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Fiscal Policy Institute

WHO IS LEAVING NEW YORK STATE?

PART I: INCOME TRENDS

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Key Findings

- High earner migration out of New York during Covid was temporary, and primarily driven by work-from-home and flight from New York City.

- In 2022 — after two years of elevated, pandemic-induced out-migration — high earners' migration rates returned to pre-Covid levels.

- While New York lost 2,400 millionaire households over the past three years (2020-2022), New York gained 17,500 millionaire households in the same period due to a strong economy and rising wages.

- There is no statistically significant evidence of tax migration in New York:

  o High earning New Yorkers move out of New York State at one-quarter the rate of the rest of the population during typical, non-Covid years.

  o High earners do not move in response to tax increases: Out-migration for those most impacted by recent effective tax increases (in 2017 and 2021) did not increase significantly in response to the tax increases.

  o When New York's high earners move, they are more likely to move to other relatively high tax states.

High earners are defined as the top 1% of New Yorkers — those earning +$815,000 per year.

I. Introduction

New York State's population has fallen in the years following the Covid pandemic, prompting observers to wonder who has moved away and why. This recent population loss has provoked concern about whether New York remains a desirable place to live, what the state's economic trajectory will be, and, especially, whether the state's large population of high earning professionals is moving away in search of lower tax rates.

In this report, the Fiscal Policy Institute analyzes migration out of New York State over eight years and concludes that states taxes have not played a significant role in out-migration of the state's high-earners. While high earners moved away at higher rates during the Covid pandemic, this was a temporary departure from the usual pattern, which is that high earners leave the state at approximately ¼ the rate of all other New Yorkers. When high earners do leave, they move to other high tax states more often than they move to low tax states. Most significantly, FPI's independent statistical analysis of the

available data sources shows that high earners did not change their migration patterns in response to two recent tax increases (in 2017 and 2021).

In broader economic and fiscal terms, the state's total population of high earners grew significantly even when high earners were moving out of state during the Covid years (2020 and 2021). Over this period the total number of millionaire households in the state increased by about 30 percent. State tax revenues, which rely significantly on the high earning population, have been stable thanks to this growth in high earners' incomes.

II. New York's High-Income Migration During Covid
Temporary exodus due to work from home and city flight

Between July 1, 2020 and July 1, 2022, New York State lost 431,100 residents — 2.1 percent of the states total population. This loss reversed about half of the state's 2010-2020 population gain of 823,100 — 4.2 percent growth through the decade. The population losses from 2020-2022 were largely driven by elevated net domestic out-migration, i.e., an increase in the number of people moving from New York to other states. and a decrease in the number of people moving into New York from other states.

Net domestic out-migration is not a new phenomenon for New York. The state has long sent more residents to other states than it takes in. However, during the 2010s, net out-migration took place alongside robust population growth driven by natural population increase — the extent by which births outnumber deaths — and international immigration into the state. Between 2020 and 2022, elevated out-migration, together with lower natural increase and depressed international immigration, resulted in sharp population drops.

Figure 1. Components of population change, 2011 to 2022
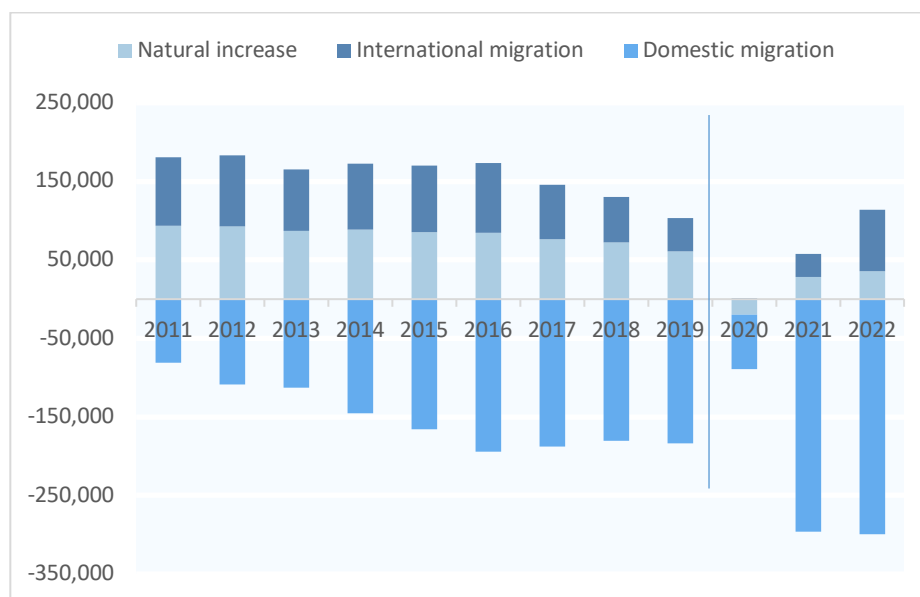
Note: U.S. Census Bureau Population Estimate Program. Annual estimates for 2020 and subsequent years are not directly comparable to years before 2020. Pre-2020 annual Census estimates substantially undercounted New York State's population. For a detailed discussion, see FPI's fiscal year 2024 budget briefing, pages 11 to 14.

New York's strong population growth in the 2010s was concentrated in New York City. The city's 7.7 percent population growth through the decade accounted for more than three-quarters (76.5 percent) of the state's total population growth. The Covid pandemic brought a sharp reversal to this pattern. Since 2020, the city has accounted for nearly all (93.9 percent) of the state's population loss.

New York City's concentrated population losses follow a national trend. In the wake of the Covid pandemic, dense cities in large metropolitan areas across the U.S. saw elevated outflows and population loss, while smaller metropolitan areas and outer suburbs have gained residents.[1] New York City's suburbs, both in New York State and neighboring states, experienced more modest population losses over the same period.

Table 1. Covid Population Loss Driven by New York City
Domestic migration and population change, 2020 to 2022, by region

	Net domestic migration	Migration per 1,000	Population change	Population change (%)
New York City	(529,400)	(61)	(404,800)	-4.6%
New York City suburbs (in-state)	(40,700)	(8)	(4,600)	-0.1%
Out-of-state New York City suburbs (NJ & CT)	(111,700)	(13)	(12,800)	-0.2%
Rest of New York State	(25,300)	(4)	(21,800)	-0.4%
New York State total	**(595,400)**	**(30)**	**(431,200)**	**-2.1%**

II a. High earners temporarily left New York at heightened rate during pandemic; 2022 rate returned to pre-Covid migration level

While net migration out of New York was elevated across the entire income distribution during the Covid pandemic, out-migration was particularly high among the top 20 percent of earners (those with household income over $172,000). Of those who moved out of New York State between 2020 and 2022, 225,000 (27.8 percent) lived in households with income in the top 20 percent of state resident households (the top income quintile; those with household income over $172,000).[2,3]

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[1] William Frey, "Pandemic-driven population declines in large urban areas are slowing or reversing, latest census data shows," *Brookings* (April 2023), https://www.brookings.edu/articles/pandemic-driven-population-declines-in-large-urban-areas-are-slowing-or-reversing-latest-census-data-s9hows/.

[2] This data refers to annual estimates of net out-migration for calendar years 2020, 2021, 2022 from the American Community Survey (ACS). By contrast, the Census Population Estimate Program (PEP) figures discussed above and used in Figure 1 and Table 1 reflect the population as of July 1 of each year. As such, ACS and PEP estimates do not always align.

[3] High income outmigration is amplified by the larger household sizes of top earners. There is a strong, direct relationship between income and household size. Out-migrating households in the top one percent average 3.9 members, the highest of any income group and double the overall average of 2.2. This report generally uses total numbers of migrants, not number of households, unless otherwise noted.

