

DOMESTIC MIGRATION: WHAT MOVES US?

Not all those who wander are lost.

– J.R.R. Tolkien

Charles Tiebout is not a household name in the Commonwealth, but this now deceased economist was a very perceptive observer of human behavior. Almost 70 years ago, he hypothesized that people have the ability to vote with their feet.¹ They can move out of cities and counties whose overall characteristics they find inferior and into areas whose characteristics they deem superior. More often than not, the factors pushing them to do so are economic in nature, but other factors count as well.² Tiebout's "I'll leave if I'm not satisfied" insight may seem blindingly obvious today, but until he began to probe the implications of this for the migration of people in and out of metropolitan regions, no one really had provided any reliable empirical evidence on the subject.

Reality is that millions of people move around the United States every year. In 2012, nearly 16.9 million people moved between counties and 7 million of these were long-distance interstate moves.³ A majority of those individuals changing locations moved into the fastest-growing metropolitan regions of the country, most of which are concentrated in the South and West.⁴ Why did they move? Why do Virginians pick up and leave? That is the subject of this chapter.

¹ Charles M. Tiebout. (1956). "A Pure Theory of Local Expenditures," *Journal of Political Economy*, 64(4), 416-24.

² The economist Richard Cebula of Jacksonville University is recognized as the guru of domestic migration studies. Over the space of 40 years, Cebula has authored dozens of empirical studies that have tested aspects of the Tiebout hypothesis.

³ America: A Nation on the Move, December 10, 2012, <http://blogs.census.gov/2012/12/10/america-a-nation-on-the-move>.

⁴ Metro Areas in South, Western U.S. Record Largest Population Gains. Source: www.governing.com/blogs/by-the-numbers/census-2012-metro-area-population-estimates.html.



The population of Virginia increased to 8,260,405 from 8,001,024 between 2010 and 2013. Although there were 103,284 births and 60,916 deaths in the Commonwealth in 2013, our net domestic migration – moves made by people already living in the United States – was 3,099.⁵ That is, once we take

⁵ Although in 2013 Virginia international migration was 29,762 and this is an interesting topic for discussion, our focus is on movers between metropolitan areas.

account of births and deaths, and subtract departures of Virginians to other states, a net of only 3,099 individuals other than international immigrants found a new place to live in the Commonwealth.⁶

⁶ The Weldon Cooper Center for Public Service at the University of Virginia recently released a brief report based on Internal Revenue Service data indicating that there was net out-migration from the Commonwealth between 2012 and 2013 (<http://statchat.va.org>). We rely upon U.S. Census Bureau data in this chapter and focus upon a longer time span - 2010-2013.

TABLE 1

2013 NET MIGRATION NUMBERS: THE TOP 20 STATES

STATE	END OF YEAR 2010 POPULATION	END OF YEAR 2013 POPULATION	POPULATION CHANGE, 2010-2013	2010-2013 NET DOMESTIC MIGRATION
Texas	25,145,561	26,448,193	1,302,632	113,528
Florida	18,801,310	19,552,860	751,550	91,484
North Carolina	9,535,483	9,848,060	312,577	37,240
Colorado	5,029,196	5,268,367	239,171	36,284
South Carolina	4,625,364	4,774,839	149,475	29,324
Arizona	6,392,017	6,626,624	234,607	26,417
Washington	6,724,540	6,971,406	246,866	17,027
North Dakota	672,591	723,393	50,802	16,961
Oklahoma	3,751,351	3,850,568	99,217	14,268
Nevada	2,700,551	2,790,136	89,585	12,854
Tennessee	6,346,105	6,495,978	149,873	12,649
Oregon	3,831,074	3,930,065	98,991	10,215
District of Columbia	601,723	646,449	44,726	6,319
Utah	2,763,885	2,900,872	136,987	5,567
Montana	989,415	1,015,165	25,750	5,467
South Dakota	814,180	844,877	30,697	4,762
Idaho	1,567,582	1,612,136	44,554	4,579
Virginia	8,001,024	8,260,405	259,381	3,099
Delaware	897,934	925,749	27,815	3,010
Wyoming	563,626	582,658	19,032	2,616

Source: U.S. Census Bureau Population Estimates Program

Table 1 reports the top 20 states, including the District of Columbia, with the highest domestic net in-migration. Virginia ranks 18th on the list. Although Virginia is in the top 20, a closer examination of the data shows that only the top 12 states actually had hearty domestic migration numbers of greater than 10,000.

