenues is likely (p12).
- Less Revenue from Consumption Taxes An aging population portends a slowdown in taxable consumption, leading to a decrease or less growth in revenue from consumption taxes. Compared to other age groups, seniors spend less overall and focus what they do spend on mostly non-taxable services, such as health care, rather than the taxable goods favored by younger cohorts (p15).
- More Property Tax Adjustments An aging cohort of homeowners and smaller household sizes suggest that more households will qualify for property tax adjustments and those adjustments will be larger. The result will either be a strain on the Education Fund or an increase in payments from remaining non-adjusted residential tax payers, non-homestead property tax payers, and other sources of revenue (p16).

Many factors impact personal income tax, sales tax, and property tax receipts. For this reason, it is difficult to predict the magnitude of change in state revenues between now and the end of the next decade. In aggregate, the demographic impacts on property tax adjustments appear to carry the greatest exposure, followed by income tax receipts and finally sales tax receipts. If Vermont's projected 2030 age structure

replaced the current age structure and all other factors were held constant, property tax adjustments would total \$206 million, a 13 percent increase over 2018 actuals (p18). A previous national study projected a four percent per capita decrease in Vermont's income tax receipts and one to two percent decrease in the state's sales tax receipts by 2030 under strict assumptions (p13,15).

Of course, reality does not abide by strict assumptions, and all other factors are not held constant. On the homeowner side, people who hold onto their homes throughout a down real estate market may decide to sell when the cycle turns. Plus, the rules related to property tax adjustments change over time. On the income and consumption tax side, many workers have tended to stay in the labor force longer, which then translates to higher incomes and higher spending levels throughout their early senior years. In addition, younger Vermonters could see more income growth if they move into more senior roles at an earlier age when Baby Boomers retire. In addition, Vermont treats income in retirement similarly to pre-retirement for the most part, and both the legislative and executive branches are taking early steps to address demographic pressures as seen in the Tax Structure Commission or the strategic planning exercise underway at the Agency of Human Services. Such factors could partially mitigate or delay some, though unlikely all, of the downward pressure on revenues.

[Insert summary of Commission's conclusions, recommendations, and/or suggestions for future research/consideration here, with reference to full section on p19]

# SECTION 1: DEMOGRAPHIC TRENDS



Figure 1. Vermont population from U.S. Census, decennial census and 2018 estimate.

## Introduction: From Steady Growth to Shifting Stability

Vermont added more than 50,000 residents in the 1960s, '70s, and '80s, then 45,000 more in the '90s. However, the U.S. Census reports growth of only 17,000 in the first decade of this century and estimates a mere 600-person gain in the last eight years (Figure 1).<sup>1</sup> Vermont's Joint Fiscal Office (JFO) projects the state will only add 12,000 people over the next 12 years while demographers at the University of Virginia expect Vermont to lose 8,000 people over that period. In other words, Vermont's population is likely to stay about the same (Appendix A).

This halt in population growth means different things to different people. For credit rating agencies and other stakeholders in an economic system that depends on growth, it can be a major cause of consternation. For those concerned with the environmental impacts of unchecked growth, it can be a source of hope and a reason to rally around a strategy of adaptation to a steady-state.

When it comes to Vermont's tax structure, however, the total number of Vermonters is only a small part of the story. More relevant are the major shifts that are occurring within the population, specifically:

- More Seniors, Fewer Children and Working-age Adults
- More Metropolitan, Less Rural
- More Households with Fewer People

These trends impact how Vermonters work, spend, and live – and therefore will impact the future of Vermont's revenue system. The rest of Section 1 discusses these trends in greater detail. For a discussion of levels of confidence in the three trends, see Appendix B. For notes on methodology, see Appendix C.

<sup>&</sup>lt;sup>1</sup> U.S. Census Bureau, "State Population Totals."



# Trend #1: More Seniors, Fewer Children and Working-age Adults

Figure 2. Share of Vermont population by age group, 2000-2030.

#### A new normal in Vermont: Seniors outnumber children.

The year 2017 marked the first time that Vermont had as many seniors (65+) as children (<18). Over the coming decade, seniors will outnumber children by an increasing margin as younger Baby Boomers reach retirement age (Figure 2). Meanwhile, the number of children and working-age adults is projected to continue dropping. By the end of the next decade, just 47 percent of Vermonters will be between the ages of 25 and 64, down from 54 percent in both 2000 and 2010.

#### National context: The U.S. is aging fast. Northern New England is aging faster.

Vermont is not alone in facing a graying age structure. Americans are having fewer babies and living longer. As a result, the 20<sup>th</sup> century's population pyramid – where a small number of senior citizens sit atop a moderate number of middle-aged adults, larger number of young adults, and even more children – is in the process of transitioning to a pillar, in which all age groups have roughly similar numbers (Appendix D).

But while the whole country is aging, the change is more dramatic in northern New England. Nationally, the proportion of seniors will increase nearly 50 percent from 2010 to 2030. In Vermont and New Hampshire the increase is projected to be about 80 percent. By 2030 the northern New England states are projected to be the first three states in the nation where seniors make up at least a quarter of the population (Figure 3).

There are at least four reasons why the phenomenon is more acute in northern New England. First, millennials have been more likely to leave rural areas than their baby boomer parents (see Table 1 for generations) and Vermont is one of the most rural states in the nation. Second, Vermont saw higher net in-migration of Baby Boomers than other generations, meaning that the state benefited from a larger workforce as Boomers aged and will now see a higher retirement population as the group continues to age (Figure 4 and Appendix D). Third, Vermont is highly educated, and high education tends to correlate with lower birth rates and longer lifespans. Fourth, the region has a low immigrant population, which is relevant because immigrants a) are

more likely to be Generation X and thus balance out a region's Baby Boomers, and b) tend to have higher birth rates than native-born residents and thus increase the number of children (Appendix E).

