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MERCATUS GRADUATE POLICY ESSAY

STATE FISCAL CONDITION AND INTERSTATE INCOME MIGRATION

by Scott Eastman

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Abstract
This analysis compares income migration to two measures of state fiscal condition with a state-level data set. This analysis focuses particularly on tax- and expense-burden differences (measurements of fiscal condition) between pairs of states. These data have almost 7,000 pairs of states that serve as observations. Each observation (pair) has an origin state that lost income and a destination state that received income from 2002 to 2010. This analysis finds that destination states with lower expense burdens (defined as total government spending per capita) and tax burdens (defined as total taxes levied per capita) relative to origin states consistently elicited more income migration than destination states with higher expense and tax burdens. This is so even when differences in factors like crime, weather, population, per capita income, demographics (race and age), unemployment, the proportion of a state's industry devoted to natural resources, and tax code progressivity are controlled for. This analysis suggests state policymakers have control over at least one factor that affects migration patterns: the burden of government spending placed on taxpayers relative to other states.

Author Bio
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Acknowledgments
I would like to thank each of my Mercatus Graduate Policy Essay committee members for all the time they contributed. I thank Matt Mitchell for taking the time to become familiar with the econometric component of this analysis and for all the feedback that made this analysis possible. I thank Eileen Norcross for helping me better understand the fiscal solvency variables that are featured in this analysis and for helping me sort out the policy implications of this analysis. And I thank my committee chair, Jason Fichtner, for keeping this on track and most importantly for investing so much time teaching me about tax policy throughout my time as a Mercatus MA Fellow.

Contents

1. Introduction

The question of whether fiscal policy encourages migration has been a source of heated debate. In the debate's latest iteration, the American Legislative Exchange Council (ALEC) sparred with the Center for Budget and Policy Priorities (CBPP) over whether taxation affects migration decisions. The CBPP argued tax-rate differences have had little effect on migration and encouraged policymakers to stop cutting taxes and focus on funding services that contribute to the overall desirability of a location.[1] ALEC, on the other hand, argued that taxation affects migration by hampering economic growth, noting that businesses opt for states where they retain more after-tax income for business operations and that individuals subsequently migrate to states where businesses have located to take advantage of job opportunities.[2]

The following analysis contributes to this debate by comparing state fiscal conditions to measures of income migration between states. As figure 1 shows, personal income migrated from northeastern and midwestern states primarily to southeastern and western states from 2000 to 2010, with the large exception in the West being California. Figure 2 demonstrates the magnitude of this trend in dollar terms by showing the top 10 state-to-state income flows over a slightly shorter period, from 2002 to 2010. States like New York, New Jersey, Illinois, and California lost billions to states like Florida, Texas, and Arizona.

[1] Mazerov, Michael. "State Taxes Have a Negligible Impact on Americans' Interstate Moves." Center on Budget and Policy Priorities. May 21, 2014. Available at http://www.cbpp.org/cms/?fa=view&id=4141. The CBPP argues migration to southwestern and southern states in recent years was a function of job opportunities, cost of living differences, and weather.

[2] Williams, Jonathan, Will Freeland, and Ben Wilterdink. "Taxes Do Matter to Migration." American Legislative Exchange Council. May 12, 2014. Available at http://www.americanlegislator.org/policy-matters/. ALEC shows that the 10 states drawing the most migration over the past decade have seen an average job growth of 11.1 percent, compared to 1.8 percent for the 10 states losing the most people. The top 10 inflow states have received an average of 220,779 people and seen an average growth in Gross State Product (GSP) of 65.2 percent during this same time period, while the 10 states losing the most saw 411,176 taxpayers leave and GSP increase by only 45.7 percent.

These figures show a trend in income migration between states. The rest of this analysis describes this trend with an econometric model that explains how differences in fiscal climates affect income migration. In particular, this analysis shows that income migrated most often to lower tax and lower spending states.

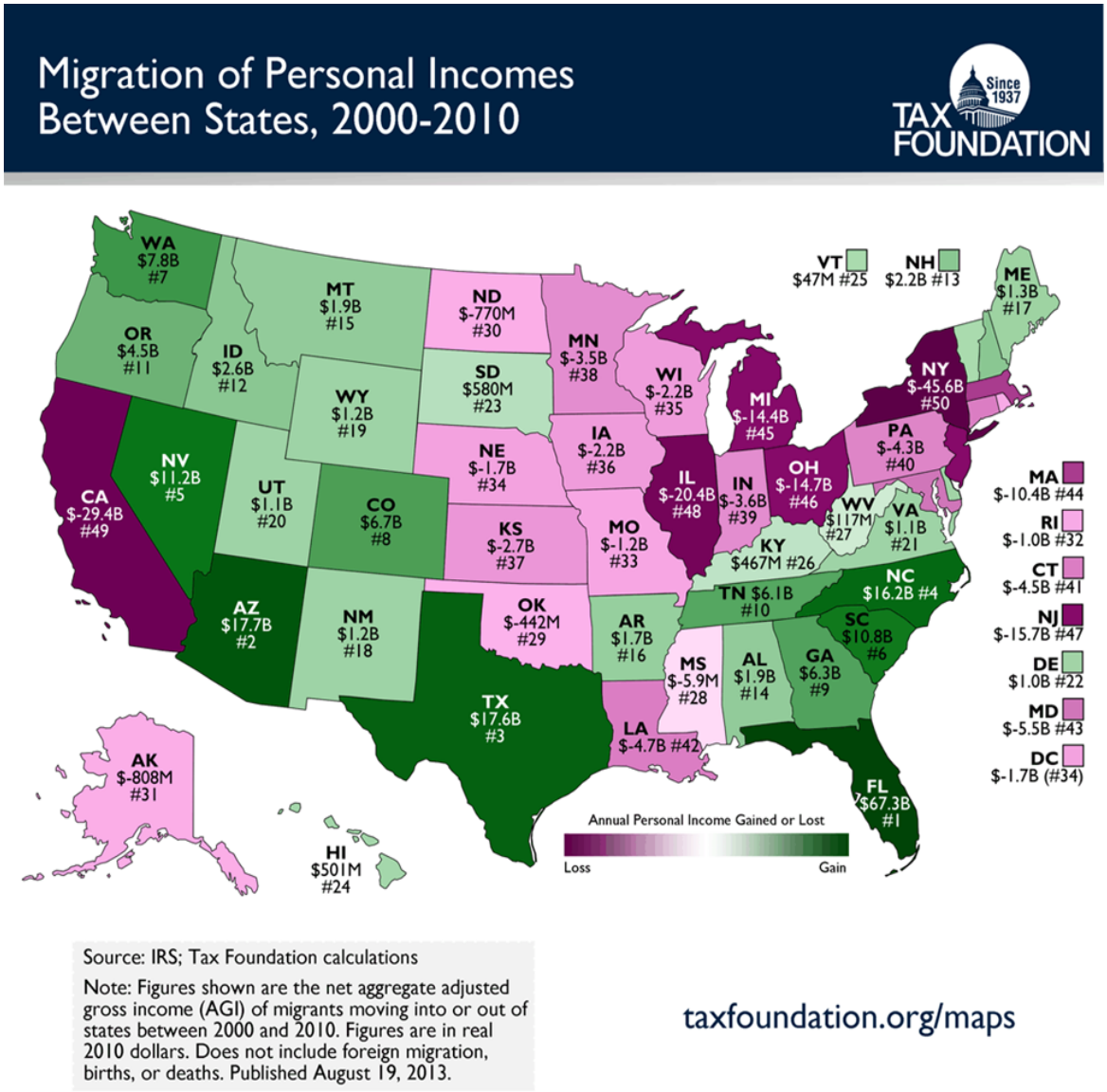

Figure 1

Top 10 Income Migration Flows Between States, 2002–2010		
Origin State	Destination State	Net Income Gain
1. New York	Florida	$10.7 Billion
2. New Jersey	Florida	$6.79 Billion
3. New York	New Jersey	$6.78 Billion
4. California	Nevada	$4.79 Billion
5. California	Arizona	$4.96 Billion
6. California	Texas	$4.28 Billion
7. Ohio	Florida	$3.95 Billion
8. Illinois	Florida	$3.94 Billion
9. Pennsylvania	Florida	$3.81 Billion
10. California	Oregon	$3.6 Billion

Figure 2

2. Literature Review: Fiscal Policy and Migration

Migrants respond to both the taxation policies and the spending policies of state governments. Each service government provides requires resources that increase the burden placed on taxpayers. As the burden of government spending grows, the incentive for taxpayers to migrate to less burdensome jurisdictions increases, particularly where there are large differences in burdens between jurisdictions.[3] This mobility promotes efficient service provision by encouraging governments to compete for taxpayers, who are able to choose which jurisdiction

[3] The efficient markets hypothesis, which normally is applied to financial markets, may be relevant to how migrants react to fiscal conditions. It would predict that taxpayers respond to abrupt changes in expense and tax burdens more than slow, steady growth in burdens. See Burton G. Malkiel. "The Efficient Market Hypothesis and Its Critics." Journal of Economic Perspectives 17.1 (2003): 59–82. Available at http://www.vixek.com/Efficient%20Market%20Hypothesis%20and%20its%20Critics%20-%20Malkiel.pdf. The theory of fiscal illusion might also explain why abrupt changes are more likely to spur migration. This theory extends the idea of rational ignorance to the individual's perception of fiscal policy. Complicated tax and spending policies make it more difficult for taxpayers to discern the true cost of public services, contributing to growth in service provision as taxpayers fail to recognize the growing burden of fiscal policy as it accumulates. Abrupt changes, however, are more likely to alert people to the burdens of fiscal policy and thus spur migration. See James M. Buchanan and Richard E. Wagner. *Democracy in Deficit*. Academic Press, 1977. Available at http://www.econlib.org/library/Buchanan/buchCv8Cover.html.

they want to support.[4] Governments that fail to maintain a tax base risk failure because of an inability to extract resources to fund government spending.[5]

Research shows that people migrate out of higher tax states into lower tax states. Vedder finds that in every state that increases its personal income-tax rate by 1 percentage point, migration into that state drops by 100,000 people.[6] The New Jersey Department of the Treasury finds that a 2004 "millionaires" tax cost the state $2.5 billion in tax revenue, which left along with 20,000 residents.[7] Yakovlev finds higher personal income-tax rates to be associated with an increased probability of residents moving to a state with a lower personal income-tax rate.[8] Ruger and Sorens find their measures of fiscal freedom to be positively associated with net migration, meaning that states with relatively lower tax burdens, levels of government employment, and levels of government spending and debt draw more migrants than states with less-free fiscal policy.[9] Davies and Pulito focus particularly on how tax-rate differences between states affect migration decisions and find that, for a period spanning 2006 to 2009, as high marginal income-tax rates increased in surrounding states, a "home state" with a lower relative rate experienced net in-migration.[10]

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[4] Tiebout, Charles M. "A Pure Theory of Local Expenditures." Journal of Political Economy 64.5 (1956): 416–424.
[5] See Charles Levine's discussion of "environmental entropy." Charles H. Levine. "Organizational Decline and Cutback Management." Public Administration Review 38.4 (1978): 316–325.
[6] Vedder, Richard. "Taxation and Migration." Taxpayers Network. Available at http://www.taxpayersnetwork.org/_rainbow/documents/taxation%20and%20migration.pdf.
[7] Lai, A., R. Cohen, and C. Steindel. "The Effect of Marginal Tax Rates on Interstate Migration in the U.S." New Jersey Department of the Treasury, Oct. 2011.
[8] Yakovlev, Pavel A. "State Economic Prosperity and Taxation." Mercatus Center at George Mason University. July 10, 2014. Available at http://mercatus.org/publication/state-economic-prosperity-and-taxation.
[9] Ruger, William P., and Jason Sorens. "Freedom in the Fifty States: 2013 Edition." Mercatus Center. 2013. Available at http://freedominthe50states.org/. The authors compare net interstate migration 2000–2010 to their measures of fiscal freedom, finding that migrants flow from states with less free fiscal policy to states with more free fiscal policy at statistically significant levels.
[10] Davies, Antony, and John Pulito. "Tax Rates and Migration." Mercatus Working Paper No. 11–31, 2011. The model employed by Davies and Pulito is of particular interest for this analysis. In this model, the authors examine how tax-rate differences between nearly 10,000 pairs of states affected migration patterns 2006–2009. Davies and Pulito use an ordinary least squares, panel data model that employs state-specific fixed effects to control for

Bakija and Slemrod investigate the effect of inheritance and estate taxes on the migration of wealthy elderly taxpayers, finding that a 1 percentage point increase in inheritance and estate taxes in a state was associated with a 1.4 to 2.7 percent reduction in the number of federal estate-tax returns filed in that state, with the effect increasing as the size of an estate increased.[11] Coomes and Hoyt also find a negative relationship between state income-tax rates and migration in multistate metropolitan areas. These are areas that have cities along state borders, allowing individuals to move relatively easily from one jurisdiction to another with little disruption, so they can easily exploit differences in tax policy. The authors find that large differences in state income-tax rates within multistate metropolitan areas affect migration.[12]

There are other factors that drive migration that must be considered in addition to fiscal policy. Distance increases both the psychic and tangible costs of relocation, such as the cost of obtaining information about potential relocation spots, which generates uncertainty and discourages relocation. Individuals also consider factors like wages in the destination state, and they react to factors like job loss in their current place of residence, as well as other factors like the presence or absence of family ties in their origin and destination.[13] Individuals also self-select

unobserved idiosyncratic differences between states, running their regression with dummy variables for each state. For a detailed discussion of this model, refer to the appendix.

