

Vermont Legislative Joint Fiscal Office

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ISSUE BRIEF

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Taxpayer Migration by Age and Income: Evidence from the IRS

I. Introduction and Summary

The issue of taxpayer migration is important in Vermont. In an average year, between 8,000 and 10,000 taxpayers move in and out of Vermont¹. As Vermont's population ages and retires, in-migration can be a potential solution to filling open jobs and providing new tax revenue. Over the past two legislative sessions, policies have been enacted intending to impact taxpayer migration. Examples include increasing estate tax exemption during the 2019 session and the Remote and New Worker Programs in 2018 and 2019.

This issue brief uses a dataset from the Internal Revenue Service (IRS) to highlight the types of taxpayers that moved to and from Vermont from 2011 to 2016. This dataset includes all 50 states, allowing JFO to analyze not only which types of taxpayers move to or from Vermont but also whether Vermont is comparatively better or worse than other states at drawing or keeping certain types of taxpayers. The main findings are as follows:

1) Overall, on net, Vermont lost 4,167 taxpayers to migration over the five-year period.

- As a percentage of total taxpayers, this net loss of taxpayers is the 11th worst in the country over this time span but also better than some New England states like Massachusetts, Rhode Island, and Connecticut.
- Because of definitional issues around incomes, this brief is unable to make conclusive statements about the change in taxable income available for Vermont personal income taxes.

Within this out-migration of taxpayers, there is considerable variation amongst income and age groups:

2) On net, Vermont lost significant numbers of taxpayers reporting lower- and middle-incomes² over the five-year period.

- Vermont lost, on net, 4,099 taxpayers with incomes below \$100,000 during this period.
- Net out-migration is strongest amongst taxpayers aged 45 to 64 with incomes between \$25,000 and \$75,000, of whom Vermont lost 720 taxpayers. This was 4th worst in the country as a percentage of total taxpayers (Figure 4).

3) On net, Vermont gained 126 high-income taxpayers (reported income of \$200,000 or above in the year of their move) over the five-year period.

- This gain is almost entirely driven by strong net in-migration of younger (aged 26 to 44), high-income taxpayers, of whom 100 came to Vermont. As a percentage of total taxpayers, this puts Vermont in the top 15 of states for this cohort of migrants (Figures 13 and 14).
- Within the same income group, during the five-year period, a net loss of 45 older (aged 65+) taxpayers was more than offset by a gain of 71 taxpayers aged 45 to 64.

¹ For reference, the database lists between 260,000 and 270,000 tax returns for Vermont. The latest data from the Department of Taxes lists just over 315,000 resident Vermont tax returns. Taxpayers in this issue brief refers to tax returns, which often contain more than one individual income-earner.

² Defined as incomes in the year of their move (Year 2), which contains a mix of income from the originating and destination state.

II. IRS Migration Database

This analysis relies on a public dataset released by the IRS that tracks address changes on individual income tax returns.³ For example, if a taxpayer reported a Vermont address on their Federal return in 2015 but then reported a New York address on their 2016 return, this dataset records that taxpayer as having moved out of Vermont from 2015 to 2016. The dataset aggregates all address changes for every state. It contains only individuals who filed a tax return and follows them over two-year periods. This analysis includes five two-year periods for returns filed in the years 2011 through 2016.

The years for the database are based upon when the taxpayer files his or her tax return, which is usually between January and April 15 of a given year.⁴ For example, for any taxpayers that moved in the 2015 to 2016 period, this would indicate that their address was in one state during the January to April 2015 period (whenever they filed their return) and a different address during the January to April 2016 period.

The dataset also delineates the incomes and ages of the taxpayers. It includes Adjusted Gross Income (AGI) for two years: the AGI reported in the year when the return has the original address (Year 1) and the AGI reported in the year when the return has a different address (Year 2).⁵ Income reported in Year 1 refers to the income in the year before the move, likely from the originating state, and income reported in Year 2 refers to income received during the year of the move, likely a mix of income in the original state and the new state. For a complete explanation of the differences between and potential shortfalls of these measures, see the Appendix.

The following age and income groups are provided. Age groups and income are based upon age and AGI in Year 2:

Income Groups	Age Groups
\$0-\$10,000	Under 26
\$10,000-\$25,000	26-34
\$25,000-\$50,000	35-44
\$50,000-\$75,000	45-54
\$75,000-100,000	55-64
\$100,000-\$200,000	65+
\$200,000+	

While the dataset is from a reliable source, there are potential caveats to using it, particularly when analyzing the migration of income across states. The definitions of Year 1 and Year 2 income make definitive conclusions about migration of incomes difficult. A complete discussion of those caveats can be found in the Appendix of this brief.

Due to these issues, income flows in and out of states should not be interpreted as taxable income gained or lost for any state's income tax base. In aggregate, though overall income flows for a state could

³ U.S. Population Migration Data. Internal Revenue Service, Tax Statistics. <https://www.irs.gov/statistics/soi-tax-stats-migration-data>

⁴ Some tax filers file an extension that allows them to file their tax return later in the year.

⁵ When comparing total amounts of income leaving or coming to Vermont and other states, this analysis uses Year 1 income. For an explanation, see the Appendix.

be biased upward or downward⁶, they could provide some directional insight as to whether a state is gaining or losing income.

Moreover, income cohorts, which are technically defined as income in the year of the move (Year 2), should be interpreted as general indications of aggregate migrant taxpayer affluence in the originating state. Because these income cohorts are based upon AGI in Year 2, they contain a mix of income from the originating and destination states. Upon moving to another state, in the years after the move, a taxpayer could have a higher or lower income that is based solely on the income in the destination state that would put him or her into a different income cohort.

Finally, it is important to add that migration during the period 2011 to 2016 was influenced significantly by the aftermath of the Great Recession. In particular, home values had dropped notably during the Great Recession and remained largely stagnant, causing many households to postpone plans to change jobs or move to a new state. Through 2016, the final year examined in this brief, no state in New England had yet fully recovered from the fall in real estate prices.⁷ **Data for a more recent period less influenced by the Great Recession, or a full real estate cycle (2003-2016) could show different outcomes than those in this brief. Furthermore, demographic trends in Vermont could exacerbate or rapidly change the findings of this brief within a few years.**

III. Major Findings

a) Methodology

To identify migration-related insights for Vermont, this analysis compared Vermont's migration to all other 49 states, controlling for age and income. The two key variables were tax returns (representing taxpayers) and income in measuring net migration.⁸ For income migration, results should not be interpreted as changes in taxable income available for a state for income tax purposes.

To put the data into relative, comparable terms across states (rather than absolute), the tax returns and income related to migration for each year were divided by the total number of tax returns and amount of AGI, respectively, for each state. These percentages were then summed over the five-year period to estimate cumulative net migration across the two variables.

b) Major Finding #1: Overall, on net, Vermont lost 4,167 taxpayers to migration over the five-year period.

Over the 2011 to 2016 period, Vermont lost taxpayers to migration. 43,714 taxpayers migrated into Vermont while 47,881 taxpayers migrated out⁹ for total net out-migration over the period of 4,167 taxpayers (Figure 1).

⁶ For example, states with generally lower-than-average incomes might show home-state incomes that are lower than incomes in the new state. States with above-average incomes might show home-state incomes that are higher than incomes likely in the new state.

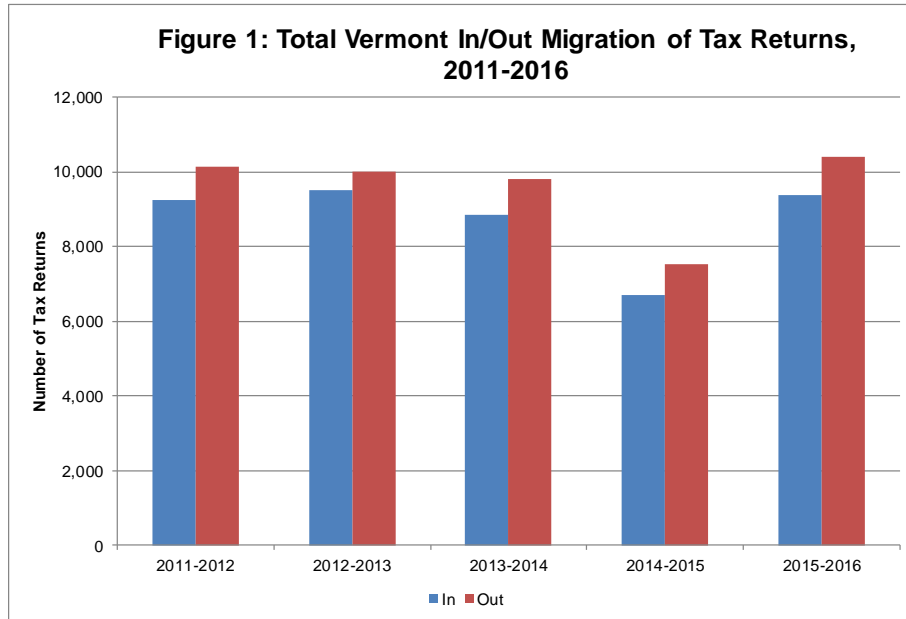
⁷ July 2016 Consensus Revenue Forecast, page 21.

https://lifo.vermont.gov/assets/docs/state_forecasts/c751359237/2016-07-July-Forecast.pdf

⁸ Defined as the difference between taxpayer/income migration into a state and the taxpayer/income migration out of a state.