Combined, these factors help explain why, compared to 2000, Vermont now has more adults at every single year of age over 53 and fewer at every age 29-53 (Figure 4), and why Vermont has a greater variance in size of generations than the nation at large (Figure 5).

As Fitch Ratings referenced in downgrading the state's bond rating, a state can grow either from a) births outnumbering deaths, b) domestic in-migration outpacing out-migration, or c) immigration exceeding emigration.<sup>2</sup> Vermont is fairly balanced on all three counts. The result: slow growth and an aging population.





Table 1. Generation names and years, as defined by Pew Research Center.

Figure 3. The five states projected to have the highest proportion of seniors (age 65+) in 2030.







% VT and U.S. Populations by Age, 2018

Figure 5.Vermont and U.S. populations by age, 2018.

<sup>2</sup> Fitch Ratings, "U.S. States and the Growth Implications of an Aging Population." See Fitch's graph in Appendix D.

# Trend #2: More Metropolitan, Less Rural



Change in County Population from 2000 to 2018					
Grew >8%	Virtually Unchanged	Shrunk >3%			
Chittenden, Franklin, Lamoille	Addison, Caledonia, Grand Isle, Orange, Orleans, Washington	Bennington, Essex, Rutland, Windham, Windsor			

Figure 6. Change in county population from 2000 to 2018.

#### In Vermont: Only the Burlington area is growing.

Since 2000, three counties around Burlington have grown by more than eight percent while the five furthest from Burlington have shrunk. The remaining six were virtually unchanged, growing less than three percent over 18 years, or less than two-tenths of a percent per year (Figure 6).

#### National Context: Americans have flocked to metropolitan areas, especially in the last decade.

Urbanization has been a global trend for over a century. In the U.S., the trend has been particularly strong in the last decade with nonmetro areas losing population (Figure 29 in Appendix F).

Most states have large metro areas to counteract rural population loss. Vermont's lone metro area consists of just three counties: Chittenden, Franklin, and Grand Isle (and the latter two are largely rural).

The Census defines rural areas differently than nonmetro areas and the U.S. Department of Agriculture (USDA) has yet a different definition of rural counties (Appendix F). But regardless of which definition is chosen, Vermont stands as one of the two most rural states in the nation, along with Maine. Maine and Vermont each have about 61 percent of their populations living in rural census blocks; no other state has more than 51 percent and only seven other states have more than 40 percent of the population in rural areas.<sup>3</sup>

Nationally, as of 2016, only one out of seven (14%) Americans lived outside of metro areas.<sup>4</sup> In Vermont, two out of three (65%) did, but the proportion is declining as rural counties lose population and age faster

<sup>&</sup>lt;sup>3</sup> U.S. Census Bureau, "Life Off the Highway."

<sup>&</sup>lt;sup>4</sup> USDA ERS, "Rural Areas Show Overall Population Decline and Shifting Regional Patterns of Population Change."

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(Figure 7,8). In New England, most counties in Census-defined metropolitan areas have gained population (except in Connecticut), while nearly all nonmetro counties have lost population (Figure 36 in Appendix F).

In short, the trend in Vermont is consistent with national and regional trends.

#### Vermont's rural counties are staying resilient in the face of population loss and aging.

While the USDA reports that one in four rural counties nationally suffer from low employment and persistent related child poverty, and more than one in ten have low education and persistent poverty, the USDA says that no Vermont meet the criteria for any of these labels (see Table 2). Not all rural economies are equal. Those that are recreation-based or non-specialized – USDA classifications that fit every rural Vermont county except Essex – are less likely to suffer from these afflictions than counties dependent on farming, mining, manufacturing, or the government.<sup>5</sup>

Type of Rural County	Low Education	Low Employment	Persistent Poverty	Persistent Related Child Poverty
U.S.	15%	29%	11%	23%
VT	0%	0%	0%	0%

Table 2. Percentage of counties afflicted by four problems, U.S. and Vermont. Source: USDA

#### 2000 35.7 36.5 37.7 39.5 40.5 45.7 45.8

While the whole state (and nation) is aging, Vermont's rural

counties are older and aging faster...

Median Age by County, 2010 - 2016

Figure 7. Median age by county, 2010-2016. Data from U.S. Census.

...which means that counties outside of the Burlington metro area are also losing working age adults and children at a more dramatic pace



Figure 8. Change in age group population by county, 2010-2017. Data from U.S. Census.

<sup>&</sup>lt;sup>5</sup> USDA ERS, "County Typology Codes."



Figure 9. Proportion of U.S. households by type of household, 1980-2010. Data from U.S. Census Decennial Census.

# Trend #3: More Households with Fewer People

#### In Vermont: Unlike population, the number of households is growing.

American households have slowly been getting smaller over time. The average U.S. household had 2.63 people in 1990, 2.59 in 2000, and 2.58 in 2010. The average Vermont household has recently shrunk faster, from 2.44 members in 2000 to 2.34 in 2010 and 2.32 for the period of 2013-2017.<sup>6</sup> Much of this change has been driven by an increase in the number of one-person households, a decades-long national trend (Figure 9) that has recently accelerated in Vermont.

This trend has kept Vermont's housing market tight in the face of stagnant population growth. Notably, all 14 counties have grown in terms of households since 2010, even as ten shrunk in terms of population.

# Regional Context: Owner-occupied households are more likely to be one-person in Vermont than in any other state in the Northeast.

