

tates have been raising tax rates on top incomes. Does the pursuit of revenue lead to the flight of millionaires? We answer this question by examining two natural experiments in the state taxation of millionaires, in each case exploiting data from administrative tax records on the movement of elite income earners. As it turns out, the flight risk is greatly exaggerated: Millionaires are more attached to their states, and less inclined to migrate for tax purposes, than is often presumed.

Millionaire taxes are a growing fashion among U.S. state governments. Starting in 2004, New Jersey raised its income tax by 2.6 percentage points on income above \$500,000. California followed suit the next year with a 1 percent tax increase on income above \$1 million. Each of these taxes raises about \$1 billion annually in new revenue. Other states took notice, and with the fiscal crisis of the Great Recession, there was a wave of similar legislation. Nine states today, representing almost one-third of the U.S. population, have millionaire taxes (Table 1). There is indeed a rising sense that states can and should tax top incomes.

Nevertheless, millionaire taxes are often a flash point for heated controversy. Much of the debate hinges on whether mil-

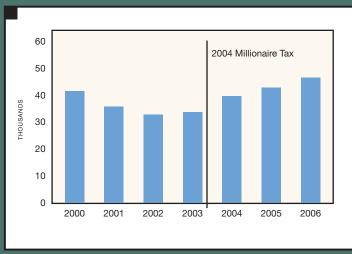
TABLE 1. States with "Millionaire Taxes"

State	Year Passed	Top Bracket	Top Marginal Rate	Percentage Point Increase	
New Jersey	2004	\$500,000	8.97	2.60	
California	2005	\$1,000,000	10.30	1.00	
Maryland	2008	\$1,000,000	6.25	1.75	
Hawaii	2009	\$200,000	11.00	1.00	
Wisconsin	2009	\$225,000	7.75	1.00	
Oregon	2009	\$250,000	11.00	2.00	
New York	2009	\$500,000	8.97	2.20	
Connecticut	2010	\$500,000	6.50	1.50	
California	2012	\$1,000,000	13.30	3.00	
Minnesota	2013	\$250,000	9.85	2.00	

Note: There have been a number of changes to the rates and brackets since these taxes were first passed. However, all these states continue to have a "millionaire tax" in some form

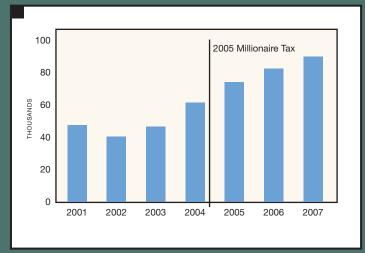
Sources: Tax Foundation, State Individual Income Tax Rates, 2004–2013; Authors' compilation

FIGURE 1. New Jersey Population Earning \$500,000+, 2000-06



Source: New Jersey Department of Treasury micro-data. N = 271,791

FIGURE 2. California Population Earning \$1 Million+, 2001-07



Source: California Franchise Tax Board micro-data. N = 443,338

lionaires will move away to states with lower taxes. Critics in California, for instance, warned that "when those required to pay this tax end up leaving the state...they will take their tax dollars with them." In Maryland, the increase was dubbed the "Get Out Of Maryland Tax Act." New Jersey Governor Chris Christie summarized the sentiment with his pronouncement: "Ladies and gentlemen, if you tax them, they will leave."

The debate has therefore taken a predictable form. Some advocate taxing millionaires as both equitable and fiscally necessary, while others warn that the wealthy are so mobile that the new taxes will only be self-defeating and will worsen state fiscal health. But to date, there is little systematic evidence about elite mobility or the likelihood of tax flight among millionaires. Our research sets out to bridge this gap. We use the recent rise in state millionaire taxes and access to individual state income tax records to test whether progressive taxation leads to millionaire migration. We analyze the effects of these taxes in the first two states to enact them, New Jersey in 2004 and California in 2005. Our in-depth analyses are reported elsewhere (see key resources). Here, we present our core results in broad strokes.

Using Big Data to Study Migration

We use big data from administrative tax records to establish a virtual census of millionaires in their respective states. Our base data sets include all individual tax records filed in New Jersey (2000–2007) and California (1987–2009), yielding millions of observations on high income earners. These two data sets cover years before and after the tax increases were imposed, allowing an analysis of two "natural experiments." In addition to microdata on every individual affected by the taxes ("millionaires"), we also use, as control groups, high-income earners who were not affected by the taxes.

