

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 2006-2010 American Community Survey (U.S. Census Bureau).¹

Among these findings:

- Maryland remains a strong net exporter of labor, (i.e., more out-commuters than in-commuters) in 2006-2010, (-275,595), with only a relatively small overall change since 2000 (-8,052, or -3.0%)
- Washington, D.C. (312,355) and Virginia (126,243) 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: 32,885 for Washington, D.C. and 9,945 for Virginia
- Despite the overall minor change in net out-commuting for Maryland, there were dramatic changes in the interactions between Maryland and some bordering states. Most significant was the increase in in-commuting from Pennsylvania to Maryland (17,984, or 43.8%). Much of this increase went to Maryland counties bordering Pennsylvania, including Baltimore, Carroll and Frederick.
- 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 and Anne Arundel counties had the largest reductions in their net out-commuter totals since 2000 (around 14,000 each) due in part to strong job growth while Baltimore County had the largest increase in net out-commuters since 2000 (-16,864) due to increased outflows to other parts of the Baltimore Region, particularly Anne Arundel and Howard counties
- Prince George’s County led the State in total net out-commuting in 2006-2010 (-116,256) 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 Baltimore Region’s economies despite substantial job losses since 2000. The City had the largest

¹ Released in March of 2013. The estimates are for the 60 month period between January 2006 and December 2010.

number of net in-commuters of any jurisdiction in 2006-2010 (103,053), an increase of 10,400 since 2000²

- Washington County had the most dramatic change in net commuting, going from a net importer of labor of 4,077 (more in-commuters than out-commuters) in 2000 to a net exporter (more out-commuters than in-commuters) of labor (-1,505) in 2006-2010. This shift 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 decade.
- 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 2006-2010

Just over 496,500 Maryland residents earn their living out of state, according to recently released Journey-to-Work commuting data from the 2006-2010 American Community Survey (ACS). Those who commute out of state to work comprise 17.4 percent of all residents of Maryland who work.

At the same time, just over 220,900 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 nearly 275,600. (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 2006-2010 period, 312,355 Maryland residents, or 62.9 percent of those who worked outside of Maryland, worked in Washington, D.C. Virginia was the second most popular destination, where just over 126,200 Maryland residents worked, or 25.4 percent of all out of state commuters. In total, nearly nine-out-of 10 (88.3%) of Maryland residents who work out of state worked in these two localities.

Residents of Virginia (65,323), Pennsylvania (59,008) and Washington, D.C. (40,689) dominated in-commuting into Maryland. Combined, these three areas comprised nearly three-quarters (74.7%) of all in-commuters into Maryland.

The net out-commutation (the number of in-commuters minus the number of out-commuters) is highest to Washington, D.C. (-271,666), Virginia (-60,920) and Delaware (-3,873). Just over three-quarters (75.8%) of the net outflow to Washington, D.C. is from Prince George's and Montgomery counties, with Anne Arundel and Charles counties

² 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.

accounting for an additional 11.6 percent. These four jurisdictions also account for 79.6 percent of the net outflows to Virginia, with Prince George's alone making up nearly one-half (46.9%) of this total.

The net out-commuting to Delaware is almost totally the result of residents of Cecil County working in Delaware. There is a net outflow of just over 7,600 Cecil residents to Delaware compared to a nearly 3,900 net outflow from all of Maryland. The statewide net out commuting is tempered somewhat by net in-commuting to several Maryland jurisdictions, including: Wicomico (1,201), Worcester (794), Talbot (542), Baltimore City (519) and Anne Arundel (518) counties.³

In contrast to the net out-commuting to Washington, D.C., Virginia and Delaware, Maryland is a net importer of labor from both Pennsylvania (45,122) and West Virginia (14,478). The net in-commuting from Pennsylvania is distributed to many of Maryland's bordering counties, but is highest to Baltimore (11,760), Washington (8,318) and Frederick (5,516) counties. The net in-commuting from West Virginia is strongest to Washington (4,958), Frederick (2,621), Montgomery (2,578) and Allegany (2,194) counties. (See [County-to-County Commutation Tables](#).)

B. Change Since 2000

The increase in the number of in-commuters to Maryland between 2000 and 2006-2010 (38,280) was not that much different than the increase in the number of Maryland residents out commuting (46,332), although the percent increase for in-commuters (21.0%) was more than twice the growth in out-commuters (10.3%). (See [Table 2](#) and [Table 3](#).) However, this relatively equal change to the in and out commuter flows from the statewide perspective covers up some rather dramatic changes in individual flows. These altered commuting flows were a direct consequence of the expanding housing bubble during the decade which, due to escalating housing prices, affected people's decisions on where to live.