The shift toward one-person households is particularly acute among owner-occupied housing units, where more than 24 percent of households were one-person based on 2013-2017 data, up from less than 22 percent for the 2005-2009 period (Figure 10). Renter units are more likely to be one-person but have been more stable,

<sup>&</sup>lt;sup>6</sup> Household size from 1990, 2000 and 2010 U.S. Census as well as U.S. Census 5-year American Community Survey from 2017 (data from 2013-2017).

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with those living alone accounting for just under 43 percent of renter households in both the 2005-2009 and 2013-2017 periods (Appendix G).

Given Vermont's high proportion of single-family homes and low availability of multi-family units and small homes, living alone can be an expensive proposition.<sup>7</sup> Housing costs in Vermont are 20 percent higher than the national average (Appendix G).

#### National Context: The trend toward one-person households is expected to continue.

The Harvard Joint Center for Housing Studies projects that one-person households will account for 38 percent of all new households across the country from 2018-2028, a development that would widen the gap between one-person households and other types of households (Appendix G).



Figure 10. Proportion of one-person owner-occupied households in ten northeastern states. Data from U.S. Census 5year American Community Survey.

<sup>&</sup>lt;sup>7</sup> While not scientific, a 2011 report from Realtor.com found that Vermont homes for sale had the largest lots of any state in the nation and the largest house size of any state in the Northeast.

# SECTION 2: IMPACT OF THE TRENDS ON VERMONT'S REVENUE SYSTEM

The three trends discussed in the previous section will impact how we earn (and pay income tax), how we spend (and pay consumption taxes), and how we live (and pay property tax).

Impact		Revenue Result
How We Earn	÷	Less Revenue from Personal Income Tax
How We Spend	÷	Less Revenue from Consumption Taxes
How We Live	$\rightarrow$	More Property Tax Adjustments

# Impact #1: How We Earn (Result: Less Revenue from Personal Income Tax)





Source: 2018 estimated income tax by age group, residents only, using <u>Chainbridge</u> model. Population from U.S. Census estimates.



#### Impact: Taxable income decreases

Incomes generally increase throughout a person's working years, then decrease in retirement. The nontaxable portion of income tends to increase in retirement as well. For these reasons, Vermonters between the ages of 45 and 64 collectively pay the most personal income tax, both overall and relative to their population size. Younger Baby Boomers (those currently aged 55-64) are the largest age group in the state and account for more than a fifth of tax returns and more than a quarter of all income tax dollars (Figure 11).

#### Impact: Higher incomes concentrate in the growing metro area

The per capita income of the three counties in the Census-defined Burlington-South Burlington Metropolitan Statistical Area (Burlington metro area) is seven percent higher than the per capita income of the state as a whole. This is the region, along with adjacent Lamoille County, that is gaining population. The counties that are losing population tend to have lower incomes (Appendix H).<sup>8</sup>

#### Impact: Per capita income up, household income down

The decreasing size of Vermont households underscores the importance of reading income metrics closely. Since 1999, Vermont real per capita income has increased five percent. However, due to smaller household sizes, the state's median household income has fallen four percent, even as per capita income has grown.<sup>9</sup>

<sup>&</sup>lt;sup>8</sup> 2013-2017 income from U.S. Census Bureau, 2013-2017 American Community Survey 5-Year Estimates.

<sup>&</sup>lt;sup>9</sup> 2013-2017 income from U.S. Census Bureau, 2013-2017 American Community Survey 5-Year Estimates. 1999 income from U.S. Census Bureau, Census 2000 Summary File 3, Matrices P53, P77, P82, P87, P90, PCT47, and PCT52.

#### Revenue Result: Personal income tax revenue will likely decrease

In announcing its July 2019 cut to Vermont's bond rating, Fitch Ratings referenced a 2018 report that "working age populations are projected to decline approximately 0.5% between 2017 and 2026. This trend will strain economic growth....with knock-on implications for revenue growth prospects and ratings."<sup>10</sup>

Several state and national researchers have studied the impact of demographic shifts on income tax revenues and tax expenditures. In 2013, Alison Felix and Kate Watkins with the Federal Reserve Bank of Kansas City estimated Vermont's per capita income tax revenue would fall four percent from 2011 to 2030.<sup>11</sup> This projection assumed that income composition by age cohort would hold steady over time, while in fact – as the authors acknowledged – seniors have tended to retire later and thus earn more wage income than they did in past decades. Assuming the trend of working later in life continues, and depending on the types of jobs worked and incomes earned, it could alleviate some of the downward pressure on income tax revenue.

On the other hand, two additional factors could suppress income tax revenues.

First, the Bank made its projection prior to Vermont's creation of a personal income tax exemption for Social Security beneficiaries below certain income thresholds. Passed in 2018, Vermont's partial social security exemption was projected to cost \$5 million the first year, a figure that will presumably tick up as more Vermonters draw social security.<sup>12</sup> However, even with the new tax expenditure, Vermont's exemptions for seniors are modest relative to many other states in the region (Appendix I) and throughout the country.

Second, in-migration dipped below the Census projections used by the study for several years before starting to rebound. To the extent that in-migration tends to be younger than a resident population, lower inmigration would generally result in an even older population and thus likely less taxable income. A forthcoming JFO analysis seems to indicate that this may not be the case with recent migration.

#### National Context: It may be little consolation, but several states will see larger revenue drops

Vermont's approach of largely following federal rules for treatment of retirement income is presumably a large reason that Felix and Watkins projected the comparatively modest drop in per capita income tax revenue (Figure 12). States that offer generous exemptions for retirement income projected significantly steeper drops, even though they won't have as high of a proportion of seniors as Vermont.

A comparison of Vermont's taxable income and effective rates by age to a 2003 study in lowa helps to illustrate the issue (Figures 13-14). While lowa taxed a higher share of older working age taxpayers' income than Vermont does (90.9% for lowa vs. 78.6% for Vermont), lowans' average taxable income fell much more steeply after age 65. As a result, lowa seniors paid an effective rate of less than half what their 55-64 year-old neighbors paid, while Vermont seniors pay much closer (~90%) to the effective tax rate for 55-64 year-olds.