[11] Bakija, Jon, and Joel Slemrod. "Do the Rich Flee from High State Taxes? Evidence from Federal Estate Tax Returns." National Bureau of Economic Research Working Paper No. 10645. 2004. Available at http://www.nber.org/papers/w10645.pdf. The authors find that returns from estates over $5 million declined by almost 4 percent in states that raised inheritance or estate taxes by 1 percent.

[12] Coomes, Paul A., and William H. Hoyt. "Income Taxes and the Destination of Movers to Multistate MSAs." Journal of Urban Economics 63.3 (2008): 920–937.

[13] Greenwood, Michael J. "Research on Internal Migration in the United States: A Survey." Journal of Economic Literature 13.2 (1975): 397–433. Importantly, such factors as wages and job loss can be the result of government institutions or rules. These may be tax policies, labor laws, or a number of other rules that can make a state attractive (or not attractive) in its job opportunities.

into areas offering the highest returns for their skills, particularly when they reside in areas that offer poor returns for their skill endowment.[14]

Molloy, Smith, and Wozniak note some characteristics associated with people who are more likely to move than others. They claim the "propensity to migrate" increases with education but falls with age. Minorities and foreign-born persons, as well as households with one child, are also less inclined to move, while renters (as opposed to homeowners) and unemployed persons are more likely to move.[15]

Research by Greg Kaplan and Sam Schulhofer-Wohl also notes factors that have contributed to a decline in migration. Technology (e.g., telecommuting) has decreased the need to relocate for a job. Information technology and cheaper travel have reduced the cost of making informed migration decisions, resulting in less migration. In other words, it is now easier for people to travel to and learn about places, and people are finding they do not wish to move after all. Decreasing migration might also be a function of increased productivity within occupations and across states, which means people can realize increased productivity and higher incomes without migrating.[16]

[14] Borjas, George J., Stephen G. Bronars, and Stephen J. Trejo. "Self-Selection and Internal Migration in the United States." Journal of Urban Economics 32.2 (1992): 159–185.
[15] Molloy, Raven, Christopher L. Smith, and Abigail K. Wozniak. "Internal Migration in the United States." National Bureau of Economic Research Working Paper No. 17307, 2011.
[16] Kaplan, Greg, and Sam Schulhofer-Wohl. "Understanding the Long-Run Decline in Interstate Migration." National Bureau of Economic Research Working Paper No. 18507, 2012. The authors argue gross migration has declined because of a drop in the "geographic specificity of returns to occupations," in turn because productivity is equalizing within occupations and across states. See also Raven Molloy, Christopher L. Smith, and Abigail K. Wozniak. "Internal Migration in the United States." National Bureau of Economic Research Working Paper No. 17307, 2011.

3. Data

To examine income migration patterns, I use data from the IRS's Statistics on Income database.[17] The IRS tracks several migration measures using tax-return data for each calendar year, which enables me to measure net income migration flows between states. The period I examine is from 2002 to 2010.[18]

The independent variables of interest—government expense and tax burdens—are part of a set of "service-level solvency" measures that indicate the burden a state's taxation and spending policies place on taxpayers.[19] These measurements were made possible by the Governmental Accounting Standards Board's (GASB) Statement No. 34, which requires state and local governments to report information that can be used to assess the current and future fiscal health of states on a "government-wide" basis.[20] This information can be found annually in Comprehensive Annual Financial Reports (CAFRs) for each state. This analysis focuses on tax and expense burdens, defined as total taxes per person and total expenses per person. These measurements are per capita figures, with higher per capita values theoretically signifying lower service-level solvency and a reduced capacity to provide services relative to states with lower

[17] Tax Foundation. "State to State Migration Data." Available at http://interactive.taxfoundation.org/migration/. This tool aggregates migration data and makes it available in a format that is far easier to work with than the raw IRS data. For ease of collection, I used this tool.

[18] In this analysis, I will examine only the effect expense and tax burdens have on income migration, although I provide an analysis of how these variables affect the migration of households and individuals in an appendix.

[19] Wang, Xiaohu, Lynda Dennis, and Yuan Sen Jeff Tu. "Measuring Financial Condition: A Study of US States." Public Budgeting & Finance 27.2 (2007): 1–21. P. 4. Abstract available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=985696. Another variable, revenue burden, is also contained in this service-level solvency category, but I do not use it in this analysis because I want to focus strictly on taxes states levy and expenses states pay, whereas revenue includes such funds as grants from the federal government.

[20] This government-wide requirement is an improvement from past methods of reporting financial condition that focused only on individual funds. While individual funds may be an accurate measure of financial condition for small organizations, individual funds (such as general revenue funds) represent small portions of a state government's total spending. Wang's measurements also gauge a government's ability to generate liquid resources and cash to pay for current liabilities (cash solvency), its ability to generate revenue to sustain current services (budget solvency), and the effect a government's current obligations will have on future resources (long-run solvency).

burdens.[21] Using expense and tax burdens, it is possible to measure the size of each state government and the burden it places on its population and compare measures of migration to the differences in burdens across states. This allows us to see whether people and their income migrate more frequently to states with lower burdens. Data on taxes and expenses were collected from CAFRs from each state, and subsequently divided by population.[22] These data span 48 states (they exclude the states of Alaska and Hawaii, as well as the District of Columbia) over fiscal years 2002–2010.[23]

The fact that government expense and tax burdens are measured in fiscal years, as opposed to the calendar years used with migration measures and control variables, calls for some adjustment. I deal with this mismatch by lagging the tax and expense burden variables by at least one fiscal year and up to five fiscal years to ensure the migration of income is being compared to past burdens as much as possible. It would not make much sense to compare migration to expense and tax burdens that occurred after migration.[24]

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[21] For a study that utilized these service-level solvency variables (as well as the other variables created by Wang, Dennis, and Tu) to rank the fiscal condition of states, see Arnett, Sarah. "State Fiscal Condition: Ranking the Fifty States." Mercatus Working Paper No. 14–02, January 2014. Available at http://mercatus.org/sites/default/files/Arnett_StateFiscalCondition_v1.pdf.

[22] These variables were calculated with taxation and spending amounts in thousands of dollars, and subsequently divided by the population of each state. This results in a smaller per capita figure but does not limit the use of these per capita figures to assess and compare the relative sizes of state governments and the burden these governments place on their respective populations.

[23] Alaska was omitted because of concerns that it was subsidizing people to move there, which would have skewed the effect of these service-level solvency variables on migration relative to other states. Hawaii was omitted because of its distant location, and the District of Columbia was omitted because it did not produce a CAFR before 2006, meaning it would have far fewer data points than the rest of the states analyzed. Restricting studies of interstate migration to the 48 contiguous states is also standard. See Karen Smith Conway and Andrew J. Houtenville. "Elderly Migration and State Fiscal Policy: Evidence from the 1990 Census Migration Flows." National Tax Journal 54.1 (2001): 103–123. At p. 107.

[24] The fiscal year ends on June 30 in all but four states. Michigan and Alabama have fiscal years that end on September 30, New York's fiscal year ends on March 31, and Texas's fiscal year ends on August 31. See National Conference of State Legislators, "Quick Reference Fiscal Table," posted July 2000, reviewed July 13, 2012. Available at http://www.ncsl.org/research/fiscal-policy/basic-information-about-which-states-have-major-ta.aspx.

Ten control variables are used in this analysis, all of which are measured in calendar years. Data from the Tax Foundation on the number of income-tax brackets in each state are used to account for varying levels of progressivity in state tax codes.[25] State population data were collected from CAFRs to control for population-size differences between states (as well as to put migration measures in per capita terms).[26] Data on Gross Domestic Product by industry and by state, as well as state personal income per capita, are available from the Bureau of Economic Analysis, and are used to control for differences in the amount of industry dedicated to natural resources and mining and for per capita income differences between states.[27] Data from the Bureau of Labor Statistics that track unemployment in the civilian noninstitutional population are used to control for unemployment-rate differences between states.[28] Census Bureau data are used to control for demographic differences between states,[29] and data from *The Disaster Center Crime Pages*, which collects crime data from several government sources, including the Department of Justice's Bureau of Justice Statistics and the Federal Bureau of Investigation's *Uniform Crime Reports*, are used to control for differences in crime rates between states.[30] Data from the National Oceanic and Atmospheric Administration are used to control for weather differences between states, specifically the difference in average January temperatures.[31]

[25] Tax Foundation, "State Individual Income Tax Rates, 2000–2014." April 1, 2013. Available at http://taxfoundation.org/article/state-individual-income-tax-rates.
[26] Population data is available in other places, but I used population numbers for CAFRs to compute expense and tax burdens.
[27] Bureau of Economic Analysis. "Regional Data." Available at http://www.bea.gov/iTable/index_regional.cfm.
[28] Bureau of Labor Statistics. "Civilian Non-Institutional Population and Associated Rate and Ratio Measures for Model-Based Areas." Available at http://www.bls.gov/lau/rdscnp16.htm.
[29] Historical race and age data from the Census Bureau can be found at http://www.census.gov/popest/data/historical/index.html.
[30] Disaster Center Crime Pages. Available at http://www.disastercenter.com/crime/. The Index value that reports the total number of reported crimes per 100,000 people for each state is used to account for crime differences.
[31] National Oceanic and Atmospheric Administration. "Climatological Rankings." Available at http://www.ncdc.noaa.gov/temp-and-precip/climatological-rankings/index.php?periods%5B%5D=1&parameter=tavg&state=4&div=0&month=1&year=2002#ranks-form.

4. Model

Instead of focusing on tax-rate differentials, this analysis focuses on how differences in expense and tax burdens between states affected income migration from 2002 to 2010. These data are broken into pairwise observations providing between 3,056 and 6,775 observations, depending on whether the model lags tax and expense burdens by one, two, three, four, or five fiscal years. Income migration is regressed separately on expense and tax burdens. Regressions are run on both the level of income migration and the natural log of income migration. Running regressions on the natural log of income migration enables a percentage-change interpretation and adjusts for the skewed nature of the data in level form. Taking the natural log rather than the levels of income migration also minimizes the importance of outliers. Below are two scatter plots that show the relationship between income migration and expense burdens (lagged by five years): one for when migration is measured in levels and another for when the natural log of income migration is taken. The natural log of income migration is more normal, whereas the levels scatter plot is skewed to the left.

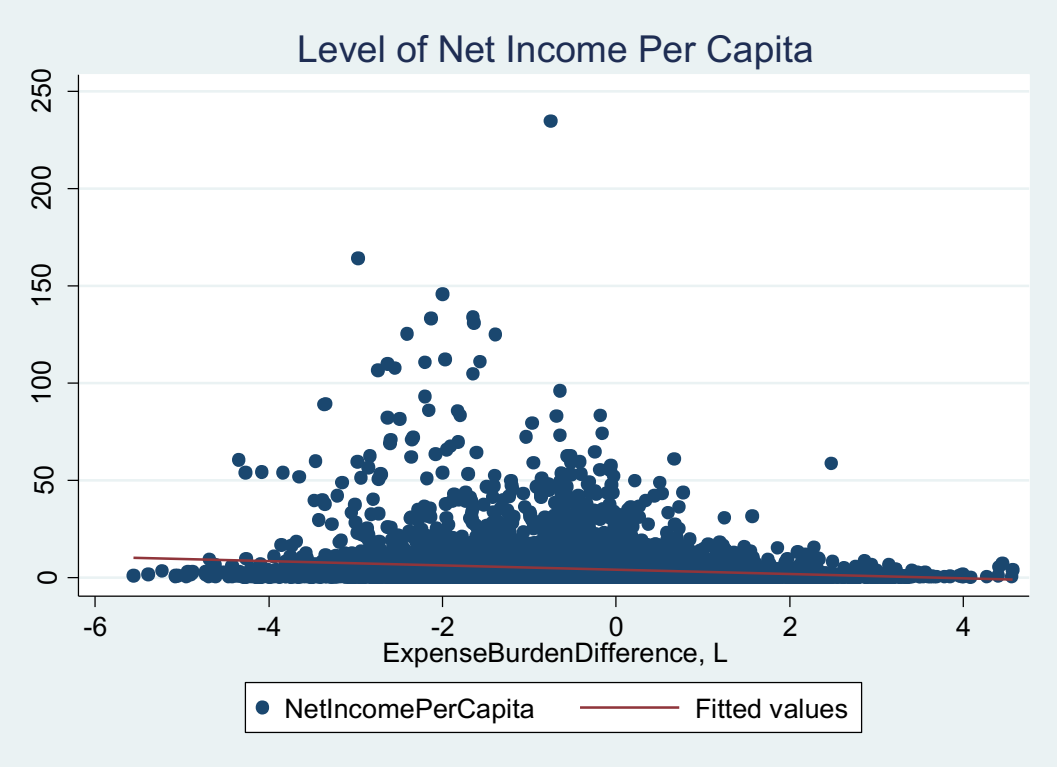
Level of Net Income Per Capita
250
200
150
100
50
0
-6
-4
-2
0
2
4
ExpenseBurdenDifference, L
NetIncomePerCapita
Fitted values