⁹ Note, these may not be all unique tax returns. A tax return may have in-migrated one year, out-migrated the next and then returned the third year.

As mentioned in the previous section, it is difficult to make any definitive conclusions about the amount of total income that flowed in or out of Vermont over the 5-year period. The dataset indicates that taxpayers with over \$2.46 billion in income in the home state (Year 1) migrated into Vermont. At the same time, taxpayers with \$2.47 billion in Vermont Year 1 income left the state, but it is not possible to know how much income was made in the new state. This dataset does not include how much income was made solely in the destination state (hypothetically, Year 3 income).



Vermont’s in-and out-migration tends to be concentrated most amongst lower- and middle-income taxpayers. Over the five-year period, taxpayers with AGI between \$10,000 and \$75,000 in the year of their moves accounted for 68% of total in-migration and 69% of total out-migration but represented 64% of Vermont tax returns. Those percentages of migrants are higher than in other New England states. Compared to Vermont, other New England states generally see greater migration from those making \$50,000 or more, especially for those making greater than \$100,000 (Table 1).¹⁰

	Vermont						New England (less VT)			
	Percent of Total VT Tax Returns in Cohort (2016)	In-Migration		Out-Migration		Percent of Total NE Tax Returns in Cohort	In-Migration		Out-Migration	
		Percent of Total	Number	Percent of Total	Number		Percent of Total	Number	Percent of Total	Number
\$1-10k	10%	14%	5,933	14%	6,642	7%	12%	85,695	11%	93,082
\$10k-25k	20%	29%	12,482	29%	13,697	17%	24%	173,367	23%	192,060
\$25k-50k	28%	27%	11,863	28%	13,252	24%	26%	192,418	26%	214,527
\$50k-75k	16%	12%	5,160	12%	5,676	16%	14%	103,477	14%	118,788
\$75k-100k	11%	7%	2,847	7%	3,117	11%	8%	57,963	8%	69,745
\$100k-200k	12%	9%	3,783	8%	3,977	18%	11%	78,481	12%	96,234
\$200k+	3%	4%	1,646	3%	1,520	7%	5%	40,095	6%	46,638
Total	100%	100%	43,714	100%	47,881	100%	100%	731,496	100%	831,074

¹⁰ Note: New England migration in Tables 1 and 2 includes migration within New England states.

The majority of Vermont’s in-and out-migration comes from taxpayers under the age of 55. About 78% to 79% of total in-and out-migration was from this group, significantly above their 60% share of Vermont tax returns. This share of in-and out-migrants under age 55 is largely similar to other New England states, although in-and out-migration of taxpayers over the age of 55 is slightly higher in Vermont as a percent of total migration, while migration between the ages of 26-35 is slightly lower. For both Vermont and New England states, it appears taxpayers are most mobile when they are younger and move less as they age (Table 2).

**Table 2: In or Out Taxpayer Migration
from Various Age Groups (total 2011-2016)**

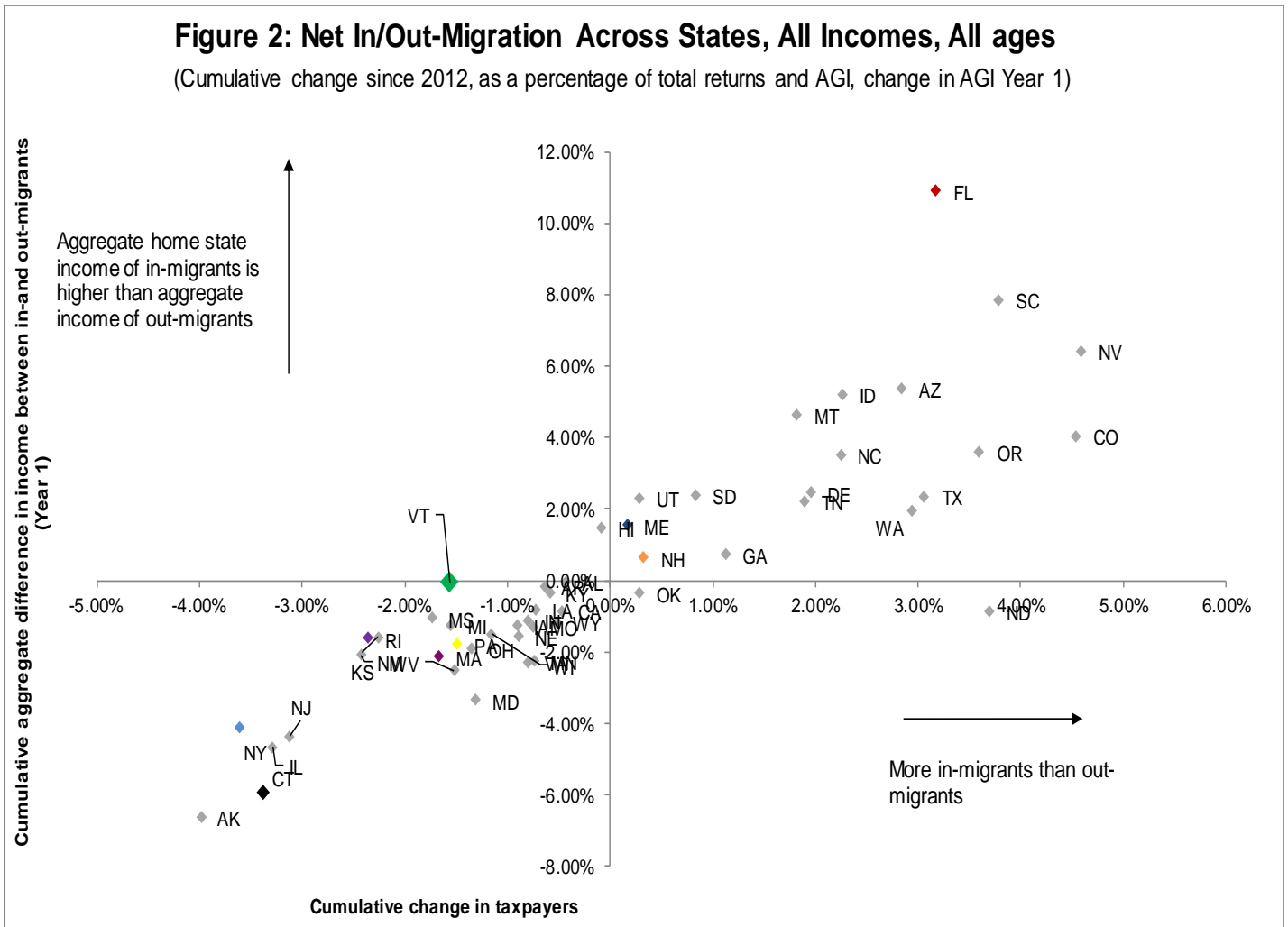
	Vermont					New England (less VT)				
	Percent of Total VT Tax Returns in Cohort	In-Migration		Out-Migration		Percent of Total NE Tax Returns in Cohort	In-Migration		Out-Migration	
		Percent of Total	Number	Percent of Total	Number		Percent of Total	Number	Percent of Total	Number
Under 26	9%	20%	8,625	22%	10,649	10%	21%	155,080	21%	172,665
26-35	16%	33%	14,278	31%	14,650	18%	34%	247,809	33%	272,892
35-44	16%	15%	6,405	14%	6,486	16%	15%	112,267	15%	123,983
45-54	19%	11%	4,885	11%	5,352	19%	11%	77,285	11%	89,624
55-64	20%	9%	4,147	10%	4,915	18%	8%	57,202	9%	76,595
65+	20%	12%	5,374	12%	5,829	20%	11%	81,853	11%	95,315
Total	100%	100%	43,714	100%	47,881	100%	100%	731,496	100%	831,074

c) Major Finding #2: Vermont struggles to attract and retain lower- and middle-income taxpayers, particularly those between the ages of 45 and 64.

Across all incomes and ages, Vermont has cumulatively lost, on net, about 1.56% of total taxpayers (4,167 taxpayers), or about 0.31% per year, and sees roughly the same amount of income (based upon Year 1 income) come and go due to migration over the five-year period.

In terms of the number of lost taxpayers over the period as a percentage of returns, Vermont looks like states in the Rust Belt (Ohio, Pennsylvania, Michigan), Massachusetts, Rhode Island, and Mississippi.

Figure 2 shows a scatterplot comparing overall taxpayer and income net migration over the five-year period. States in the upper right quadrant gained both taxpayers and saw a positive difference in the home state incomes of their in-migrants versus their out-migrants. States in the lower left quadrant lost taxpayers and saw a negative difference in the home state incomes of migrants. The green diamond highlights Vermont.