Elites and Migration in Two Millionaire Tax States

The first state millionaire taxes were passed during times of prosperity, and the new taxes did not disrupt the momentum. In New Jersey, there was a surge in the number of millionaires after the tax was passed, an increase of 38 percent by 2006 (13,000 new millionaires, see Figure 1). California also saw substantial growth in millionaires after its 2005 tax increase, with a rise of 30 percent by 2007 (Figure 2). Detailed yearly data for each state are shown in Table 2.

These millionaire booms were not caused by a rush of high earners moving into these states. Rather, they were fueled by income growth at the top, as more residents became millionaires. These were times of economic growth and rising inequality. Federal income tax records indicate that over 60 percent of all income growth during this economic expansion (2002–2007) accrued to the top I percent. Growth in the millionaire population was in this sense inevitable.

From a demographic perspective, changes in the millionaire population are mostly driven by the "birth rate" (people becoming millionaires) and the "life expectancy" (how long people persist with millionaire incomes). Migration itself has played only a small role in the ups and downs of these state's millionaire populations.

For example, in New Jersey in 2005, the out-migration of millionaires increased by 37 individuals—a loss that *could* be attributed to the new tax. In the same year, however, the millionaire population increased by over 3,000 individuals. Similarly, in California the net migration of millionaires fluctuates each year by about 120 people, while the millionaire population as a whole fluctuates by about 10,000 individuals. Shifts in migration account for only 1 to 3 percent of year-to-year changes in the millionaire population. This fact is key to millionaire demography. Unlike the population of say, teenagers, a state's population

TABLE 2. Population and Migration Counts for New Jersey and California, by Year

NEW JERSEY												
Control Group	Control Group (\$200k-\$500k)					Treatment Group (\$500k+)						
Year	Population	Out	In	Out-In (net out)	Net Out Rate	Marginal Tax Rate	Population	Out	In	Out-In (net out)	Net Out Rate	Marginal Tax Rate
2000	139,829	3,660	4,074	-414	-0.3%	6.37%	41,358	1,339	1,100	239	0.6%	6.37%
2001	133,817	3,190	3,392	-202	-0.2%	6.37%	35,621	1,144	772	372	1.0%	6.37%
2002	129,848	3,128	3,153	-25	0.0%	6.37%	32,726	1,038	696	342	1.0%	6.37%
2003	131,297	3,303	3,082	221	0.2%	6.37%	33,696	1,065	682	383	1.1%	6.37%
2004	138,442	3,717	3,199	518	0.4%	6.37%	39,235	1,401	824	577	1.5%	8.97%
2005	145,628	3,848	3,317	531	0.4%	6.37%	42,504	1,474	860	614	1.4%	8.97%
2006	153,582	3,783	3,084	699	0.5%	6.37%	46,651	1,460	774	686	1.5%	8.97%

CALIFORNIA												
Control Group	Control Group (\$500k-\$1M)					Treatment Group (\$1M+)						
Year	Population	Out	In	Out-In (net out)	Net Out Rate	Marginal Tax Rate	Population	Out	In	Out-In (net out)	Net Out Rate	Marginal Tax Rate
2001	75,464	1,165	948	217	0.3%	9.30%	47,648	767	850	187	0.4%	9.30%
2002	68,351	1,004	904	100	0.1%	9.30%	40,171	637	467	170	0.4%	9.30%
2003	77,145	1,068	905	163	0.2%	9.30%	46,613	651	464	187	0.4%	9.30%
2004	95,604	1,226	1,024	202	0.2%	9.30%	61,500	766	517	249	0.4%	9.30%
2005	113,185	1,634	1,168	466	0.4%	9.30%	74,385	820	650	170	0.2%	10.30%
2006	124,452	1,586	1,244	342	0.3%	9.30%	82,769	859	700	159	0.2%	10.30%
2007	134,216	1,533	1,331	202	0.2%	9.30%	90,252	831	793	38	0.0%	10.30%

Source: Micro-data from the New Jersey Division of Taxation and the California Franchise Tax Board.

of millionaires is highly sensitive to the business cycle. Teenagers don't disappear in large numbers during recessions, but millionaires do.

Nevertheless, the key policy question we address is how responsive millionaires are to state tax increases. If states add a I percent millionaire tax, how many millionaires will likely leave the state?