Chart 1

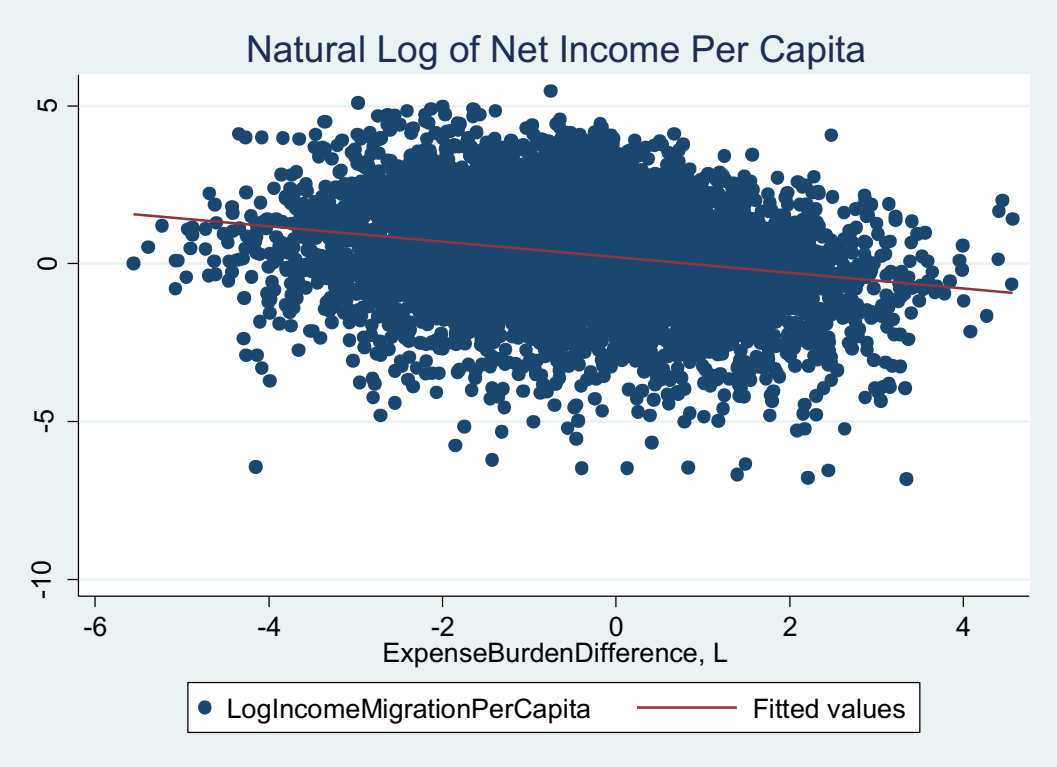

Chart 2

Each observation includes both a destination state and an origin state, which are denoted in the equations below by subscripts *D* and *O*. Year is denoted by subscript *T*. *M* stands for migration of income into the destination state, and *Ln(M)* stands for the natural log of income migration. Income migration in each year is divided by the population of the origin state that lost income in the same year income migrated.[32] *E* stands for expense burden, and *T* stands for tax burden, while $\beta 1$ is the coefficient for expense burden in equations 1 and 2 and for tax burden in equations 3 and 4. For each equation, both the expense burden and tax burden variables are lagged by one, two, three, four, and five years. For both burden variables, the subscript *T* is

[32] Population estimates for states were also obtained from Comprehensive Annual Financial Reports. These states generally obtain data from the US Census Bureau, but some of the population estimates differed between CAFRs and the Census Bureau, although the differences were small.

subtracted by *t*, which signifies the burden is being lagged. This looks like $\beta_1 \Delta T_{D,O,T-t}$ for tax burden and $\beta_1 \Delta E_{D,O,T-t}$ for expense burden. $\mathbf{X}$ represents the 10 control variables discussed in the data section (such as the difference in unemployment rate between states) and the Δ symbol stands for the difference between these measures for each pairwise observation. Putting these together, you get a vector of control variables denoted by $\mathbf{\Delta X_{D,O,T} \beta}$, where $\mathbf{\beta}$ is the coefficient on each control variable. Differences are generated by subtracting the origin-state value from the destination-state value so that income migration is regressed on the differences between each state pair's expense and tax burdens, as well as the difference for each control variable. The term $\mathbf{\Theta_{O-1}}$ represents a vector of dummy variables for each origin state (minus one state to avoid perfect collinearity), which I use to provide state-specific fixed effects, while $\mathbf{\Omega_{T-1}}$ is a vector of dummy variables for each year (again, minus one year) to provide for year fixed effects. The expression $\psi_{D,O,T}$ is the error term. Only expense and tax burdens are lagged, and control variables are contemporaneous with migration flows. Expense and tax burdens are highly correlated, so they are run in separate regression models to ensure the effect of each burden on migration is isolated as best as possible.[33]

The models used are provided below:

Equation 1: $M_{D,O,T} = \alpha + \beta_1 \Delta E_{D,O,T-t} + \mathbf{\Delta X_{D,O,T} \beta} + \mathbf{\Theta_{O-1}} + \mathbf{\Omega_{T-1}} + \psi_{D,O,T}$

Equation 2: $Ln(M)_{D,O,T} = \alpha + \beta_1 \Delta E_{D,O,T-t} + \mathbf{\Delta X_{D,O,T} \beta} + \mathbf{\Theta_{O-1}} + \mathbf{\Omega_{T-1}} + \psi_{D,O,T}$

[33] See Wang, Xiaohu, Lynda Dennis, and Yuan Sen Jeff Tu. "Measuring Financial Condition: A Study of US States." Public Budgeting & Finance 27.2 (2007): 1–21. At pp. 10 and 15. The authors note that all of their variables measuring financial condition "should be correlated to ensure that they can be used to measure the same concept"—in this case, financial condition among states. They find their service-level solvency variables (including expense burdens and tax burdens) to be correlated.

Equation 3: $M_{D,O,T} = \alpha + \beta_1 \Delta T_{D,O,T-t} + \mathbf{\Delta X_{D,O,T}\beta} + \mathbf{\Theta_{O-1}} + \mathbf{\Omega_{T-1}} + \psi_{D,O,T}$

Equation 4: $Ln(M)_{D,O,T} = \alpha + \beta_1 \Delta T_{D,O,T-t} + \mathbf{\Delta X_{D,O,T}\beta} + \mathbf{\Theta_{O-1}} + \mathbf{\Omega_{T-1}} + \psi_{D,O,T}$

5. Results

The regressions show a negative relationship between increasing tax and expense burdens and income migration. That is, as the tax and expense burdens of destination states increased relative to the tax and expense burdens of the origin states, income migration into the destination states decreased over the period.

Expense Burdens and Income Migration					
Regression Number	1	2	3	4	5
VARIABLES	Income	Income	Income	Income	Income
L.ExpenseBurdenDifference	-0.699***				
	(0.0908)				
L2.ExpenseBurdenDifference		-0.674***			
		(0.0994)			
L3.ExpenseBurdenDifference			-0.839***		
			(0.120)		
L4.ExpenseBurdenDifference				-0.938***	
				(0.128)	
L5.ExpenseBurdenDifference					-0.959***
					(0.133)
PopulationDifference	4.61e-07***	4.81e-07***	4.79e-07***	4.89e-07***	4.55e-07***
	(3.17e-08)	(3.51e-08)	(3.84e-08)	(4.11e-08)	(3.18e-08)
NaturalShareDifference	-0.0999***	-0.107***	-0.0864***	-0.0750***	-0.0751***
	(0.0130)	(0.0135)	(0.0140)	(0.0148)	(0.0141)
TaxBracketDifference	-0.307***	-0.338***	-0.348***	-0.348***	-0.283***
	(0.0401)	(0.0433)	(0.0470)	(0.0508)	(0.0486)
PersonalIncomeDifference	0.000231***	0.000242***	0.000241***	0.000200***	0.000189***
	(3.15e-05)	(3.36e-05)	(3.57e-05)	(3.50e-05)	(3.02e-05)
UnemploymentDifference	-0.905***	-0.999***	-0.932***	-0.881***	-0.546***
	(0.117)	(0.123)	(0.130)	(0.134)	(0.112)
HispanicDifference	0.0338***	0.0290***	0.0298***	0.0354***	0.0403***
	(0.00939)	(0.00993)	(0.0108)	(0.0111)	(0.0117)
AfricanAmericanDifference	-0.0714***	-0.0662***	-0.0824***	-0.0542***	-0.0650***
	(0.0135)	(0.0145)	(0.0172)	(0.0170)	(0.0161)
Over65Difference	1.776***	1.800***	1.813***	1.697***	1.590***
	(0.133)	(0.150)	(0.166)	(0.171)	(0.171)
JanuaryTemperatureDifference	0.179***	0.199***	0.207***	0.178***	0.152***
	(0.0217)	(0.0245)	(0.0278)	(0.0261)	(0.0228)
CrimeDifference	0.000667***	0.000454**	0.000488***	0.000497***	0.000489***
	(0.000155)	(0.000177)	(0.000183)	(0.000189)	(0.000185)
Constant	3.598***	4.804***	2.141**	3.164***	1.897**
	(0.803)	(0.934)	(0.859)	(0.585)	(0.783)
State-Specific Fixed Effects	YES	YES	YES	YES	YES
Year Fixed Effects	YES	YES	YES	YES	YES
Observations	6,775	5,805	4,846	3,895	3,056
R-squared	0.317	0.324	0.332	0.343	0.405
Robust standard errors in parentheses					
*** p<0.01, ** p<0.05, * p<0.1					

Table 1

Expense Burdens and Log Income					
Regression Number	6	7	8	9	10
VARIABLES	Log Income	Log Income	Log Income	Log Income	Log Income
L.ExpenseBurdenDifference	-0.189***				
	(0.0161)				
L2.ExpenseBurdenDifference		-0.181***			
		(0.0183)			
L3.ExpenseBurdenDifference			-0.183***		
			(0.0206)		
L4.ExpenseBurdenDifference				-0.190***	
				(0.0247)	
L5.ExpenseBurdenDifference					-0.213***
					(0.0280)
PopulationDifference	7.80e-08***	8.11e-08***	7.77e-08***	8.07e-08***	7.79e-08***
	(3.46e-09)	(3.67e-09)	(4.15e-09)	(4.67e-09)	(5.34e-09)
NaturalShareDifference	-0.0278***	-0.0249***	-0.0259***	-0.0272***	-0.0263***
	(0.00329)	(0.00337)	(0.00361)	(0.00377)	(0.00427)
TaxBracketDifference	-0.0157**	-0.0140**	-0.0122	-0.0182**	-0.00520
	(0.00650)	(0.00699)	(0.00779)	(0.00921)	(0.0101)
PersonalIncomeDifference	5.75e-05***	5.98e-05***	6.48e-05***	5.64e-05***	6.57e-05***
	(4.96e-06)	(5.31e-06)	(5.61e-06)	(6.11e-06)	(6.47e-06)
UnemploymentDifference	-0.0206	-0.0213	0.000975	0.0136	0.0407**
	(0.0155)	(0.0158)	(0.0164)	(0.0183)	(0.0196)
HispanicDifference	0.00974***	0.00672***	0.00493**	0.00441*	0.00312
	(0.00203)	(0.00221)	(0.00237)	(0.00260)	(0.00294)
AfricanAmericanDifference	0.000845	-0.00163	-0.00738**	-0.00792**	-0.0176***
	(0.00266)	(0.00289)	(0.00328)	(0.00368)	(0.00414)
Over65Difference	0.0721***	0.0558***	0.0392***	0.0324**	0.0189
	(0.0104)	(0.0112)	(0.0129)	(0.0140)	(0.0158)
JanuaryTemperatureDifference	0.0116***	0.0139***	0.0177***	0.0166***	0.0214***
	(0.00278)	(0.00310)	(0.00351)	(0.00390)	(0.00462)
CrimeDifference	0.000359***	0.000372***	0.000401***	0.000406***	0.000428***
	(2.68e-05)	(3.09e-05)	(3.41e-05)	(3.86e-05)	(4.50e-05)
Constant	-0.638***	-0.311	-0.862***	-0.819***	-0.979***
	(0.175)	(0.205)	(0.207)	(0.198)	(0.208)
State-Specific Fixed Effects	YES	YES	YES	YES	YES
Year Fixed Effects	YES	YES	YES	YES	YES
Observations	6,775	5,805	4,846	3,895	3,056
R-squared	0.393	0.401	0.404	0.412	0.419
Robust standard errors in parentheses					
*** p<0.01, ** p<0.05, * p<0.1					