Such exemptions are sometimes used by states that are competing for retiree in-migrants. For example, a study commissioned by the OneGeorgia Rural Policy Center notes: "Georgia appeals to retirees with

<sup>&</sup>lt;sup>10</sup> Fitch Ratings, "U.S. States and the Growth Implications of an Aging Population."

<sup>&</sup>lt;sup>11</sup> Felix and Watkins, "The Impact of an Aging U.S. Population on State Tax Revenues."

<sup>&</sup>lt;sup>12</sup> Vermont Department of Taxes, "New Vermont Law Reduces Personal Income Taxes by \$5 Million for Social Security Recipients."

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substantial retirement income due to its generous retirement income exclusion—\$65,000 for singles and \$130,000 for couples. Social Security income also is fully exempt."<sup>13</sup> These states often have higher unemployment rates and count on job creation and consumption tax revenues from incoming seniors with disposable income and a need for services. However, the states also must plan for a larger drop in per capita income tax revenue.

#### A 2013 report by the Federal Reserve Bank of Kansas City projected that Vermont's income tax per capita would fall 4% by 2030. Several less aged states, particularly those with extensive tax breaks for retirement income, projected larger drops.



Projected Change in Income Tax per Capita, 2011-2030

Figure 12. Projected change in per capita income tax by state, 2011-2030. Graph from Mullis, data from Felix and Watkins.



Source: 2017 income tax data from Department of Tax. Iowa from Harris and Upsman, "The Elderly Population and Iowa Tax Revenues: As One Goes Up, Must the Other Come Down?"

Figure 13. Average taxable share of income by age, Vermont and Iowa.

Average Effective Tax Rate by Age



Source: 2017 income tax data from Department of Tax. Iowa from Harris and Lipsman, "Tr Elderly Population and Iowa Tax Revenues: As One Goes Up, Must the Other Come Down?

Figure 14. Average effective tax rate by age, Vermont and Iowa.

<sup>&</sup>lt;sup>13</sup> "Golden Rules: Evaluating Retiree-Based Economic Development in Georgia."

## Impact #2: How We Spend (Result: Less Revenue from Consumption Tax)

#### Impact: Less spending on goods (typically taxable), more spending on services (typically non-taxable)

Seniors, especially older seniors, tend to spend less than younger cohorts. In addition, the focus of seniors' spending tends to shift away from taxable goods and toward non-taxable services. Compared to other age groups, seniors spend the largest proportion on health care – which is mostly non-taxable – and spend less than most groups on taxable food away from home (Figure 15).

#### Consumption taxes, particularly Meals & Rooms, are also paid by visitors to Vermont

Vermont's Agency of Commerce and Community Development (ACCD) estimates that out-of-state visitors account for roughly 35 percent of meals and over 95 percent of rooms.<sup>14</sup> Therefore, an increase in retirement tourism into Vermont would have the potential to boost tax revenues. However, many factors impact tourism and there is not clear enough evidence about demographics' role to impact projections. ACCD did find spending was highest among younger adults with children, an area that is unlikely to grow – at least not as a result of demographic changes.

#### **Revenue Result: Less consumption tax revenue**

In 2013, Alison Felix and Kate Watkins with the Federal Reserve Bank of Kansas City estimated Vermont's per capita sales tax revenue would fall one to two percent from 2011 to 2030 (Figure 16).<sup>15</sup>

This projection assumed that expenditures by age cohort would hold steady over time, while in fact – as the authors acknowledged but did not work into calculations – average expenditures by seniors have increased as they have continued to work past retirement age. Assuming the trend of working later in life continues, younger seniors will likely spend at higher levels, thus mitigating some of the projected decrease in revenue.



Figure 15. Spending by age in two areas: food away from home (taxable) and health care (usually non-taxable). Graph from 2017 Vermont Tax Study.



Figure 16. Projected change in per capita sales tax by state, 2011-2030. Graph from Mullis. Data from Felix and Watkins.

<sup>&</sup>lt;sup>14</sup> Jones, "Benchmark Study of the Impact of Visitor Spending on the Vermont Economy: 2013."

<sup>&</sup>lt;sup>15</sup> Felix and Watkins, "The Impact of an Aging U.S. Population on State Tax Revenues."

# Impact #3: How We Live (Result: More Property Tax Adjustments)

Because income and sales taxes across the country are largely similar in structure, if not rate, the research from other states concerning demographic impacts can be instructive. Not so for property tax. This paper examines Vermont tax data and determines that the number and size of property tax adjustments (PTA), as currently constructed, are likely to increase significantly due to both the trend of more seniors and the trend of smaller households.

# Impact: Smaller households are more likely to receive PTA and to receive larger adjustments. An increase in the number of small households will increase total PTA.

The impact of household size on PTA is straightforward. Eligibility for PTA and the size of the adjustment are determined based on household income and do not take household size or filing status into account. Therefore, Vermont's previously discussed trend toward smaller households with higher per capita incomes and lower household incomes creates more exposure for the PTA program.

An analysis of 2018 Vermont tax data shows that small households receive a disproportionate share of PTA. More than four in five (82%) one-person households receive PTA compared to two in three (66%) two-person households and less than three in five (59%) households with more than two members (Figure 17).

In addition, smaller households tend to receive larger adjustments. The average adjustment for a one-person household was \$1,870 in 2018, over \$400 more than the average adjustment for a two-person household and nearly \$600 more than for a household with more than two members.

As previously demonstrated, one-person owner-occupied households are more prevalent in Vermont than in any other state in the Northeast and continue to grow.



