The Effects of Marginal Tax Rates on Interstate Migration in the U.S.

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Abstract

This paper analyzes the effects of tax policy on interstate migration in the United States. Using annual IRS migration data from 1992 to 2008, we study how taxes and other economic factors affect the migration flows of taxpayers and income. Our results indicate that average marginal tax increases have a small but significant effect on net out-migration from a state. Calibrating the model for New Jersey, we estimate that the state's cumulative losses from the 2004 "millionaires' tax" totaled roughly 20,000 taxpayers and $2.5 billion in income.

I. Introduction

Policymakers seeking to balance budgets during the recent economic downturn have been faced with a difficult public policy question: will constituents flee higher taxes? In 2009-2010, California, Illinois and Oregon lawmakers raised individual income taxes on top earners to reduce state budget deficits (Davey 2011, Henchman 2009, Henchman 2010). Legislators in other states have resisted such measures, arguing that "tax flight," the movement of wealthy taxpayers to low-tax states, is a very real and tangible concern. In 2010, New Jersey Governor Chris Christie vetoed a bill that would have renewed the state's 2009 "millionaire's tax"; Christie argued that the state's 2004 upper-income tax hike had already driven $70 billion of wealth from New Jersey and made it more difficult to attract new residents and businesses to the state (Diulio 2011)[1]. A similar proposal in neighboring New York extending its 8.97% top marginal tax rate

[1] Governor Christie was citing a Boston College study which looked at migration of wealth from New Jersey between 1992-2003 and 2004-2008. See Havens (2010) for the complete analysis. Havens refrained from offering any explanations — including New Jersey's tax increase — for the movements; some reports have mistakenly asserted that he specifically rejected higher taxes as a factor.

was blocked by Governor Andrew Cuomo, who cited concerns about the effects of taxes on New York's economic competitiveness (Quint 2011).

The economic reasoning behind tax flight is straightforward: individuals respond to incentives, and they will choose to move to states with lower tax burdens, holding all else equal[2,3]. The historical evidence is less clear cut, however: many states have successfully levied income taxes over the past half century without observing mass out-migration. Additionally, some empirical research has suggested that individuals primarily select residences based on proximity to family or jobs, trumping any migration response to taxes (Politifact 2011, CPI 2011, Grassmueck *et al*. 2008).

The earliest studies of state-to-state migration focused on specific state characteristics (e.g., housing affordability, climate, and other state amenities) to explain migration decisions (Carlino and Mills 1987, Gabriel *et al*. 1992, Clark and Hunter 1992). Borjas *et al*. 1992 found that this effect holds true for labor markets: workers tend to migrate to regions where they can receive the highest returns for their skills.

More recent studies have estimated the impact of tax policy changes on taxpayer behavior using micro data. Coomes and Hoyt 2007 found that tax-motivated migration only occurred if the difference between state tax rates was sufficiently large. Several studies have focused specifically on migration behavior of upper-income households. Top earners are more likely to be affected by top marginal tax rates, and so arguably those residents would have a higher propensity to migrate in response to taxes. In analyzing panel data from the European

[2] The Tiebout model suggests that individuals will migrate to the community with the optimum "bundle" of amenities and taxes, assuming perfect information and zero costs to migrate.
[3] See Molloy, Smith, and Wozniak (2011) for an excellent review of recent empirical studies on migration and the various migration datasets that are available.

football market, Kleven et al. 2010 found that players had a strong tendency to migrate to those European countries with more favorable tax regimes. In the U.S., the "tax flight" effect has been observed in the elderly wealthy, with respect to estate and inheritance taxes (Bakija and Slemrod 2004, Conway and Houtenville 2003). A recent study of New Jersey's 2004 "millionaire's tax" concluded that migration trends of the wealthiest 1% of New Jersey taxpayers did not change significantly after the tax hike (Young and Varner 2011), and suggested that sharp increases in New Jersey home prices in the middle of the last decade spurred outmigration. However, the study spanned only three years, was restricted to New Jersey, and did not systematically examine the influence of housing costs, limiting the scope of its findings.

This study will take a broad look at the effect of interstate variations of taxes and other factors on migration. We integrate two rich datasets: the Internal Revenue Service (IRS) series on annual cross-state movement of taxpayers and income, and the National Bureau of Economic Research TAXSIM series on state marginal tax rates (Feenberg 2011). We find clear, albeit modest effects of cross-state tax differences on migration. Calibrating our findings for New Jersey (the results can be computed for any state), we estimate that a one percentage point rise in New Jersey's average marginal income tax rate relative to every other state would be associated with an increase in annual net out-migration of approximately 4,000 taxpayers and $520 million of adjusted gross income (AGI). Applying these results to New Jersey's 2004 tax increase, we estimate that by 2009 the tax hike had lowered the number of taxpayers by roughly 20,000 and the state's aggregate adjusted gross income by $2.4 billion. The associated loss of over $125 million in state income tax revenue would offset a small but noticeable fraction of revenue gains.

This paper is organized as follows. In Section II, we describe recent migration trends in the U.S. In Section III, we describe our dataset and outline our theoretical framework for

interstate out-migration. Section IV presents empirical findings, and Section V applies model estimates to predict how changes in marginal tax rates and housing prices would affect in- and out-migration from New Jersey. Section VI concludes.