To answer this question, we look at the migration patterns of millionaires before and after a tax increase. Then we compare this with control groups of high-income earners just below the millionaire bracket who did not face the tax increase. The control groups capture the underlying trends in migration that are not due to tax changes. In our studies, households in the 95th to 99th percentiles of the income distribution did not face a tax increase and serve as control groups for those in the top I percent. If the migration of millionaires rises relative to the control groups when the taxes are passed, this is evidence showing millionaire tax flight.

New Jersey's out-migration among millionaires did increase after the tax was passed (right panel, Figure 3), rising from 0.9 percent to 1.4 percent, suggesting a tax flight loss equal to about one half of 1 percent of the millionaire population. However, this does not seem to be attributable to the tax itself. The control group of high-income earners (left panel, Figure 3) saw an almost identical increase in out-migration, despite being unaffected by the tax. Millionaires do have higher migration rates than non-millionaires, but this was equally true before the tax

increase. There is higher out-migration after the tax than before, but this is equally true for high earners who do not pay the tax. Exposure to the tax increase has no readily observable influence on migration patterns. These findings also hold in difference-in-difference regression models that control for a range of demographics, income levels, and income sources.

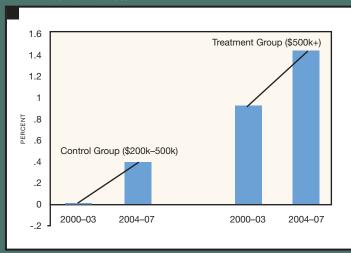
In California (Figure 4), the pattern is even more pronounced. Net out-migration increased for the control group, but not at all for the treatment group (millionaires exposed to the tax). This implies a "wrong-signed" effect: Raising taxes on millionaires would somehow seem to have discouraged out-migration or made California more appealing. It is unclear what is driving this outcome. We suspect that something about the high tech boom, occurring at the same time as the tax increase, disproportionately favored millionaires in California and overwhelmed any potential tax flight response.

What is clear is that neither state offers transparent evidence for a "flight of the millionaires" effect. First, the rise and fall of the millionaire population is largely due to income dynamics—residents growing into or out of the millionaire bracket—not due to migration. Second, migration itself seems largely unaffected by changes in tax rates.

Why So Little Migration Response?

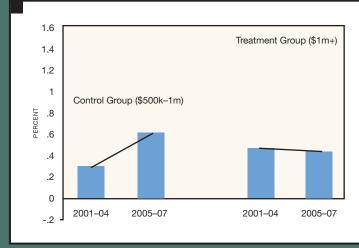
"There's nothing more portable," said California Republican leader Bob Huff, "than a millionaire and his money." Why does this intuition find such little empirical support? Three key rea-

FIGURE 3. New Jersey: Net Out-Migration Rates Before and After Tax Increases



Source: New Jersey Department of Treasury micro-data. N = 1,420,652.

FIGURE 4. California: Net Out-Migration Rates Before and After Tax Increases



Source: California Franchise Tax Board micro-data. N = 1,157,997.

sons are likely behind the stability of millionaires.

Millionaire incomes are temporary. Most people paying the millionaire tax are having an unusually good year and do not earn such high incomes every year. Falling in this tax bracket is a temporary condition, associated with the very peak of one's career. Millionaire taxes, in effect, target spikes in income, rather than regular annual incomes.

To see this, we followed the incomes of millionaires in California over time. We took people who were in the millionaire bracket in a given year and tracked their income for six years before and six years after. If a person, for instance, earned \$1.5 million in 2001, we looked at his or her income history back to 1995, and then forward to 2007. As shown in Figure 5, the representative millionaire has seen strong recent income growth, and will not earn this much money again in the future. People are typically in the millionaire bracket for 7 out of 13 years, or 54 percent of the time. Over this "lifetime," only 14 percent of their total income was above the million-per-year bracket and subject to the tax. In other words, the burden of the tax is largely dispersed among people who pay it for only a few years.

Earning power doesn't migrate well. People can move to other states, but they may not be able to take their annual incomes with them when they move. Earning power is often place-specific; it is not easily transferred around the country like funds in a bank account. Income potential derives not just from one's individual talent (which is movable) but also from one's position in a localized world of colleagues, collaborators, rivals, and market conditions. The "I percent" are deeply embedded insiders flush with local market knowledge and place-specific social capital.