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 2006-2010, a 43.8 percent increase. At the same time, out commuting to Pennsylvania increased slightly (1,104, or 8.6%). 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. (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 2007 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

³ However, the margins of error associated with these estimates of net gains from Delaware are all relatively large (i.e., 50 percent or more of the estimate. (See [County-to-County Commutation tables](#)).

increase in housing value from 2000 to 2007 was in all cases higher for the Maryland counties. Between 2007 and 2010, 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 2010, 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 2006-2010 period.

By far, the largest increases in in-commuting into Maryland from Pennsylvania since 2000 were to Baltimore (4,214), Frederick (2,689), Carroll (1,777) and Harford (1,590) counties. (See **Chart 4**.) Although not bordering on Pennsylvania, Baltimore City also experienced a relatively large increase of in-commuters from Pennsylvania (1,637). The bulk of these increases of in-commuters from Pennsylvania were from York and Adams counties to Baltimore and Carroll counties, and from Adams and Franklin counties to Frederick County.

Substantial Increase in Commuting from Delaware

Commuting into Maryland from Delaware also increased substantially (4,288, or 31.4%), while commuting outflows from Maryland to Delaware dropped modestly (-1,644, or -7.0%). The bulk of the increase into Maryland from Delaware was to Cecil (1,229) and Worcester counties (543). In Cecil County's case, the majority of the increase was from New Castle County. For Worcester County, the largest source of the increase was neighboring Sussex County. And while 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, this is not the case for Cecil County. Cecil County has traditionally experienced net in-migration from Delaware, meaning the growth in in-commuters is probably driven by other factors.⁴

More Maryland Residents Commuting to Washington, D.C.

Although the increase of in-commuters from Washington D.C. to Maryland (4,239, 11.6%) was relatively large, it was swamped by the increase of Maryland residents commuting to Washington, D.C. (32,885, or 11.8%), so that the net outflow of Maryland workers to D.C. grew by nearly 28,650 (11.8%). As one would expect, the greatest increases of out-commuters to Washington, D.C. occurred from Prince George's County (10,079, or 8.0%) and Montgomery County (7,453, 7.5%) 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 (4,335) and a much larger percentage increase (40.2%) over the 2000 to 2006-

⁴ Cecil County had a *net* inflow of just over 2,000 people from Delaware over the 2000 to 2010 period, despite small net outflows from 2007 to 2009.

2010 period. More than likely, the large increase in commuters from Charles County to Washington, D.C. was due to the migration patterns during the decade 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 2006-2010 journey-to-work commuting patterns. **Table 4** summarizes the 2006-2010 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 2006-2010 for these items.

Net Commuting

Net commuting in 2006-2010 was positive (meaning more commuters coming into a jurisdiction than residents commuting out to work to another jurisdiction) for six jurisdictions and negative (i.e., more out commuters than in commuters) for the remaining 18 jurisdictions. The range for these net commuting totals went from a positive (net in) of 103,053 for Baltimore City to a negative (net out) of 116,256 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 2006-2010 compared to 2000. (See **Chart 6**.) Chief among these for those jurisdictions with a net gain of in-commuters was Anne Arundel and Howard counties. Both jurisdictions had gains of over 14,000 in *net* in-commuters (i.e., in-commuters minus out-commuters). (See **Chart 7**.) For Anne Arundel County, the biggest part of the increase in net in-commuting was from Baltimore County (+5,664), and Southern Maryland (+1,715), and a drop in net out-commuting to Baltimore City (-2,988), and Prince George's County (-3,809). Relatively strong wage & salary job growth between 2000 and 2010 of just over 38,300 – the largest in the State – was behind much of the increased gains in net in-commuting. (See **Table 7**.) Despite the large increase in net in-commuting to Anne Arundel County between 2000 and 2006-2010, the County is still a net exporter of labor of nearly 16,700, but this is down by 45.7 percent from what it was in 2000.

For Howard County, its gain of 14,390 net in-commuters between 2000 and 2006-2010 has brought its net commuter total to near zero (meaning the number of in-

commuters roughly balances out the number of out-commuters).⁵ Almost all of this 14,390 net gain was due to a very large increase in in-commuters (19,399), compared to a much smaller increase of out-commuters (5,009). Gains from net in-commuting were greatest from the Baltimore Region, which went from nearly 9,000 in 2000 to 17,572 in 2006-2010 (for a gain of nearly 8,600), and a reduction in net out-commuting to the Suburban Washington Region (from -14,240 in 2000 to -10,668 in 2006-2010, a reduction of just under 3,600). As with Anne Arundel County, the strong wage and salary gains for Howard County since 2000 (20,187, the second largest in the State), was a major factor in the large increase in net in-commuting.