II. Migration Trends in the U.S.

Inter-regional migration trends have been fairly consistent over the past three decades (Table 1). In terms of aggregate flows, there has been a small but consistent outflow of population and wealth from the Northeast region to the South since the 1980s. Table 1 compares state migration figures, average regional income tax rates, and other regional characteristics.

The Northeast region faced disproportionately strong out-migration relative to its share of the U.S. population, while having the highest average and top marginal tax rates of the four major geographic regions. The South and West, with the lowest tax rates, had disproportionately higher in-migration (and lower out-migration). Table 2 lists the top ten states by total in-migration in 2007. Cumulatively, migration into these "destination" states accounted for roughly half of the total interstate movement in the U.S. in that year.

The data suggest that migrants tended to favor low tax states. Two of the top 10 destination states levied no income tax, Florida and Texas. Five of the destination states have average marginal tax rates that rank in the lowest quartile of all states. The results correspond with findings by Conway and Houtenville (2003) and the Pew Research Center (2008), which found a positive net population flow from the Northeast and Midwest to the South in the 1990s and 2000s. In the Pew Center's ranking of "magnet states" (states with the highest percentage of current state population born in another state), four of the top five magnet states were zero tax

states. We also note that people tended to move to states with bigger populations: the top four states for in-migration flows are also the four most populous states.

We are particularly interested in New Jersey, because of its steady out-migration flow over the past 25 years — a trend that has been attributed to the state's relatively high tax rates, high cost of living, and the decline of manufacturing in the Northeast (Laffer and Moore 2009, Ebeling 2010). This is reflected in New Jersey's low population growth rate over the past 30 years, relative to the national growth rate. Based on U.S. Census estimates, New Jersey's population grew 22.7% between 1970 and 2010, while the U.S. population grew 51.9%. As a result, New Jersey's share of the national U.S. population declined from a high of 3.5% in 1970 to 2.85% in 2010.

In Graph 2, we track net out-migration flows for New Jersey from 1988 to 2008 using the IRS data. Taxpayer and exemption flows are available from 1988-2008; income flows are available from 1992-2008. The graph shows that movements of taxpayers and income are highly correlated: migration peaks in 2005, the year following the introduction of New Jersey's "millionaires' tax." By 2009, the share and overall levels of migrants had fallen by 50%.

Understanding why individuals move is equally important, but notoriously difficult to pin down. The Current Population Survey (CPS), administered by the Census Bureau, asks respondents about their primary reason for moving.[4] In Table 3, we break down reasons for moving for working-age adults (ages 18-54). We compare responses from New Jersey migrants (those people who moved out of New Jersey to another state in the past year) to responses from all domestic migrants (those who moved from one state to another in the past year). The Census

[4] Note that secondary reasons for moving would not be captured by the Current Population Survey.

did not ask respondents if they moved for tax reasons, and so we cannot determine tax effects from these data.

However, housing concerns apparently played a major role in relocation decisions. Between 2002 and 2007, more than 50% of respondents (New Jersey and national) listed a housing-related issue as their primary reason for moving. The Young-Varner study attributed the surge in out-migration to the 2003-2007 housing market boom. However, upon closer inspection, the CPS results do not appear to support this claim. The fraction of housing-motivated migration in the U.S. remains relatively consistent over time—in fact, it dips slightly from 53% in 2003 to 48% in 2006. For New Jersey movers, the percentage of housing-related moves fluctuates from 57% in 2004 to 46% in 2005 to 60% in 2006. While the CPS results suggest that housing costs are obviously a major factor for migration, the annual fluctuations appear unlikely to account for the step-up in net outmigration from New Jersey in the last decade.

Young and Varner also attribute much of the "tax flight" effect to out-migration of retirees to warmer locales. However, only 1-2% of respondents (both nationally and in New Jersey) cited retirement as their primary reason for moving. Given these results, we believe that other forces, such as varying changes in interstate tax differentials, may account for at least some of the observed variation in migration movements, both in the CPS and IRS data.

III. Data and Theoretical Model

We model interstate migration decisions using logarithmic and standard linear regression models[5]. For simplicity, we use the coefficients from the linear regression model to estimate migration effects in Section IV. In both models, individuals are assumed to choose the state that

[5] This model is based on the theoretical framework presented in Gabriel *et al*. (1992) and Sasser (2010),

maximizes their predicted return, given a finite number of destinations. We also assume that an individual decision-maker compares prospective destination states to the origin state in pair-wise fashion; an individual bases his migration decision on differences in state characteristics[6]. The probability of migration is defined as follows:

$$\Pi_{ijt} = \exp(Z_{ijt}) / \sum_k \exp(Z_{ikt}),\ i,j=1,2....51;\ t = 1....\tau \qquad (1)$$

where the *Z* variables are the expected return of moving to a destination state. The probability is normalized by $\sum_k \exp(Z_{ikt})$, so that individual probabilities for a given year sum to one. The "out-migration ratio" is defined as the probability that an individual will migrate from state *i* to state *j*, divided by the probability that an individual will choose to stay in original state *i*. Taking the natural log of the out-migration ratio, we arrive at the "log-odds ratio" that is used in the logit model:

$$\ln(\Pi_{ijt} / \Pi_{iit}) = Z_{ijt} - Z_{iit},\ i,j = 1,2...51;\ i \neq j;\ t=1...\tau \qquad (2)$$

Our analysis uses IRS state-to-state migration flow data from April 1992 to March 2009. The IRS matched federal tax returns of filers across consecutive years using Social Security numbers, and were thus able to track the aggregate flow of tax returns and income across state lines[7]. A distinct advantage of the rich IRS dataset is that it records gross in- and out-migration, rather than net migration flows.