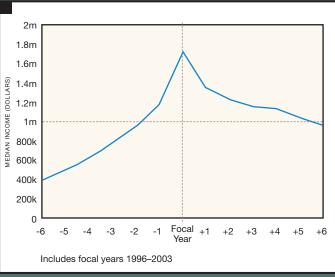
The tax flight argument often relies on a notion of the "idle rich," who are simply looking for the best harbor to temporarily moor their yacht. A more accurate image of most high-income earners is of the "working rich"; most of their income is from

employment, they are at their peak years of earnings, and they are drawing on long personal investments in a career or business line that are place-specific rather than portable.

An important caveat to our core results reinforces this point. When we restrict attention to millionaire retirees, there is indeed evidence of tax flight. In New Jersey, we focused on individuals who are retired and earn their income entirely from investments—primarily stock market earnings. While this is a small group (representing less than 10 percent of millionaires), retirees are more mobile in general, and they show a clearly visible rise in migration following the tax increase. For this group, the tax flight response is one-to-one: a 1 percent increase in the tax rate leads to a 1 percent loss of the population. Thus, among people who have little or no economic anchors to geographic place, there is a much stronger migration response to tax increases. But few millionaires fall into this group.

Affordability is not the only concern. State taxes are one aspect of the regional differences in the cost of living. To the bottom line, state taxes are no different than the cost of housing or the price of restaurant meals. Millionaires tend to live in the more expensive parts of the country, and in the most expensive areas of town. California and New Jersey are expensive places to live, but more because of the high and rising cost of housing than because of the tax rates. Silicon Valley, for example, includes five of the top-10-most expensive housing markets in America. A typical home in Palo Alto, California, is about 10 times as expensive as a similar house in Stockton or Modesto, towns that are within commuting range of Palo Alto. Yet housing price competition has not lured high-tech millionaires into California's affordable Central Valley region. If millionaires do not make small-distance moves for big savings on their housing costs, why would they make long-distance moves for smaller savings on their taxes?

FIGURE 5. Median Income Profile of People Making \$1M+ in Focal Year



Source: California Franchise Tax Board micro-data. N = 326,312.

Conclusion: Embedded Elites

State tax competition—cutting taxes to attract top income earners—is part of a broader discourse of jurisdictions competing for resources, businesses, and population. The fear of being undercut by other states is often cited by political leaders and interest groups seeking to scale back environmental, labor, and business regulations. However, in a recent comprehensive review, Bruce Carruthers and Naomi Lamoreaux conclude that jurisdictional competition has been widely exaggerated, and that "differences in the regulatory burden [across states] seldom cause significant numbers of firms to relocate." Most of these potential "regulatory races," as they call them, are non-starters.

This seems equally true of state tax competition. While millionaire tax flight is an intuitive concern, evidence of it is difficult to find. Our analyses, however, do not mean that states have a free hand to engage in runaway taxing of the rich. We have evaluated modest tax increases in the range of τ to 3 percent. Larger tax increases may well have greater salience and impact.

Moreover, states should spend millionaire tax revenues with caution. Millionaire-bracket incomes are especially sensitive to the business cycle, and revenues from the tax will fall sharply during recessions. States would be wise to set aside 20 to 30 percent of these revenues for a "rainy day" fund.

Warnings of dramatic millionaire migration are a modern Ayn Rand novella: Resentful of taxation, the economic elite withdraw their services and abandon society. In contrast, we see little migration as a result of millionaire taxes. Earning power—even at the top—is not readily mobile. Millionaires are both socially and economically embedded in their states, and they typically pay the tax only for a few years. If these tax dollars are prudently managed and well-invested in communities, some of the benefits may even be appreciated by millionaires themselves. ■

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Key Resources

Carruthers, B., & Lamoreaux, N. (2012). Regulatory races: The effects of jurisdictional competition on regulatory standards. Working Paper. Department of Sociology, Northwestern University. Saez, E. (2013). "Striking it richer: The evolution of top incomes in the United States" (updated to 2013). Originally published in *Pathways Magazine*, Stanford Center for the Study of Poverty and Inequality, Winter 2008, 6–7.

Young, C., & Varner, C. (2011). "Millionaire migration and state taxation of top incomes: Evidence from a natural experiment." *National*

Tax Journal, 64(2), 255-284

Varner, C., & Young, C. (2012). "Millionaire migration in California: The effect of top tax rates." Working Paper. Stanford Center on Poverty and Inequality.