Four in five (82%) one-person households receive PTA, compared

Source: TSC analysis of Department of Tax 2018 Data

Figure 17. Number of households and share of PTArecipients by household size.





Source: TSC analysis of Department of Tax 2018 Data

Figure 18. Average property tax adjustment per household size.

# Impact: Older Vermonters are more likely to own homesteads, more likely to receive PTA, and more likely to receive large adjustments

The impact of age on PTA is significant. Because younger cohorts are less likely to own homes than older cohorts, and because older cohorts are more likely to be one-person households, the ratio of homesteads to the state's population peaks for the 60-80 age groups and remains high over 80 years old (Figure 19). In addition, every age cohort over 40-49 is more likely to receive PTA than the next youngest age group, with more than three in four (76%) householders in their 70s receiving PTA and 85 percent of householders in their 80s (Figure 20).

Finally, while the average recipient household received a \$1,572 adjustment in 2018, there was significant variance across age groups. Each age group received more PTA per recipient than the next younger age group, with recipients in their 30s getting an average adjustment of \$1,123, just over half the \$2,134 adjustment received by the average householder in their 80s (Figure 21).

To analyze for the impact of Vermont's aging on PTA, we sought to hold three factors (home ownership, PTA eligibility, and average adjustment by age group) constant, then apply the projected 2030 age structure. To do so we calculated the ratio of each age group's total 2018 adjustment to the number of Vermonters in each age group as of 2018. Because every factor tilts toward older age cohorts, the combined variance across age groups is even starker than the variance within any single factor. Adjustments received by householders in their 80s average out to \$816 per Vermonter in their 80s, or fully four times the \$204 ratio of adjustments received by 30-something Vermonters to all Vermonters in their 30s (Figure 22).





Figure 19. Homesteads per Vermonter in each age group.

Figure 20. Number of households and proportion receiving PTA by age group.





# Result: Replacing Vermont's current age structure with the projected 2030 age structure would result in a \$24 million increase in property tax adjustments.

With the projected 2030 population and age distribution, PTA would be expected to increase by \$24M over the 2018 amount, or 13 percent higher. This increase in adjustments to the growing populations of Vermonters in their 70s (up \$16M) and those 80 and over (up \$18M) would overshadow decreases to middle-aged cohorts (Figure 23). The result will either be a strain on the Education Fund or an increase in payments from remaining non-adjusted residential tax payers, non-homestead property tax payers, and other sources of revenue.

This calculation should not be viewed as a forecast for the year 2030 for at least three reasons. First, it may be conservative in that it is based on a year (2018) that is on the high-end of an economic cycle. Adjustments

increase during economic downturns. Second, it doesn't account for trends such as the decrease of household size within age groups, a trend that could further increase adjustments. Third, it isn't realistic to assume no additional changes to a program that has changed over time.

Rather this analysis should be viewed as an illustration of how demographic pressures will impact the property tax system as currently configured.





# AREAS FOR FUTURE CONSIDERATION

There are several areas that are beyond the scope of this paper but are relevant to the demographic challenges facing Vermont.

[Insert summary of Commission's conclusions, recommendations, and/or suggestions for future research/consideration here, with reference to full section on p19]

Appendices



### Appendix A - Population Projections and a Caveat

Figure 24. Vermont's population and various projections.

This paper largely used the most up-to-date projections, looking to internal JFO projections from 2019 for Vermont's age structure and the University of Virginia Cooper Center projections for national figures (Figure 24). JFO's internal projections expect a slight increase from current population levels by 2030 while the Cooper Center projects a slight decrease, but both expect a continuation of relative stability in total population for at least a decade.

In 2013, Vermont's Agency of Commerce and Community Development produced two scenarios of population projections. The first (Scenario A) projected the state's population through 2030 based on a recurrence of patterns from the 1990s. The second (Scenario B) replicated the much slower 2000s. As seen in Figure 24, Scenario B currently looks far more accurate, though even it underestimated the internal shift toward some of the metro counties.

As demographers frequently note, projections are not predictions. Projections assume that past trends will continue. When trends and underlying assumptions shift, the projections can turn out to be wildly inaccurate. For example, in 2006, the U.S. Census projected that North Dakota and Washington, D.C. would both lose population between 2005 and 2020. However, the Census now estimates that, rather than shrinking to 630,000, North Dakota actually grew 20 percent to 760,000 as of 2018. The Census also estimates that,

rather than shrinking to 481,000, the nation's capital actually grew 27 percent to 702,000. Incidentally, that same study projected that Vermont's population would grow by nearly ten percent by 2020. As of 2018, its population is virtually unchanged.

#### "Past results are not a guarantee of future performance."

In the case of the Census, projections could not foresee the oil boom in North Dakota or the impact of an urban revival on Washington, DC or rural America. Having said that, Figure 25 is presented as a caution against treating the latest projections as predictions (Figure 25).

Projections can be a useful tool for long-term planning, but only if the underlying assumptions are well understood and data are continually monitored to detect new trends. For this reason, this paper attempts to comment on the likelihood of each of the three trends to continue and what, if anything, is likely to change.



Figure 25. U.S. Census projections from 2006 vs. actuals.

# Appendix B - Levels of Confidence in Trends

As Appendix A demonstrates, population projections should be used to understand what is likely to happen if current trends continue. But what if trends change? For this reason, it's useful to pause and assess the likelihood of the three trends to continue. Each trend is discussed below. In short, while there are factors that could sharpen or dull the extent of the trends, they each appear to be a safer bet than guessing whether the overall population will rise, fall or stay the same.