Table 2

Tax Burdens and Income Migration					
Regression Number	11	12	13	14	15
VARIABLES	Income	Income	Income	Income	Income
L.TaxBurdenDifference	-0.513***				
	(0.175)				
L2.TaxBurdenDifference		-0.286			
		(0.187)			
L3.TaxBurdenDifference			-0.334*		
			(0.202)		
L4.TaxBurdenDifference				-0.430**	
				(0.218)	
L5.TaxBurdenDifference					-0.483**
					(0.232)
PopulationDifference	4.82e-07***	5.01e-07***	4.98e-07***	5.08e-07***	4.70e-07***
	(3.11e-08)	(3.48e-08)	(3.84e-08)	(4.22e-08)	(3.32e-08)
NaturalShareDifference	-0.120***	-0.128***	-0.106***	-0.0893***	-0.0908***
	(0.0150)	(0.0158)	(0.0162)	(0.0165)	(0.0151)
TaxBracketDifference	-0.353***	-0.395***	-0.408***	-0.417***	-0.356***
	(0.0403)	(0.0447)	(0.0477)	(0.0536)	(0.0513)
PersonalIncomeDifference	0.000213***	0.000214***	0.000216***	0.000177***	0.000172***
	(3.10e-05)	(3.37e-05)	(3.60e-05)	(3.59e-05)	(3.23e-05)
UnemploymentDifference	-1.053***	-1.118***	-1.028***	-0.963***	-0.623***
	(0.115)	(0.125)	(0.133)	(0.139)	(0.118)
HispanicDifference	0.0122	0.00869	0.00673	0.0119	0.0173
	(0.00868)	(0.00915)	(0.0101)	(0.0103)	(0.0108)
AfricanAmericanDifference	-0.0820***	-0.0771***	-0.0933***	-0.0612***	-0.0752***
	(0.0137)	(0.0148)	(0.0176)	(0.0172)	(0.0162)
Over65Difference	1.669***	1.686***	1.672***	1.550***	1.443***
	(0.126)	(0.141)	(0.154)	(0.160)	(0.160)
JanuaryTemperatureDifference	0.188***	0.210***	0.221***	0.192***	0.171***
	(0.0222)	(0.0252)	(0.0288)	(0.0268)	(0.0235)
CrimeDifference	0.000768***	0.000533***	0.000575***	0.000582***	0.000562***
	(0.000152)	(0.000174)	(0.000180)	(0.000188)	(0.000185)
Constant	2.760***	3.938***	4.262***	1.870***	0.679
	(0.771)	(0.897)	(0.883)	(0.564)	(0.779)
State-Specific Fixed Effects	YES	YES	YES	YES	YES
Year Fixed Effects	YES	YES	YES	YES	YES
Observations	6,775	5,805	4,846	3,895	3,056
R-squared	0.314	0.321	0.328	0.337	0.398
Robust standard errors in parentheses					
*** p<0.01, ** p<0.05, * p<0.1					

Table 3

Tax Burdens and Log Income					
Regression Number	16	17	18	19	20
VARIABLES	Log Income	Log Income	Log Income	Log Income	Log Income
L.TaxBurdenDifference	-0.244***				
	(0.0390)				
L2.TaxBurdenDifference		-0.236***			
		(0.0430)			
L3.TaxBurdenDifference			-0.256***		
			(0.0483)		
L4.TaxBurdenDifference				-0.267***	
				(0.0538)	
L5.TaxBurdenDifference					-0.349***
					(0.0680)
PopulationDifference	8.22e-08***	8.45e-08***	7.96e-08***	8.21e-08***	7.90e-08***
	(3.49e-09)	(3.71e-09)	(4.20e-09)	(4.73e-09)	(5.45e-09)
NaturalShareDifference	-0.0292***	-0.0252***	-0.0240***	-0.0247***	-0.0254***
	(0.00343)	(0.00358)	(0.00387)	(0.00402)	(0.00435)
TaxBracketDifference	-0.0225***	-0.0215***	-0.0166**	-0.0237**	-0.0100
	(0.00656)	(0.00704)	(0.00780)	(0.00927)	(0.0102)
PersonalIncomeDifference	6.02e-05***	6.31e-05***	7.17e-05***	6.32e-05***	7.42e-05***
	(5.40e-06)	(5.84e-06)	(6.12e-06)	(6.79e-06)	(7.15e-06)
UnemploymentDifference	-0.0545***	-0.0411***	-0.00878	0.00852	0.0365*
	(0.0152)	(0.0157)	(0.0163)	(0.0181)	(0.0196)
HispanicDifference	0.00386*	0.00123	-0.000438	-0.000903	-0.00247
	(0.00198)	(0.00215)	(0.00233)	(0.00253)	(0.00289)
AfricanAmericanDifference	-0.00174	-0.00417	-0.00964***	-0.00994***	-0.0207***
	(0.00267)	(0.00289)	(0.00330)	(0.00369)	(0.00417)
Over65Difference	0.0499***	0.0345***	0.0188	0.0114	-0.00248
	(0.0104)	(0.0111)	(0.0128)	(0.0138)	(0.0155)
JanuaryTemperatureDifference	0.0135***	0.0158***	0.0202***	0.0195***	0.0254***
	(0.00280)	(0.00310)	(0.00351)	(0.00393)	(0.00463)
CrimeDifference	0.000387***	0.000396***	0.000424***	0.000425***	0.000447***
	(2.69e-05)	(3.10e-05)	(3.42e-05)	(3.87e-05)	(4.51e-05)
Constant	-0.827***	-0.483**	-0.614***	-1.009***	-1.194***
	(0.173)	(0.203)	(0.211)	(0.201)	(0.204)
State-Specific Fixed Effects	YES	YES	YES	YES	YES
Year Fixed Effects	YES	YES	YES	YES	YES
Observations	6,775	5,805	4,846	3,895	3,056
R-squared	0.386	0.395	0.399	0.408	0.415
Robust standard errors in parentheses					
*** p<0.01, ** p<0.05, * p<0.1					

Table 4

Summary Statistics

Variable	Observation	Mean	Standard Deviation	Minimum	Maximum
NetIncomePerCapita	10152	3.792061	9.385367	0	234.5411
LogIncomeMigrationPerCapita	10150	0.039814	1.694336	-8.6548	5.457631
ExpenseBurdenDifference	10152	-0.3445	1.558279	-5.68772	5.030799
TaxBurdenDifference	10152	-0.16849	0.8022909	-3.93423	3.889067
PopulationDifference	10152	-1164341	9362585	-3.68E+07	3.67E+07
NaturalShareDifference	10152	1.324206	7.428854	-39.7997	40.68332
TaxBracketDifference	9024	-0.13564	3.981254	-10	10
PersonalIncomeDifference	10152	-2054.33	6938.863	-26389	22083
UnemploymentDifference	10152	-0.07878	1.610051	-9.6	7.5
HispanicDifference	10152	1.153321	13.6538	-43.7679	44.32125
AfricanAmericanDifference	10152	0.084024	13.62638	-36.3251	36.43007
Over65Difference	9024	-0.20589	2.142749	-8.21977	8.488168
JanuaryTemperatureDifference	10231	3.840074	15.66906	-66	63.1
CrimeDifference	9021	372.9887	1212.812	-4064	4353.9

Table 5

For instance, the average destination state received $3.79 per capita in income migration over the period. The model based on equation 1 (shown in table 1) predicts that if the average destination state's expense burden increased by one standard deviation relative to the origin state one fiscal year prior to migration (regression 1), the average destination state would see income migration decrease by $1.09 per capita, decreasing income migration to $2.70 per capita, ceteris paribus.[34] This effect generally increases as expense burden is lagged by additional years. Regression 5 predicts that a one standard deviation increase in the average destination state's expense burden relative to the origin state, five fiscal years prior to migration, would reduce income migration by $1.50, to approximately $2.29 per capita.[35]

The effect of tax burdens on the level of income migration (equation 3, shown in table 3) moves in the same direction, although the magnitude of the effect is smaller and the estimations

[34] 1.56 x –$.70 = –$1.09. Then, $3.79 – $1.09 = $2.70. Numbers are rounded at the second decimal place. Values for all these variables can be found in the summary statistics.
[35] 1.56 x –$.96 = –$1.50. Then, $3.79 – $1.09 = $2.29.

are less significant (the estimations of expense burdens were statistically significant at the 99 percent level for regressions 1–5, whereas only regression 11 is statistically significant at the 99 percent level for tax burdens). Also, lagging tax burdens yields a smaller coefficient than the one–fiscal year lagged model. Regression 11 predicts that a one standard deviation increase in the tax burden of the average destination state relative to the origin state would reduce income migration by $0.41, to $3.38 per capita.[36] Regression 15 predicts that a one standard deviation increase in the tax burden of the destination state relative to the origin state five years prior to migration would reduce income migration by $0.38, to $3.41 per capita.[37]

There are two variables with coefficients that consistently meet or exceed the coefficients of expense and tax burdens: differences in unemployment rate between destination states and origin states, and differences in the share of the population over age 65. Even so, expense burdens have a larger coefficient than unemployment rate in both the four– and five– fiscal year lagged models (regression 4 and regression 5). Also, in regressions 12 and 13, the difference in income-tax brackets between states has a larger coefficient and is more statistically significant than the tax burden variable, and the coefficients for unemployment-rate differences and the difference in population over 65 are larger than the coefficient on tax burdens in regressions 11 through 15.

Taken together, both expense and tax-burden differences generally have a statistically significant effect on income migration levels, although expense-burden differences at the state level have a larger effect on income migration levels than do tax burdens. The magnitude of this effect is large compared to differences in crime, weather, personal income per capita, natural resource exploitation, and race composition between states but is overshadowed by differences in

[36] .80 x –$.51 = –$.41. Then, $3.79 – $.41 = $3.38.
[37] .80 x –$.48 = $.38. Then, $3.79 – $.38 = $3.41.

the unemployment rate and prevalence of older people between states. Also, lagging expense and tax burdens generally increases the effect expense and tax burdens have on the level of income migration, and these variables generally remain statistically significant.

The log of income migration (equation 2 and equation 4, tables 2 and 4) shows that increases in burdens have a larger percentage-change effect than increases in any other variable. Regressions predict that increases in the average destination states' expense and tax burden relative to the origin state yield a larger percentage change in income per capita than does any other variable.

Again, take the average state. The average destination state saw a 3.9 percent increase in income migration over this period. Using the coefficient for percentage change in regression 6, the regression based on equation 2 predicts that a one standard deviation increase in the destination states' expense burden relative to the origin states' expense burden one fiscal year prior to migration would result in a 30 percent decrease in income migration into the destination state.[38] This result increases when expense burdens are lagged by five fiscal years (regression 10), in which case a one standard deviation increase in the destination state's expense burden would decrease income migration by 33 percent.

The same pattern holds for tax burdens.[39] A one standard deviation increase in the destination state's tax burden relative to the origin state's one year prior to migration (regression 16, based on equation 4) would decrease income migration by 19 percent,[40] whereas a one standard deviation increase five years prior to migration would decrease income migration by 28 percent (regression 20).[41] Comparing these percentage changes to the average for all destination

[38] 1.56 x –.19 = –.30 or –30%.
[39] 1.56 x –.21 = –.33 or –33%.
[40] .80 x –.24 = –.19 or –19%.
[41] .80 x –.35 = –.28 or –28%.

states is important. Again, the average destination state in this period actually saw a 3.9 percent increase in income migration per capita. These regressions show that increasing expense and tax burdens by one standard deviation quickly reduces the income migrating into these destination states.

It is important to note that percentage changes say nothing about the importance of one variable over another in terms of level effects, and as the discussion of income migration levels above shows, there are other variables in the model that account for higher levels of income migration. This relationship is analogous to economic growth rates in rich and poor nations. Poor nations are able to grow at faster rates than rich nations because it is easier to grow a smaller economy in percentage-change terms than it is to grow a larger economy. This does not change the fact that larger economies still have a higher level of absolute wealth than faster-growing but poorer nations. In terms of income migration, the regressions dealing with levels of income show that differences between destination states and origin states in the unemployment rate and in the amount of population over the age of 65 account for a higher level of income migration, even while increases in tax and expense burdens yield the largest percentage-change values.

Still, the fact that increases in expense and tax burdens are associated with decreased income migration into destination states is important. This is because policymakers have some control over tax and expense burdens, meaning they can take some steps toward increasing income migration by lowering expense and tax burdens. Also, because government spending crowds out the resources available to businesses to invest and operate, increasing these burdens might increase the unemployment rate, a variable that is also associated with negative income migration. This suggests policymakers can make their states more attractive destinations for migrants by reducing the size of their governments relative to other states.

6. Discussion

One drawback to this analysis is endogeneity. In "Tax Rates and Migration," Davies and Pulito explain that there was a significant amount of "bi-directionality" in the relationship between tax rates and migration. It may be that high tax rates drive people to migrate to a less burdensome state, but Davies and Pulito note that this movement reduces a state's tax base, necessitating higher tax rates on the people who remain to provide services. This creates a feedback loop where higher tax rates drive migration, which, in turn, encourages the state to raise taxes to recoup revenue, meaning high tax rates spur migration and this migration in turn leads to higher tax rates.[42]

Bi-directionality is a concern in this analysis also. High expense and tax burdens might encourage people to move. This outflow of people would make expense and tax burdens increase. Population outflow decreases the denominator used to divide total taxes and total expenditures, meaning the migration of people actually puts upward pressure on the independent variable that theoretically should affect migration. Lagging variables partly addresses these endogeneity concerns between income migration and tax and expense burdens. Lagging variables also makes it easier to say it is tax and expense burdens influencing migration, rather than the opposite, because migration cannot affect burdens from five years prior to that migration.

Regardless of this endogeneity problem, the effect of tax-base erosion on expense and tax burdens is important for the taxpayers who choose not to or cannot migrate in response to increasing burdens. Tax-base erosion increases the expense and tax burdens on taxpayers who cannot move, meaning fewer people are left to support government services. This requires more

[42] Davies, Antony, and John Pulito. "Tax Rates and Migration." Mercatus Working Paper No. 11–31, 2011. At p. 22.

from each taxpayer or a reduction in services if a state is to balance revenues with expenditures. Any failure to do this results in debt, a poor state of fiscal health for origin states, and higher burdens for remaining residents (both in terms of debt, if a state keeps spending, and forfeited services, if states make spending cuts).

