

## Highlights of State and County-to-County Commuting Data for Maryland

There were several significant findings in county-to-county and state-to-state workforce commuting flows for Maryland compared to 2000, according to recently released data from the 2009-2013 American Community Survey (U.S. Census Bureau).<sup>1,2</sup>

Among these findings:

- Maryland remains a strong *net* exporter of labor, (i.e., more out-commuters than in-commuters) in 2009-2013, (-273,533), with only a relatively small overall change since 2000 (-5,990, or -2.2%)
- Washington, D.C. (322,878) and Virginia (122,688) remain the two top destinations of Maryland residents who work outside the State and also were the recipients of the two largest increases in out-commuting since 2000: +43,408 for Washington, D.C. and +6,390 for Virginia
- Despite the overall minor change in *net* out-commuting for Maryland, there were dramatic changes in the interactions between Maryland and the bordering states of Pennsylvania and Delaware. Most significant was the increase in in-commuting from Pennsylvania to Maryland (+18,054, or 44.0%). Much of this increase went to Maryland counties bordering Pennsylvania, including Baltimore, Harford, and Washington in addition to Baltimore City.
- For Delaware, a sharp increase in in-commuters to Maryland jurisdictions and a large decrease in Maryland out-commuters to Delaware resulted in net commuting going from a net outflow in 2000 of -9,805, to a net inflow of workers of +582 in 2009-2013.
- The “drive to affordability” that was evident for much of the 2000s and which greatly impacted historical migration patterns, was behind much of the changes in cross border commutation patterns since 2000
- Among Maryland’s jurisdictions, Howard (+12,931) and Anne Arundel (+22,169) counties had the largest reductions in their *net* out-commuter totals since 2000 due in part to strong job growth while Baltimore County had the largest increase in net out-commuters since 2000 (+18,935) due to increased outflows to other parts of the Baltimore Region, particularly Anne Arundel and Howard counties

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<sup>1</sup> Released in August of 2015. The estimates are for the 60 month period between January 2009 and December 2013.

<sup>2</sup> In March of 2013 the U.S. Census Bureau released county-to-county commutation data for the 2006-2010 period. However, since there is an overlap between the 2006-2010 and 2009-2013 periods (namely 2009 and 2010), valid comparisons cannot be made between these two, five-year data sets.

- Prince George’s County led the State in total net out-commuting in 2009-2013 (-119,803) as it also did in 2000 (-102,043). The County also remained the largest source of Maryland residents who work in Washington, D.C.
- Baltimore City remains a vital part of the State’s and the Baltimore Region’s economies despite substantial job losses since 2000. The City had the largest number of net in-commuters (i.e. in-commuters minus out-commuters) of any jurisdiction in 2009-2013 (102,822), an increase of 10,173 since 2000<sup>3</sup>
- Washington County had one of the most dramatic changes in net commuting, going from a relatively large net importer of labor in 2000 (4,077 more in-commuters than out-commuters) to near parity in 2009-2013 (only 408 more in-commuters than out-commuters). This reduction in net in-commuting was a consequence of the increased migration of households to Washington County from Frederick County and to a lesser extent from Montgomery County during the 2000s.
- Washington County also had the largest percentage point drop (-6.6%) in the share of residents who worked in their own county due to these migration flows which ultimately led to larger numbers of out-commuters.

#### **A. State-to-State Commuting in 2009-2013**

Just over 501,000 Maryland residents earn their living out of state, according to recently released Journey-to-Work commuting data from the 2009-2013 American Community Survey (ACS). Those who commute out of state to work comprise 17.3 percent of all residents of Maryland who work.

At the same time, just over 227,500 out of state residents commute to work in Maryland resulting in a net export of Maryland workers (i.e. in-commuters minus out-commuters) of just over 273,500. (See Table 1.)