The Internet site www.governing.com, which focuses on state and local government issues, publishes data concerning the characteristics of those migrating into and out of states. Table 2 reports the characteristics of the typical domestic migrant into Virginia in 2012. One can see, for example, that more than half of domestic migrants into Virginia were college graduates and that almost a quarter had earned graduate or professional degrees. However, their median (50th percentile) age was only 27.4 and their individual median income was less than \$27,000. Thus, our in-migrants typically are young, well-educated individuals who have yet to make their fortunes.

Table 3 reveals the geographic sources of Virginia’s migrants, both those coming in and those leaving. Neighboring states North Carolina and Maryland contributed more domestic immigrants to the Commonwealth than other states, but California and New York, both of which were experiencing difficult economic conditions at the time of the survey, also generated substantial numbers of immigrants into Virginia. Further, all four of these states host large active-duty military populations and hence are likely to supply many in-migrants to Virginia for that reason as well.

What about domestic migration to and from Virginia’s major metropolitan areas? Table 4 reports net migration rates for Virginia’s five largest metropolitan areas between 2010 and 2013. It is immediately apparent that Northern Virginia was the big gainer and Hampton Roads the big loser. Presumably, stagnant defense spending had something to do with Hampton Roads’ net domestic out-migration. Actual direct defense spending in Hampton Roads declined from \$19.51 billion in 2011 to \$19.23 billion in 2013 (The State of the Region report for Hampton Roads, 2014).

However, the focus on metropolitan areas in Virginia disguises some interesting changes inside those regions. Table 5 reveals that Loudoun and Prince William counties accounted for about three-quarters of the net domestic immigration into Northern Virginia during this time period.

However, Table 6 tells us that at the same time, Fairfax County was experiencing an out-migration that exceeded 11,600. Meanwhile, inside Hampton Roads, domestic migration into Chesapeake exceeded 3,000, but this trend was outpaced easily by out-migrations exceeding 6,000 each from Norfolk, Portsmouth and Virginia Beach.

TABLE 2	
NEW VIRGINIA RESIDENTS: 2012 AMERICAN COMMUNITY SURVEY	
VIRGINIA MOVER DEMOGRAPHICS	
Total Out-of-State Movers	312,717
Total Moved from Different State	250,653
Total Moved from Abroad	62,064
Percent Female	49.1%
Percent Male	50.9%
Median Age of Movers from Different State	27.40
Percentage of Movers Under 18	21.6%
Percentage of Movers Age 65+	4.2%
Foreign Born	19.8%
Native	80.2%
Education and Income	
At Least Bachelor’s Degree	51.4%
Graduate or Professional Degree	24.1%
At Least Some College	74.7%
Median Income of Domestic Movers	26,589
Source: www.governing.com/gov-data/residents-moving-to-new-state-demographics-population-statistics.html	

TABLE 3

STATE-TO-STATE MIGRATION: 2012 AMERICAN COMMUNITY SURVEY

ARRIVING VIRGINIA FROM:	
North Carolina	22,735
Maryland	22,051
California	19,371
Florida	17,773
New York	12,455
LEAVING VIRGINIA FOR:	
North Carolina	27,302
Maryland	22,089
Florida	16,614
California	15,753
Texas	13,231

Source: www.census.gov/hhes/migration/data/acs/state-to-state.html

TABLE 4

**2010-2013 DOMESTIC MIGRATION:
VIRGINIA'S FIVE LARGEST METROPOLITAN AREAS**

METRO AREA	DOMESTIC MIGRATION
Hampton Roads	(18,879)
Lynchburg	1,834
Richmond	10,783
Roanoke	1,004
Northern Virginia	40,900

* Births and deaths not included
Source: www.governing.com/gov-data/census/metro-area-population-migration-estimates-2013-data.html

TABLE 5

**2010-2013 DOMESTIC NET MIGRATION:
VIRGINIA'S LARGEST RECIPIENTS**

METRO AREA	NET DOMESTIC MIGRATION
Loudoun County	17,926
Prince William County	12,764
Chesterfield County	4,065
Richmond	3,986
Arlington County	3,765
Chesapeake	3,067
James City County	2,516
Bedford County	1,194
Roanoke	745

* Births and deaths not included
Source: www.governing.com/gov-data/census/metro-area-population-migration-estimates-2013-data.html