[6] The logit model assumes Independence of Irrelevant Alternatives (IIA, which implies that error terms are independent and identically distributed. As a result, the model assumes that given a choice set of two states *A* and *B*, the addition of an alternative state *C* has no impact on the ratio of migration probabilities p_i/p_j. For a more detailed discussion of the multinomial logit model and its weaknesses, see Lattin *et al*. 2003.

[7] Although counts of exemptions were included in the IRS migration data, we elected not to use them as a measure of out-migration. Individuals can claim additional exemptions when they meet certain criteria (e.g., being blind, elderly), and so the number of exemptions on a given tax return may exceed the actual number of people in a family. Admittedly, our use of tax returns to represent "families" may also lead to over-counting; for example, if a couple

This study contributes to the existing literature by calculating the direct effects of tax policy on state-level migration. To the best of our knowledge, this is the first attempt to study the marginal tax rate effects using IRS migration data. Since the dataset is based on tax filings, non-filers (e.g., the poor, college students) will almost certainly be underrepresented. However, in comparing 20 years of IRS data with contemporaneous CPS data, Molloy *et al*. (2011) found no significant differences in migration trends over time. In any case, since we are most interested in studying tax effects on top earners, the omission of non-filers from the dataset would likely have little impact.

In both models, we estimate the effects of marginal tax rates on migration, controlling for labor market conditions, housing costs, and other state-specific attributes. Based on our regressions estimates, we predict how changes in the marginal tax affect population and income flows. We model out-migration using the following ordinary least squares [Eq. 3] and the logit [Eq. 4] models:

$$\begin{aligned}\mathbf{OUTMIGRATION}_{i,j,t} = {} & \beta_1\mathbf{HOUSING\_PRICE}_{i,j,t} + \beta_2\mathbf{PERCAP\_INC}_{i,j,t} + \beta_3\mathbf{UNEMP}_{i,j,t} + \\ & \beta_4\mathbf{AVG\_MTR}_{i,j,t} + \beta_5\mathbf{POP}_{i,j,t} + \beta_6\mathbf{DISTANCE}_{i,j} + \beta_7\mathbf{DISTANCE}^2_{i,j} + \\ & \beta_8\,\mathbf{AVG\_MTR}_{i,j,t}*\mathbf{DISTANCE}_{i,j} + \beta_9\,\mathbf{ZERO\_TAX\_STATE}_j + \\ & \sum\alpha_1\mathbf{state}_i + \sum\alpha_2\mathbf{state}_j + \varepsilon_{i,j,t} \\ & i,j=1\ldots51;\ i \neq j;\ t = 1\ldots\tau \qquad (3)\end{aligned}$$

$$\begin{aligned}\log(\mathbf{OUTMIGRATION}_{i,j,t}) = {} & \beta_1\mathbf{HOUSING\_PRICE}_{i,j,t} + \beta_2\mathbf{PERCAP\_INC}_{i,j,t} + \beta_3\mathbf{UNEMP}_{i,j,t} + \\ & \beta_4\mathbf{AVG\_MTR}_{i,j,t} + \beta_5\mathbf{POP}_{i,j,t} + \beta_6\mathbf{DISTANCE}_{i,j} + \beta_7\mathbf{DISTANCE}^2_{i,j} + \\ & \beta_8\,\mathbf{AVG\_MTR}_{i,j,t}*\mathbf{DISTANCE}_{i,j} + \beta_9\,\mathbf{ZERO\_TAX\_STATE}_J + \sum\alpha_1\mathbf{state}_i + \sum\alpha_2\mathbf{state}_j + \varepsilon_{i,j,t} \\ & i,j=1\ldots51;\ i \neq j;\ t = 1\ldots\tau \qquad (4)\end{aligned}$$

In the linear model, $\mathrm{OUTMIGRATION}_{i,j,t}$ is defined as the out-migration ratio between states *i* to state *j* in year *t*; in the logarithmic model, $\log(\mathrm{OUTMIGRATION}_{i,j,t})$ [Eq. 4] is the natural log transformation of the out-migration ratio between states *i* and *j* in year *t*. DISTANCE

filed separate tax returns, they would be counted as two families. However, when we rerun the model using exemptions as the dependent variable, the magnitude or sign of the coefficients did not change significantly.

is the geographic distance between the centers of population of states *i* and *j*[8]. Median home sales price (HOUSING_PRICE) per capita disposable income (PERCAP_INC), and unemployment rate (UINEMP) are represented as the differential between two states (destination state *j* – origin state *i*). Population (POP) is the origin state's population from the 2000 Census. A "zero income tax dummy" is included, which is equal to one for destination states that have no individual income tax. We hypothesize that migrants may be particularly attracted to states with "zero" income tax, an effect distinct from the regular tax differential effect.