#### **Washington, D.C. Main Destination of Maryland Out-of-State Commuters**

Washington, D.C. is the work place destination for the majority of Maryland residents who work out of state. For the 2009-2013 period, 322,878 Maryland residents, or 64.4 percent of those who worked outside of Maryland, worked in Washington, D.C. Virginia was the second most popular destination, where nearly 122,700 Maryland residents worked, or 24.5 percent of all out of state commuters. In total, nearly nine-out-of 10 (88.9%) of Maryland residents who work out of state worked in these two localities. Following Washington, D.C. and Virginia are Delaware (19,505) and Pennsylvania (14,770) as workplace destinations for Maryland residents.

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<sup>3</sup> It is possible that some of this reported gain in in-commuters may be a function of incorrect coding of workplace destinations to Baltimore City instead of Baltimore County.

Residents of Virginia (68,542), Pennsylvania (59,078) and Washington, D.C. (40,287) dominated in-commuting into Maryland. Combined, these three areas comprised nearly three-quarters (73.8%) of all in-commuters into Maryland in the 2009-2013 period.

The net out-commutation (the number of in-commuters minus the number of out-commuters) is highest to Washington, D.C. (-282,591), Virginia (-54,146) and New York (-1,182). Just over three-quarters (76.0%) of the net outflow to Washington, D.C. is from Prince George's and Montgomery counties, with Anne Arundel and Charles counties accounting for an additional 12.1 percent. These four jurisdictions plus Frederick County also account for 86.6 percent of the net outflows to Virginia, with Prince George's alone making up nearly one-half (47.7%) of this total.

In contrast to the net out-commuting to Washington, D.C. and Virginia, Maryland is a net importer of labor from both Pennsylvania (44,308) and West Virginia (15,021). The net in-commuting from Pennsylvania is distributed to many of Maryland's bordering counties, but is highest to Baltimore (11,515), Washington (8,241) and Frederick (4,532) counties. The net in-commuting from West Virginia is strongest to Washington (5,633), Frederick (3,082), Montgomery (2,723) and Allegany (2,018) counties. ([See County-to-County Commutation Tables.](#))

## **B. Change Since 2000**

The increase in the number of in-commuters to Maryland between 2000 and 2009-2013 (+44,916) was not that much different than the increase in the number of Maryland residents out-commuting (+50,906), although the percent increase for in-commuters (24.6%) was more than twice the growth in out-commuters (11.3%). (See [Table 2](#) and [Table 3](#).) However, this relatively equal change to the in and out commuter flows from the statewide perspective masks some significant changes in individual flows. These altered commuting flows were a direct consequence of the expanding housing bubble during the 2000s which, due to escalating housing prices, led households to move "further out" from urban to suburban and from suburban to ex urban areas, and even to adjacent counties in neighboring states.

Chief among these changes since 2000 was the tremendous increase in in-commuting from Pennsylvania into several counties in Maryland. Overall, in-commuting from Pennsylvania increased from just over 41,000 in 2000 to just over 59,000 in 2009-2013, a 44.0 percent increase. At the same time, out commuting to Pennsylvania increased only slightly (+1,988, or 15.6%). This pattern is not surprising given the fact that out migration from Maryland to Pennsylvania increased markedly during the decade, with these out flows going from 12,750 in 2000 to a peak of 20,500 in 2006 before beginning to decline as the housing bubble began to deflate and the Great Recession began. (See [Chart 1](#).) The driver behind this rising out-migration was the increasing differential in housing prices in the bordering counties of Maryland and Pennsylvania. For example, [Chart 2](#) shows that in all cases, the median housing value in 2006 was higher in the Maryland border counties of Washington, Baltimore, Harford, Carroll and

Frederick, compared to the Pennsylvania border counties of York, Franklin, Lancaster and Adams. **Chart 3A** shows also that the increase in housing value from 2000 to 2006 was in all cases higher for the Maryland counties. Between 2006 and 2013, however, housing values declined in the Maryland border counties while increasing in the Pennsylvania border counties. (See **Chart 3B**.) While Maryland home prices were still higher in 2013 (see **Chart 3C**), the price differential with Pennsylvania did shrink somewhat, making the Maryland homes more affordable than they had been just a few years earlier. As such, it would be expected that future measures of in-commuting from Pennsylvania to Maryland would not show as great an increase as was seen during the 2000 to 2009-2013 period.