TABLE 6

**2010-2013 DOMESTIC NET MIGRATION:
VIRGINIA'S LARGEST LOSERS**

METRO AREA	NET DOMESTIC MIGRATION
Fairfax County	-11,729
Norfolk	-6,709
Newport News	-6,597
Virginia Beach	-6,248
Hampton	-3,828
Alexandria	-2,688
Petersburg	-987
Hopewell	-780
Roanoke	-314
Sussex County	-236

* Births and deaths not included
Source: www.governing.com/gov-data/census/metro-area-population-migration-estimates-2013-data.html

Thus, even inside specific metropolitan areas, some cities and counties are experiencing net immigration, while others are afflicted by out-migration. We will explore the reasons for this in a later section.

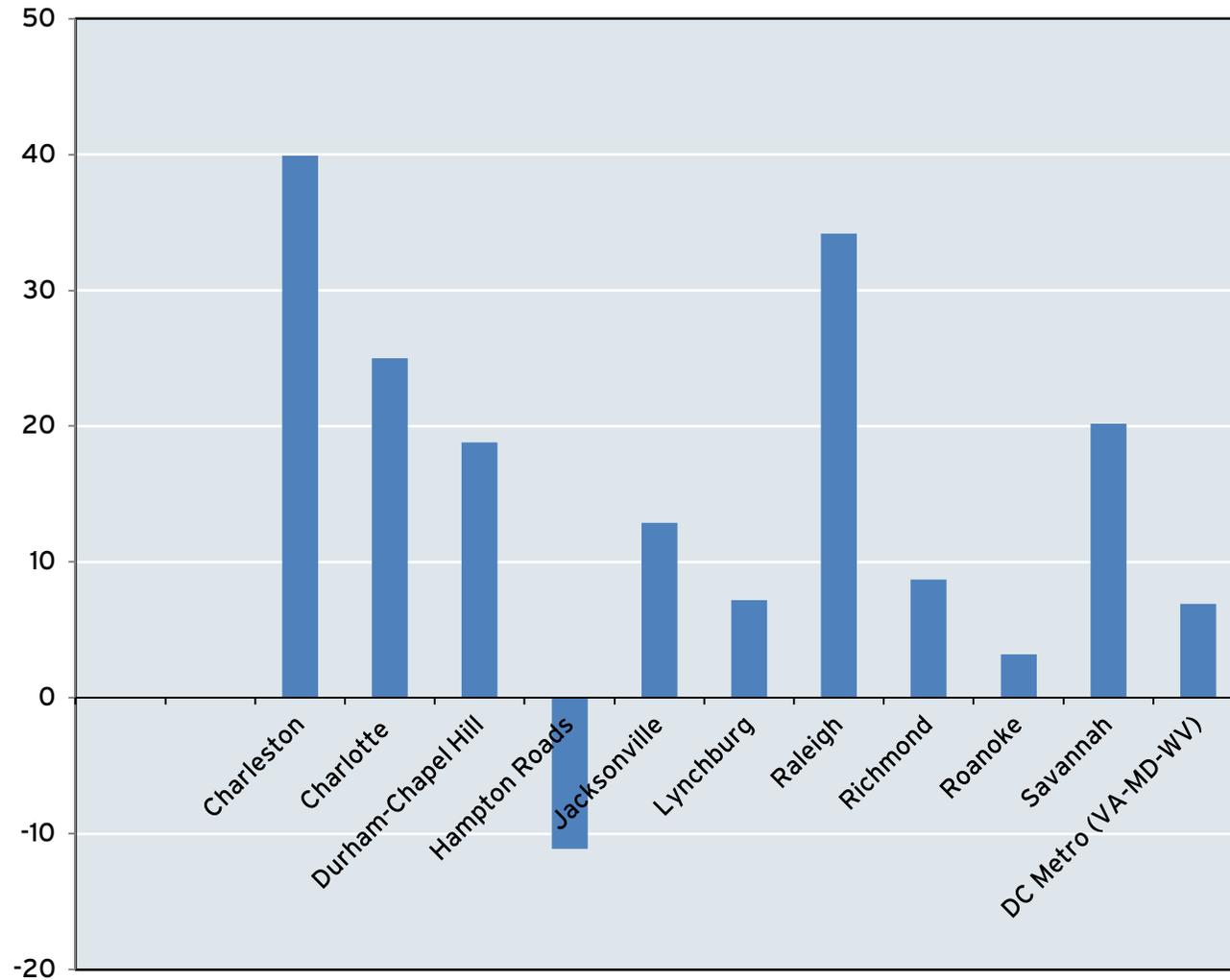
Graph 1 presents domestic net migration numbers for several Virginia metropolitan areas, as well as those in comparable Mid-Atlantic states, for the 2010-13 time period. In general, one can see that Virginia's net migration was not as robust as that in major metropolitan regions throughout the South. Hampton Roads is a major reason why this is true. Indeed, there has been net domestic out-migration from Hampton Roads since 2005. Newport News, Norfolk, Virginia Beach, Hampton, York County, Portsmouth, Suffolk, Gloucester County and Poquoson all have experienced net domestic out-migration for at least half a decade. This is despite the fact that the region's unemployment rate typically has been below that of the United States and only a bit higher than that of the Commonwealth. This tells us that even though job availability is an important reason why people decide to migrate, it is not the only reason.