This scenario has played out at both the state and local levels when governments have failed to balance revenues with expenditures. Detroit, Michigan, had a population of 2 million at its 1950 peak, but this population fell over the next six decades to around 750,000.[43] In the summer of 2013, the municipality became the largest US city to declare bankruptcy, doing so as its dwindling and impoverished population was unable to pay the city's obligations.[44] The city's pension problem was particularly bad, as the benefits owed to the city's 21,000 retirees reached $3.5 billion and became the "second biggest drain on the city's bank account," all while the number of workers available to pay into the city's pension systems fell.[45]

As the Detroit example shows, dwindling tax bases can be destructive for governments that have promised payouts to beneficiaries but lost the population necessary to pay for those benefits. This stress can be seen in state pension systems. *State Budget Solutions* estimates state public pension plans are underfunded by $4.7 trillion, or about $15,000 for every person in the United States, and notes that taxpayers throughout the country will feel this burden, as state governments will have to allocate resources toward these obligations and away from services. States currently are struggling to fund their pension systems, with Illinois, Connecticut, and

[43] "How to Break an American City." Reason. November 2013. Available at http://reason.com/archives/2013/10/21/how-to-break-an-american-city.
[44] Plumer, Brad. "Detroit Just Filed for Bankruptcy. Here's How It Got There." Washington Post. July 18, 2013. Available at http://www.washingtonpost.com/blogs/wonkblog/wp/2013/07/18/detroit-just-filed-for-bankruptcy-heres-how-it-got-there/.
[45] "Editorial: How Detroit Came to Betray Its Retirees." Detroit Free Press. July 14, 2013. Available at http://www.freep.com/article/20130714/OPINION01/307140047/detroit-pensions-financial-crisis-retirees.

Kentucky being the three states with the lowest funding ratios—at 22 percent, 23 percent, and 24 percent, respectively. Alaska places the largest unfunded liability on its residents, at about $40,000 per capita, followed by Illinois at almost $26,000 and Ohio at just over $25,000.[46]

Poor pension performance and poor fiscal performance in general at the state level have been reflected in credit downgrades. Illinois suffered 13 credit downgrades from 2009 to 2013, owing largely to the state's massively underfunded pension system.[47] And Illinois policymakers have opted to raise fees and taxes to fill in pension gaps instead of making structural reforms that would make the system more sustainable, such as raising the age at which pension beneficiaries can receive benefits.[48] In September 2014, Fitch Ratings downgraded New Jersey's credit rating after Governor Chris Christie opted to plug a budget gap by redistributing $2.4 billion from the state's pension system, showing that fiscal problems elsewhere in the budget can also negatively impact the ability of governments to meet pension obligations.[49] Kansas experienced a credit downgrade in 2014 when Standard & Poor's lowered the state's bond rating from AA+ to AA, citing failure to match income-tax cuts with cuts in spending.[50]

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[46] Luppino-Esposito, Joe. "Promises Made, Promises Broken 2014: Unfunded Liabilities Hit $4.7 Trillion." State Budget Solutions. Nov. 12, 2014. Available at http://www.statebudgetsolutions.org/publications/detail/promises-made-promises-broken-2014-unfunded-liabilities-hit-47-trillion.

[47] Klingner, John. "Illinois Has Lowest Credit Rating of All 50 States." Illinois Policy Institute. Nov. 19, 2013. Available at https://www.illinoispolicy.org/illinois-has-lowest-credit-rating-of-all-50-states/.

[48] Dabrowski, Ted. "Parks and Wreck." Illinois Policy Institute. Nov. 7, 2013. Available at https://www.illinoispolicy.org/parks-and-wreck/?utm_source=Illinois+Policy+Institute&utm_campaign=14476f51fb-0615_HPP_pensions&utm_medium=email&utm_term=0_0f5a22f52c-14476f51fb-10656193.

[49] Rizzo, Salvador. "Fitch Downgrades N.J. Debt, Saying Christie Is Repudiating His Pension Reform." NJ.com. Sep. 5, 2014.

[50] Lowry, Bryan. "S&P Downgrades Kansas Bond Rating; Brownback Pushes Back." Aug. 6, 2014. Available at http://www.kansas.com/news/article1158214.html.

7. Policy Prescription

Even though this analysis cannot claim to show that expense and tax burdens *cause* migration, it provides more evidence supporting the idea that increasing the burden of government spending makes a state less attractive to taxpayers. This means states should think carefully about what services to spend on, because every tax dollar spent increases the incentive for taxpayers to move to a less burdensome state.

Are there any areas of government spending that migrants prefer more than others? My data can be used to make a few suggestions on how states should organize spending to attract migrants. The National Association of State Budget Officers (NASBO) documents the composition of state budgets, measuring the proportion of budgets in seven categories: elementary and secondary education, higher education, public assistance, Medicaid, corrections, transportation, and a catchall that captures all other spending.

The following scatter plots qualitatively compare how the proportion of state budgets allocated to public assistance relates to expense burdens, tax burdens, and income migration. The graphs demonstrate a positive relationship between the amount of its budget a state allocates to public assistance and the state's total expense and tax burdens. As public assistance funding rises, so do expense and tax burdens. Conversely, the graph comparing public assistance funding to income migration shows a negative relationship, where income tends to flow out of a state as that state's spending on public assistance rises.[51]

[51] The value for the proportion of state budgets going toward public assistance is lagged by one fiscal year when compared to income migration to ensure migration is being compared to budget composition data from the past. The scatter plots comparing public assistance to expense and tax burdens are not lagged because both are measured in fiscal years.

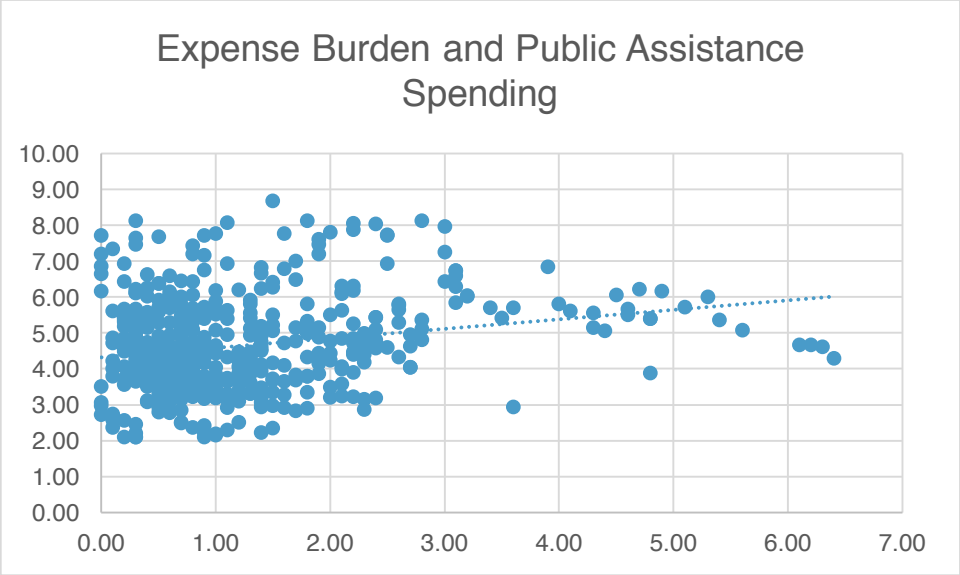

Chart 3

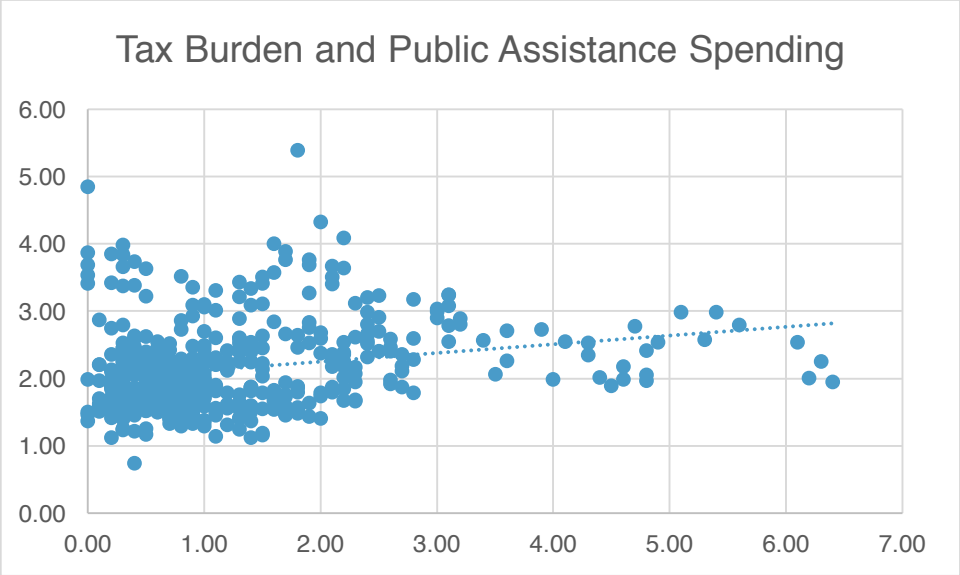

Chart 4

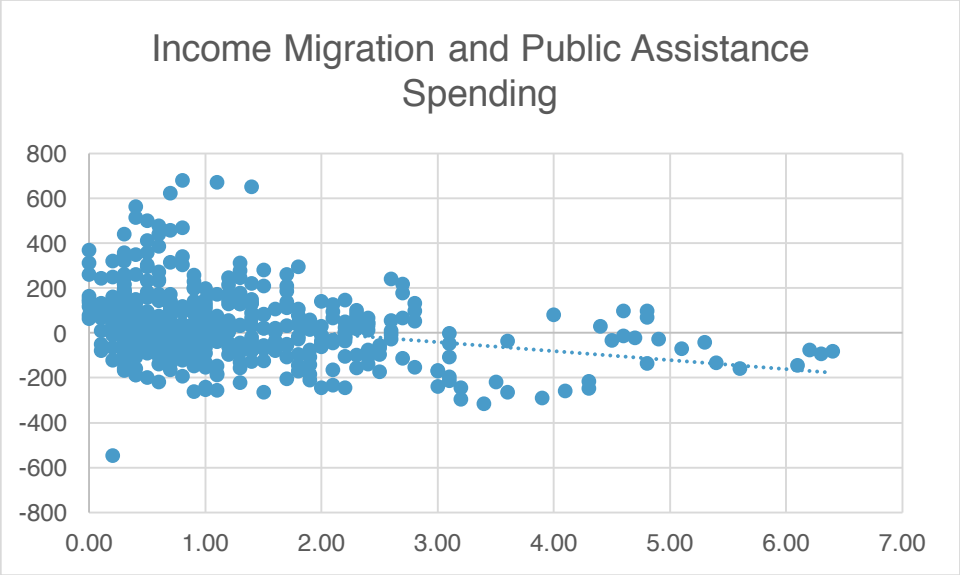

Chart 5

Thus, the proportion of state budgets going toward public assistance is associated with increased tax and expense burdens, as well as a decrease in the amount of income flowing into states (negative values on the Y axis represent states that had net income migration outflow, whereas positive values represent states that had net income migration inflows). While it may be undesirable to suggest a state stop spending on public assistance entirely, states might focus on ways of providing public assistance in more efficient ways in order to reduce the amount of taxation and spending required to sustain their public-assistance policies. How a state might actually do that is far beyond the scope of this analysis.

It is also important to note a few things about this interpretation. First, public assistance spending generally constituted a smaller part of state budgets than the other five budgetary categories (excluding the catchall), with the highest proportion of budget expenditures dedicated to public assistance standing at about 6.5 percent. This means there is less absolute room to cut public assistance spending than other budgetary areas.

Second, this correlation between public assistance spending and income migration might be capturing other factors that could spur migration. For instance, increased public assistance expenditures might mean a state's population is relatively impoverished compared to other states. This might encourage wealthier taxpayers to leave because they dislike living in a state with higher amounts of poverty.

Third, a majority of the funds states spent on public assistance comes from the federal government, going toward programs like Temporary Assistance for Needy Families (TANF).[52] This suggests migration has more to do with factors like poverty and less with the taxes states levy to finance public assistance spending.

We can also examine other budget areas that draw less funding from the federal government, such as transportation spending. Transportation is funded more by state funds and less by federal funds, although federal funds still made up an average of 30 percent of state spending over the period measured. The scatter plots below show that states that dedicate more funds to transportation spending generally have lower expense and tax burdens and draw more income migration. If transportation draws people and their money in, a focus on funding transportation might actually put states on firmer fiscal ground by increasing their tax base. Still, correlation does not mean causation, and there may be other reasons why migrants have chosen states that devote a higher proportion of their budgets to transportation. It might be that states that dedicate more to transportation have a higher number of automobiles per capita. A higher

[52] See "State Expenditure Report: Examining Fiscal 2012–2014 State Spending." National Association of State Budget Officers, 2014. Available at http://www.nasbo.org/sites/default/files/State%20Expenditure%20Report%20%28Fiscal%202012-2014%29S.pdf. Federal funds accounted for an average of 28.69 percent of total spending across states from fiscal years 2002 to 2010. The amount of federal funds per budgetary category varied widely among categories. For example, federal funds made up 52.59 percent of public assistance spending, 12.07 percent of higher-education spending, and 30.19 percent of transportation spending at the state level over this period. For a complete list of NASBO's state-expenditure reports, which can be used to get information on fund composition for all six areas, visit: http://www.nasbo.org/publications-data/state-expenditure-report/archives.

number of automobiles per capita might indicate lower cost of living within a jurisdiction, which enables more people to purchase automobiles. This low cost of living might explain more why a place would be attractive to a migrant than does transportation spending.