By far, the largest increases in in-commuting into Maryland from Pennsylvania since 2000 were to Baltimore (+4,099), Frederick (+2,057), Harford (+1,748) and Washington (+1,612) counties. (See **Chart 4**.) Although not bordering on Pennsylvania, Baltimore City also experienced a relatively large increase of in-commuters from Pennsylvania (+2,768). The bulk of these increases of in-commuters from Pennsylvania were from York and Adams counties to the Baltimore Region, and from Adams and Franklin counties to Frederick and Washington counties.

### **Substantial Increase in Commuting from Delaware**

Commuting into Maryland from Delaware also increased substantially (+6,448, or 47.3%), while commuting outflows from Maryland to Delaware dropped (-3,939, or -16.8%), leading to a huge swing in the net commuting with Delaware, from a net outflow of -9,805 in 2000 to a net inflow of 582 in 2009-2013. The bulk of the increase into Maryland from Delaware was to Cecil (+1,301), Wicomico (+1,088), Harford (+897) and Worcester (+634) counties.

For Cecil and Harford counties, the majority of the increase was from New Castle County. For Wicomico and Worcester counties, the largest source of the increase was neighboring Sussex County. Worcester County traditionally has had more out-migrants to Delaware than in-migrants from Delaware, which would help explain the increased in-commuting back into Worcester.

The bulk of the reduced outflow from Maryland to Delaware was from Cecil County (-3,512). This reduction in out-commuting to Delaware is consistent with the loss of jobs in the Newark area (e.g. Chrysler and Avon) which employed many Cecil residents.<sup>4</sup>

### **More Maryland Residents Commuting to Washington, D.C.**

Although the increase of in-commuters from Washington D.C. to Maryland (+3,837, 10.5%) was relatively large, it was swamped by the increase of Maryland residents commuting to Washington, D.C. (+43,408, or 15.5%), so that the net outflow of Maryland workers to D.C. grew by 39,571 (16.3%). As one would expect, the greatest

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<sup>4</sup> Daniel Blevins, Wilmapco

increases of out-commuters to Washington, D.C. occurred from Prince George's County (+13,617, or 10.8%) and Montgomery County (+11,466, 11.5%) since these two counties also had by far the largest number of residents who commuted to Washington, D.C. in 2000 (126,140 for Prince George's and 99,670 for Montgomery).

While commuting from Charles County to Washington, D.C. in 2000 (15,120) was far less than in Prince George's and Montgomery, it did have a large numeric increase (+5,401) and a much larger percentage increase (50.1%) over the 2000 to 2009-2013 period. More than likely, the large increase in commuters from Charles County to Washington, D.C. was due to the migration patterns since 2000 which saw significant out-migration of Prince George's residents to Charles County. It would make sense that many of these former Prince George's residents worked in D.C. and continued to do so after moving to Charles County.

### **C. Inter-Jurisdictional Commutation**

The diverse economic geography found among Maryland's jurisdictions is reflected by the 2009-2013 journey-to-work commuting patterns. **Table 4** summarizes the 2009-2013 inter-jurisdictional in and out flows; net (in minus out) flows; the percent of residents working within their own jurisdictions; and, the percent of jurisdiction jobs held by jurisdiction residents. **Table 5** has the same data for 2000 and **Table 6** has the change between 2000 and 2009-2013 for these items.

#### **Net Commuting**

Net commuting in 2009-2013 was positive (meaning more commuters coming into a jurisdiction than residents commuting out to work to another jurisdiction) for seven jurisdictions and negative (i.e., more out-commuters than in-commuters) for the remaining 17 jurisdictions. The range for these net commuting totals went from a positive (net in) of 102,822 for Baltimore City to a negative (net out) of 119,803 for Prince George's County. (See **Chart 5**.) Besides Baltimore City, the jurisdictions with positive net in-commuting are all on the Eastern Shore or in the Western Maryland Region. The largest net out-commuting is found in the suburban jurisdictions surrounding Washington, D.C. or Baltimore City.