Average marginal tax rates were obtained from NBER's TAXSIM model, and reflect cross-deductibility of federal and state taxes when appropriate[9]. To control for state amenities and other state-specific features, the model includes origin and destination state fixed effects ($state_i$, $state_j$). Since each state (and the District of Columbia) can be either an origin or a destination state, there are a total of 102 fixed effects. We omit year fixed effects from the regressions, because they are not jointly significant in any of the specifications. To avoid potential simultaneity issues, we use one-period lagged values of housing prices, per capita income, unemployment rate, and average marginal tax rate.

IV. Regression Results

We report the linear regression results in Tables 4 and 5, and the logarithmic regression results in Tables 6 and 7. We measure migration flow (the dependent variable) using two different measures, movement of taxpayers (top panel) and movement of income (bottom panel). The returns out-migration ratio is defined as the total number of returns moving from state *i* to *j*

[8] Population centers for each state are determined using the Census Bureau's "center of population" method. A state's center of population is calculated as the point on which a state would perfectly balance, if the state surface were rigid and flat and each person had the same weight (Census Bureau 2004).
[9] Note that local income taxes (county, city taxes) are not taken into account. For example, New York City's individual income tax would not be reflected in the calculated New York state tax.

divided by the total number of returns originally in state *i*. Similarly, the income out-migration ratio is calculated by dividing the total income moving from state *i* to *j* by the total income originally in state *i*.

The model coefficient estimates are generally consistent with *a priori* expectations: in all linear regressions, the average marginal tax rate coefficient is negatively signed. This indicates that out-migration is greater when the originating state's average marginal tax rate is higher than the destination state's. The logarithmic model results are less readily interpretable: the coefficient on average marginal tax is negative and significant only when state fixed effects are included. In both linear and logit models, the coefficient for "zero income tax" states is positively significant for all regressions in which the dummy is included. This suggests that individuals have a strong preference for zero income tax states. State fixed effects are highly significant in all regressions.

In both tables, the coefficients also indicate that higher housing prices and higher unemployment rate lead to greater out-migration. As expected, greater geographic distance between two states weakens the tax effect: the positive coefficient on the tax*distance interaction term indicates residents are less sensitive to cross-state tax differentials the further a potential state lies from the originating state. Also, we also find the large state effect observed in Census data by Perry 2003: states with large populations are more likely to receive migrants from other states.

V. Calculations

From the regression results in Table 6, we estimate changes in population and income losses for two scenarios, using New Jersey as our test case. Under the first scenario, New Jersey

raises its average marginal state income tax rates by one percentage point. As an "across the board" tax increase, a one percentage point raise would be a very large tax hike that is more than twice as large as the actual 2004 "millionaires' tax." Under the second scenario, average housing prices in New Jersey rise by $10,000. For simplicity, we hold all other factors constant in each scenario.

Based on internal New Jersey Treasury projections, we estimate that a one percentage point increase would raise roughly $2.5 billion in additional tax revenue. However, this figure would be partially offset and eroded over time by out- and in-migration effects. Our model suggests that New Jersey would see increased annual net outflows of about 4,200 taxpayers and $530 million of AGI. Income losses would translate to roughly $29 million in lost income tax revenue for the state. By dividing the estimated loss of AGI by the number of lost taxpayers, we estimate that the state would lose an average of roughly $125,000 in income per lost taxpayer, almost double New Jersey's 2009 median household income of $68,000. This suggests that tax increases are associated with increased out-migration (or lessened in-migration) of upper-income taxpayers.

The model shows an association between higher home prices and higher net migration, which is consistent with the CPS findings. In the second scenario, we estimate that a $10,000 increase in New Jersey home prices would have a modest effect on migration: on net, New Jersey would lose a total of 1,200 taxpayers and $66 million in AGI. It is difficult to compare this directly with the tax rate effect, but the housing effect seems relatively smaller and, given the volatility of home prices, would probably be short-lived.

Finally, we estimated the cumulative effect of New Jersey tax changes since 2003. These changes include the 2004 and temporary 2009 legislated tax hikes, as well as the impact of bracket creep. Had tax rates remained at 2003 levels, we predict that New Jersey would have had roughly 20,000 more taxpayers in 2009. Also, AGI would have been $2.4 billion higher, generating more than $125 million in additional state income tax. Based on the average losses for 2004-2009, we believe that by 2011 the cumulative loss in taxpayers was over 25,000, the loss in AGI was roughly $3 billion, and the annual shortfall in state income tax revenue was greater than $150 million, which amounts to a substantive portion of the incremental revenue (a bit over $1 billion) directly attributable to the 2004 rate increase.

VI. Conclusion

This paper analyzes the effects of state marginal tax rates on domestic migration in the U.S. between tax years 1992 and 2008. Using IRS migration data, we calculated the specific state-to-state migration flows of taxpayers and income for every year and state pair. We find that average marginal tax rates had a small but significant effect on migration decisions in the U.S. and in New Jersey. We estimate that higher New Jersey income taxes after 2003 were associated with a reduction of more than 20,000 taxpayers and a loss of annual income of at least $2 1/2 billion.

Clearly, our results do not suggest that tax-induced migration would come anywhere close to eclipsing the immediate revenue gain from an income tax increase, but losses would cumulate over time. Our analysis of the New Jersey 2004 “millionaires’ tax” suggests that, over time, migration effects could offset a meaningful share of the revenue boost. Additionally, out-migration associated with higher income taxes will likely diminish other streams of state

revenue, such as corporate tax, sales tax, and property tax, as well as degrade a state's overall economic performance, in turn associated with further out-migration. Given New York's 2012 reduction in income taxes, it seems sensible that New Jersey legislators should keep in mind the potential impact of New Jersey taxes on migration. By January 1, 2012 (when New York's lower top marginal tax rate takes effect), Garden State households making more than $500,000 in AGI will face the highest top marginal tax rate in the tri-state area: New Jersey households will be taxed at 8.97%, compared to New York's 6.85% marginal tax rate and Pennsylvania's 3.07% flat tax rate.