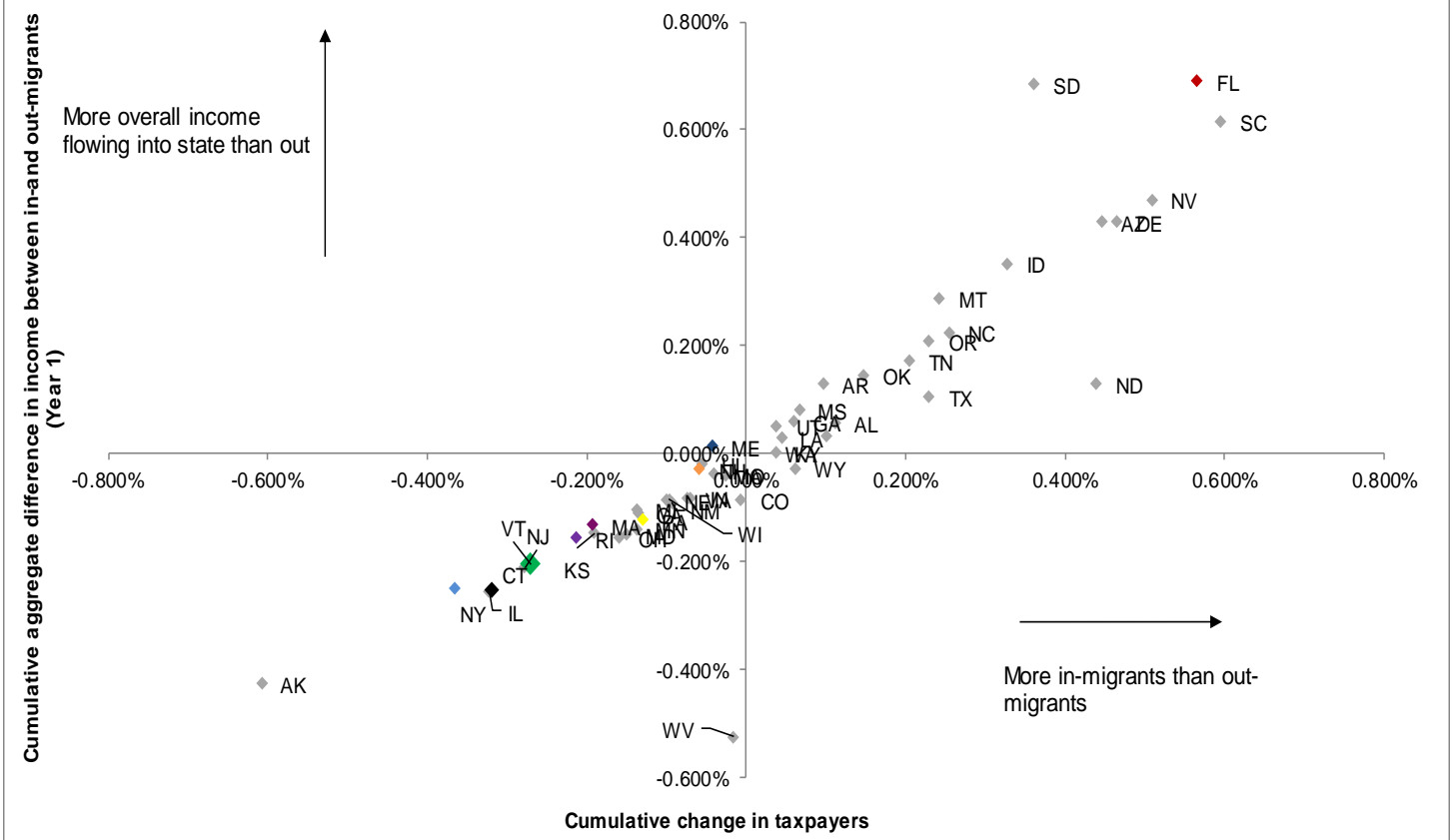
Note: Key comparison states are highlighted: CT (black), RI (purple), NY (light blue), PA (yellow), ME (dark blue), NH (orange), MA (magenta), and FL (red).

Vermont struggles the most with the narrower cohort of taxpayers aged 45 to 64 with incomes between \$25,000 to \$75,000. Total net out-migration from just this cohort was 720 taxpayers, which is over 17% of total net-out migration for Vermont as a whole (Table 3). As a percentage of total returns, only 5 states fared worse with this age and income cohort (Figure 4).

Table 3: Cumulative Net Taxpayer Migration from Vermont Lower-and-Middle Income Taxpayers, 2011-2016			
		Age Group	
		45-54	55-64
Income Group	\$25k-75k	-156	-223
	\$50k-75k	-172	-169
Total		-328	-392

Figure 4: Net In/Out-Migration Across States, \$25,000 to \$75,000, 45-64

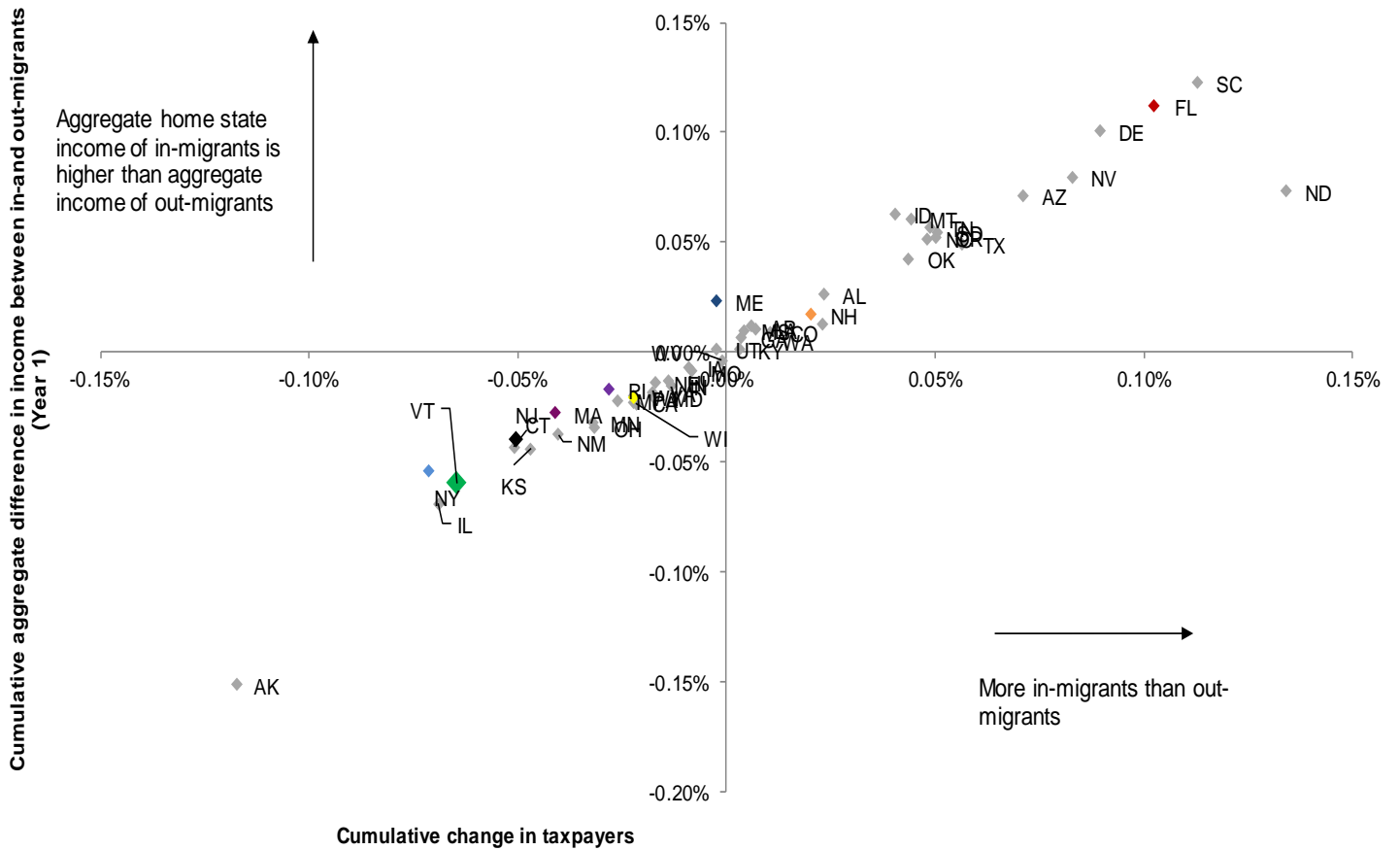
(Cumulative change since 2012, as a percentage of total returns and AGI), change in AGI Year 1