#### Trend #1: More Seniors, Fewer Children and Working-age Adults

Confidence in Trend: High

Fertility and mortality rates seem unlikely to take a dramatic turn. Immigration and domestic migration are thus the wildcards, dependent on federal policy, the availability of jobs, incomes relative to cost of living, and the disruption caused by global phenomena such as war, famine, and climate change.

Such factors are highly unlikely to change the trend toward more seniors, but they could blunt or accentuate the impact of the trend by increasing or decreasing the number of working-age adults and children.

#### Trend #2: More Metropolitan, Less Rural

Confidence in Trend: Moderate to High

Recent centuries have been marked by people moving from rural areas to metro areas, but there have been periodic countertrends over time – including in Vermont in the late 20<sup>th</sup> century. This century's job growth has overwhelmingly taken place in cities, but the fact that Gallup reports so many Americans want to live in rural areas (Appendix F) indicates that another countertrend isn't out of the question. There are very real reasons that this decade's job creation has been concentrated in metro areas but, as with Trend #1, it's at least within the realm of possibility that a national or global event could change migration patterns.

#### Trend #3: More Households with Fewer People

Confidence in Trend: Moderate

On the one hand, lower fertility and mortality don't show signs of changing. Both factors, along with divorce, lead to smaller households. On the other hand, multigenerational households, homesharing, or immigration could provide a countertrend. If it's true that younger generations will not be as wealthy as their predecessors (and, to date, studies have shown Millennials have lower earnings and less wealth than prior generations had at the same age<sup>16</sup>), then it's possible fewer people will be able to afford to live alone.

<sup>&</sup>lt;sup>16</sup> Kurz, Christopher, Geng Li, and Daniel J. Vine (2018). "Are Millennials Different?," Finance and Economics Discussion Series 2018-080. Washington: Board of Governors of the Federal Reserve System, https://doi.org/10.17016/FEDS.2018.080

# Appendix C - Methodology

This paper surveys data on three demographic trends, the impact of those trends on how Vermonters earn, spend, and live, and accordingly the impact on three of Vermont's key revenue sources: income tax, sales tax, and property tax. When possible the paper offers context of whether a Vermont trend or impact is consistent with national and regional trends.

The paper then conducts an analysis of future prospects for tax revenues and income sensitization costs based on current Vermont tax data and population projections.

When focusing on Vermont, this paper uses JFO's internal population projections. When making regional and national comparisons, the paper uses data from the University of Virginia Cooper Center for both Vermont and other states' projections in order to provide a consistent comparison. Cooper Center data is also used when projecting to 2040.

Similarly, while data from the Vermont Department of Taxes provides the most precise picture of Vermont, data from the U.S. Census Bureau is used for both Vermont and other states when making comparison national and regional comparisons. The Census's five-year American Community Survey is used, rather than the one-year, in order to maximize reliability.

# Appendix D - Age Structure from Pyramid to Pillar

The U.S. Census has produced a set of materials called "From Pyramid to Pillar" that provides a visualization of how the national age structure is changing (Figure 26).<sup>17</sup>



Figure 26. U.S. age structure, 1960 actual and 2060 projected. Graph from U.S. Census Bureau National Population Projections 2017.

A similar visual can be created at the state level using data from the decennial Census as well as state projections through 2040 from the University of Virginia Cooper Center.

#### How did we get here?

Ninety years ago, Vermont's age structure looked like the traditional "population pyramid." More than one in three (37%) Vermonters were under 20 years old, each of the subsequent age cohorts gradually decreased in size, and less than nine percent were 65 or older (Figure 27).

<sup>&</sup>lt;sup>17</sup> U.S. Census Bureau, "From Pyramid to Pillar." An excellent three-minute video is available at https://www.census.gov/programs-surveys/popproj.html



Figure 27. Vermont age structure in 1930 (not including 0-4 year-olds). Seniors 65+ in gold, youth <25 in blue. Data from 1930 Census.

A drop in births during the Great Depression and World War II was followed by a post-war baby boom, which combined with a drop in childhood mortality to disrupt the pyramid (Figure 28).



Falling mortality rates then led to longer lifespans. For example, a child born in the U.S. in 1930 could expect to live until 63, while a child born in 1975 could expect to live to 73, and a child born in 2010 could expect to live to 79.<sup>18</sup> These longer lifespans serve to broaden the top of the age structure (Figure 29).

At the same time, falling birth rates served to shrink the age structure's base. U.S. fertility rates fell by nearly 50 percent from the mid-1950s to the mid-1970s and have stayed low for the last forty years.<sup>19</sup>

<sup>&</sup>lt;sup>18</sup> Jacobs, "Soaring Numbers of Elderly Reshaping U.S. Economy."

<sup>&</sup>lt;sup>19</sup> Jacobs.

# Net In-migration Boosted VT Baby Boomers Nearly 20% in 50 Years

Age Cohort	In VT in 1960	In VT in 2010
Born ~early 1950s (5-9 in 1960 Census, 55-59 in 2010)	40,732	48,739
Born ~late 1950s (0-4 in 1960 Census, 50-54 in 2010)	43,873	52,493

Table 3. Growth over time in Vermont residents born in the 1950s.



Figure 29. Vermont age structure in 2010. Seniors 65+ in gold, youth <20 in blue. Baby Boomers in dots. Data from 2010 Census.

By mid-21st century, Vermont's population structure will likely resemble a pillar. But first it must manage the transition of its largest cohort from the workforce to retirement (Figure 30).



Figure 30. Projected Vermont age structure for 2020, 2030, 2040. Seniors 65+ in gold, youth <20 in blue. Baby Boomers in dots. Data from UVA Cooper Center.

Vermont is one of the slowest growing states in the nation despite having relatively neutral net domestic migration. Low birth rates and low international migration, which often go hand-in-hand as immigrants tend to have higher birth rates, keep Vermont's overall growth rate lower than states with far more out-migrants.