Parts of Abandoned Detroit, Michigan, 2013
Photographers: Yves Manchand and Romain Meffre

GRAPH 1

2010-2013 DOMESTIC MIGRATION RATES PER 1,000 RESIDENTS: VIRGINIA AND COMPARABLE MID-ATLANTIC AREAS



Source: www.governing.com/gov-data/census/metro-area-population-migration-estimates-2013-data.html

Why Do People Migrate?

Our Study

Detroit symbolizes a metropolitan region that has been experiencing persistent net domestic out-migration. Between 2010 and 2013 (and after taking account of births, deaths and international immigration), Detroit lost 69,075 residents to other metropolitan regions within the United States. Clearly, net domestic migration patterns tell us something important about the vitality of regional economies.

Accumulated research reveals that the following factors are most important in determining whether or not individuals choose to move, and where they move:

- Job availability
- Income growth
- The quality of a region's amenities – its schools; its cultural life; its proximity to oceans, beaches, rivers and mountains; health care availability and quality; fine and performing arts opportunities; religious preferences; access to collegiate and professional sports teams; the regional “cool” factor; the quality of its infrastructure and transportation
- Cost of living
- Economic freedom – a person's ability to work, invest and operate a business without excessively burdensome rules and laws
- Taxation – though here we must acknowledge that while migrants might be turned off by high levels of taxation, they might be attracted by the services and infrastructure that these taxes finance (including quality schools)
- Climate
- The absolute size of a metropolitan region – once again, some prospective migrants might be attracted by the wealth of possibilities and diversity provided by large metropolitan regions, while others might be turned off by congestion, costs and long commutes.

Now let us consider the results of our study of the net domestic migration rates in and out of 358 U.S. metropolitan regions between 2010 and 2013. This sample included eight Virginia metropolitan areas: Hampton Roads, Lynchburg, Northern Virginia, Richmond, Roanoke, Blacksburg, Charlottesville and Winchester. We focus on the factors listed above as possible determinants of these net domestic migration rates, which we measure as the net immigration of individuals in or out of a region per 1,000 residents, between 2010 and 2013.

All of our data came from U.S. government sources, such as the Bureau of Labor Statistics and the United States Census; from private organizations, such as the Council for Community and Economic Research (C2ER); or from well-known amenity assessments, such as “Cities Ranked & Rated” or “Places Rated Almanac.”

AMENITY RATINGS

Let's take a moment to look at the amenity ratings of Virginia metropolitan areas before we look at the overall results.