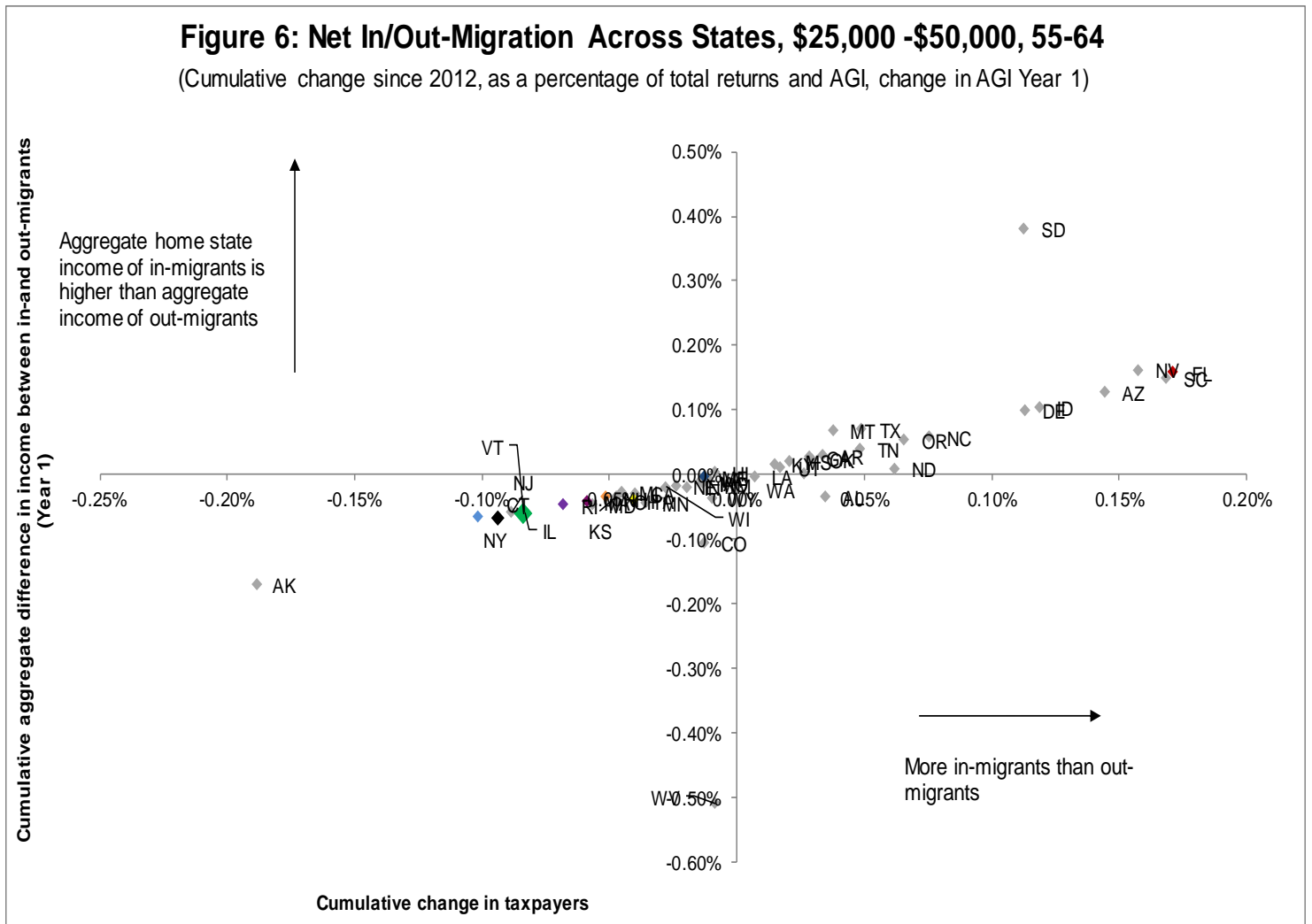
Relative to other states, Vermont is the fourth worst in the country at retaining or attracting taxpayers aged 45 to 54 reporting between \$50,000 and \$75,000 in the year of their move (Figure 5). For taxpayers aged 55 to 64 in that same income range, Vermont is the sixth worst in the country.

Figure 5: Net In/Out-Migration Across States, \$50,000-\$75,000, 45-54

(Cumulative change since 2012, as a percentage of total returns and AGI, change in AGI Year 1)



Similar results exist for taxpayers aged 55 to 64 with incomes between \$25,000 and \$50,000 (Figure 6).



d) Major Finding #3: Vermont tends to attract and retain higher-income taxpayers, particularly younger high-income taxpayers.

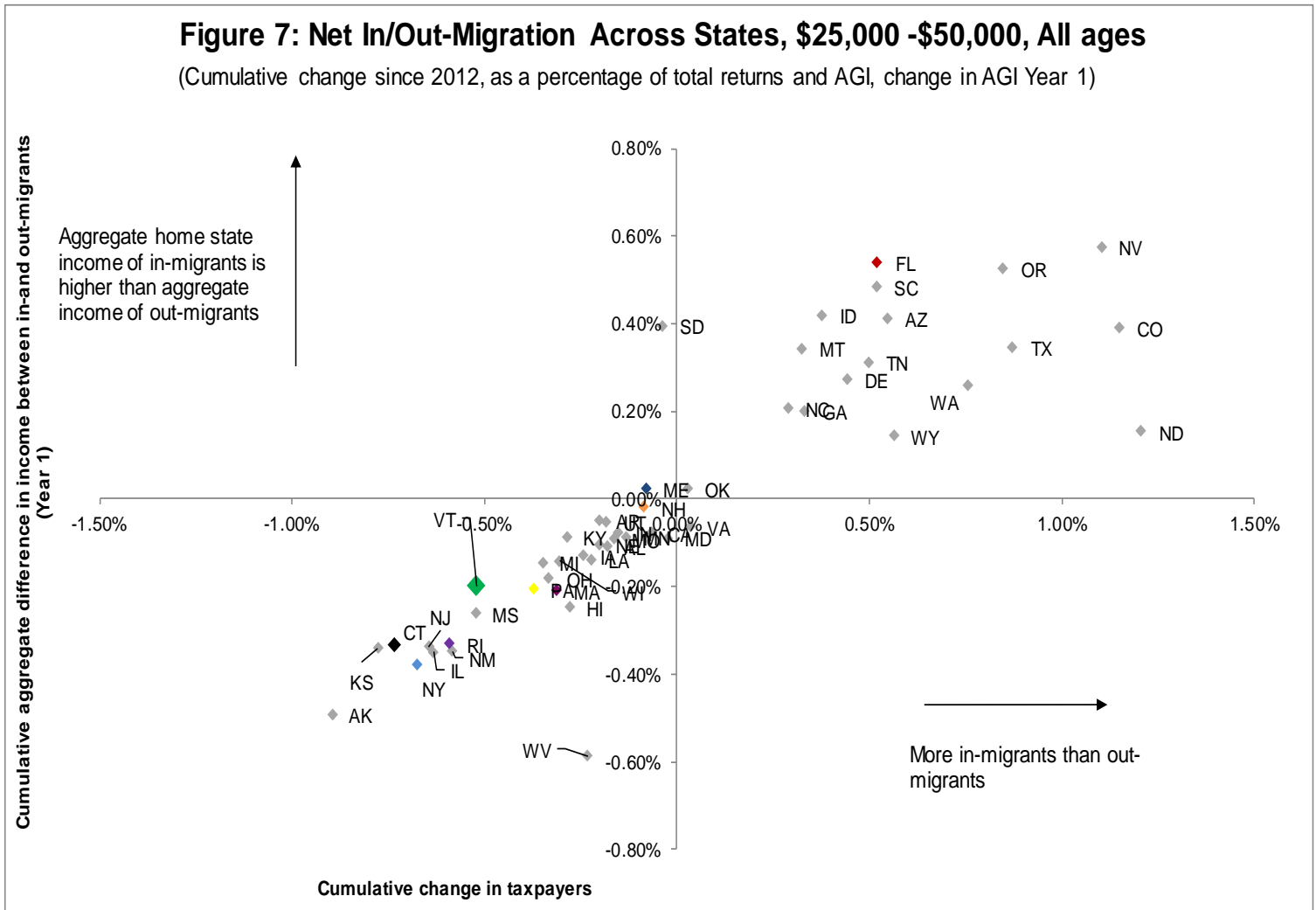
While Vermont lost taxpayers over the five-year period, Vermont's profile is unique; for other states that have lost similar proportional numbers of taxpayers, the aggregate home state incomes of out-migrants are significantly greater than in-migrants.¹³

With the caveats around income migration, the difference between the home state incomes of in-and out-migrants for Vermont was less than 0.002% per year over the five-year period. For states that lost proportionally the same number of taxpayers, the differences in income are much wider than Vermont's: Ohio (-0.38% per year on average), Pennsylvania (-0.36%), Massachusetts (-0.33%), and Mississippi (-0.34%).