#### **Howard and Anne Arundel See Strong Net Gains in Net In-Commuting**

There were several significant changes in the net commuting patterns in 2009-2013 compared to 2000. (See **Chart 6**.) Chief among these for those jurisdictions with a net gain of in-commuters was Anne Arundel (+22,169) and Howard (+12,931) counties. (See **Chart 7**.) For Anne Arundel County, the biggest part of the increase in net in-commuting was from Baltimore County (+5,355), the Southern Maryland Region (+1,856), and a drop in net out-commuting to Baltimore City (-4,950), and Prince George's County (-4,898). Relatively strong wage & salary job growth between 2000 and the 2009-2013 period of just over 47,300 – the largest in the State – was behind much of the increased net in-commuting. (See **Table 7**.) Despite the large increase in net in-

commuting to Anne Arundel County between 2000 and 2009-2013, however, the County is still a net exporter of just over 8,600 workers, but this is down by 72.0 percent from what it was in 2000.

For Howard County, its gain of just over 12,900 net in-commuters between 2000 and 2009-2013 has brought its net out-commuter total to just over 2,000 from nearly 15,000 in 2000. Almost all of this 12,900 net reduction was due to a very large increase in in-commuters (+22,707), compared to a much smaller increase of out-commuters (+9,776). Gains from net in-commuting were greatest from the Baltimore Region, which went from nearly 9,000 in 2000 to 15,748 in 2009-2013 (for a gain of nearly 6,800), and a reduction in net out-commuting to the Suburban Washington Region (from -14,240 in 2000 to -11,126 in 2009-2013, a reduction of just over 3,100). As with Anne Arundel County, the strong wage and salary gains for Howard County since 2000 (26,024, the second largest in the State), was a major factor in the large decrease in net out-commuting.

### **Baltimore County Largest Increase in Net Out-Commuters**

Baltimore County had the largest increase in net out-commuters in the State between 2000 and 2009-2013 (-18,935). This increased net out-commuting was almost exclusively the result of net outflows to other parts of the Baltimore Region, particularly to Baltimore City (-10,080), Anne Arundel (-5,355), Howard (-2,465) and Harford (-2,332) counties. The increased net outflow to the entire Baltimore Region amounted to 21,000, which was only partially offset by increased net inflows from Pennsylvania (+3,810).

### **City Gain of Commuters Contrary to Jobs Picture**

Baltimore City had a surprising increase in net in-commuting (+10,173) between 2000 and 2009-2013, despite the fact that it is reported to have lost 62,000 wage & salary jobs over this time span, the worst job performance in the State. Most of the net in-commuting increase was due to gains from other parts of the Baltimore Region (particularly Baltimore and Harford counties), but also some growth in the net gain from Pennsylvania (particularly York County).<sup>5</sup>

### **Washington County Sees Large Reduction in Net In-Commuting**

One of the more dramatic changes in commuting occurred in Washington County. In 2000, Washington County had a net in-commuting total of 4,077, but by 2009-2013 this was reduced to one-tenth of the 2000 total (408). This roughly 3,700 reduction was due in large part to more out-commuting to Frederick and Montgomery counties. Net

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<sup>5</sup> The increase in net *in* commuting for Baltimore City, and the increase in net *out* commuting for Baltimore County may both be a function of incorrect coding of work places to Baltimore City instead of Baltimore County. This inference is based on the job *loss* for Baltimore City (-62,052) and the job *gain* for Baltimore County (+5,465) between 2000 and the 2009-2013 average which would imply net gains in commuting for Baltimore County and net losses for Baltimore City.

out-commuting to Frederick County went from around 5,000 in 2000 to just under 7,700 in 2009-2013 while net out-commuting to Montgomery County increased from 2,100 in 2000 to 3,150 in 2009-2013. Both increases in net out-commuting were most likely due to migration patterns during the housing bubble in the 2000s which resulted in large in-migration of residents to Washington from Frederick, and to a lesser extent, from Montgomery. For instance, in-migration from Frederick to Washington County increased from around 1,150 in both 2000 and 2001 to a peak of just over 2,500 in both 2005 and 2006 before declining. (See [Chart 8](#).) In-migration of Montgomery County residents to Washington County increased from around 300 in 2000 to a peak of just over 1,000 in 2006. (See [Chart 9](#).) The increased migration of Frederick and Montgomery residents to Washington County was primarily due to lower cost housing in Washington County.