Figure 2. Pandemic-era out-migration was disproportionately driven by the top 20% of earners in the state
*Net domestic migration, 2017 to 2022, by income quintile*
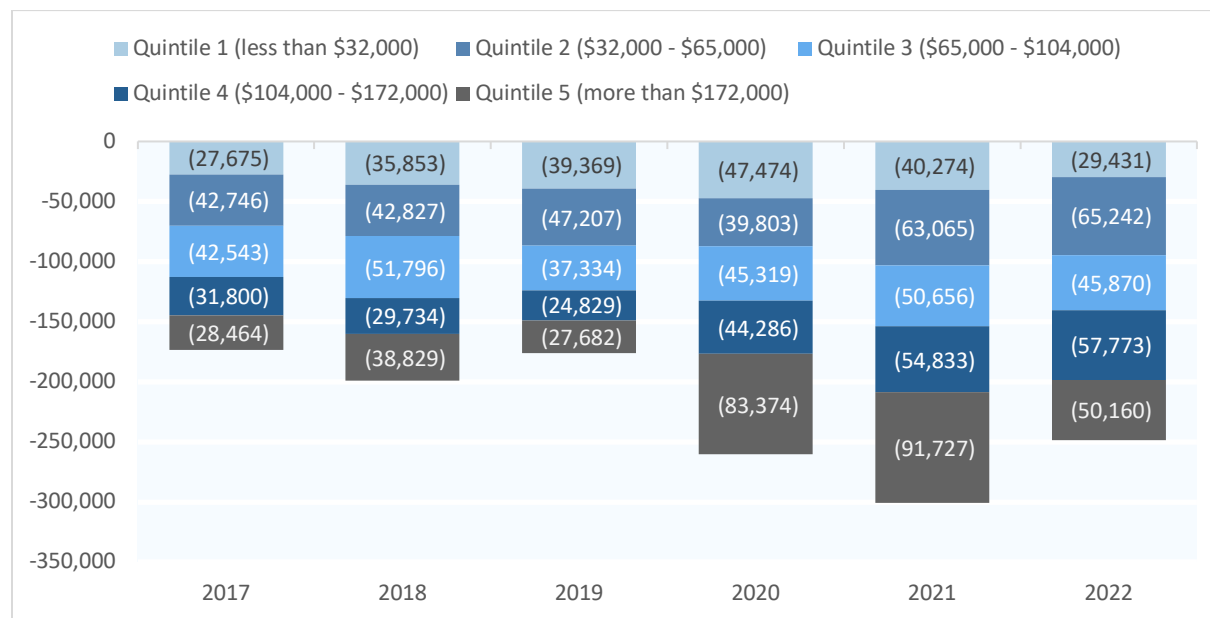
For New York residents in the top 10 percent of earners, out-migration rates returned to their pre-Covid levels in 2022 — **elevated out-migration over the past year has been driven most by those with annual household incomes of $248,000 or less**.

Figure 3. The top 5% of earners returned to pre-Covid out-migration rates
Net domestic migration, 2017 to 2022, breakdown of top quintile into smaller groups
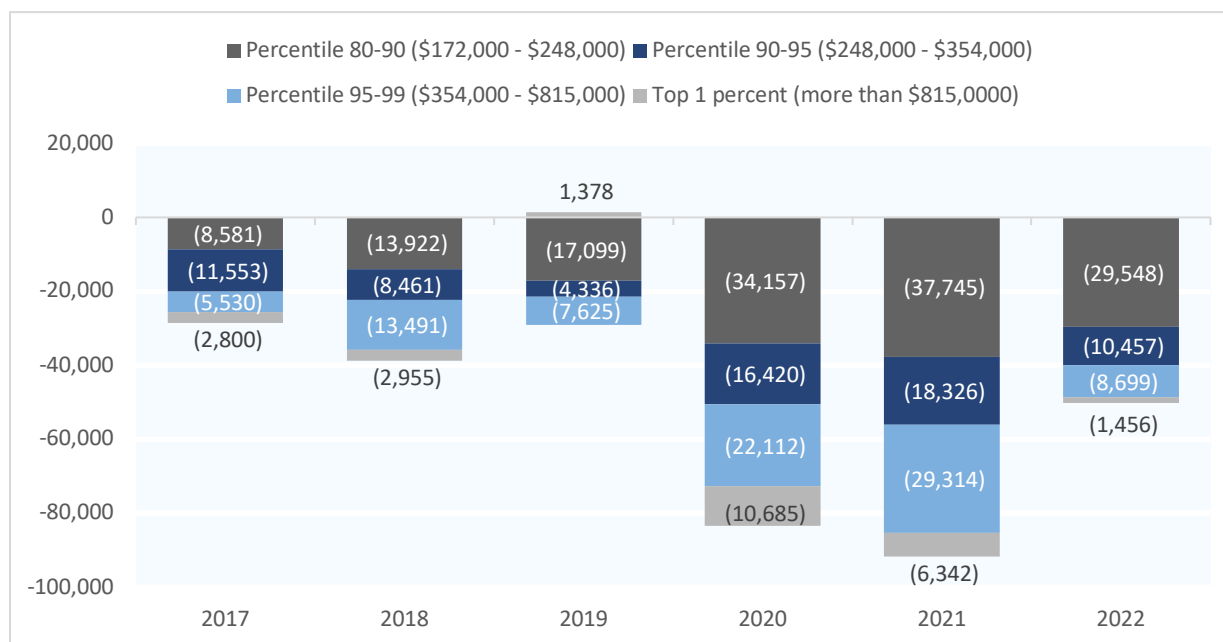
However, these out-migration trends among high earners were a significant aberration from the normal pattern. In typical years (in this analysis, 2017-19 and 2022), the net migration rate of the top one percent (-0.2 percent) was one-quarter that of the state's overall net migration rate (-1.0 percent). Simply put, the top 1 percent of New Yorkers (those earning more than $815,000) move out of New York State at one-quarter the rate of the rest of the population during typical, non-Covid years.

Figure 4. Net out-migration rates by income group, 2017 to 2022
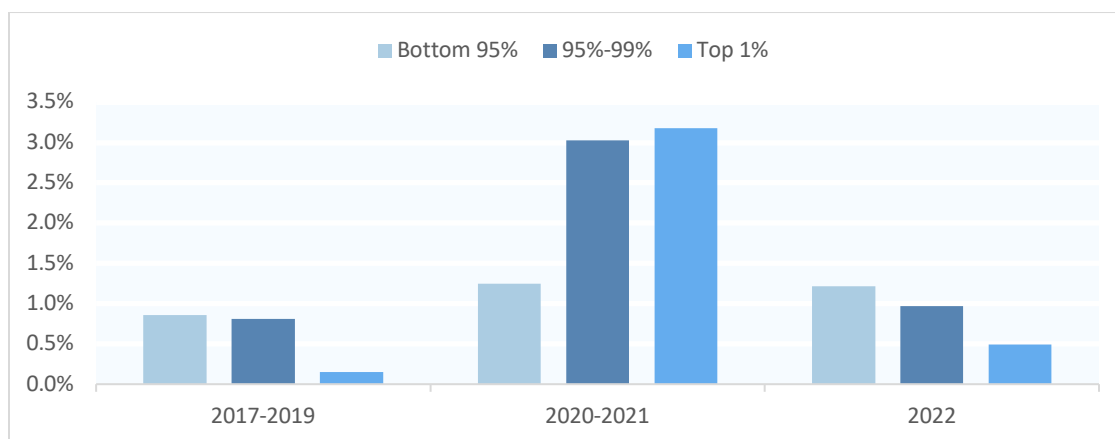
## II b. High-earner migration driven by work from home and city flight

To understand who left during the Covid pandemic, FPI analyzed the characteristics of those in the top 5 percent of earners (referred to as "high earners" in section II b) who left New York in 2020 and 2021. One very clear driver of out-migration during the Covid pandemic was the fact that many jobs converted to "Work-from-Home" (WFH), particularly in high-paying, high-skilled industries. Before Covid, about 5 percent of those in the bottom 95 percent of the income distribution worked from home, whereas 13 percent of high earners worked from home. In 2020, over 40 percent of high earners worked from home, and just 17 percent of those in the bottom 95 percent worked from home. This inequality in WFH continues into 2021 and 2022. With a large shift in the number of people who can work from home, attachment to New York waned for a large number of individuals, especially high earners. People who once had no choice but to live near their place of work suddenly had the opportunity to move freely.