While clear conclusions about income migration are difficult to make using this data, the fact that Vermont has lost taxpayers but has not seen as wide a gap between in-and out-migrant incomes could suggest that even though net taxpayer out-migration is concentrated amongst lower- and middle-income taxpayers, their income is partly replaced by fewer, but higher-income in-migrating taxpayers. The following data show that this appears to be case.

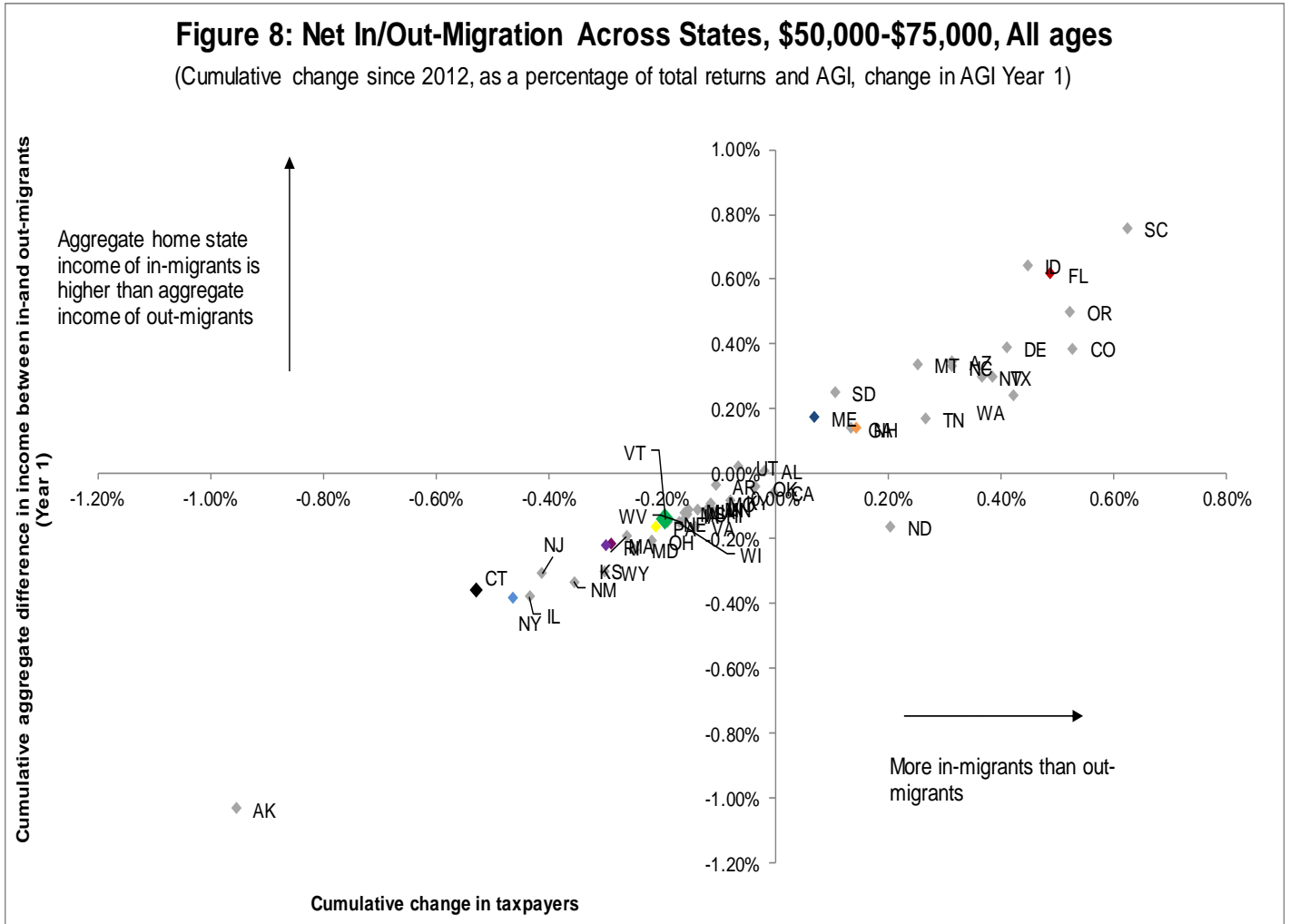
¹³ Measured as a percentage of total Adjusted Gross Income for each state.

Figure 7 shows only migrants with reported AGI between \$25,000 and \$50,000.¹⁴ Relative to other states, only 9 states (3 of which are in Vermont's region) have lost more taxpayers as a percentage of their total tax returns.



¹⁴ Note, these income cohorts are based upon the income in the year of the move. After moving, incomes of taxpayers could be significantly higher or lower, particularly for higher income taxpayers.

Figure 8 shows the same chart, but for the income group \$50,000 to \$75,000. Vermont is still one of the poorer performing states for taxpayers, although it does better relative to the \$25,000 to \$50,000 group of migrants.



When the sample is restricted to higher income taxpayers, Vermont does comparatively better. Figures 9, 10, and 11 show the same data as Figures 7 and 8 but for taxpayers with increasingly higher incomes: \$75,000 to \$100,000, \$100,000 to \$200,000, and above \$200,000.

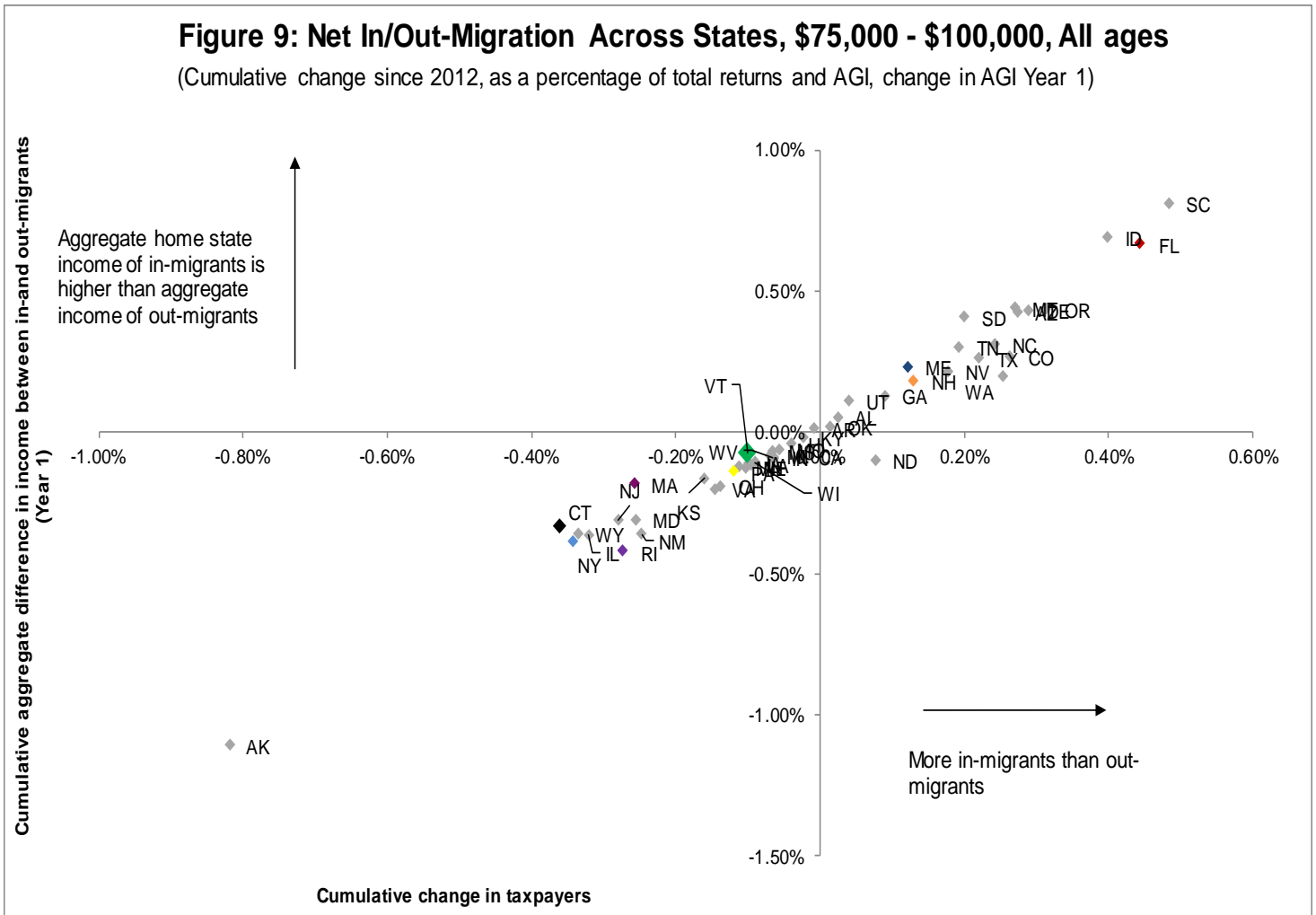


Figure 10: Net In/Out-Migration Across States, \$100,000 - \$200,000, All ages

(Cumulative change since 2012, as a percentage of total returns and AGI, change in AGI Year 1)