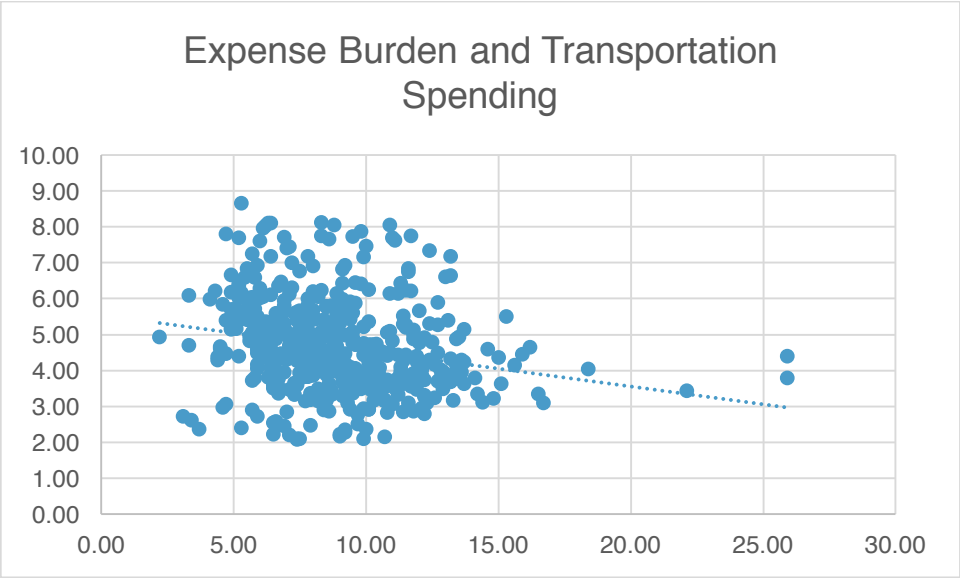

Chart 6

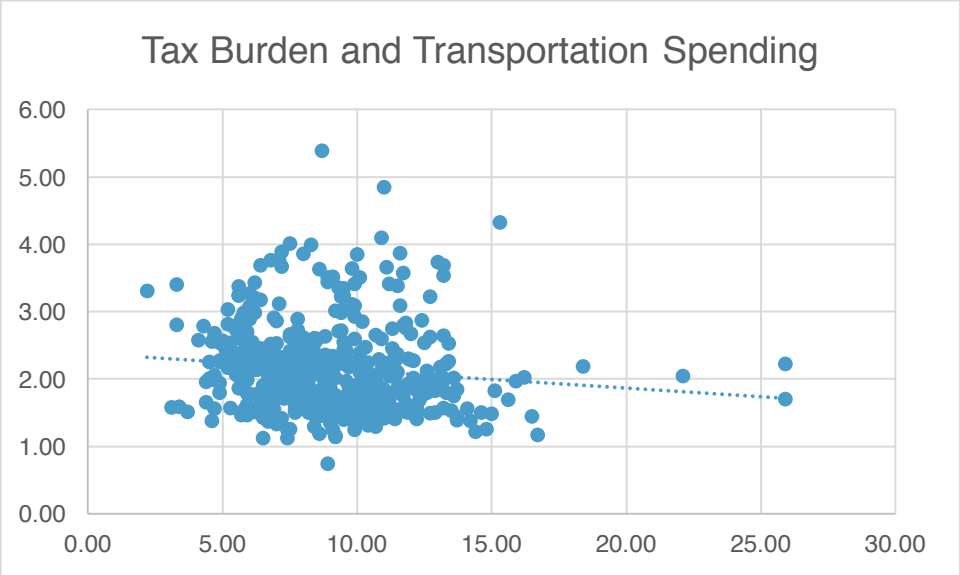

Chart 7

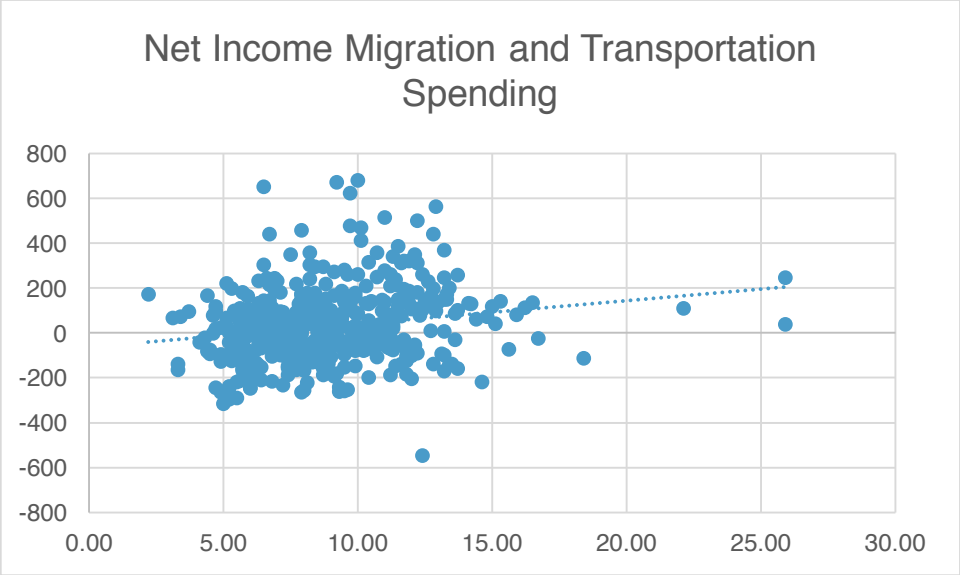

Chart 8

8. Conclusion

This analysis supports other research that finds taxation at the state level affects migration. The models show that, on average, as destination states increase taxation and government spending relative to origin states, fewer dollars move to the destination state. This analysis provides evidence that reducing the burden of fiscal policy on taxpayers is one way to attract and retain taxpayers. This is a finding policymakers should consider, because the only way for a state to sustain its fiscal health is to have a tax base capable of paying for its expenses.

Appendix

Explanation of the Davies and Pulito Model from "Tax Rates and Migration"

Davies and Pulito use the following equation to estimate the effects of tax-rate differentials on migration:

$$M_{ijt} = \alpha + \theta_i + \beta_1 \Delta R_{ijt} + \beta_2 \Delta B_{ijt} + \beta_3 \Delta P_{ijt} + \beta_4 \Delta S_{ijt} + \beta_5 \Delta U_{ijt} + u_{ijt}$$

Each variable has a subscript *i*, which represents the origin state, and *j*, which represents a destination state, as well as a subscript *t*, which denotes the year measured. The variable *M*, the dependent variable, is the ratio of migrants flowing from destination state *j* to origin state *i* over the number of migrants moving from state *i* to state *j*. When *M*'s ratio is greater than one, that means there is a net inflow of migrants from destination state *j* into home state *i*. If *M*'s ratio is less than one, that means income is flowing from the origin state to the destination state.[53]

The variables on the right-hand side include the difference between home state *i* and destination state *j* (denoted as *R* in equation 1) in the marginal state income-tax rate applied to a $200,000 income, among other factors. Davies and Pulito subtract origin-state values from destination-state values to generate the differences. A positive difference indicates that the destination state had a higher marginal income-tax rate than the origin state. The authors then model how these differences predict migration flows. Below is a table from their paper that explains the variables used in "Tax Rates and Migration." The authors include dummies for state *i*, the origin state, to account for state-specific migration effects.

[53] Davies, Antony, and John Pulito. "Tax Rates and Migration." Mercatus Working Paper No. 11–31, 2011.

Variable	Definition
M_{ijt}	For year *t*, the number of migrants moving from state *j* to state *i* divided by the number moving from state *i* to state *j*. For state *i*, this is the ratio of "in-migrants" to "out-migrants."
ΔR_{ijt}	For year *t*, the marginal state income-tax rate applicable to a $200,000 income in state *j* minus the marginal state income-tax rate applicable to a $200,000 income in state *i*.
ΔB_{ijt}	For year *t*, the lower limit of the tax bracket applicable to a $200,000 income in state *j* minus the lower limit of the tax bracket applicable to a $200,000 income in state *i*.
ΔP_{ijt}	For year *t*, property tax as a fraction of home value in state *i* minus property tax as a fraction of home value in state *j*.
ΔS_{ijt}	For year *t*, sales tax in state *i* minus sales tax in state *j*.

Appendix Figure 1

Davies and Pulito find that positive differences in tax rates, where state *j*'s rate was higher than state *i*'s rate, were positively associated with migration into state *i*. The authors also find that larger differences in income-tax rates were associated with larger amounts of migration.[54]

Results for Households and Individuals

This analysis originally began as a project to see how expense and tax burdens affect all three of the IRS's migration variables. In the end, I opted to focus on income migration to make this analysis more tractable. Included in this appendix is the same set of regressions I ran for income

[54] Davies, Antony, and John Pulito. "Tax Rates and Migration." Mercatus Working Paper No. 11–31, 2011.

migration, only applied to returns and exemptions instead. The IRS tracks the migration of returns, which approximate households, and exemptions, which approximate individuals. Returns approximate households because individual returns cover dependent children and married couples who file jointly. Exemptions approximate total population movement because there is an exemption for each person on a tax return, such as a dependent child or a spouse, making exemptions closely correlated with the number of individuals moving.[55] The results are extremely similar to the results for income migration in terms of sign and magnitude. They are slightly more difficult to interpret, however, because the coefficients are so small, which in turn is because the total net amount of households and individuals was divided by the population of the origin state (i.e., the state households and individuals exited). Coefficients generally become larger in magnitude as tax and expense burdens are lagged by more years, in regressions that either compare levels to burdens or the natural log of income migration to burdens. Expense burdens remain statistically significant at the 99 percent level throughout all regressions, while the regressions of income migration on tax burdens are slightly less significant, especially as tax burdens are lagged by more years.

[55] See the Tax Foundation's "Frequently Asked Questions about the Tax Foundation Migration Tool." Available at http://interactive.taxfoundation.org/migration/FAQ.html.

Top 10 Return Migration Flows Between States, 2002–2010		
Origin State	Destination State	Net Return Gain
1. New York	Florida	131,767
2. California	Arizona	78,107
3. California	Nevada	73,461
4. California	Texas	71,504
5. New Jersey	Florida	64,675
6. New York	New Jersey	63,000
7. California	Oregon	49,406
8. New York	North Carolina	44,449
9. Louisiana	Texas	39,725
10. Michigan	Florida	37,696

Appendix Figure 2

Top 10 Exemption Migration Flows Between States, 2002–2010		
Origin State	Destination State	Net Exemption Gain
1. New York	Florida	275,423
2. California	Texas	205,977
3. California	Arizona	186,911
4. New York	New Jersey	163,899
5. California	Nevada	155,991
6. New Jersey	Florida	132,331
7. California	Oregon	103,255
8. New York	North Carolina	97,252
9. New York	Pennsylvania	92,380
10. Louisiana	Texas	88,984

Appendix Figure 3

Expense Burdens and Household Migration					
Regression Number	21	22	23	24	25
VARIABLES	Returns	Returns	Returns	Returns	Returns
L.ExpenseBurdenDifference	-7.94e-06***				
	(1.26e-06)				
L2.ExpenseBurdenDifference		-8.02e-06***			
		(1.52e-06)			
L3.ExpenseBurdenDifference			-8.94e-06***		
			(1.91e-06)		
L4.ExpenseBurdenDifference				-1.01e-05***	
				(1.83e-06)	
L5.ExpenseBurdenDifference					-8.60e-06***
					(1.42e-06)
PopulationDifference	0***	0***	0***	0***	0***
	(0)	(0)	(0)	(0)	(0)
NaturalShareDifference	-1.09e-06***	-1.15e-06***	-1.02e-06***	-8.93e-07***	-7.48e-07***
	(2.04e-07)	(2.26e-07)	(2.45e-07)	(2.97e-07)	(1.91e-07)
TaxBracketDifference	-4.42e-06***	-4.47e-06***	-4.09e-06***	-3.99e-06***	-3.14e-06***
	(6.53e-07)	(7.58e-07)	(8.74e-07)	(8.63e-07)	(5.34e-07)
PersonalIncomeDifference	1.52e-09***	1.55e-09**	1.51e-09**	8.40e-10	1.02e-09***
	(5.78e-10)	(6.88e-10)	(7.49e-10)	(6.98e-10)	(3.06e-10)
UnemploymentDifference	-1.39e-05***	-1.44e-05***	-1.36e-05***	-1.16e-05***	-6.58e-06***
	(2.01e-06)	(2.23e-06)	(2.39e-06)	(2.08e-06)	(1.28e-06)
HispanicDifference	1.47e-07	5.43e-08	-1.79e-08	-2.06e-08	-4.00e-08
	(1.22e-07)	(1.38e-07)	(1.48e-07)	(1.61e-07)	(1.33e-07)
AfricanAmericanDifference	-9.09e-07***	-8.29e-07***	-9.44e-07***	-6.35e-07***	-7.60e-07***
	(1.58e-07)	(1.74e-07)	(2.14e-07)	(2.21e-07)	(1.80e-07)
Over65Difference	1.45e-05***	1.47e-05***	1.24e-05***	1.05e-05***	8.72e-06***
	(1.86e-06)	(2.16e-06)	(2.39e-06)	(2.27e-06)	(1.99e-06)
JanuaryTemperatureDifference	2.17e-06***	2.24e-06***	2.24e-06***	1.95e-06***	1.35e-06***
	(2.68e-07)	(3.13e-07)	(3.62e-07)	(3.23e-07)	(2.49e-07)
CrimeDifference	1.08e-08***	9.70e-09***	1.05e-08***	9.76e-09***	9.56e-09***
	(2.21e-09)	(2.89e-09)	(3.15e-09)	(2.30e-09)	(1.97e-09)
Constant	1.33e-05	3.75e-05***	5.36e-06	4.56e-05***	5.13e-05***
	(8.61e-06)	(1.19e-05)	(1.07e-05)	(9.49e-06)	(9.61e-06)
State-Specific Fixed Effects	YES	YES	YES	YES	YES
Year Fixed Effects	YES	YES	YES	YES	YES
Observations	7,039	5,897	4,869	3,872	2,994
R-squared	0.193	0.195	0.184	0.183	0.350
Robust standard errors in parentheses					
*** p<0.01, ** p<0.05, * p<0.1					