Figure 5. Percent of population that works from home
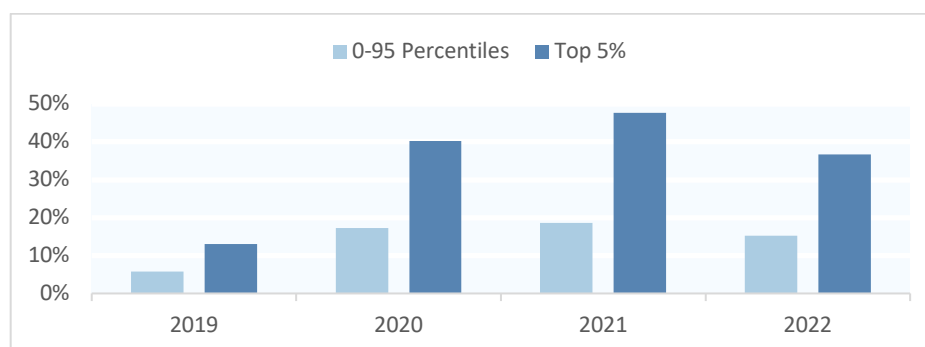
Under almost any circumstances one would expect that when people are able to move more freely relative to their workplace, some would leave to live closer to family, or in an environment that they prefer. This is the case in New York during the pandemic. While the net migration rate of high earners was about -2.1% in 2020 and 2021, the net migration rate would have been reduced to -1.2% without the impact of work-from home. In other words, **about 43% of the increased net out-migration of the top 5 percent of earners is driven by the increase in the number of people working from home.** Similarly, 30 percent of the net out-migration of the top 1 percent in 2020 can be explained by the impact of work-from-home.

Figure 6. Net migration of top earners with and without work-from-home effect
*Demographic controls included in analysis to account for differences between groups*
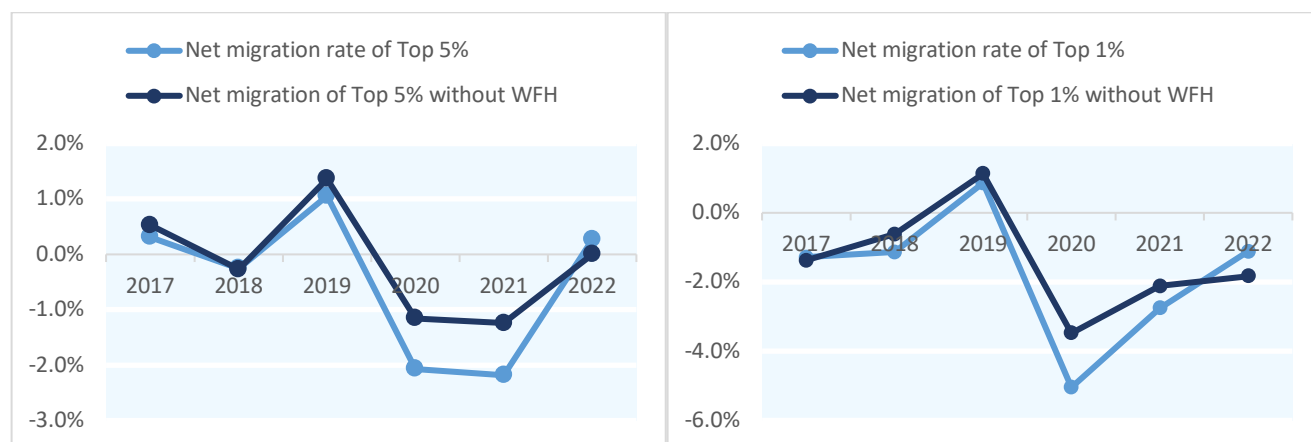
Note: These charts plot the estimates of net out-migration from regressions that control for demographic characteristics such as age, race, employment status, etc. Thus, they are not equivalent to the raw numbers reported in earlier sections. Rather, these estimates show the impact of work-from-home holding all else equal.

Work from home does not entirely explain high earners' increased out-migration from New York during the Covid-19 pandemic. New York's geography plays an equally important role, with pandemic-era out-migration overwhelmingly originating from New York City. Prior to Covid, the city was already a source of disproportionate out-migration: 51.1 percent of New York State's out-migrants from households with income in the bottom 95 percent (less than $354,000) originated from the city, as did 64.5 percent of households with income in the top five percent. This was greater than the city's share of the state population — the city is home to 42.7 percent of those in the bottom 95 of incomes and 45.5 percent of those in the top five percent.

During the pandemic, the share of high earner out-migration originating from the city surged to 77.7 percent. The increase for the bottom 95 percent was much more subdued, with the city's share of state out-migration rising to 55.3 percent. In 2022, the city's share of state out-migration fell below pre-Covid average levels for both income groups. As such, **Covid drove a dramatic but temporary spike in out-migration from New York City. This spike was especially pronounced for high earners.**

Figure 7. Percent of out-migrants from New York State who moved from New York City, by income
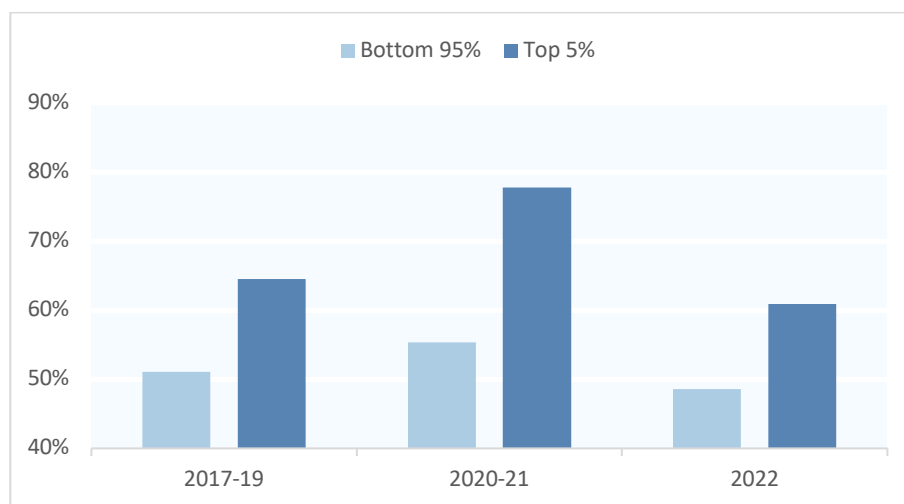
Further, as discussed below, the states to which New Yorkers moved when they did move out of the state did not change significantly during the pandemic.

III. High-Earner Population Continued to Grow During Covid, Due to Strong Economy and Rising Wages

Over the same years that saw a rise in domestic out-migration by high earners, the overall number of high earner New York tax filers has increased. The only year since 2015 that saw an overall decrease in full-year residents making over $200,000 was 2020 — a year that also saw growth in the population making over $5 million in annual earnings. **While New York lost 2,400 millionaires over the past three years (2020-2022), New York gained 17,500 millionaires in the same period due to a strong economy and rising wages.**[4]

Despite the large shock to New York's in- and out-migration patterns during the peak of the Covid pandemic, these patterns did not cause a decline in the state's high earner population. This is possible because over these years, individual incomes grew such that an increasing number of people living in New York started to earn higher wages, pushing them into a higher income group.

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[4] These estimates are from the ACS data. The New York Department of Taxation and Finance shows that the increase in millionaire households is slightly different but in the same range.