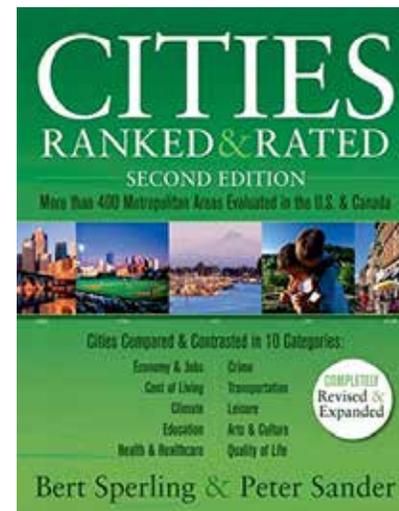
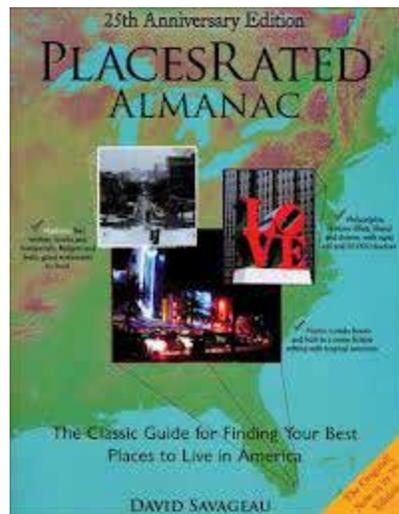
A micro-industry now exists that compares the attributes of one metropolitan area to another. “Places Rated Almanac” (David Savageau, 2007) ranks every metropolitan area in the country on nine separate variables, while Bert Sperling and Peter Sander (2004) rank all metropolitan areas according to 10 criteria in “Cities Ranked & Rated.” Popular publications ranging from Money magazine (2014) to The Economist (2014) annually rank metropolitan areas in terms of their overall attractiveness to job seekers, retirees and even slackers. See Table 7 for Money magazine's “Best Places to Live 2014.” Reston was the only Virginia city to make the list, claiming a No. 10 ranking. In 2014, Richmond, Newport News and Norfolk made the list of Sperling and Forbes magazine's “Top Opportunity Cities.” These noted cities supposedly offer “the freedom to pursue a dream that is more difficult, if not impossible, to realize in other places.”⁷

7 “Top 97 Opportunity Cities For 2014,” www.bestplaces.net/docs/studies/top_97_opportunity_cities.

TABLE 7
MONEY MAGAZINE'S BEST PLACES TO LIVE 2014: THE TOP 10 CITIES

RANK	CITY, STATE	POPULATION	CENSUS REGION	PROJECTED JOB GROWTH	AVERAGE PROPERTY TAXES
1	McKinney, TX	140,864	South	13.1%	\$5,142
2	Maple Grove, MN	63,395	Midwest	6.5%	\$3,562
3	Carmel, IN	83,897	Midwest	17.1%	\$3,317
4	Castle Rock, CO	51,871	West	11.5%	\$2,214
5	Kirkland, WA	84,786	West	4.5%	\$4,655
6	Columbia & Ellicott City, MD	172,745	South	8.7%	\$4,830
7	Clarkstown, NY	85,613	Northeast	5.6%	\$10,054
8	Ames, IA	60,489	Midwest	0.6%	\$2,363
9	Rochester Hills, MI	71,128	Midwest	4.3%	\$3,401
10	<i>Reston, VA</i>	<i>61,177</i>	<i>South</i>	<i>1.8%</i>	<i>\$4,619</i>

Source: <http://time.com/money/3312309>



Our study used "Cities Ranked & Rated" and "Places Rated Almanac" rankings to test the proposition that amenities explain why we move.

Predictably, metropolitan areas grow when they fare well in any ranking, however obscure. For better or worse, the rankings attract national attention and contribute to the public image of the states in which the cities are located. Nevertheless, it is legitimate to ask: Do these rankings reflect real-world differences among metropolitan areas such that they subsequently influence factors such as domestic migration? That is, do publications like “Places Rated Almanac” or “Cities Ranked & Rated” actually capture anything of importance where domestic migration is concerned?

Our Results

Our statistical study assumes that the eight factors noted previously capture the primary reasons why people choose to leave one metropolitan region for another. Economic variables are the most powerful explanatory variables, followed by measures of economic freedom, amenities and public services.

Job availability, which we measure by the rate of job growth in a metropolitan region, is the most important magnet that enables one metropolitan area to attract domestic migrants from other metropolitan areas. This is hardly a surprise, though the rate of income growth in metropolitan areas, per se, was not an important determinant of net domestic migration rates. The lesson is this: What is important to potential migrants is that jobs are available; the compensation level of those jobs is not equally important.

We calculate that a 10 percent increase in employment growth stimulates a 7.7-person increase in the net domestic migration. In an energy-boom metropolitan area such as Midland, Texas (where employment increased 26 percent between 2000 and 2010), this translated to a 23.1 percent increase in that area’s domestic migration rate between 2010 and 2013.