There are a number of limitations in using the IRS data. Since migration flows are aggregated, it is impossible to determine how different groups of taxpayers react to tax policy. A policymaker considering an introduction of a "millionaire's tax" would probably be most interested in learning specifically how top earners react to tax increases at the top brackets, rather than how the general population responds. A disproportionately strong out-migration could significantly offset gains in tax revenue. With micro-level data, we could track movements of taxpayers over time, and control for unobserved individual characteristics that could influence migration decisions (e.g., age, race, education), as well as explore the interaction of income and estate taxes on migration.

Without further exploration, it is certainly possible to argue that the connection we draw is not causal: independent forces could simultaneously spur out-migration from a state and impose sufficient fiscal stress to trigger tax hikes. Our attempt to control for this through state fixed effects and observed economic circumstances may not be sufficient. In any event, our results appear to suggest a meaningful association between state taxes and migration.

FIGURES

Table 1

	Average Marginal Tax Rate	Top Marginal Tax Rate	Share of Population	Share of Aggregate Income	Share of Out-migration	Share of In-migration
National						
Mean	4.53%	5.13%	--	--	--	--
25th percentile	3.32%	3.64%	--	--	--	--
50th percentile	5.31%	5.77%	--	--	--	--
75th percentile	6.10%	7.05%	--	--	--	--
By Region						
South	4.69%	4.78%	36.4%	34.0%	30.4%	42.9%
Northeast	5.17%	6.05%	18.2%	20.2%	21.8%	13.9%
Midwest	5.02%	5.33%	22.1%	21.8%	24.7%	20.1%
West	4.39%	4.71%	23.3%	24.0%	22.8%	23.1%

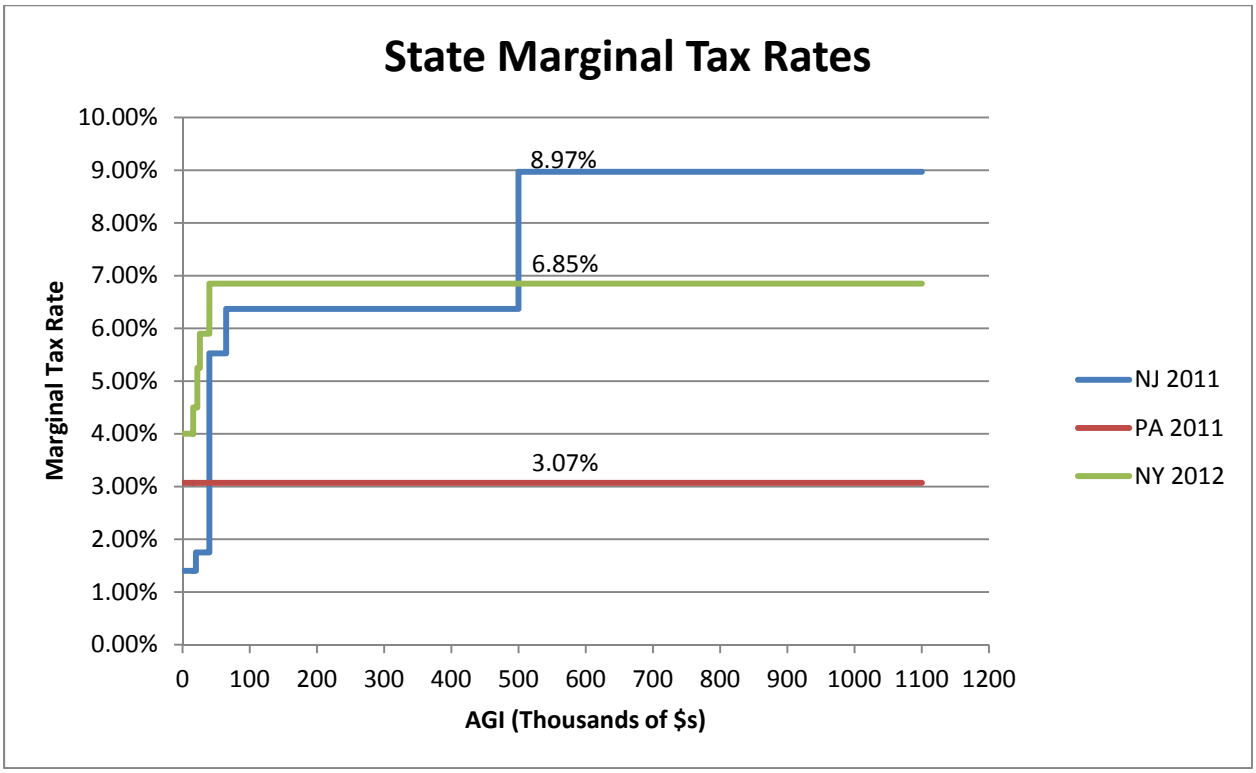
Source: Regional population share and aggregate income share are based on authors' calculations from 2007 Current Population Survey microdata (using person weights). Individuals traveling abroad are omitted.