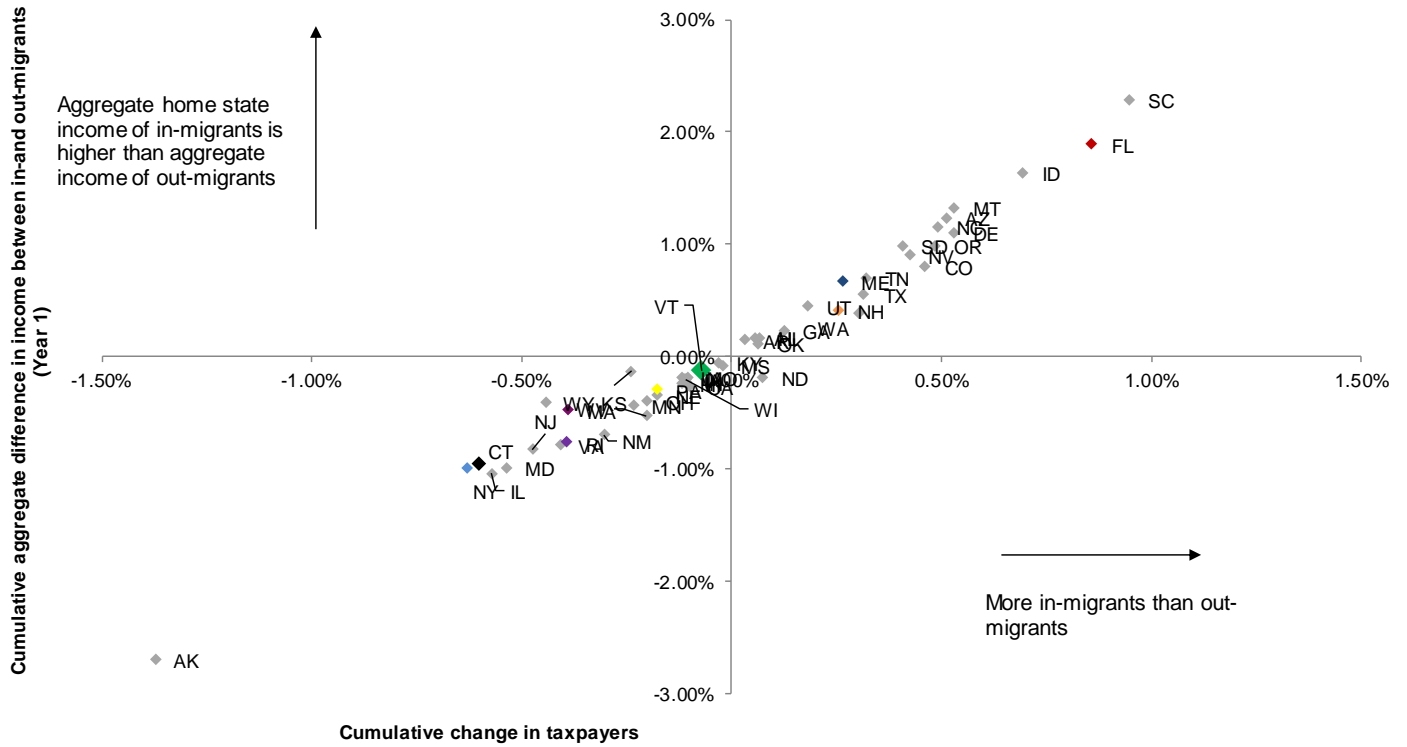
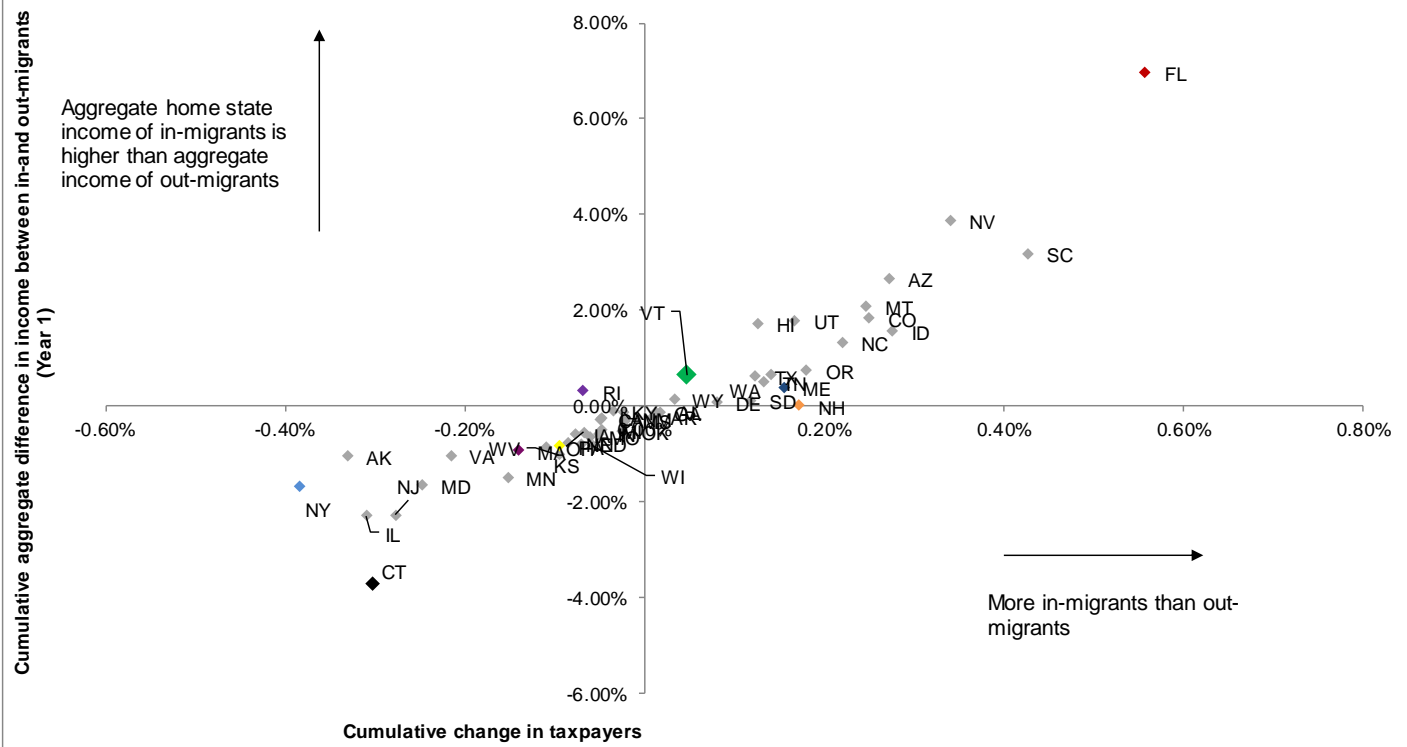


Figure 11: Net In/Out-Migration Across States, >\$200,000, All ages

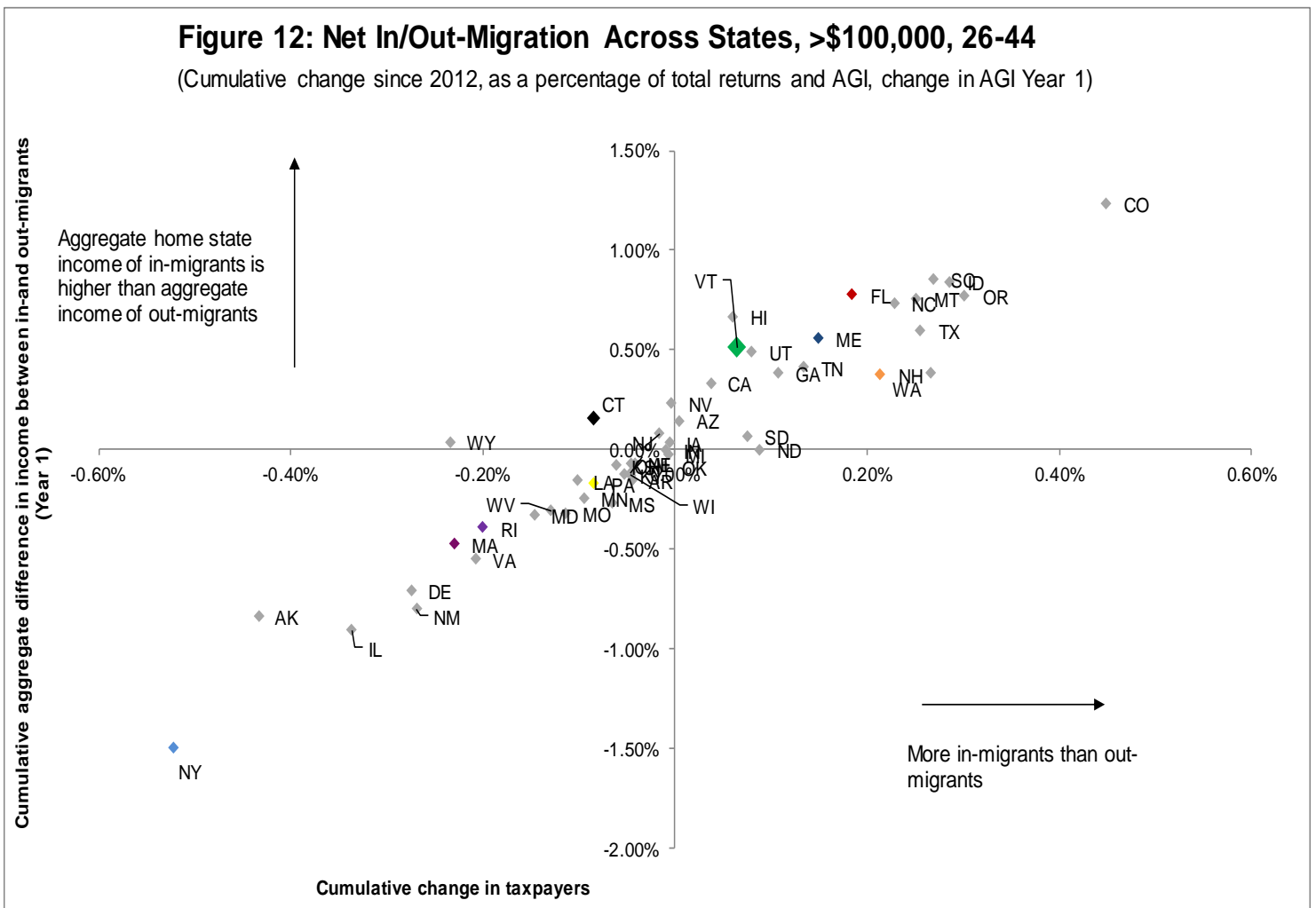
(Cumulative change since 2012, as a percentage of total returns and AGI, change in AGI Year 1)