Economic freedom is not easy to define, but refers in general to the ability of an individual to choose how he or she will work, invest, create and run a business with a minimum of interference from government at any level. Economist Dean Stansel has become well known for developing an “index of economic freedom” for U.S. metropolitan areas. His index, which varies

between 0 and 10, takes into account 10 different factors, including the relative size of government in each metropolitan area, the extent of taxation and takings, and labor market freedom.

Table 9 provides Stansel’s economic freedom index (EFI) estimates for the Commonwealth’s major metropolitan areas. Virginia performs well in terms of economic freedom in Stansel’s eyes. Richmond leads the pack with a national ranking of 20, and all major Virginia metropolitan areas rank in the upper half of the national distribution.

Consider an economic freedom example. Stansel estimated Cincinnati’s EFI to be 5.98 in 2013, which was slightly below the 6.54 average for the 358 metropolitan areas we examine in this study. An increase in Cincinnati’s EFI to 6.98 (a +1.00 increase) would move its -8.2 net domestic migration rate per 1,000 residents to -3.83.

TABLE 8 THE MAJOR DETERMINANTS OF NET MIGRATION RATES: 358 METROPOLITAN AREAS, 2010-2013
JOB AVAILABILITY
ECONOMIC FREEDOM
DEGREE OF UNIONIZATION
AMENITIES
PUBLIC SERVICES

Source: Old Dominion University Center for Economic Analysis and Policy

TABLE 9

VIRGINIA METROPOLITAN AREAS AND STANSEL'S ECONOMIC FREEDOM INDEX (EFI)

NATIONAL RANK	METRO AREA	EFI
20	Richmond	7.90
31	Winchester	7.82
32	Lynchburg	7.81
33	Roanoke	7.80
81	Hampton Roads	7.43
122	NoVa/DC Metro	7.12
National Average = 6.54		

Source: Dean Stansel (2013), "An Economic Freedom Index for U.S. Metropolitan Areas," Journal of Regional Analysis and Policy, 43(1), 3-20

DEGREE OF UNIONIZATION OF THE LABOR FORCE

One aspect of economic freedom that merits a closer look is the degree of unionization of the labor force. Virginia, after all, is a right-to-work state and workers in the Commonwealth may not be required to join a union as a condition of employment. Table 10 compares Virginia's rate of worker unionization (4.9 percent) to neighboring states and the United States. Notably, Maryland is not a right-to-work state.

Our results indicate that domestic migrants may view heavily unionized labor markets as ones that are more stratified and less accessible to them. While those who are not business owners may prefer the higher wages and benefits that may be associated with jobs that carry union membership, those are to no avail if they cannot access those jobs. From the standpoint of business owners and entrepreneurs, unionization is much less attractive because it often restricts their ability to pay, reward and penalize their employees as they might wish.

We calculate that a 5 percent increase in the unionization of an area's workforce in a metropolitan area with a domestic migration rate of 10 per 1,000 residents (close to the national average) would cause that rate to decline to 6.2. In fact, economic growth rates are lower in those states

that are heavily unionized; however, it is important to note that economic growth rates reflect many factors in addition to the extent of labor market unionization.

THE COST OF LIVING

How influential is the cost of living to those considering a move? As Graph 2 reveals, the estimated cost of living in New York City (Manhattan) is 85.5 percent higher than the corresponding cost of living in Campbell County/Lynchburg. A 39.9 percent cost-of-living index differential exists between the District of Columbia and Campbell County/Lynchburg. Does this make a difference insofar as domestic migration is concerned?

To be sure, most among us prefer to pay lower prices rather than higher prices for the things we purchase. The problem is that higher prices usually go hand-in-hand with higher incomes and increased job opportunities, while lower prices often mean the reverse.

Our research indicates that the cost of living, per se, is not a major determinant of domestic migration. Migrants will endure higher living costs (or bad weather, for that matter) if jobs are available.