Table 2. Top ten states for domestic in-migration in 2007.

State	Avg MTR	Top MTR	Fraction of Total U.S. Migration	Population Growth Rate	Population Rank (2000 Census)	Est. Income Taxes for $40k Family	Est. Income Taxes for $200k Family
FL	0%	0%	8.30%	1.00%	4	$0	$0
CA	6.90%	9.86%	7.00%	0.66%	1	$1,081	$20,434
TX	0%	0%	6.30%	2.00%	2	$0	$0
NY	7.00%	8.46%	4.10%	0.34%	3	$1,179	$15,564
GA	5.60%	5.77%	4.00%	2.18%	9	$1,670	$14,270
NC	7.08%	8.16%	4.00%	2.19%	10	$2,071	$18,738
VA	5.70%	5.78%	3.80%	0.94%	12	$1,594	$13,669
AZ	3.19%	4.43%	3.30%	2.73%	16	$797	$10,259
IL	3.00%	3.00%	3.20%	0.48%	5	$1,080	$7,380
PA	3.10%	3.07%	3.10%	0.41%	6	$1,228	$7,675

Source: "Marginal tax rate" from NBER TAXSIM calculations. "Fraction of U.S. migration" from authors' calculations using IRS migration data. "Pop growth rate" from Census. Est. family tax burdens are calculated using Tax Foundation state tax data. All figures are from 2007, except for population rank.