Appendix Table 1

Expense Burdens and Log Household Migration					
Regression Number	26	27	28	29	30
VARIABLES	Log Returns	Log Returns	Log Returns	Log Returns	Log Returns
L.ExpenseBurdenDifference	-0.162***				
	(0.0149)				
L2.ExpenseBurdenDifference		-0.166***			
		(0.0167)			
L3.ExpenseBurdenDifference			-0.175***		
			(0.0189)		
L4.ExpenseBurdenDifference				-0.167***	
				(0.0219)	
L5.ExpenseBurdenDifference					-0.182***
					(0.0259)
PopulationDifference	6.56e-08***	7.19e-08***	6.89e-08***	7.23e-08***	7.63e-08***
	(2.95e-09)	(3.07e-09)	(3.67e-09)	(4.04e-09)	(4.73e-09)
NaturalShareDifference	-0.0264***	-0.0267***	-0.0260***	-0.0261***	-0.0215***
	(0.00284)	(0.00305)	(0.00329)	(0.00342)	(0.00380)
TaxBracketDifference	-0.0163***	-0.0128**	-0.0118	-0.0160**	-0.0184**
	(0.00579)	(0.00631)	(0.00716)	(0.00812)	(0.00908)
PersonalIncomeDifference	3.92e-05***	4.21e-05***	4.69e-05***	4.09e-05***	3.42e-05***
	(4.67e-06)	(4.82e-06)	(5.29e-06)	(5.62e-06)	(6.23e-06)
UnemploymentDifference	-0.0743***	-0.0642***	-0.0622***	-0.0394**	-0.0243
	(0.0148)	(0.0153)	(0.0160)	(0.0176)	(0.0192)
HispanicDifference	0.00368**	0.00489**	0.000743	-0.00193	-0.00185
	(0.00182)	(0.00196)	(0.00214)	(0.00233)	(0.00265)
AfricanAmericanDifference	-0.00614***	-0.00202	-0.0106***	-0.0121***	-0.0142***
	(0.00234)	(0.00252)	(0.00285)	(0.00318)	(0.00359)
Over65Difference	0.0119	0.0107	-0.0170	-0.0292*	-0.0455***
	(0.0107)	(0.0114)	(0.0132)	(0.0150)	(0.0173)
JanuaryTemperatureDifference	0.0207***	0.0163***	0.0214***	0.0191***	0.0168***
	(0.00258)	(0.00280)	(0.00326)	(0.00365)	(0.00429)
CrimeDifference	0.000320***	0.000331***	0.000354***	0.000401***	0.000388***
	(2.50e-05)	(2.82e-05)	(3.11e-05)	(3.45e-05)	(3.98e-05)
Constant	-11.79***	-11.40***	-12.09***	-11.82***	-11.36***
	(0.182)	(0.215)	(0.219)	(0.225)	(0.250)
State-Specific Fixed Effects	YES	YES	YES	YES	YES
Year Fixed Effects	YES	YES	YES	YES	YES
Observations	7,039	5,897	4,869	3,872	2,994
R-squared	0.363	0.388	0.392	0.407	0.399
Robust standard errors in parentheses					
*** p<0.01, ** p<0.05, * p<0.1					

Appendix Table 2

Tax Burdens and Household Migration					
Regression Number	31	32	33	34	35
VARIABLES	Returns	Returns	Returns	Returns	Returns
L.TaxBurdenDifference	-9.30e-06***				
	(2.77e-06)				
L2.TaxBurdenDifference		-6.80e-06**			
		(2.78e-06)			
L3.TaxBurdenDifference			-6.04e-06**		
			(2.99e-06)		
L4.TaxBurdenDifference				-9.84e-06***	
				(3.28e-06)	
L5.TaxBurdenDifference					-1.04e-05***
					(3.11e-06)
PopulationDifference	0***	0***	0***	0***	0***
	(0)	(0)	(0)	(0)	(0)
NaturalShareDifference	-1.19e-06***	-1.29e-06***	-1.15e-06***	-9.12e-07***	-7.85e-07***
	(2.77e-07)	(2.90e-07)	(2.93e-07)	(3.18e-07)	(2.00e-07)
TaxBracketDifference	-4.71e-06***	-4.93e-06***	-4.56e-06***	-4.42e-06***	-3.41e-06***
	(5.72e-07)	(6.86e-07)	(7.98e-07)	(8.90e-07)	(5.52e-07)
PersonalIncomeDifference	1.58e-09***	1.42e-09**	1.40e-09**	9.24e-10	1.16e-09***
	(4.65e-10)	(5.89e-10)	(6.94e-10)	(6.80e-10)	(3.45e-10)
UnemploymentDifference	-1.54e-05***	-1.57e-05***	-1.46e-05***	-1.23e-05***	-6.98e-06***
	(1.82e-06)	(2.04e-06)	(2.25e-06)	(2.11e-06)	(1.31e-06)
HispanicDifference	-1.12e-07	-1.88e-07	-2.88e-07**	-3.04e-07**	-2.73e-07**
	(1.12e-07)	(1.23e-07)	(1.32e-07)	(1.46e-07)	(1.21e-07)
AfricanAmericanDifference	-1.05e-06***	-9.62e-07***	-1.08e-06***	-7.48e-07***	-8.86e-07***
	(1.62e-07)	(1.77e-07)	(2.20e-07)	(2.23e-07)	(1.81e-07)
Over65Difference	1.34e-05***	1.36e-05***	1.10e-05***	9.02e-06***	7.60e-06***
	(1.70e-06)	(1.97e-06)	(2.16e-06)	(2.20e-06)	(1.90e-06)
JanuaryTemperatureDifference	2.27e-06***	2.34e-06***	2.39e-06***	2.12e-06***	1.52e-06***
	(2.80e-07)	(3.27e-07)	(3.81e-07)	(3.27e-07)	(2.57e-07)
CrimeDifference	1.20e-08***	1.07e-08***	1.15e-08***	1.08e-08***	1.04e-08***
	(2.12e-09)	(2.78e-09)	(3.04e-09)	(2.33e-09)	(1.98e-09)
Constant	3.12e-06	2.87e-05***	-6.38e-06	3.53e-05***	4.19e-05***
	(7.87e-06)	(1.10e-05)	(9.14e-06)	(9.31e-06)	(8.79e-06)
State-Specific Fixed Effects	YES	YES	YES	YES	YES
Year Fixed Effects	YES	YES	YES	YES	YES
Observations	7,039	5,897	4,869	3,872	2,994
R-squared	0.191	0.193	0.182	0.181	0.346
Robust standard errors in parentheses					
*** p<0.01, ** p<0.05, * p<0.1					

Appendix Table 3

Tax Burdens and Log Household Migration					
Regression Number	36	37	38	39	40
VARIABLES	Log Returns	Log Returns	Log Returns	Log Returns	Log Returns
L.TaxBurdenDifference	-0.262***				
	(0.0355)				
L2.TaxBurdenDifference		-0.266***			
		(0.0402)			
L3.TaxBurdenDifference			-0.275***		
			(0.0464)		
L4.TaxBurdenDifference				-0.341***	
				(0.0497)	
L5.TaxBurdenDifference					-0.427***
					(0.0656)
PopulationDifference	6.82e-08***	7.41e-08***	7.02e-08***	7.18e-08***	7.56e-08***
	(2.96e-09)	(3.08e-09)	(3.70e-09)	(4.05e-09)	(4.72e-09)
NaturalShareDifference	-0.0257***	-0.0253***	-0.0229***	-0.0217***	-0.0194***
	(0.00300)	(0.00325)	(0.00357)	(0.00363)	(0.00393)
TaxBracketDifference	-0.0187***	-0.0165***	-0.0139*	-0.0150*	-0.0152
	(0.00583)	(0.00638)	(0.00725)	(0.00820)	(0.00926)
PersonalIncomeDifference	4.55e-05***	4.82e-05***	5.55e-05***	5.35e-05***	4.78e-05***
	(5.12e-06)	(5.41e-06)	(5.94e-06)	(6.25e-06)	(6.87e-06)
UnemploymentDifference	-0.101***	-0.0795***	-0.0705***	-0.0390**	-0.0218
	(0.0143)	(0.0152)	(0.0159)	(0.0175)	(0.0192)
HispanicDifference	-0.00153	-5.55e-05	-0.00464**	-0.00683***	-0.00667***
	(0.00174)	(0.00189)	(0.00206)	(0.00222)	(0.00250)
AfricanAmericanDifference	-0.00879***	-0.00443*	-0.0131***	-0.0145***	-0.0175***
	(0.00232)	(0.00250)	(0.00283)	(0.00316)	(0.00352)
Over65Difference	-0.00475	-0.00467	-0.0350***	-0.0426***	-0.0587***
	(0.0106)	(0.0113)	(0.0129)	(0.0148)	(0.0171)
JanuaryTemperatureDifference	0.0225***	0.0177***	0.0240***	0.0221***	0.0204***
	(0.00258)	(0.00280)	(0.00324)	(0.00362)	(0.00420)
CrimeDifference	0.000343***	0.000352***	0.000374***	0.000418***	0.000404***
	(2.51e-05)	(2.83e-05)	(3.13e-05)	(3.46e-05)	(4.00e-05)
Constant	-11.98***	-11.55***	-12.28***	-11.94***	-11.53***
	(0.178)	(0.210)	(0.213)	(0.219)	(0.238)
Observations	7,039	5,897	4,869	3,872	2,994
R-squared	0.358	0.384	0.387	0.407	0.399
Robust standard errors in parentheses					
*** p<0.01, ** p<0.05, * p<0.1					

Appendix Table 4

Variable	Observation	Mean	Standard Deviation	Minimum	Maximum
NetReturnsPerCapita	10055	0.000054	0.0001357	4.39E-08	0.008124
LogIncomeMigrationPerCapita	10055	-10.9607	1.589853	-16.9424	-4.81297
ExpenseBurdenDifference	10055	-0.33075	1.559148	-5.68772	5.085021
TaxBurdenDifference	10055	-0.16328	0.8017335	-3.88907	3.934228
PopulationDifference	10055	-554908	9451724	-3.68E+07	3.67E+07
NaturalShareDifference	10055	1.4146	7.412488	-35.5695	40.68332
TaxBracketDifference	8938	-0.01992	3.986613	-10	10
PersonalIncomeDifference	10055	-1709.14	7031.486	-26389	23261
UnemploymentDifference	10055	-0.08221	1.608297	-9.6	7.1
HispanicDifference	10055	1.792751	13.61622	-43.5862	44.32125
AfricanAmericanDifference	10055	1.262274	13.57094	-36.4205	36.43007
Over65Difference	8938	-0.33033	2.128296	-8.3955	8.488168
JanuaryTemperatureDifference	8923	5.176734	15.21259	-52.3	55.1
CrimeDifference	8937	457.6282	1184.294	-3275.7	4353.9