Figure 9. Total tax returns by income, 2015 to 2021
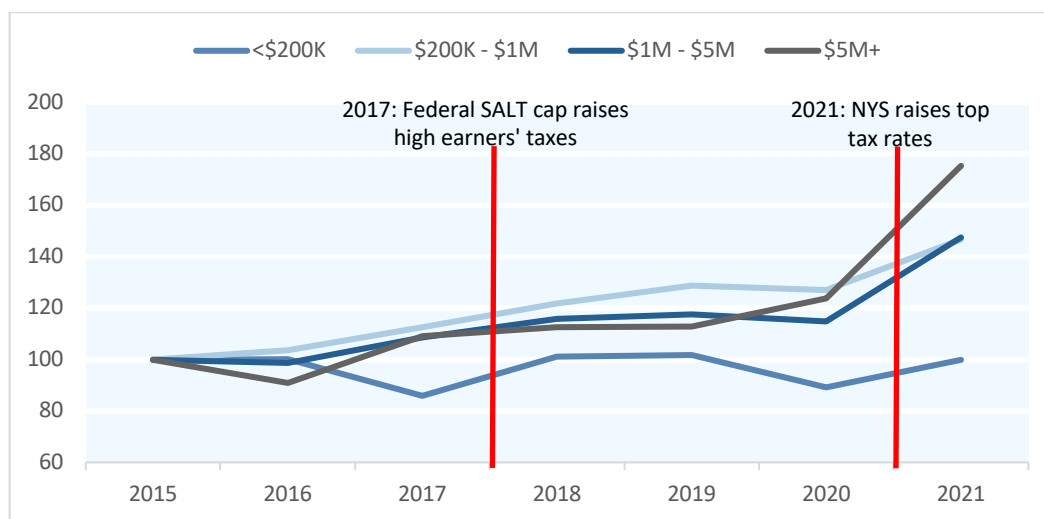*Indexed to 2015; full-year New York State residents*

Table 2. Total tax returns by income, 2015 to 2021
Full-year New York State residents

	Filers making <$200K	Filers making $200K-$1M	Filers making $1M-$5M	Filers making $5M+	All filers making over $200K	Growth Rate of Filers Making Under $200K (% Change)	Growth Rate of Filers Making Over $200K (% Change)
2015	8,748,032	416,186	41,059	6,194	463,439		
2016	8,753,652	431,527	40,525	5,631	477,683	0.1%	3.1%
2017	7,514,152	468,548	44,581	6,761	519,890	-14.2%	8.8%
2018	8,839,067	506,876	47,592	6,979	561,447	17.6%	8.0%
2019	8,902,864	535,749	48,319	6,989	591,057	0.7%	5.3%
2020	7,810,397	528,808	47,152	7,672	583,632	-12.3%	-1.3%
2021	8,738,238	610,700	60,578	10,863	682,141	11.9%	16.9%

Both the number and income of the highest income New Yorkers grew in 2021. Atypically strong financial markets and capital gains income pushed the collective income of tax filers with more than $1 million in income to $407.5 billion in 2021 — 39.9 percent higher than in 2020. These 1.6 percent of tax filers accounted for 35.5 percent of all income reported on New York tax filings in 2021 — the highest share in the New York State Department of Taxation and Finance's data series, which extends back to 2015. Further, those with incomes between $200,000 and $1 million earned a collective $277.6 billion, a 16.4 percent increase from the prior year.

As Figure 10 shows, the state's income tax base (the total income subject to tax) grew steadily during the pandemic, particularly for the highest earners.

Figure 10. Total income by income group, 2015 to 2021
2021 dollars
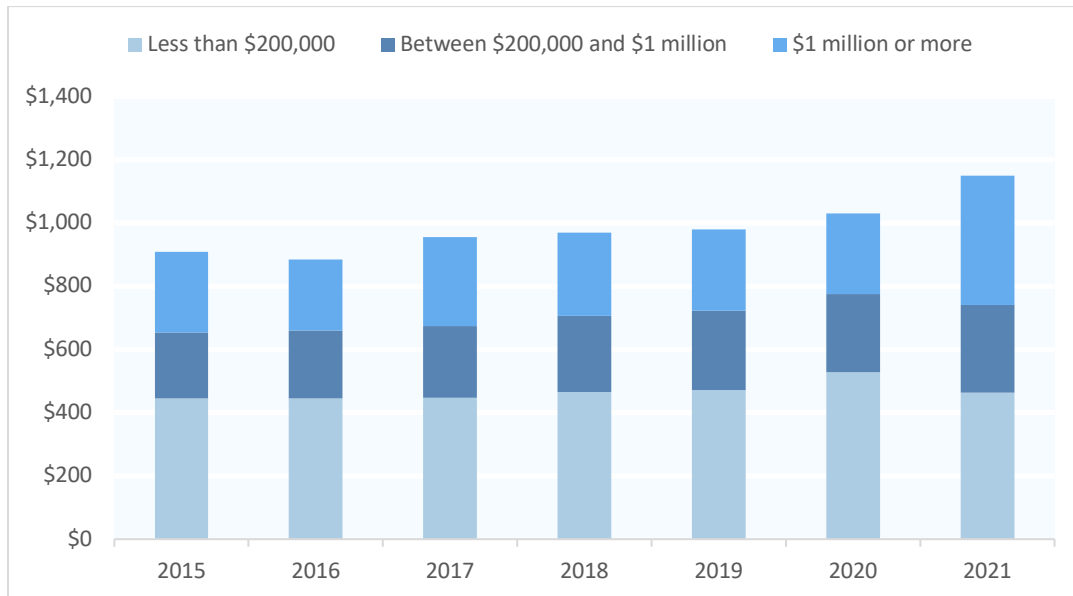
IV. Taxes Do Not Explain High-Earner Out-Migration Patterns
Outside Covid, wealthy typically move at lower rates; migration not affected by tax increases; and wealthy more frequently move to high-tax states

Any increase in high earner migration of the New York State raises the question of whether these out-migrants are moving in search of lower taxes. FPI's analysis finds no evidence of significant tax-motivated migration for three reasons: First, in non-pandemic years, the top 1 percent moves at lower rate than other income groups. Second, when we examine two different increases in the effective tax rate on the top 1 percent, we see no indication that tax increases resulted in an increase in out-migration. Third, when the top 1 percent do move, they move to other high tax states more often than they move to low tax states.

While Covid represented a shock that drove higher out-migration, particularly among higher earning New Yorkers, the pattern of out-migration shows that tax changes were not a driving force. In 2021, New York State enacted higher personal income tax rates on incomes over $1 million, $5 million, and $25 million. In the same year, the only income group affected by this change — the top one percent — began out-migrating at a lower rate than they had in 2020, falling further in 2022. Meanwhile, tax rates for earners in the 95th to 99th percentiles (those making between $354,000 and $815,000) have not changed in recent years.

By 2022, the Covid shock to high-income migration had receded. Migration rates for the top five percent of earners were on par with pre-Covid averages. While New York State continued to demonstrate elevated net out-migration, this was driven by the middle of the income distribution.

Finally, FPI's analysis of ACS data finds that other states' tax rates do not affect top earners' migration decisions. Rather, when top earners leave New York State, they disproportionately move to other relatively high tax states. More than half of all out-migrants (54.5 percent) moved to relatively high tax states. A higher share (59.3 percent) of top earners moved to high tax states. This pattern was consistent for the top income quintile (incomes above $172,000). Conversely, less than half of lower- and moderate-income out-migrants (those in the second and third income quintiles) moved to high tax states.

IV a. Outside of the Covid years, the top 1 percent typically moves at lower rates than rest of population

The top one percent of New Yorkers — those earning more than $815,000 — typically move out of the State at lower levels than any other income group. Excluding the Covid pandemic years (2020 and 2021), the top one percent left New York at an average rate 0.2 percent on net (that is, for every 1,000 members of the top one percent, out-migrants exceeded in-migrants by two). This rate of migration was less than one-quarter of the out-migration for all other income groups (1.0 percent over the same period). While this pattern was temporarily reversed during Covid, Census data from 2022, the most recent data available, shows a return to pre-Covid levels. Simply put, **the top 1 percent of New Yorkers (those earning more than $815,000) move out of New York State at one-quarter the rate of the rest of the population during typical, non-Covid years.**