### **C. Residents Working Within Their Own Jurisdiction**

The percent of residents who work within their own jurisdiction in 2009-2013 also shows great variation across Maryland, from a high of 84.9 percent in Allegany County to a low of 36.2 percent for those who live and work in Charles County. (See [Chart 10](#).) Most of the jurisdictions that have less than half of their residents working within their own borders are the “outer” or later-developing suburban jurisdictions such as Howard, Charles, Queen Anne’s, Calvert, Carroll and Cecil counties. Most of these jurisdictions have developed into bedroom communities supplying labor for jobs in “inner” or earlier-developing suburban counties – Anne Arundel, Baltimore, Montgomery and Prince George’s – or the central cities of Baltimore City or Washington, D.C. For Caroline County (at 42.9 percent, the sixth lowest share of residents who work in their own county), most of the residents in this predominantly rural county travel to other parts of the Eastern Shore for work, particularly to Talbot and Queen Anne’s counties, and also to Anne Arundel County across the Chesapeake Bay.

For Prince George’s County, the large job centers of Washington, D.C., Northern Virginia as well as adjacent Montgomery County is part of the reason that just 38.7 percent of Prince George’s residents work in their own county, the third lowest percentage. All of the remaining inner suburban jurisdictions of Baltimore, Montgomery and Anne Arundel counties have between 50 and 59 percent of their residents working within their own borders. For these three inner suburban counties, many remaining residents are commuting to either another inner suburban county or to Baltimore City or Washington, D.C.

Allegany, Garrett and Washington counties in Western Maryland, and Wicomico, Talbot, Kent and Worcester counties on the Eastern Shore, all have at least two-thirds of their residents working within their own borders. Each of these jurisdictions is distant from major metropolitan counties and their major employment centers. The remaining Maryland jurisdiction with more than two-thirds of their residents working within its own County – St. Mary’s (75.5%) - is more distant than the other Southern Maryland counties from the major Washington, D.C. area job centers, but also has a good share of its workforce either employed by the Patuxent Naval Air Station, or by contractors affiliated with the federal facility.

There are many similarities in the ranking of counties by percent of their residents who work in their own county in 2009-2013 and 2000. (See [Chart 11](#).) For instance, Allegany, Wicomico, Talbot and St. Mary's counties were all in the top six in both time periods in the percentage of residents who worked locally. Similarly, Queen Anne's, Calvert, Howard, Charles and Prince George's counties were all in the bottom six in both years.

Rural Garrett County had the largest percentage point change in the proportion of its residents who work locally, going from 73.0 percent in 2000 to 76.4 percent in 2009-2013. (See [Chart 12](#).) With relatively small commuting flows and relatively large margins of error associated with those flows, it is difficult to draw many significant conclusions, but it appears that there are less Garrett residents commuting to work to the adjacent counties of Allegany, Maryland and Preston, West Virginia. At the same time the number of Garrett residents who work in Garrett County increased from 9,425 in 2000 to 10,526 in 2009-2013,

Other jurisdictions that showed relatively large increases in the share of residents who worked in their own jurisdiction were Howard (+2.3 percentage points), Harford (+2.3 percentage points) and Cecil (+1.9 percentage points). All three jurisdictions experienced relatively rapid growth in wage and salary jobs since 2000 with Howard and Harford counties having the second and fourth largest numeric gains and Cecil having the second largest percentage increase (24.0%). However, despite the increase in the share of residents who work locally in these three jurisdictions, Howard (at 38.0%) still had the lowest share in the State, while Harford (43.9%) is well below and Cecil (51.9%) is just below the statewide average (52.9%) is just below the statewide average (52.9%).