TABLE 10

UNION AFFILIATION OF EMPLOYED WAGE AND SALARY WORKERS: SELECTED MID-ATLANTIC STATES, 2014 ANNUAL AVERAGES (000S)

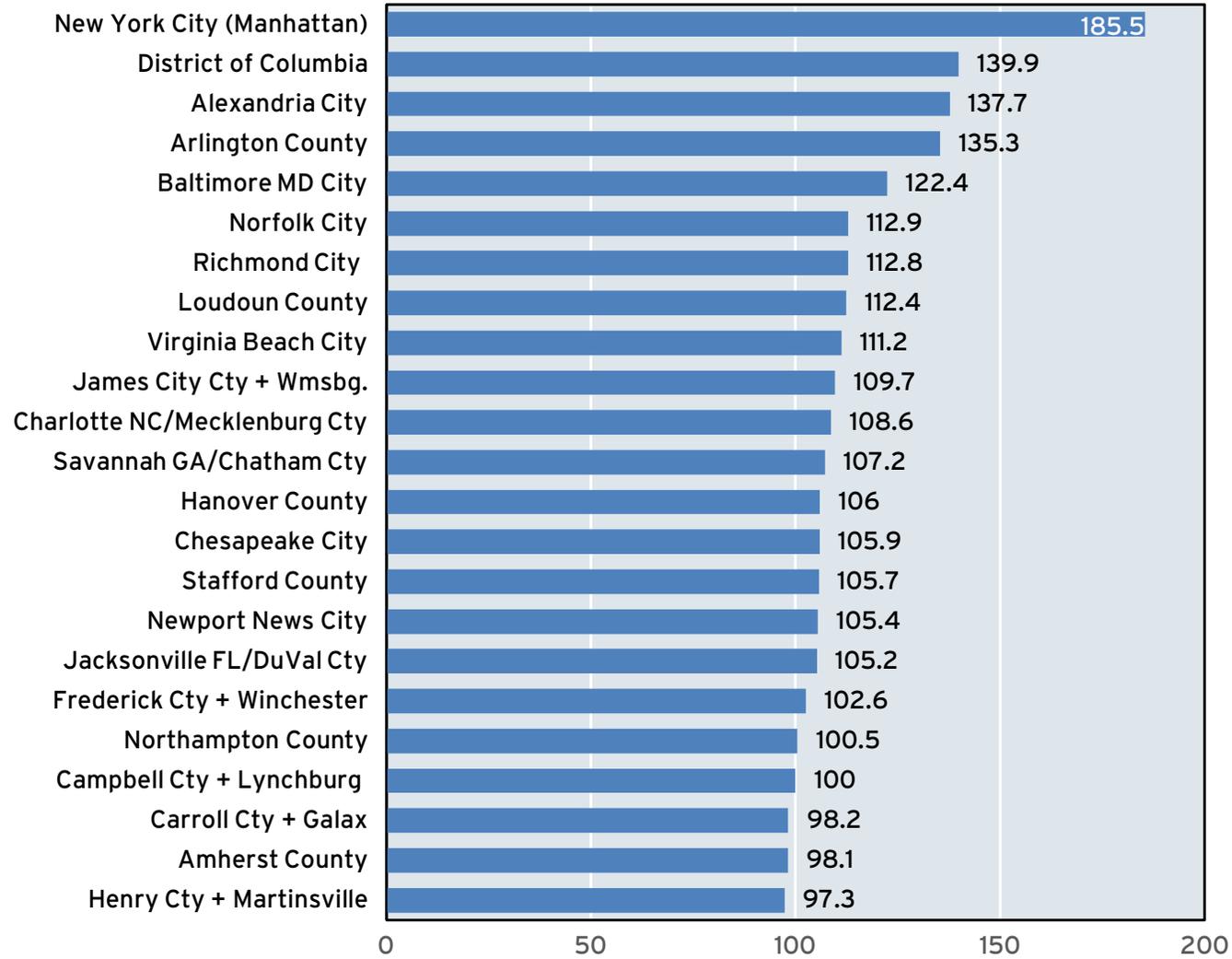
STATE	2013			2014		
	TOTAL EMPLOYED	REPRESENTED BY UNIONS*	PERCENT OF EMPLOYED	TOTAL EMPLOYED	REPRESENTED BY UNIONS*	PERCENT OF EMPLOYED
District of Columbia	308	34	11%	325	35	10.7%
Georgia	3,958	248	6.3%	3,926	193	4.9%
Maryland	2,665	349	13.1%	2,612	347	13.3%
North Carolina	3,879	184	4.8%	3,936	126	3.2%
South Carolina	1,855	86	4.7%	1,884	61	3.2%
Virginia	3,601	229	6.4%	3,665	228	6.2%
National Average =11.1%						

Source: www.bls.gov/news.release/union2.t05.htm, January 2015
 * Data refer to both union members and workers who report no union affiliation, but whose jobs are covered by a union or an employee association contract.