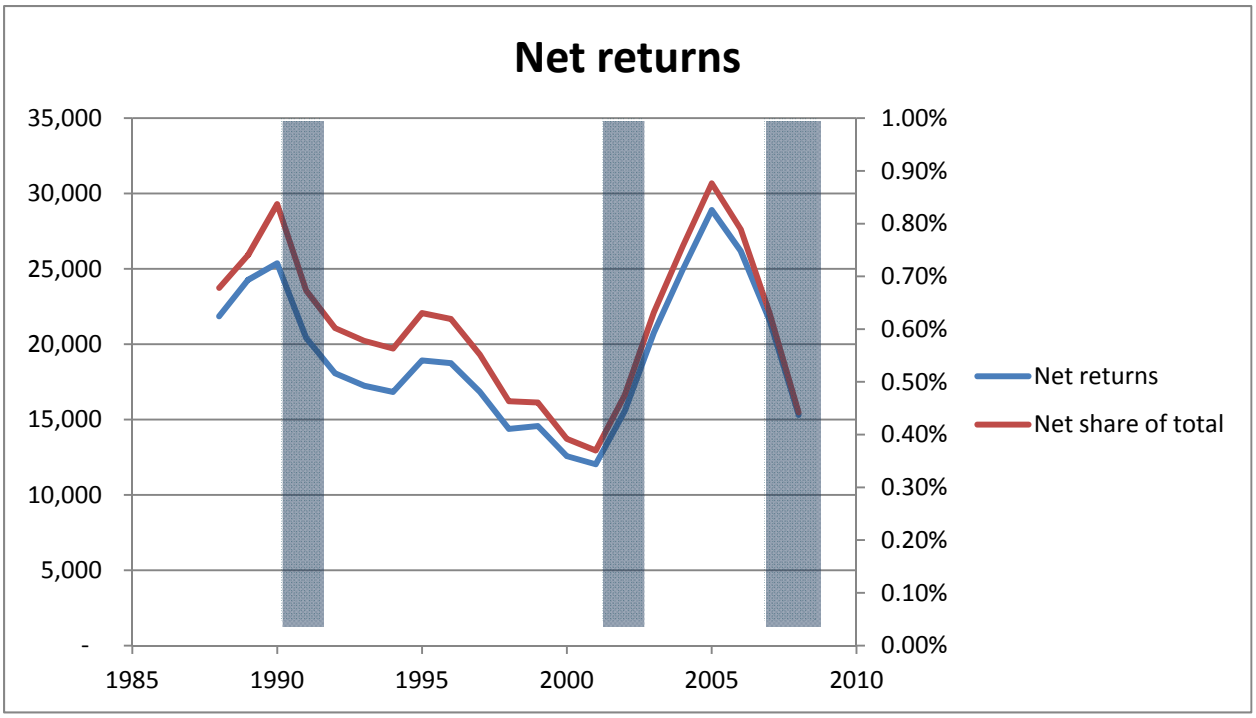
Graph 1

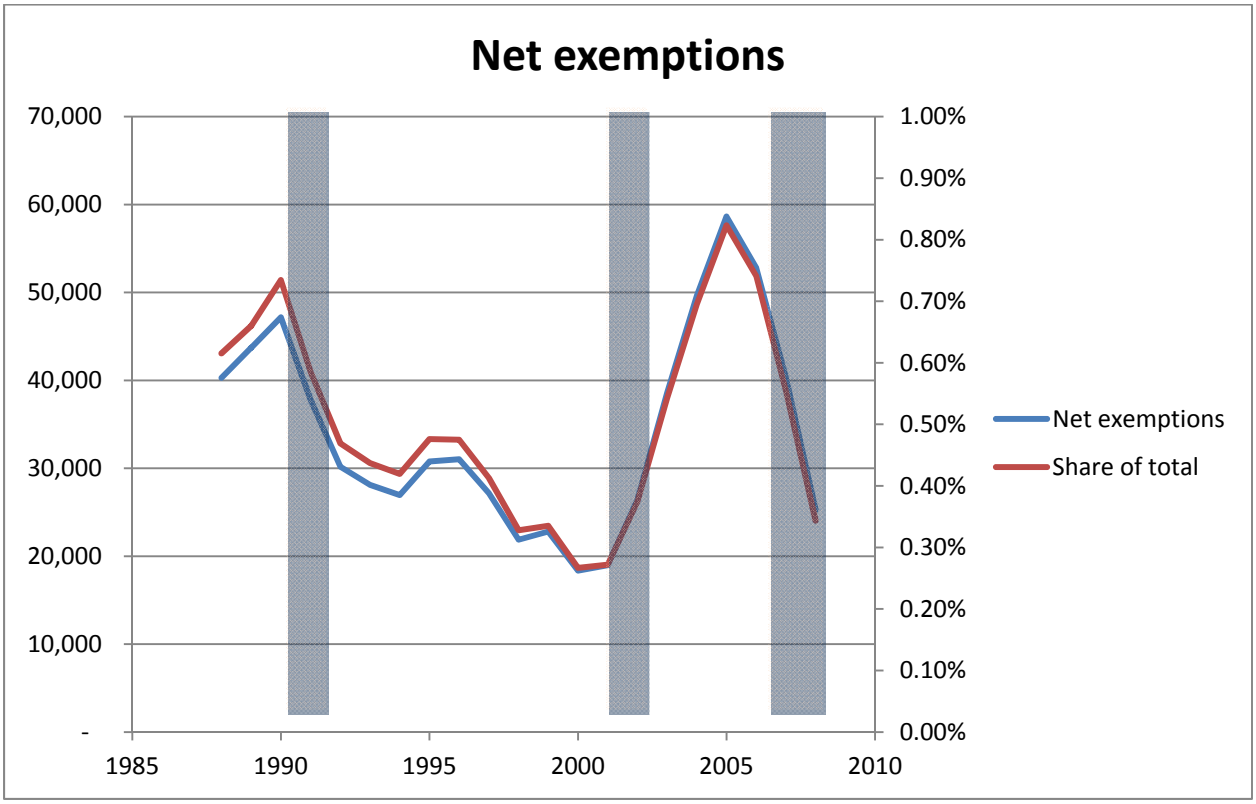


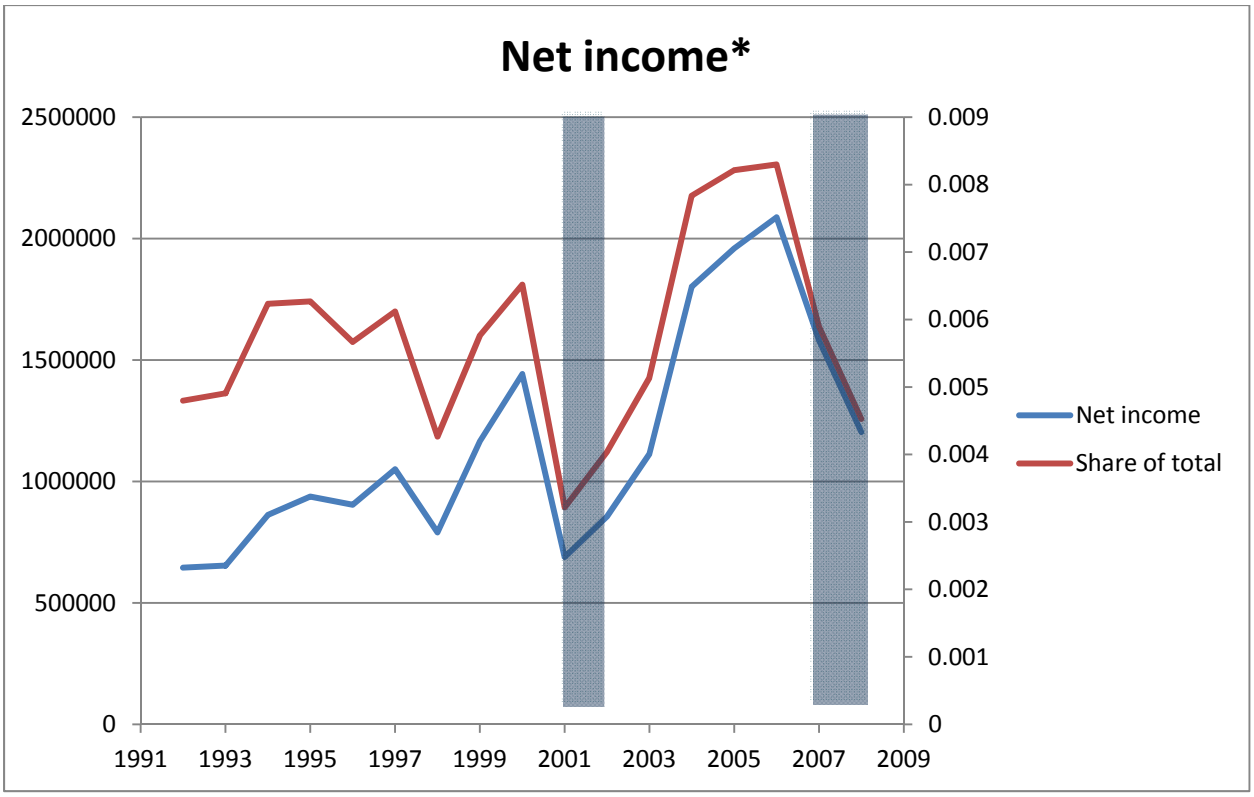
NJ 2011	NY 2012	PA 2011
1.4% > $0	4.0% > $0	3.07% > $0
1.75% > $20k	4.5% > $16k	
3.5% > $35k	5.25% > $22k	
5.525% > $40k	5.9% > $26k	
6.37% > $65k	6.85% > $40k	
8.97% > $500k		