Figure 31. Cumulative projected change in population: 2017-2026. Data from U.S. Census, graph from Fitch Ratings.

# Appendix E - The Impact of International Immigration

Nationally immigrants provide a counterbalance to generational ebbs and flows. For example, while native born Americans have a large population of Baby Boomers and a significantly smaller population of Generation Xers, the latter generation is bolstered by the largest cohort of immigrants (Figure 32). In addition, immigrants tend to have higher birth rates than native born Americans, which provides a further counterbalance to aging generations. Without immigrants, the U.S. population would have a larger drop-off from Baby Boomers to Generation X – much like Vermont's variance.

Recent immigration has come from the south (Latin America) and west (Asia) into the American South and West (Figure 33). The declining share received by the Northeast has concentrated in urban areas, leaving rural northern New England with less than half the proportion of immigrants as the U.S. overall (Figure 34).

Nonetheless a July 2019 analysis from the Federal Reserve Bank of Boston illustrates the growing importance of immigration to northern New England. The study shows the three states added nearly 60,000 immigrants from 1990 to 2017, a growth rate of 63 percent, while the region's native-born population increased by less than 12 percent. Notably, the Bank's analysis also showed that immigration was particularly impactful in relatively slow-growing communities with small populations of youth, that the quintile of towns with the lowest native-born growth rates had their population losses (11.5%) offset by immigration, and that the quintile with the second lowest growth rate attracted the largest share by far.<sup>20</sup>

In other words, immigration is bolstering the population in some of the areas that need it most and could play an increasingly important role in the future. The changing nature of federal immigration policy shrouds any forecasts in uncertainty however.



Figure 32. Age and sex structure of U.S. population. Graph from U.S. Census. Overlaid arrows/comments added by TSC. Note that children of immigrants are not shown distinct from other native-born residents.



Figure 33. Share of foreign-born population by region, 1850-2016. Graph from U.S. Census.

<sup>&</sup>lt;sup>20</sup> Sullivan, Riley. "Aging and Declining Populations in Northern New England: Is There a Role for Immigration?"



Figure 34. Foreign-born persons as proportion of overall population, 2013-2017. Data from U.S. Census American Community Survey 5-Year Estimates.

# Appendix F - More Metro (Bonus Information and Graphs)

From the U.S. Census:

#### Urban (defined at Census block level)

"In order for a block to qualify as urban, it must have a density of 1,000 people per square mile." "In 2000, the Census Bureau expanded the classification to include two types of urban areas: urbanized areas and urban clusters. Urbanized areas are areas with 50,000 or more people. Urban clusters are areas with at least 2,500 but fewer than 50,000 people."<sup>21</sup>

#### Rural (defined at Census block level)

"Rural is defined as all population, housing, and territory not included within an urbanized area or urban cluster."

#### Metro Areas (defined at county level)

"Metropolitan statistical areas, or metro areas, are delineated by the U.S. Office of Management and Budget (OMB). Each metro area consists of one or more counties that contain a core urban area of 50,000 or more population, plus additional counties that have a high degree of social and economic integration with the urban core. They are typically partly urban and partly rural, and can contain many cities, in whole or in part. Each metro area generally includes a large city and its nearby suburbs, as well as some sparsely settled territory that is in some degree reliant on the urban core for employment. About 83.7 percent of the U.S. population lived in metro areas in 2010."







Figure 36. Population change, 2010-2017. Graph from Peter Nelson of Middlebury College using data from U.S. Census.

<sup>&</sup>lt;sup>21</sup> Ratcliffe et al., "Defining Rural at the U.S. Census Bureau."

	Where Americans would like to live*	Where Americans actually live**
	%	%
Big city	12	20
Small city	17	20
Suburb of a big city	21	19
Suburb of a small city	10	7
Town	12	16
Rural area	27	15

\*Based on interviewing conducted Nov. 13-18, 2018; \*\*Based on interviewing conducted in September, October and November 2018

GALLUP

Table 4. Where Americans would prefer to live compared with where they actually live. Data and table from Gallup.

# Appendix G - Smaller Households (Bonus Graphs)

The following data is from the U.S. Census American Community Survey for the period 2013-17 (and, where noted, 2005-2009).



Figure 37. Vermont One-person Households, % by Age.



Figure 38. Vermont One-person Households, # by Age.







Figure 40. % of 65-74 Householders Living Alone.



Figure 41. % of 55-64 Householders Living Alone.



Figure 42. % of <55 Householders Living Alone.



Figure 43. % of 75+ Householders Living Alone.



Figure 44. % of 65-74 Householders Living Alone.



Figure 45. % of 55-64 Householders Living Alone.



Figure 46. % of <55 Householders Living Alone.



Figure 47. Harvard's Joint Center for Housing Studies (JCHS) expects growth in one and two-person households nationally to far outpace other compositions over the coming decade. Graph from JCHS.



Figure 48. Change in proportion of one-person renter-occupied households in the U.S. and Vermont. Data from U.S. Census 5-year American Community Survey.

# Appendix H - Income Tax (Bonus Tables and Graphs)

Every county had a lower unemployment rate in 2017 than in 2007, and all but two counties had a rate lower than the national average...



Source: Employment data from U.S. Bureau of Labor Statistics Local Area Unemployment Statistics Home Page, https://www.bls.gov/lau/.

Figure 49. Unemployment rate by Vermont county, 1997, 2007, 2017.

#### ...Yet Vermont's workforce grew in only two counties (both in the Burlington Metro Area) in the last decade, after growing statewide in the prior decade



Change in Workforce by County

Figure 50. Change in workforce by Vermont county, 1997-2007 and 2007-2017.