Figure 11. Net out-migration rate by income group, all years excluding 2020-21
Error bars represent 95 percent confidence intervals; lower bound for top one percent is negative
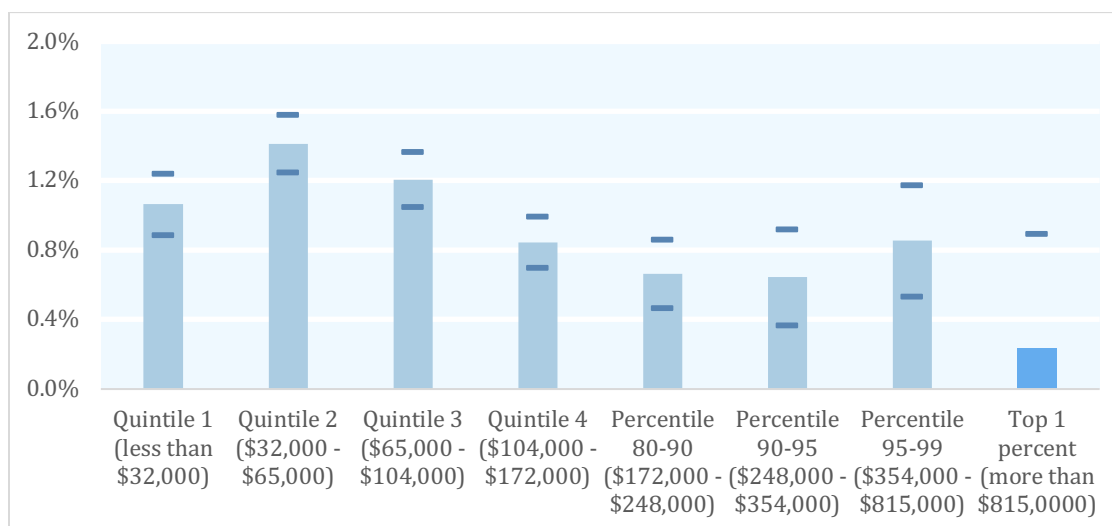
IV b. Top earners do not move out of New York in response to tax increases

The most reliable way to analyze the impact of tax rates on migration patterns is to measure behavior changes in response to *changes* in tax rates, as this approximates a natural experiment. The past six years have seen two increases in the effective tax rates paid by high earners: the 2017 limitation of the federal deduction for state and local taxes (the "SALT cap"), and the 2021 increase in New York State's income tax rates on the $1 million, $5 million, and $25 million income brackets. Each of these tax changes imposed an increase in the effective tax rate on high earners of multiple percentage points.[5]

In a statistical analysis of migration patterns before, during, and after these tax increases, FPI finds that they did not consistently or significantly increase high-income New Yorkers' out-migration rates (and note, as discussed in section III, that the high earning population grew during these periods as well).

To test whether migration status changed in response to recent tax changes, FPI analyzed migration patterns across the income distribution by analyzing changes in the State's part-year resident population. Part-year filers are defined as those who move between states during a year, including both those who moved into New York and those who moved out. Part-year filing status does not indicate whether a taxpayer has moved into or out of the state. Nevertheless, it provides a gauge of the level of migration activity across income groups and over time. Corroborating the Census data discussed above, part-year filing status is sharply lower for top earners in all years for which data exists. Migration rates generally begin to fall for taxpayers with more than $350,000 in annual income and continue to fall along the top of the income distribution, with extremely high earners — those income above $2 million — moving between states at lower rates than any other group.

FPI employed a difference-in-differences model to test whether each tax change affected the growth of high earners in New York relative to low- and middle-income earners. The results for both tax changes

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[5] This is an approximation, particularly with respect to the effects of the SALT cap, which varies considerably depending on a taxpayer's particular circumstances.

are inconsistent and muted, suggesting that top earners do not respond to tax changes by leaving the state.

Following the 2017 SALT cap, part-year filing rates rose by 0.1 percentage points on average for those making over $200,000 annually — those most likely to be affected by the policy change. This result is not statistically significant, nor is there any data that show meaningful increases in migration out of New York State in response to recent tax changes. Thus, FPI concludes that there is no evidence of tax-motivated migration out of New York.

Figure 12. Migration rate by income, before and after 2017 Tax Cuts and Jobs Act
Part-year New York State residents as share of total filings; logarithmic scale
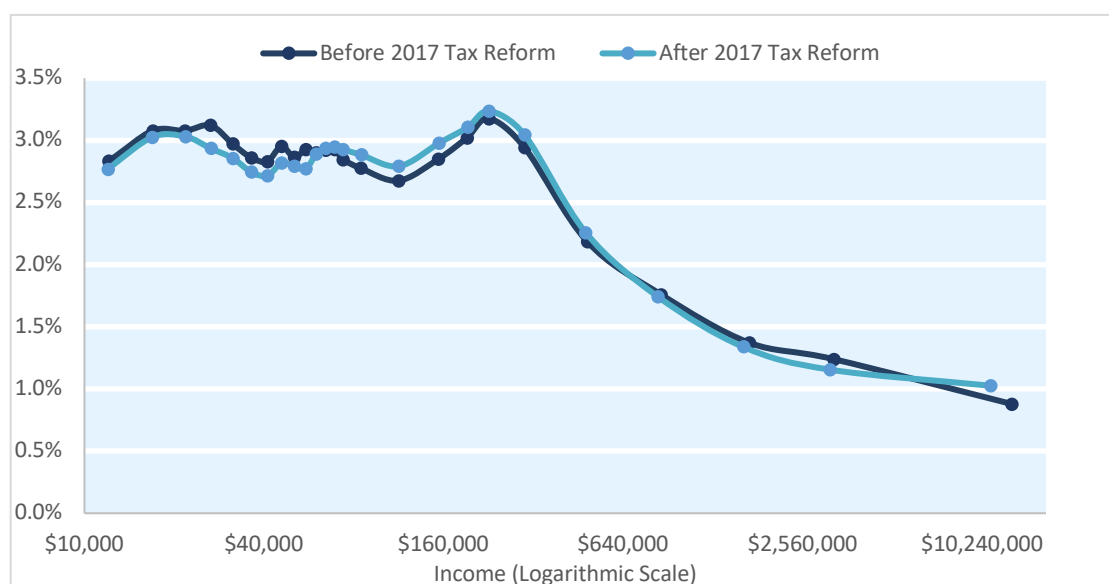
New York's 2021 tax rate increases on high earners also show little evidence of tax-motivated out-migration. In 2020, the year prior to the State's tax change, part-year filings for high-income earners rose sharply, while part-year filing rates for all other earners remained flat. The following year, 2021 (the most recent year for which data is available), part-year filing rates for both upper-middle and top earners fell, though they remained above pre-pandemic levels. Even as income tax rates rose for top earners — those with income above $1 million ($2 million if married, filing jointly) — their total migration rate fell from the prior year. By contrast, part-year filings rose for taxpayers earning less than $200,000. This trend suggests that migratory responses to the pandemic occurred relatively quickly for high earners and lagged for all other taxpayers.

Figure 13. Migration rate across by incomes, 2019-2021
*Part-year New York State residents as share of total filings; logarithmic scale*
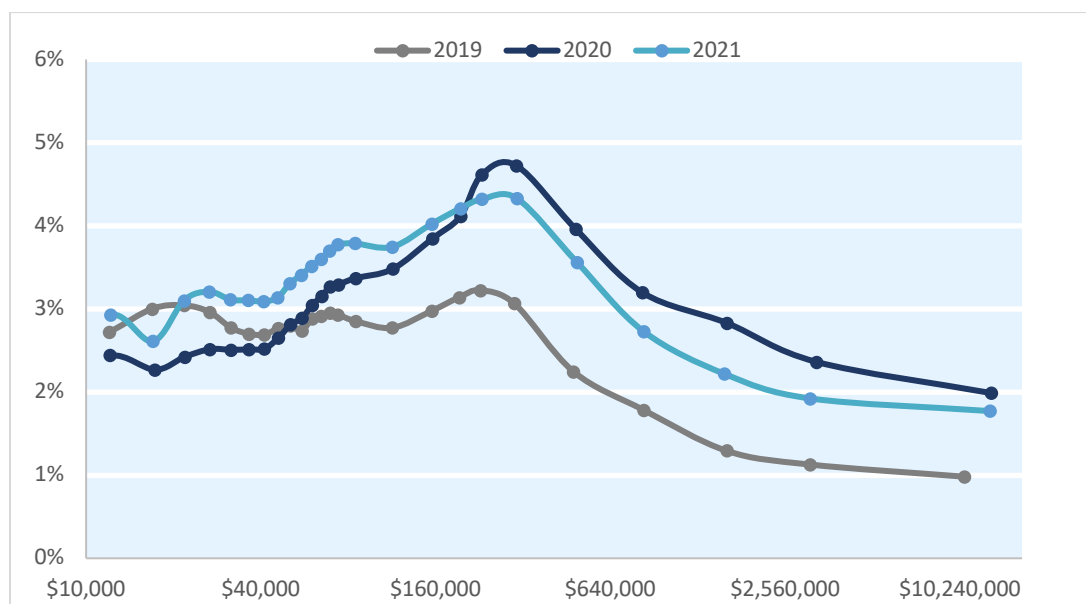
New York's most recent tax data provide further evidence that migration rates are lower for extremely high earners. Further, these tax data corroborate ACS data showing no consistent evidence of a relationship between tax levels and migration decisions.