Source: Tax Foundation (2011), NY State Legislature (2011).
http://public.leginfo.state.ny.us/menuf.cgi

Graph 2


Net returns
35,000
30,000
25,000
20,000
15,000
10,000
5,000
-
1.00%
0.90%
0.80%
0.70%
0.60%
0.50%
0.40%
0.30%
0.20%
0.10%
0.00%
1985
1990
1995
2000
2005
2010
Net returns
Net share of total


Net exemptions
70,000
60,000
50,000
40,000
30,000
20,000
10,000
-
1.00%
0.90%
0.80%
0.70%
0.60%
0.50%
0.40%
0.30%
0.20%
0.10%
0.00%
1985
1990
1995
2000
2005
2010
Net exemptions
Share of total

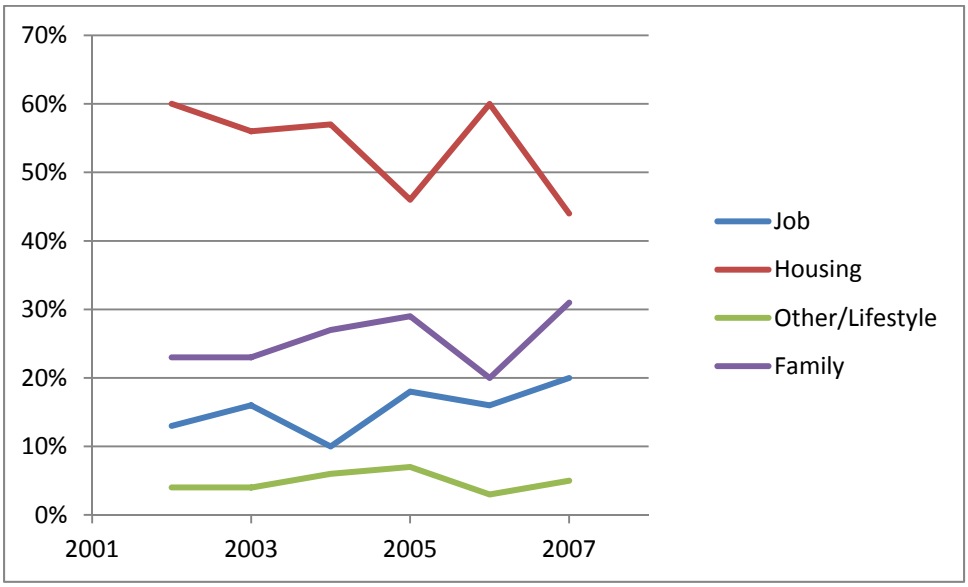


Source: Authors' calculations using IRS data. Income migration data is only available after 1990. Shaded regions indicate NBER-designated recessions.

Table 3. Reasons for leaving for working-age adults (18-54 year olds).

	NEW JERSEY ONLY (state leavers)						
Reason for move	2002	2003	2004	2005	2006	2007	2002-2007
Family	23%	23%	27%	29%	20%	31%	25%
Job	13%	16%	10%	18%	16%	20%	15%
Housing	60%	56%	57%	46%	60%	44%	55%
Other/Lifestyle	4%	4%	6%	7%	3%	5%	5%
Total movers	845,499	1,198,585	1,039,413	933,842	1,109,259	607,748	5,734,346

	US (all interstate migrants)						
Reason for move	2002	2003	2004	2005	2006	2007	2002-2007
Family	26%	26%	24%	28%	28%	30%	27%
Job	16%	14%	15%	15%	17%	20%	16%
Housing	52%	53%	54%	49%	48%	43%	50%
Other/Lifestyle	6%	6%	6%	7%	7%	7%	6%
Total movers	49.41 mil	49.20 mil	46.76 mil	47.86 mil	47.97 mil	36.4 mil	277.63 mil



Source: Authors' calculations using March CPS microdata (2002-2007). Sample restricted to working-age adults (18-54 year olds) who reported that they moved from one state to another in the past year.

For tables 4-5, (regression results, scenario estimates), please see attached Excel files.

Table 6

Scenario 1: +1% inc. in Average MTR

	Out-migration	In-migration	Net change
# Taxpayers (Change)	2,443	(1,737)	4,180
AGI (Change)	$ 298,678,221	$ (216,339,106)	$ 515,017,327

Scenario 2: +$10,000 in Average Housing Price

	Out-migration	In-migration	Net change
# Taxpayers (Change)	722	(474)	1,196
AGI (Change)	$ 43,986,973	$ 21,804,058	$ 65,791,031

Source: Authors' calculations using IRS data. Net change is calculated as out-migration minus in-migration. Out- and in-migration estimates are calculated using OLS regression 3 (Table 4).

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