As incomes rise, Vermont tends to perform better relative to other states:

- For taxpayers with between \$75,000 and \$100,000 in income, Vermont lost, on net, 270 taxpayers over the period, but as a percentage of total returns, this is better than 16 other states.
- Amongst migrating taxpayers with between \$100,000 and \$200,000 in income, Vermont lost 194 taxpayers but as a percentage of returns, it fared better than 24 other states.
- For those migrants with over \$200,000 in income, Vermont gained 126 taxpayers over the 5-year period which, as a percentage of returns, is better than 31 other states.

Within higher income groups, Vermont appears to be strongest at attracting or retaining younger, high-income taxpayers. For taxpayers aged 26 to 44 with over \$100,000 in income, Vermont gained 174 migrant taxpayers, which is approximately 0.07% of total returns.¹⁵ As a percentage of returns, only 16 states saw greater net in-migration than Vermont (Figure 12).



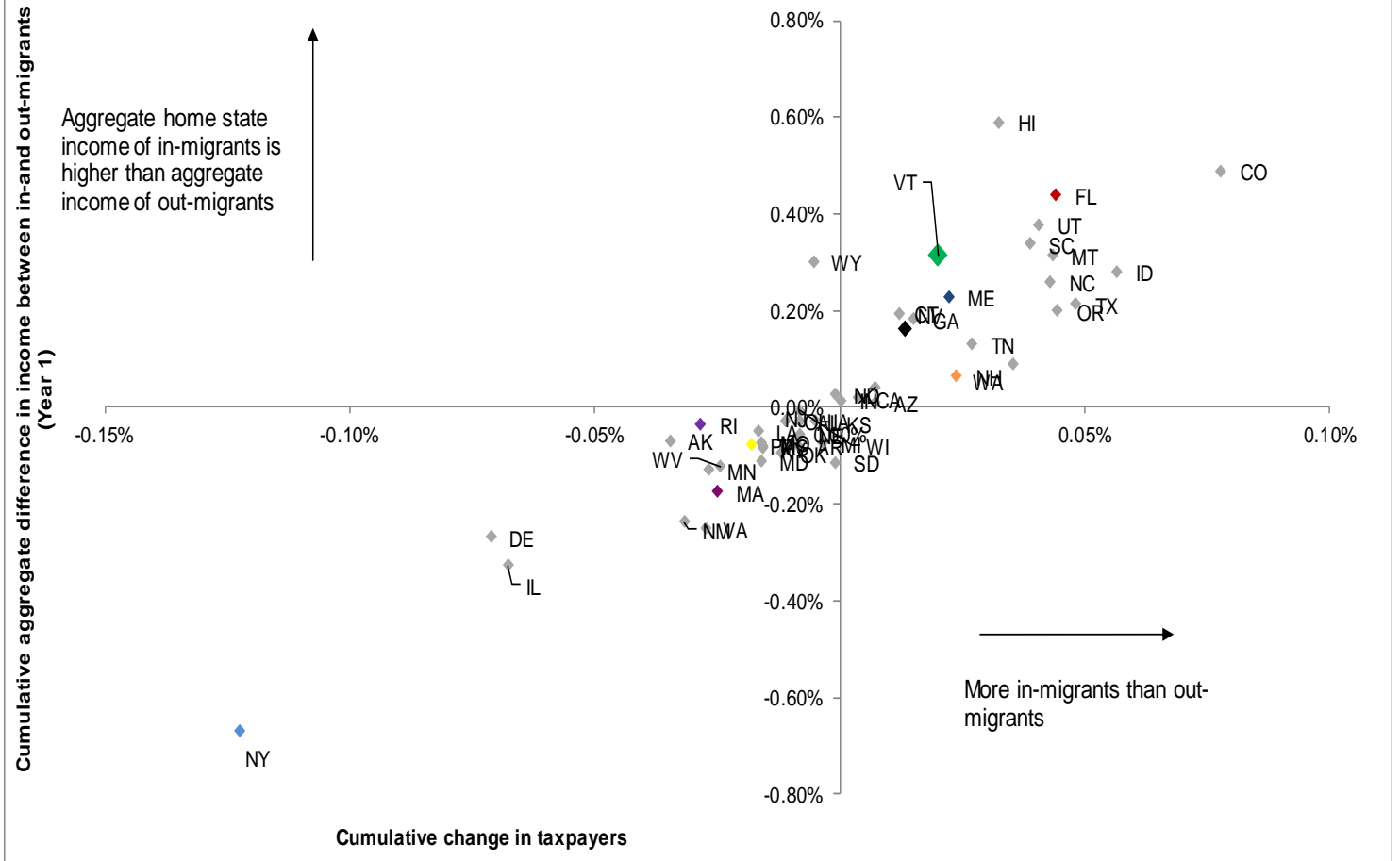
Looking more closely at narrower slices of the data, relative to other states, Vermont's net-migration position is strongest amongst those younger taxpayers (26 to 44) with high incomes (greater than \$200,000). Figures 13

¹⁵ For reference, in the dataset, there were 10,564 returns in this group in 2016, which is about 3.5% of total Vermont tax returns.

On net, 54 taxpayers aged 35 to 44 with incomes greater than \$200,000 moved into Vermont. As a percentage of returns, this puts Vermont in the top 15 of states. (Figure 14).