IV c. High earners move to other high tax states more often than not

Even when high earners move out of state, they often move to other high tax states. Higher income groups appear consistently more likely to move to relatively high tax states, especially Connecticut, New Jersey, and California, than lower income out-migrants. Overall, 54.7 percent of those leaving New York State more to relatively high tax states. For out-migrants with income in the top 1 percent, 72.9 percent moved to high tax states.

Figure 13. Share of out-migrants relocating to high tax states by income
Greater than 50 percent indicates more moves to high tax states than low tax states; error bars represent 95 percent confidence intervals
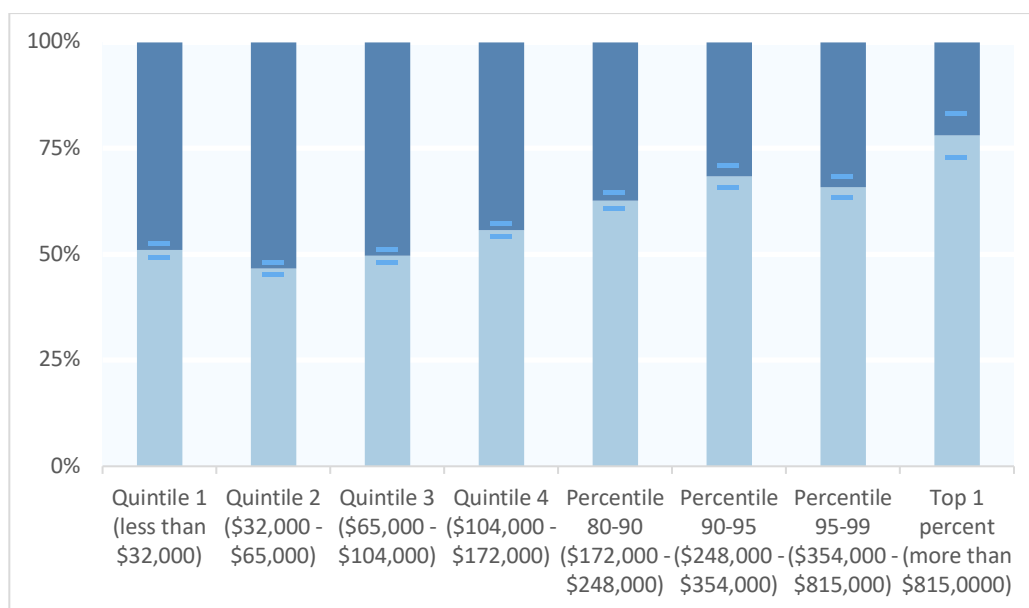
More than half (56.3 percent) of in-migrants to New York State moved from other relatively high tax states. This trend is consistent across the income distribution except for the top one percent, only 42.0 percent of whom moved from other high tax states. That is, New York's top earning in-migrants are disproportionately likely to arrive from relatively low tax states. This is further evidence of state tax policy's irrelevance to domestic migration in the U.S.

Figure 14. Share of in-migrants relocating from high tax states by income
Greater than 50 percent indicates more moves from high tax states than low tax states; error bars represent 95 percent confidence intervals
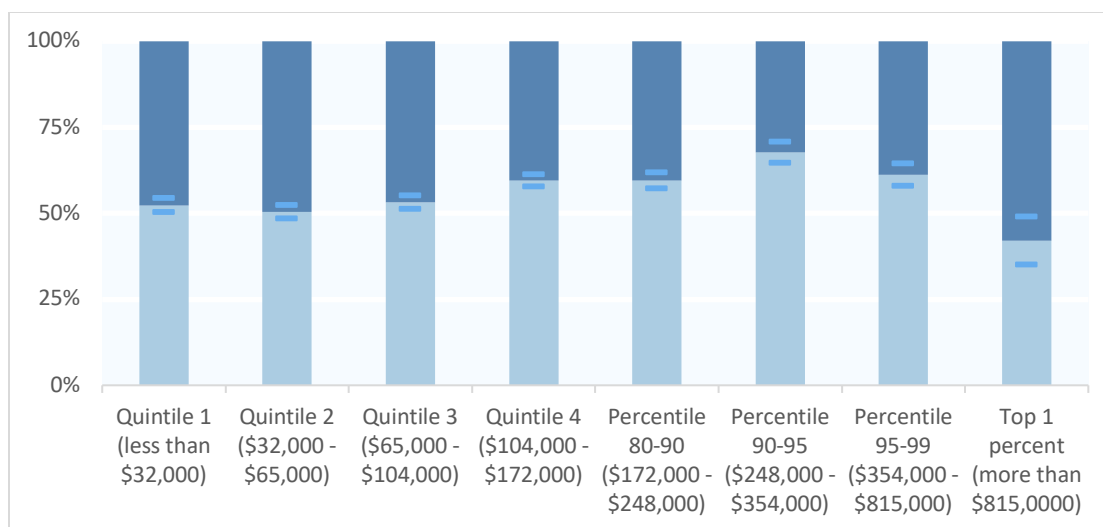
V. Conclusion

High earner migration raises multiple policy concerns. As a tax policy matter, if high earners leave the state in search of lower taxes, this imposes a limit on how high the state can raise its tax rates. In state fiscal terms, a decline in the total high earner population could result in an overall loss of revenue, thereby destabilizing the state's finances. Finally, in economic perspective, high earner out-migration could be a negative economic indicator for the state. A trend of high earners relocating to states unlike New York could signal a long-term decline in the state economy.

This study refutes each of the above concerns. This study finds that outside of the Covid pandemic years, high earners move at a *lower* rate than working- and middle-class New Yorkers. This is true for the three years prior to Covid as well as 2022, the most recent year for which data is available. Further, following two increases in the tax rates (or effective tax rates) imposed on high earners — in 2017 and 2021 — there was no behavioral response among high earners that indicated migration out of the state. When high earners do move, they are more like to move to another high tax state than to a low tax state, indicating that taxes are relatively low on the list of motivating factors in high earners' moving decisions.

These trends changed in 2020 and 2021, the main years of the Covid pandemic. Many New York residents left the state, largely reflecting city residents moving to suburban or rural areas in search of more living space and lower population density. This transition was easier for high earners than any other income group, given the spread of working from home among white collar workers. While high earners did leave at higher rates than all other income groups during the Covid pandemic, this trend returned to normal by 2022.

In response to pandemic migration trends among high earners, one might raise the fiscal and economic concerns mentioned above: Perhaps the state's revenues are suffering from the loss of so many high earners, and perhaps that loss signals a problem for the state economy.

Fortunately, the State's fiscal and economic outlook is strong, in particular with respect to the high earner population. Despite out-migration by some high earners during the pandemic, the state's total population of those earning over $1 million annually grew by about 30 percent during the pandemic. Thanks to federal stimulus policies, low interest rates, and a booming stock market, many high earning New Yorkers saw significant income gains during the pandemic. The State's tax revenues also grew substantially during the pandemic and have remained relatively steady. Thus, not only is high earner tax migration largely a myth, but there is no need to fear for the State's fiscal and economic future.

Appendix: Data Sources and Methods

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A.1 American Community Survey Microdata

A.1.1 Data Description

FPI analyzed American Community Survey Public Use Microdata Samples (ACS PUMS) for relationships between migration status, income, and social characteristics. First, FPI constructed a sample that covered all domestic in- and out-migration for New York State. This required merging the entire New York State PUMS sample with a separate PUMS sample covering the entire U.S. that filtered for households that had moved out of New York in the past year. FPI then coded out-migrants as observations that had lived in New York State in the year prior to the survey, and were not living in New York in the survey year. Similarly, in-migrants were coded as observations that had lived in any U.S. state (including Washington, D.C. and Puerto Rico) other than New York State in the year prior to the survey, and were living in New York in the survey year.