Talbot (-5.3 percentage points), Somerset (-5.9 percentage points) and Washington (-6.6 percentage points) counties had the three largest reductions since 2000 in the share of their residents who work locally. For Talbot, indications are that this reduced share is a product of a larger number of residents who are commuting to work to Anne Arundel and Queen Anne's counties. For Somerset, there was a small increase in the number of out-commuters (+275), but an even larger drop in the number of Somerset residents who live and work in the county (-814), as the county saw its wage and salary jobs drop by 9.6 percent between 2000 and 2009-2013.

For Washington County, as explained above, migration patterns since 2000 have led to larger number of Washington residents out-commuting to Frederick and Montgomery counties.

#### **D. Jurisdiction Jobs Held by Jurisdiction Residents**

The percent of a jurisdiction's jobs held by its own residents also shows great variation, ranging from St. Mary's 80.3 percent to Howard County's 40.8 percent. (See [Chart 13](#).) St. Mary's high proportion of jobs held by its residents is due chiefly to the Patuxent River Naval Air Station being the major employer in the County. Howard County's low proportion is primarily the result of its prime location midway between

Baltimore City and Washington, D.C. This location over the last 20 years has allowed its residents to commute to other job opportunities throughout the two metropolitan areas. In addition, Howard County, unlike most outer suburban jurisdictions, has developed a significant job base, which has attracted workers from other suburban counties.

Jurisdictions that have the highest share of jobs held by their own residents tend to have either a large military base as a dominant employer (such as St. Mary's and Harford counties), or are more likely to be the more rural jurisdictions located in Western Maryland and on the Eastern Shore which do not have significant volumes of cross-jurisdictional commuting.

Besides Howard County, the jurisdictions with the lowest percentage of jobs held by their own residents include Baltimore City and the four inner suburban jurisdictions of Prince George's, Montgomery, Baltimore and Anne Arundel counties. The low proportion of jobs held by their own residents in the inner suburban jurisdictions is due to the cross-jurisdictional commuting patterns, not only among themselves, but also with the outer suburban jurisdictions and central cities.

Baltimore City's second lowest share in Maryland of jobs held by its own residents (43.4%) is a result of the large net in-commuting by suburban residents (especially Baltimore County). The fact that suburban commuters hold over one-half of the total jobs in the City emphasizes the extreme importance of Baltimore City to the economic vitality of the State as a whole, and even more importantly, to the Baltimore Region.

Five of Maryland's 24 jurisdictions had gains to the share of jobs held by their own residents, and 19 had declines between 2000 and 2009-2013. (See **Chart 14** and **Chart 15**). Caroline County had the largest increase in the share of its residents holding local jobs (+1.5 percentage points). Caroline's increase was driven by a small increase in the number of residents who live and work in the county (+151) plus a small decrease in the number of in-commuters (-125) from other localities. Caroline County had a 3.0 percent drop in wage & salary jobs between 2000 and 2009-2013.

The biggest drop in the share of county residents holding jobs in their own County took place in Somerset (-7.1 percentage points), Anne Arundel (-5.0 percentage points) and Harford (-4.9 percentage points) counties. The decline in Somerset was mostly due to a relatively large drop in the number of Somerset residents working in their own county (-814) combined with a smaller increase in the number of in-commuters (+379). As mentioned above, this overall drop in workers in Somerset (-814+379 = -435) is consistent with the 9.6 percent decline in wage & salary jobs between 2000 and 2009-2013.

The situation was different for both Anne Arundel and Harford counties. Both had large wage & salary gains since 2000 (with Anne Arundel having the largest numeric gain and Harford the fourth largest), helped in part by the transfer of BRAC jobs from New Jersey (to Aberdeen in Harford County) and from Virginia (to Ft. Meade in Anne

Arundel). For each county, the growth in jobs led to strong increases in in-commuters (+30,102 for Anne Arundel and +9,044 for Harford) between 2000 and 2009-2013 leading to the reduction in the percent of jobs held by local residents.

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