GRAPH 2

COMPARING METROPOLITAN COST-OF-LIVING INDEXES, 2013



Source: Council for Community and Economic Research (C2ER), www.c2er.org

INCOME INEQUALITY

There is much discussion today about income inequality; political candidates of all stripes usually pledge to diminish it. Domestic migrants, however, tend to see things through a different prism. Our results reveal that holding other things constant, metropolitan areas with higher levels of income inequality tend to attract more in-migration, while areas with less inequality tend to have negative net domestic migration rates.

Why so? Because income inequality often is a marker for a dynamic economic situation in which many opportunities exist and it is possible for one to vault quickly upward from lower economic status. Potential migrants, it seems, are more attracted by the real or imagined opportunity to do well than they are repelled by what many may see as the unfairness or inequity attached to unequally distributed incomes.

The most common statistic used to measure income inequality is the Gini Coefficient, which varies between 0 (everyone has the same income) and 1.00 (only one person has all the income). Table 11 reports Gini Coefficients for a variety of jurisdictions. Of all the cities and counties included in Table 11, incomes are more unequally distributed in the New York City metropolitan region. Incomes are most equally distributed in Virginia Beach, Harrisonburg and Roanoke.

A 1-point increase in a metropolitan area's Gini Coefficient increases the typical region's net domestic migration rate by 1.2 per 1,000 citizens – not a huge amount, but statistically significant.

TABLE 11

2005-2009 GINI COEFFICIENTS FOR VARIOUS JURISDICTIONS

METROPOLITAN AREA	GINI COEFFICIENT, 2005-2009
New York/New Jersey	.502
Charleston, SC	.494
Wilmington, NC	.485
Savannah, GA/Chatham County	.478
Blacksburg, VA	.467
Charlottesville, VA	.466
Baltimore, MD	.445
Charlotte, NC/Mecklenburg County	.464
Jacksonville, FL	.446
Richmond, VA	.437
Raleigh, NC/Wake County	.434
Washington DC/Northern Virginia	.433
Virginia Beach, VA	.421
Harrisonburg, VA	.414
Roanoke, VA	.402

Sources: www.census.gov/prod/2011pubs/acs-16.pdf, Table 4 for cities and regions above 1 million; <http://factfinder2.census.gov>, Table 19083 for all others

GOVERNMENT SPENDING

Excessively high taxes can be anathema to economic growth. As a consequence, the citizens of some jurisdictions have voted to restrict the growth of government expenditures. Nevertheless, when revenues raised are used to provide services and infrastructure that stimulate economic activity, they can generate jobs that attract immigrants. Two public goods that domestic migrants usually value are education and transportation infrastructure. When tax revenues are utilized efficiently to achieve quality in these arenas, this makes many people happy. Domestic migrants are no exception. We calculate that a 1 percent increase in government revenues as a proportion of total income elicits a 1.67-person increase in a typical region's net domestic migration rate per 1,000 individuals, holding everything constant. Why? We believe it is because government expenditures act as a rough proxy for educational quality, public safety, parks and other public-sector amenities that domestic migrants value. Domestic movers may subscribe to the old adage, "You get what you pay for."

CLIMATE

Even the most casual observer of population movements in the United States has noticed that many people have been leaving Northern "snow belt" states for warmer locales in the South. Thus, *prima facie*, it appears as if climate must be important. However, we did not find this to be true once we controlled for other factors such as jobs, unionization and amenities. This is consistent with several current domestic migration trends, for example, individuals moving to North Dakota and Montana to take jobs connected to energy as well as a much larger flow of people into the Pacific Northwest and job-generating cities such as Portland and Seattle.

Moderate winters and temperate summers are attractive to some domestic migrants, especially those of retirement age. Nevertheless, the impact of climate on domestic migration is small once one has taken into account other factors, such as the availability of jobs.

METROPOLITAN AREA SIZE

Do domestic migrants consider the raw size of metropolitan areas when they make their relocation decisions? Not according to our regression analysis. This does not mean that domestic migrants are just as likely to move to Carlock, Ill. (population 552), as they are to the Chicago metropolitan area (population 9,474,211). It does mean, however, that multiple characteristics associated with metropolitan area size, and variables such as commuting times, crime rates and school quality, apparently play a role in migrants' decision making.

Other things being equal, however, the size of a region, like climate, is not a major determinant of domestic migration moves.