FPI downloaded both the NYS and U.S. out-migrants samples as 1-year files for each year between 2017 and 2022, then pooled all years into a single sample for analysis. All income variables are first adjusted for inflation using the adjustment factors provided by the PUMS sample. Next, income ranks are assigned for each year. That is, 2017 income ranks are assigned to observations in the 2017 according to household income percentile thresholds for that year. This exercise is repeated for each year.

Finally, FPI employed the 2020 PUMS data available via IPUMS. These data are known to be flawed due to difficulty surveying households during the 2020 Covid-19 pandemic. We use the data as a the best public resource available, but with awareness of its shortcomings and high levels of uncertainty.

A.1.2 Statistical Methods

To measure the characteristics that predict out-migration, we run a linear probability model given by

$$Outmigrated_{i,t} = \alpha + \beta_t * IncomeGroup_{i,t} + \gamma_t' X_{i,t} + \mu_{t,i}$$

where "Outmigrated" is a binary variable denoting whether the individual, i, is an out-migrant from New York, "IncomeGroup" is their respective income bracket (broken into quintiles and then subgroups in the top quintile), and X is a vector of other control variables such as demographics, home ownership status, work from home status, etc This regression measures the power of one's income group to predict whether you moved out of New York. We run this regression on each year of ACS data independently to look at how patterns changed over time. We also run the regression on pooled years that indicate the peak pandemic years (2020-2021), the pre-pandemic years (2017-2019) and 2022 separately as the most recent data that gives a best estimate of how the post-Covid world might look. It is not testing for causality. The regression controls for other observable

characteristics of an individual. The results of how other characteristics predict outmigration will be explored in a future report. Error bars depicted in the report show the 95% confidence interval for the estimated coefficients in this regression.

We also run a test to find out the role that "Work-from-Home" played in out-migration from New York. To do this, we run two regressions:

1. $Outmigrated_{i,t} = \alpha + \sum_{\tau=2017}^{2022}[\beta_t * 1(year_t = \tau)] + \gamma_t' X_{i,t} + \mu_{t,i}$

2. $Outmigrated_{i,t} = \alpha + \sum_{\tau=2017}^{2022}[\beta_t * 1(year_t = \tau)] + \sum_{\theta=2017}^{2022}[\delta_t * WFH_{i,t} * 1(year_t = \theta)] + \gamma_t' X_{i,t} + \mu_{t,i}$

Where the "WFH" variable indicates that the individual, i, is working from home in year, t. We plot the estimates "Beta" coefficients to demonstrate the out-migration rates of individuals with and without accounting for the impact of Work-from-Home on migration behavior.

A.1.3 State-to-state analysis

FPI analyzed the states between which domestic migrants were moving. The PUMS sample size is generally inadequate for statistically meaningful analysis of individual state-to-state pairs. To overcome this shortcoming, FPI categorized states into relatively high tax states and relatively low tax states. FPI classified the top half of states by income tax as high tax states and the bottom half as low tax states. All in- and out-migrants were recoded according to whether they moved from/to a relatively high or low tax state. The bottom 99 percent of income earners were recoded according to destination/origin states' total personal income tax revenue as a share of state personal income (the average effective personal income tax rate). The top 1 percent of earners were recoded according to states' top marginal rate. FPI used data from the New York State Division of the Budget's fiscal year 2024 Economic and Revenue Outlook — table 3 provides average effective personal income tax rates by state and table 1 provides top marginal rates by state.

A.2 New York State Department of Taxation and Finance Data

A.2.1 Data Description

The New York State Department of Taxation and Finance (NYS DTF) releases data each yeah on New York State filers of the state's personal income tax. The data is available to the public on the Department's website. The data comes in a few different forms – FPI's analysis uses dataset 3, "Statewide Major Items and Income & Deduction Components by Liability Status and Detail Income Range: Beginning Tax Year 2015." Of available public tax data, these data give the most detailed information about tax filer total annual income. The income brackets given are not evenly distributed across the population, however. There are many more tax filers in the middle

brackets, reporting income of about $100,000 annually than there are in other brackets. The data reports tax filers by type (single, joint, head of household, or married but separated) and also breaks down income by group into type (wage and salary, interest, dividend, capital gain, etc.). FPI utilizes this data from 2015 to 2021, all available years in the analysis of high-earner migration. The data are based on the full population of New York tax filers and not a sample. Data published before 2015 was based on a sample and thus FPI does not use data before 2015 in this analysis.

Figure A.1. Distribution of New York tax filers in 2021 along with the total income generated by each group.
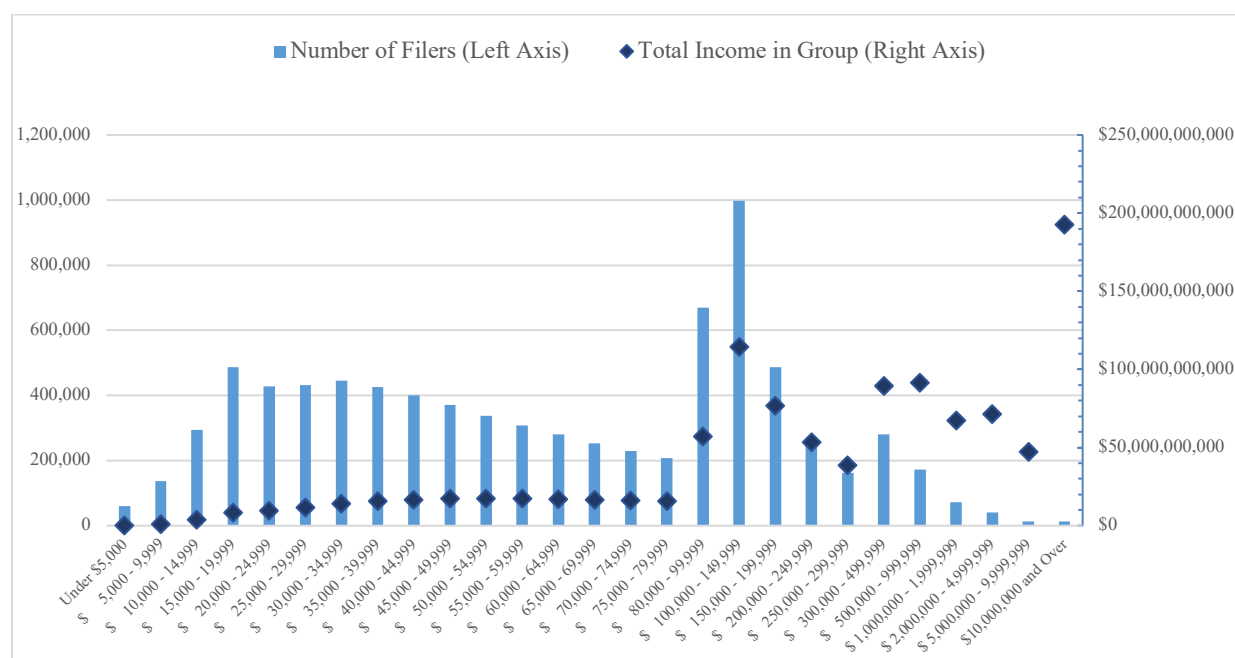
A.2.1.1 2017 Tax Cuts and Jobs Act

In December 2017, the Federal government passed the legislation known as the "Tax Cuts and Jobs Act" (TCJA). Before the TCJA, Federal law allowed a federal income tax deduction for state and local taxes (known as the "SALT deduction"). This would mean that, for example, a household making over $1 million annually and paying a combined $150,000 in state and local income and property taxes could take a $150,000 deduction on its federal taxes (assuming that the federal alternative minimum tax does not apply). The TCJA limited this deduction to $10,000, thereby increasing the effective tax burden for high-earning taxpayers in states with higher income and property tax rates (for high-earning households, this would amount to around a 4 percent income tax increase). Thus, the relative tax burden between high tax states, including NY, and low tax states, such as FL or TX increased under the TCJA.