Appendix Summary Statistics 1

Expense Burdens and Individual Migration					
Regression Number	41	42	43	44	45
VARIABLES	Individuals	Individuals	Individuals	Individuals	Individuals
L.ExpenseBurdenDifference	-1.09e-05***				
	(2.76e-06)				
L2.ExpenseBurdenDifference		-1.01e-05***			
		(3.36e-06)			
L3.ExpenseBurdenDifference			-1.22e-05***		
			(4.14e-06)		
L4.ExpenseBurdenDifference				-1.53e-05***	
				(4.42e-06)	
L5.ExpenseBurdenDifference					-1.13e-05***
					(2.92e-06)
PopulationDifference	0***	0***	0***	0***	0***
	(0)	(0)	(0)	(0)	(0)
NaturalShareDifference	-1.72e-06***	-1.79e-06***	-1.37e-06**	-1.02e-06	-6.25e-07
	(4.51e-07)	(5.01e-07)	(5.60e-07)	(7.46e-07)	(4.04e-07)
TaxBracketDifference	-8.68e-06***	-8.79e-06***	-8.00e-06***	-7.70e-06***	-4.92e-06***
	(1.34e-06)	(1.54e-06)	(1.81e-06)	(1.65e-06)	(1.08e-06)
PersonalIncomeDifference	2.60e-09*	3.12e-09*	2.58e-09	8.98e-10	1.82e-09**
	(1.43e-09)	(1.63e-09)	(1.81e-09)	(1.75e-09)	(7.43e-10)
UnemploymentDifference	-2.65e-05***	-2.81e-05***	-2.63e-05***	-2.44e-05***	-1.11e-05***
	(4.81e-06)	(5.11e-06)	(5.28e-06)	(5.16e-06)	(2.54e-06)
HispanicDifference	3.40e-07	1.22e-07	2.20e-07	5.33e-08	7.15e-08
	(2.91e-07)	(3.21e-07)	(3.34e-07)	(3.92e-07)	(3.27e-07)
AfricanAmericanDifference	-1.16e-06***	-1.02e-06**	-8.65e-07*	-2.68e-07	-5.06e-07
	(3.79e-07)	(4.05e-07)	(4.87e-07)	(5.22e-07)	(4.26e-07)
Over65Difference	2.70e-05***	2.70e-05***	2.36e-05***	1.89e-05***	1.69e-05***
	(4.03e-06)	(4.74e-06)	(5.24e-06)	(5.01e-06)	(4.12e-06)
JanuaryTemperatureDifference	3.87e-06***	4.19e-06***	3.94e-06***	3.28e-06***	2.15e-06***
	(5.90e-07)	(6.79e-07)	(7.70e-07)	(7.00e-07)	(5.02e-07)
CrimeDifference	2.03e-08***	1.81e-08***	1.63e-08**	1.63e-08***	1.44e-08***
	(5.18e-09)	(6.67e-09)	(6.83e-09)	(6.02e-09)	(4.58e-09)
Constant	-1.28e-05	-1.47e-05	5.50e-06	1.18e-05	1.06e-05
	(2.48e-05)	(2.82e-05)	(3.29e-05)	(3.70e-05)	(2.96e-05)
State-Specific Fixed Effects	YES	YES	YES	YES	YES
Year Fixed Effects	YES	YES	YES	YES	YES
Observations	6,920	5,788	4,763	3,777	2,923
R-squared	0.160	0.164	0.156	0.152	0.327
Robust standard errors in parentheses					
*** p<0.01, ** p<0.05, * p<0.1					

Appendix Table 5

Expense Burdens and Log Individual Migration					
Regression Number	46	47	48	49	50
VARIABLES	Log Individuals	Log Individuals	Log Individuals	Log Individuals	Log Individuals
L.ExpenseBurdenDifference	-0.159***				
	(0.0158)				
L2.ExpenseBurdenDifference		-0.156***			
		(0.0180)			
L3.ExpenseBurdenDifference			-0.177***		
			(0.0206)		
L4.ExpenseBurdenDifference				-0.177***	
				(0.0234)	
L5.ExpenseBurdenDifference					-0.197***
					(0.0281)
PopulationDifference	6.97e-08***	7.25e-08***	7.48e-08***	7.98e-08***	8.75e-08***
	(3.36e-09)	(3.69e-09)	(4.26e-09)	(4.62e-09)	(5.32e-09)
NaturalShareDifference	-0.0204***	-0.0198***	-0.0195***	-0.0190***	-0.00886**
	(0.00306)	(0.00331)	(0.00363)	(0.00378)	(0.00419)
TaxBracketDifference	-0.0118**	-0.00875	-0.00293	-0.0118	0.00423
	(0.00584)	(0.00661)	(0.00733)	(0.00821)	(0.00920)
PersonalIncomeDifference	3.37e-05***	4.08e-05***	3.92e-05***	3.22e-05***	2.85e-05***
	(4.94e-06)	(5.41e-06)	(5.90e-06)	(6.28e-06)	(6.82e-06)
UnemploymentDifference	-0.0797***	-0.0686***	-0.0675***	-0.0451**	-0.0107
	(0.0157)	(0.0167)	(0.0173)	(0.0186)	(0.0207)
HispanicDifference	0.000118	-6.96e-05	-0.00146	-0.00352	-0.00357
	(0.00201)	(0.00223)	(0.00234)	(0.00256)	(0.00300)
AfricanAmericanDifference	-0.00572**	-0.00351	-0.00762**	-0.00903**	-0.00892**
	(0.00260)	(0.00286)	(0.00314)	(0.00353)	(0.00399)
Over65Difference	0.00354	-0.00276	-0.0159	-0.0266*	-0.0380**
	(0.0113)	(0.0124)	(0.0139)	(0.0158)	(0.0182)
JanuaryTemperatureDifference	0.0234***	0.0227***	0.0225***	0.0193***	0.0115***
	(0.00265)	(0.00299)	(0.00344)	(0.00382)	(0.00444)
CrimeDifference	0.000320***	0.000317***	0.000340***	0.000352***	0.000396***
	(2.56e-05)	(2.96e-05)	(3.24e-05)	(3.60e-05)	(4.12e-05)
Constant	-11.14***	-11.13***	-10.94***	-11.36***	-11.01***
	(0.257)	(0.322)	(0.341)	(0.265)	(0.236)
State-Specific Fixed Effects	YES	YES	YES	YES	YES
Year Fixed Effects	YES	YES	YES	YES	YES
Observations	6,920	5,788	4,763	3,777	2,923
R-squared	0.344	0.356	0.368	0.376	0.380
Robust standard errors in parentheses					
*** p<0.01, ** p<0.05, * p<0.1					

Appendix Table 6

Tax Burdens and Individual Migration					
Regression Number	51	52	53	54	55
VARIABLES	Individuals	Individuals	Individuals	Individuals	Individuals
L.TaxBurdenDifference	-1.69e-05***				
	(5.59e-06)				
L2.TaxBurdenDifference		-1.10e-05**			
		(5.50e-06)			
L3.TaxBurdenDifference			-1.10e-05*		
			(6.02e-06)		
L4.TaxBurdenDifference				-1.88e-05**	
				(7.57e-06)	
L5.TaxBurdenDifference					-1.51e-05**
					(6.21e-06)
PopulationDifference	0***	0***	0***	0***	0***
	(0)	(0)	(0)	(0)	(0)
NaturalShareDifference	-1.71e-06***	-1.89e-06***	-1.44e-06**	-9.44e-07	-6.74e-07
	(5.99e-07)	(6.36e-07)	(6.87e-07)	(7.94e-07)	(4.16e-07)
TaxBracketDifference	-8.89e-06***	-9.23e-06***	-8.44e-06***	-8.11e-06***	-5.19e-06***
	(1.17e-06)	(1.39e-06)	(1.63e-06)	(1.69e-06)	(1.10e-06)
PersonalIncomeDifference	3.03e-09**	3.25e-09**	2.76e-09*	1.46e-09	2.23e-09***
	(1.19e-09)	(1.44e-09)	(1.66e-09)	(1.64e-09)	(8.19e-10)
UnemploymentDifference	-2.82e-05***	-2.92e-05***	-2.72e-05***	-2.48e-05***	-1.14e-05***
	(4.32e-06)	(4.68e-06)	(4.92e-06)	(5.16e-06)	(2.58e-06)
HispanicDifference	-1.13e-08	-1.97e-07	-1.51e-07	-3.81e-07	-2.29e-07
	(2.74e-07)	(2.90e-07)	(3.12e-07)	(3.44e-07)	(2.98e-07)
AfricanAmericanDifference	-1.32e-06***	-1.19e-06***	-1.04e-06**	-4.32e-07	-6.67e-07
	(3.88e-07)	(4.10e-07)	(4.95e-07)	(5.21e-07)	(4.19e-07)
Over65Difference	2.60e-05***	2.58e-05***	2.20e-05***	1.72e-05***	1.56e-05***
	(3.65e-06)	(4.29e-06)	(4.71e-06)	(4.91e-06)	(3.95e-06)
JanuaryTemperatureDifference	3.96e-06***	4.30e-06***	4.13e-06***	3.53e-06***	2.37e-06***
	(6.18e-07)	(7.14e-07)	(8.10e-07)	(6.96e-07)	(5.09e-07)
CrimeDifference	2.20e-08***	1.96e-08***	1.79e-08***	1.79e-08***	1.56e-08***
	(4.93e-09)	(6.39e-09)	(6.55e-09)	(6.14e-09)	(4.56e-09)
Constant	-2.62e-05	-2.86e-05	-9.18e-06	-6.18e-06	-2.76e-06
	(2.30e-05)	(2.58e-05)	(2.97e-05)	(3.78e-05)	(2.88e-05)
State-Specific Fixed Effects	YES	YES	YES	YES	YES
Year Fixed Effects	YES	YES	YES	YES	YES
Observations	6,920	5,788	4,763	3,777	2,923
R-squared	0.160	0.163	0.155	0.151	0.325
Robust standard errors in parentheses					
*** p<0.01, ** p<0.05, * p<0.1					

Appendix Table 7

Tax Burdens and Log Individual Migration					
Regression Number	56	57	58	59	60
VARIABLES	Log Individuals	Log Individuals	Log Individuals	Log Individuals	Log Individuals
L.TaxBurdenDifference	-0.269***				
	(0.0374)				
L2.TaxBurdenDifference		-0.236***			
		(0.0425)			
L3.TaxBurdenDifference			-0.251***		
			(0.0485)		
L4.TaxBurdenDifference				-0.367***	
				(0.0508)	
L5.TaxBurdenDifference					-0.444***
					(0.0655)
PopulationDifference	7.23e-08***	7.48e-08***	7.66e-08***	7.91e-08***	8.65e-08***
	(3.35e-09)	(3.70e-09)	(4.32e-09)	(4.63e-09)	(5.33e-09)
NaturalShareDifference	-0.0194***	-0.0189***	-0.0174***	-0.0141***	-0.00713*
	(0.00320)	(0.00353)	(0.00386)	(0.00395)	(0.00425)
TaxBracketDifference	-0.0139**	-0.0129*	-0.00576	-0.0106	0.00653
	(0.00589)	(0.00666)	(0.00741)	(0.00819)	(0.00928)
PersonalIncomeDifference	4.15e-05***	4.73e-05***	4.80e-05***	4.81e-05***	4.48e-05***
	(5.36e-06)	(5.99e-06)	(6.60e-06)	(6.82e-06)	(7.42e-06)
UnemploymentDifference	-0.102***	-0.0804***	-0.0732***	-0.0399**	-0.00555
	(0.0154)	(0.0166)	(0.0173)	(0.0185)	(0.0207)
HispanicDifference	-0.00497***	-0.00485**	-0.00679***	-0.00861***	-0.00861***
	(0.00192)	(0.00214)	(0.00225)	(0.00247)	(0.00290)
AfricanAmericanDifference	-0.00800***	-0.00577**	-0.00991***	-0.0112***	-0.0119***
	(0.00258)	(0.00285)	(0.00313)	(0.00353)	(0.00395)
Over65Difference	-0.0102	-0.0172	-0.0334**	-0.0382**	-0.0500***
	(0.0111)	(0.0124)	(0.0138)	(0.0155)	(0.0180)
JanuaryTemperatureDifference	0.0246***	0.0240***	0.0249***	0.0224***	0.0153***
	(0.00265)	(0.00299)	(0.00342)	(0.00379)	(0.00435)
CrimeDifference	0.000344***	0.000341***	0.000363***	0.000368***	0.000415***
	(2.57e-05)	(2.96e-05)	(3.26e-05)	(3.62e-05)	(4.14e-05)
Constant	-11.34***	-11.33***	-11.12***	-11.52***	-11.24***
	(0.251)	(0.314)	(0.333)	(0.262)	(0.211)
State-Specific Fixed Effects	YES	YES	YES	YES	YES
Year Fixed Effects	YES	YES	YES	YES	YES
Observations	6,920	5,788	4,763	3,777	2,923
R-squared	0.340	0.352	0.363	0.377	0.381
Robust standard errors in parentheses					
*** p<0.01, ** p<0.05, * p<0.1					

Appendix Table 8

Variable	Observation	Mean	Standard Deviation	Minimum	Maximum
NetExemptionsPerCapita	10117	0.000104	0.0002901	5.59E-08	0.018817
LogIncomeMigrationPerCapita	10117	-10.335	1.595444	-16.7002	-3.97299
ExpenseBurdenDifference	10117	-0.35735	1.55432	-5.68772	5.085021
TaxBurdenDifference	10117	-0.17673	0.8000085	-3.88907	3.934228
PopulationDifference	10117	-1017753	9392909	-3.68E+07	3.67E+07
NaturalShareDifference	10117	1.525992	7.385788	-40.41	40.68332
TaxBracketDifference	8996	0.09382	3.985031	-10	10
PersonalIncomeDifference	10117	-2107.12	6919.179	-26389	22083
UnemploymentDifference	10117	-0.12829	1.606842	-9.6	7.5
HispanicDifference	10117	0.677722	13.69404	-43.5862	44.32125
AfricanAmericanDifference	10117	0.96649	13.5945	-36.4205	36.43007
Over65Difference	8996	-0.17301	2.146716	-8.3955	8.488168
JanuaryTemperatureDifference	8981	4.633359	15.36633	-52.3	55.1
CrimeDifference	8995	404.7195	1202.359	-4064	4353.9

Appendix Summary Statistics 2