Figure 14: Net In/Out-Migration Across States, >\$200,000, 35-44

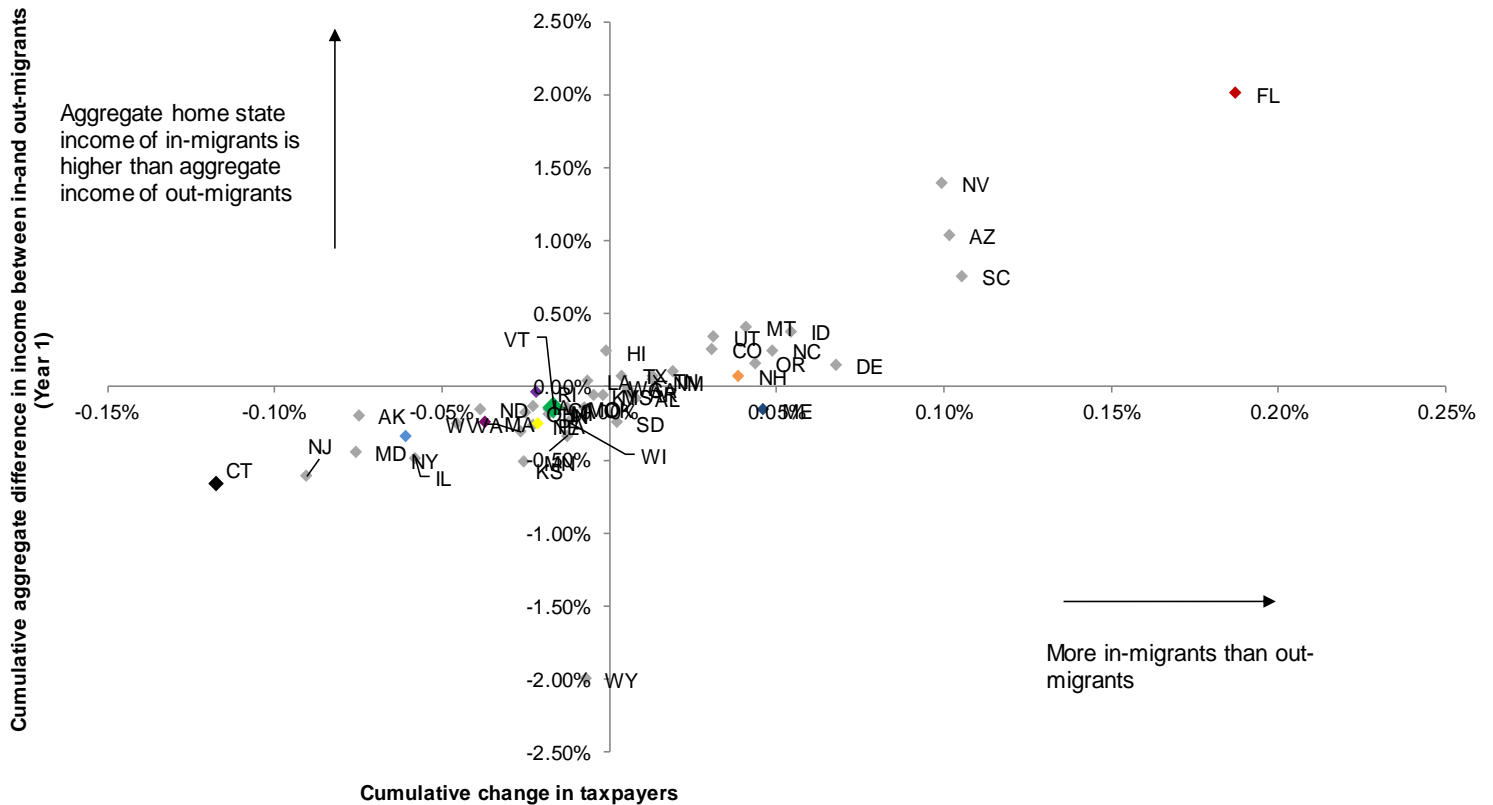
(Cumulative change since 2012, as a percentage of total returns and AGI, change in AGI Year 1)



Vermont has gained a small number of older, high-income taxpayers, taxpayers. For those aged 45 to 65, Vermont gained 71 taxpayers. Those gains were partially offset by a net loss of 45 taxpayers aged 65 years or more. Even though Vermont lost taxpayers amongst this 65+ group, as a percentage of returns, it was not much worse than the median state: 19 states fared worse than Vermont. Warmer states (Florida, Nevada, Arizona, and South Carolina) draw significant numbers of older, high-income taxpayers, far more than any other net-positive migration state (Figure 15).

Figure 14: Net In/Out-Migration Across States, >\$200,000, 65+

(Cumulative change since 2012, as a percentage of total returns and AGI, change in AGI Year 1)



While the data indicate that Vermont has gained high-income taxpayers over the five-year period, it is important to note that for these taxpayers, high incomes are often one-time events.

Evidence from the Department of Taxes indicates that high-income taxpayers who move to Vermont experience modest decreases in income after moving. Table 4 indicates that over the five-year time period, in-migrants with AGI above \$300,000 saw their incomes decrease roughly 22% on average in the year after the move.

	Year of Move	1 Year After Move	2 Years After Move	3 Years After Move
Average AGI	\$840,852	\$656,271	\$502,313	\$642,758

Source: Vermont Department of Taxes

However, it is not entirely unexpected that these taxpayers would see decreases in their income upon moving to Vermont, mainly for two reasons:

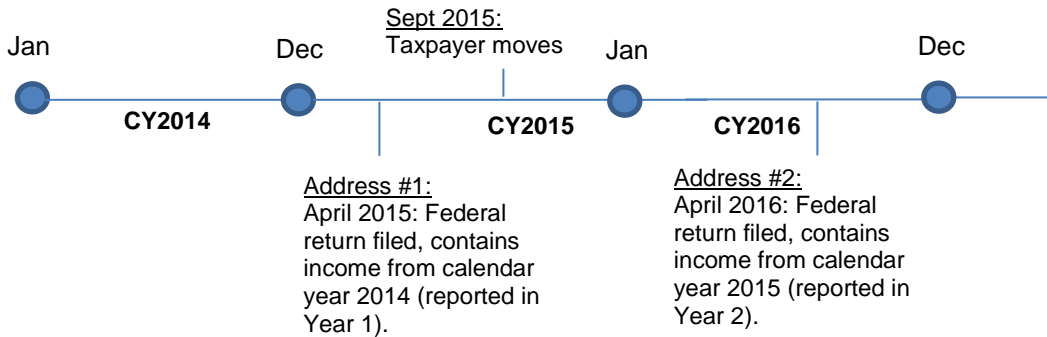
- High-income taxpayers may sell assets in the year of the move. For instance, they may cash out vacation days from a previous job or sell off investments to make improvements on their new Vermont home.
- Vermont tends to draw most of its migrants from states like New York, Connecticut, and Massachusetts, all of which are higher-income states. Even if these taxpayers take a job as a career advancement move, they could be taking pay cuts upon moving into Vermont simply because the incomes in their home states are higher.

Furthermore, even though these taxpayers may take a pay cut upon moving into Vermont, the data show that they still maintain a relatively high level of income on average.

Appendix

Further explanation of income data within the IRS Migration Database

The IRS Database contains two measures of income: Year 1 and Year 2. The graphic below illustrates an example of a taxpayer who moved during the 2015-2016 period and the corresponding Year 1 and Year 2 incomes.



In the example above, Year 1 income is income earned in calendar year (CY) 2014. Year 2 income is income earned during CY 2015.

The analysis in this brief uses Year 1 income when comparing income flows across states. This is because Year 1 income is always exclusively comprised of income earned while in the originating state. While it may not be an accurate reflection of what happened to a taxpayer's income upon moving, it is a measure of the income level of the taxpayer before he or she moved. Moreover, using Year 2 income does not significantly change the main findings of this brief.

As mentioned in the body of this brief, there are numerous caveats to analyzing income flows using this database.

First, the incomes of the taxpayers are not apportioned, meaning a taxpayer's income in this database is not assigned to the location of where the income is made. This is important for state personal income tax purposes, particularly for higher-income taxpayers. If a taxpayer lists an Arizona address on his or her Federal return but makes most of his or her income from passive business income in Vermont, this taxpayer would be counted as an Arizona taxpayer in this dataset even though most of their income is Vermont-based, which would mean they would pay Vermont personal income taxes as a nonresident. For this reason, it is possible that other data, such as apportioned income data from the Vermont Department of Taxes, could yield different conclusions from those in this brief.

Second, the definitions of Year 1 and Year 2 income and the absence of Year 3 income make definitive conclusions about income migration difficult. This is for three reasons:

- Incomes, in either Year 1 or Year 2, are not adjusted for income distributions in a particular state or cost of living differences across states. If a taxpayer making \$300,000 in San Francisco moves to Vermont and takes a 50% pay cut, based upon Year 1 income, this dataset would show Vermont gained \$300,000 in income, which is not the case. Conversely, if a Vermonter making \$75,000 moves to New York City for a \$200,000 job, this dataset would say New York gained a \$75,000 taxpayer. As

such, high cost of living, high-income states are likely biased towards greater income out-migration and low cost of living, lower-income states are likely biased towards greater net income in-migration.

- Year 2 income could be over or understating the income of the migrant taxpayer after the move. This is because Year 2 income, which is the basis for the income cohorts in the dataset, is a mix of the income made in the originating state and the new state. For example, suppose a taxpayer was making \$300,000 in Vermont in 2014 and continued to work at the same job until he moved in early November 2015 to Florida. At that point, he retired and began living on a significantly lower income. This dataset would show a high-income taxpayer (\$200,000+) moved from Vermont to Florida. His Year 2 AGI (the return filed April 2016) would contain 10 months of income at the Vermont salary, even though his income once he moved to Florida was not nearly as high.
- Year 2 income could potentially be influenced by one-time income incurred as part of the move, such as selling assets in preparation for retirement or taking a lump-sum payment from the originating state's job. Year 2 income is also heavily influenced by how many months' income came from the originating state versus the new state. Ideally, it would be most useful to have data on Year 3 income to know the value of AGI after relocating to the new state for one full tax year. However, the IRS Migration database does not contain Year 3 income.

Third, for any taxpayer who leaves the state, it is impossible to know whether someone who was not filing a tax return replaced that taxpayer in the labor force. If an individual who was not in the labor force replaces a job held by a taxpayer who out-migrates, the state would not see a decrease in taxable income. Without knowing whether out-migrants' jobs were replaced, it cannot be said with certainty whether Vermont had seen an income loss.

Acknowledgements

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- Public Assets Institute
- Staff from the Vermont Tax Structure Commission