FPI does not attempt to compute the precise tax change experienced by households. Instead, FPI uses the event of the tax change to measure changes in migration behavior for high-earning New Yorkers who would be most highly impacted by the change.

A.2.1.2 2021 Tax Hike on Millionaires

In 2021, New York State enacted new, temporary higher income tax rates on the highest earners. In effect for tax years 2021-2027, the following rates and brackets apply:

Income Bracket	Rate prior to 2021	Current rate
Over $1.08 million single/ $2.16 million joint	8.82%	9.65%
Over $5 million	8.82%	10.3%
Over $25 million	8.82%	10.9%

A.2.2 Statistical Methods

To study whether tax rates impact the behavior of high earners in New York, FPI studied the impact of two tax changes on migratory behavior, the 2017 TCJA and the 2021 increase in personal income tax rates for high earning New Yorkers. FPI employed a difference-in-differences model to test for changes in behavior of impacted New Yorkers around the time of the tax change. The difference-in-differences model employed is given by

$$
\begin{aligned}
\text{PercentPartYear}_{i,t} &= \beta_0 + \beta_1 1[i \text{ was impacted by tax reform}] + \beta_2 1[t \geq \tau] \\
&+ \beta_3 1[i \text{ was impacted by tax reform}] * 1[t \geq \tau] + \mu_{i,t}
\end{aligned}
$$

where i is the income group of the observation, t is the year of the observation, and τ is the year of the respective tax reform. We assume that for the TCJA, all households making over $200,000 were impacted by the tax reform. For the 2021 tax hike, we assume that households making over $1,000,000 were impacted by the tax reform.

The results of the difference-in-differences regressions show that overall, there is no statistically significant relationship between tax changes and the percent of New York households filing their taxes as part-year residents. The estimates are also very close to zero, a sign that not only is there little statistical significance, but the range of possible estimates does not include any possibility of meaningful migration in the wake of tax changes.

Table A.1. Regression coefficients of interest on difference-in-difference models.

Dependent Variable: Percent Filing as Part-Year Residents				
	2017	**2017 with FEs**	**2021**	**2021 with FEs**
Impacted Group	0.0005 (0.0029)	-0.0037 (0.0187)	-0.0068* (0.0025)	0.0020 (0.3107)
After Reform	-0.0002 (0.0003)	-0.0044 (0.0119)	0.0047*** (0.0007)	-0.0946 (0.2097)
Impacted x After Reform	**0.0009* (0.0003)**	**0.0011 (0.0162)**	**-0.0005 (0.0008)**	**0.0001 (0.0017)**
S.E.: Clustered	Inc. Group	Inc. Group	Inc. Group	Inc. Group
Fixed Effects	-	Year, Inc. Group	-	Year, Inc. Group
Observations	135	135	108	108

Significance codes: '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1

According to the regression analysis, following the 2017 SALT cap, part-year filing rates rose by at most 0.10 percentage points on average for those making over $200,000 annually — those most likely to be affected by the policy change. This increase might indicate out-migration of these high-earners, although it is not possible to know whether this heightened total migration indicates elevated net in- or net out-migration of this group. To measure the upper bound out-migration level derived from these results, FPI assumes the average tax change from the 2017 SALT cap to be an implicit 4 percentage point increase in State taxes. This estimate implies that for every percentage point increase in State tax rates, an individual is at most 0.025 percentage points more likely to migrate out of the state in the year following the tax reform. FPI's regression analysis indicates that this effect persists into the second year after the tax reform. Thus, over time an individual may be at most 0.050 percentage points more likely to migrate. For example, there are about 20,000 households filing income of over $5 million per year. This estimate then means that a 1 percentage point increase in the tax rate induces a move of at most 10 of these households out of New York in the two years following the tax change. This result is not statistically significant when controlling for group level characteristics and likely overstates any measured impact of the tax change because the data measures gross migration rather than out-migration.

A.3 Additional Sources of Migration Data: Census Bureau and IRS

This paper's primary findings are provided by ACS microdata and NYS tax data, discussed above. Two additional data sources are commonly used in studies of migration and are worth noting. First, the U.S. Census Bureau's Population Estimate Program (PEP) provides annual tables summarizing net migration and state-to-state migration for each U.S. state. These annual population estimates are based on survey and administrative data, while state-to-state migration as based on the ACS 1-year files (which in turn is weighted to mirror annual population estimates). FPI uses Census PEP data in its discussion of general migration and demographic trends at the state and regional level.

Census summary tables, however, do not provide any information on the income or social characteristics of migrants. Analysis of ACS PUMS data is necessary for deeper analysis.

The Statistics of Income (SOI) published by the IRS provide the second major source of data on domestic migration in the U.S. SOI provides two files on migration: the file provides the total number of in-, out-, and non-migrants for each state by age and income. The top income bracket provided by SOI data, however, is for tax filings with income of $200,000 or more. As such, SOI provides no data on the very highest earners. Only a small share of all tax filers with incomes over $200,000 are subject to the recent tax changes discussed in this paper. For this reason, SOI is generally inadequate to analyze migration rates at the top of the income distribution.

Data from NYS DTF — a source used extensively in this analysis — and IRS SOI overlap substantially in their coverage. Both provide the number of total tax filings by income for New York State (SOI additionally provides data for all other states). While IRS SOI data provides separate estimates for in- and out-migration by state, NYS DTF's data provides the number of part-year filers, a proxy for gross migration that does not distinguish in- and out-migration.

Nevertheless, the two source diverge in a few key aspects. IRS SOI is drawn from a stratified sample of the IRS's tax data. In 2011, the IRS assumed responsibility for compiling SOI migration estimates from the Census Bureau. Researchers have found considerable, unexplained volatility in state and county migration estimates since this administrative change.[1]

IRS SOI data generally finds a higher rate of net out-migration (in-migration minus out-migration) from New York for the top bracket — those earning above $200,000. Most years in the IRS data find a slightly higher rate of out-migration for high earners together with a slightly lower in-migration rate, resulting in a consistent, though often muted elevated net out-migration rate for high earners. The ACS analysis in this paper discusses out- and in-migration separately, rather than as net migration. For the 2021 ACS sample, out-migration trends accord with IRS data. While our analysis finds a lower out-migration rate for the top 1 percent of earners, the out-migration rate for all households with income above $200,000 was higher (though statistically insignificant) than those earning less than $200,000. For the 2022 ACS sample, there was no consistent gradient; those earning more than $200,000 had a slightly lower out-migration rate. Because 2022 IRS data is not yet available, it is unclear how the ACS and IRS estimates accord for 2022.

NYS DTF data can provide a third set of evidence. While NYS DTF and IRS SOI are both tax data and should therefore generally align, they occasionally diverge. Prior to 2015, NYS DTF, like the current IRS SOI, released data derived from samples of its tax data. Since 2015, the agency has released data reflecting the full population of State tax filings. (For this reason, only NYS DTF since 2015 can be compared for time series analysis.) As discussed above, NYS DTF data does not allow us to determine out-migration rates. Nevertheless, the total number of households

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[1] Jack DeWaal et al. "User Beware: Concerning Findings from the Post 2011-2012 U.S. Internal Revenue Service Migration Data" *Population Research and Policy Review* (Apr 2022), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8974493/.

earning at least $200,000 provides a general indication of the state's tax base. Here, NYS and IRS estimates diverged in 2021. While the two sources aligned on estimates of the number of high earning, full-year New York State residents each year prior to Covid, they have since diverged. In 2021, the most recent year available, the IRS estimated that elevated high-income out-migration led to a 4.3 percent decline in the total number of high earning households. By contrast, NYS DTF data for the same year show a sharp 16.9 percent increase in households earning more than $200,000. Only additional years of data will clarify this discrepancy. Given IRS SOI's recent unexplained volatility, piecing together post-Covid shifts in migration will require careful analysis across all available sources of data.

Figure A.3. Number of New York full-year resident tax filers with income of $200,000 or more, 2015 to 2021, according to NYS DTF and IRS SOI data