The three counties in the Burlington Metro Area have the highest incomes in the state. Two contiguous counties are above the state median. The other nine counties are below the state median.



Figure 51. Median household income by county.

Vermont is the <u>only</u> state that ranks in <u>both</u> the ten highest employment rates and ten slowest growing populations. Three other states rank in the top 15 in both categories. Two are Vermont's northern New England neighbors.

States Ranking in Both Lowest 15 Population Growth and Highest 15 Employment Rates



Source: Employment data from U.S. Bureau of Labor Statistics Local Area Unemployment Statistics, https://www.bls.gov/lau/. Population data from U.S. Census Bureau, County Population by Characteristics: 2010-2017, https://www.census.gov/data/tables/2017/demo/popest/counties-detail.html

Figure 52. States ranking in both highest employment and slowest population growth.

# Appendix I - Tax Breaks Related to Seniors

	State Taxes and Tax Breaks Related to Seniors						
	СТ	ME	MA	NH	NY	RI	VT
Military pensions	100% exempt	100% exempt	100% exempt		100% exempt		
Other pensions	Not exempt. As of 2018, requires pension payers to withhold income tax	\$10,000 exempt (this deduction is reduced by any Social	MA state and local government pensions 100% exempt; pensions from other state and local governments that don't tax MA public pensions are also 100% exempt	N/A (only taxes dividend and interest income) N/A (only taxes dividend and retirement plans qualify for \$20,000 exclusion	New York state and local pensions 100% exempt; out- of-state	\$15,000 of federally taxable exempt if income up to \$100,000 married jointly (\$80,000 for single), threshold adjusts with	Not exempt
Defined Contribution Plans (e.g. 401(k))	Not exempt	and Railroad benefits, but not impacted by military pensions)	Not exempt				
IRAs	As Not exempt Not exempt			Not exempt			
Social Security (also see next table)	Additional exemption for all plus income- based exemption	100% exempt	100% exempt		100% exempt	Additional income- based exemption	Additional income- based exemption

Property Tax Breaks	Property tax credits up to \$1,250 if >=65 with income up to \$43,000 for married jointly (\$1,000 and \$35,300 for singles)	Property tax credits up to \$1,200 if >=65 with income up to \$54,167 for married jointly (\$34,167 for singles), compared to \$750 if <65; in addition, not senior- specific, the homestead exemption provides a reduction of up to \$20,000 in the value of home for property tax purposes	Homeowner and renter credit up to \$1,100 if >=65 with income up to \$88,000 married jointly (\$58,000 single, 73,000 HoH); >60 can also reduce property taxes up to \$1,000 through volunteer work; in addition, not senior- specific, some municipalities offer residential exemptions that can reduce property tax by varying amounts (e.g. up to \$2,709 in Boston)	Elderly exemption off assessed home value with income and asset thresholds set by municipality at three tiers: 65-74, 75- 79, 80+; Separate program for education property tax relief based on income (20-100%) for property owners with income up to \$40,000 for married and HoH(\$20,000 for singles)	Enhanced School Tax Relief (STAR) for >=65 with income >=\$86,300; >=65 with income <\$38,000 (higher in NYC) also qualify for reduction in taxable assessment, depending on municipality	Elderly exemption off assessed home value with income, length of ownership, and residency thresholds set by municipality	Not senior specific, but up to \$8,000 in Property Tax Adjustment for incomes up to ~\$136,000 (based on income for all ages); Up to \$3,000 in Renter Rebate for portion of rent paid that exceeds 2- 5% (depending on income) of household income for incomes up to \$47,000
Other Taxes or Tax Breaks	Gift tax ranges from 7.2% to 12% when agg. value of gifts to an individual since 2005 exceeds \$2M						Tax credit worth 24% of Elderly or Perm. Totally Disabled Tax Credit

In addition to the catgories above, railroad retirement benefits are exempt from state taxation in all 50 states, per the Railroad Retirement and Railroad Unemployment Insurance Acts.

Table 5. Northeastern State Tax Breaks Related to Seniors

Federal Treatment of Social Security Income				
If combined income* is:				
Single/Separate/HoH/Widow(er)	Married Joint	- 55 benerirs are:		
<\$25,000	<\$32,000	100% exempt		
\$25,000-\$34,000	\$32,000-\$44,000	up to 50% taxable		
>\$34,000	>\$44,000	up to 85% taxable		

Table 6. Federal exemption for Social Security income. Combined income is non-social security income (including taxexempt interest) plus 1/2 of social security benefits.

Additional Exemption of Social Security Income by Northeastern States							
Most state income of Social Security addition, most sta	taxes are based benefits that is ex tes provide additi	off federo empt from onal exem	al Adjuste n federal nptions.	d Gross Inco tax is also e	ome (AGI) exempt fro	, meaning that om state income	the portion e tax. In
	СТ	ME	MA	NH	NY	RI	νт
Single/ Separate/ HoH <sup>^</sup> / Widow(er) <sup>^</sup> *	<b>AGI up to</b> <b>\$75,000^:</b> SS benefits are 100% exempt >\$75,000: 75% exempt	100% exempt	100% exempt	N/A (only taxes dividend and interest income)	100% exempt	up to \$80,000*: 100% exempt >\$80,000: No exemption	up to \$45,000: 100% exempt \$45,000- \$55,000: Phased out exemption >\$55,000: No exemption
Married Joint	AGI up to \$100,000^: SS benefits are 100% exempt >\$100,000: 75% exempt	100% exempt	100% exempt	N/A (only taxes dividend and interest income)	100% exempt	up to \$100,000*: 100% exempt >\$100,000: No exemption	up to \$60,000: 100% exempt \$60,000- \$70,000: Phased out exemption >\$70,000: No exemption

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