Baltimore County Largest Increase in Net Out-Commuters

Baltimore County had by far the largest increase in net out-commuters in the State between 2000 and 2006-2010 (-16,864). This increased net out-commuting was almost exclusively the result of net outflows to other parts of the Baltimore Region, particularly to Baltimore City (-7,871), Anne Arundel (-5,664) and Howard (-3,463) counties. The increased net outflow to the entire Baltimore Region amounted to nearly 21,000, which was only partially offset by increased net inflows from Pennsylvania (4,055) and Cecil County (877).

City Gain of Commuters Contrary to Jobs Picture

Baltimore City had a surprising increase in net in-commuting (10,404) between 2000 and 2006-2010, despite the fact that it is reported to have lost nearly 62,000 wage & salary jobs over this time span, the worst job performance in the State.⁶ 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).⁷

Washington County Flips From Net Importer to Net Exporter of Labor

One of the more dramatic changes from a net importer of labor in 2000 to a net exporter of labor in 2006-2010 was in Washington County. In 2000, Washington County had a net in-commuting total of 4,077, but by 2006-2010 had reversed direction with a net out-commuting total of 1,505. This roughly 5,600 turnaround was due in large part to more out-commuting to Frederick and Montgomery counties. Net out-commuting to

⁵ Howard County net commutation for the 2006-2010 period is slightly negative (-557), but the margin of error (+/- 1,774 for inter county commuters) brackets zero, i.e. the lower bound is -2,331 and the upper bound is +1,217.

⁶ The 61,909 job loss is measured from 2000 to 2010. Using the 2006-2010 annual average wage & salary totals for Baltimore City, the loss is calculated at 51,152 between 2000 and the 2006-2010 period. Source: U.S. BEA, Table CA27, May 2012

⁷ 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 (-51,152) and the job *gain* for Baltimore County (+14,177) between 2000 and the 2006-2010 average which would imply net gains in commuting for Baltimore County and net losses for Baltimore City.

Frederick County went from around 5,000 in 2000 to just under 8,900 in 2006-2010. Net out-commuting to Montgomery County increased from 2,100 in 2000 to nearly 3,200 in 2006-2010. Both increases in net out-commuting were most likely due to migration patterns during the decade 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 of residence in 2006-2010 also shows great variation across Maryland, from a high of 84.2 percent in Allegany County to a low of 37.3 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 41.2 percent, the fifth 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 are part of the reason that just 39.6 percent of Prince George’s residents work in their own County, the second lowest percentage after Charles County. 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 more than 70.0 percent of their residents working within their own borders. Each of these jurisdictions is distant from major metropolitan counties which could be work place destinations for their residents. The remaining Maryland jurisdiction with more than 70.0 percent of its residents working within its own County – St. Mary’s - 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 2006-2010 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 change in the proportion of its residents who work locally, going from 73.0 percent in 2000 to 76.7 percent in 2006-2010. (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 county of Preston, West Virginia. At the same time the number of Garrett residents who work in Garrett County increased from 9,425 in 2000 to 10,856 in 2006-2010,

Other jurisdictions that showed relatively large increases in residents who worked in their own jurisdiction was Cecil (+2.9 percentage points), and Queen Anne's (+2.3 percentage points). Both jurisdictions enjoyed relatively rapid growth in wage and salary jobs since 2000, with Queen Anne's job gain of 21.5percent ranked second and Cecil's 20.3 percent gain ranked third in the State (by percentage increase). Still, despite the increase in the share of residents who work locally, the share for both Cecil (46.8%) and Queen Anne's (42.4%) are still below the statewide average of 53.1 percent.

Dorchester (-3.8 percentage points) and Washington (-6.6 percentage points) counties had the two largest reductions since 2000 in the share of their residents who work locally. For Dorchester, indications are that this reduced share is a product of a larger number of residents who are commuting to work to Upper Eastern Shore counties, particularly Talbot County, although the relatively large margins of error associated with these estimates makes it difficult to draw definitive conclusions.

For Washington County, as explained above, migration patterns over the course of the decade 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 81.1 percent to Howard County's 40.0 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 (44.0%) 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.

One-half of the jurisdictions had gains to the share of jobs held by their own residents, and one-half had declines between 2000 and 2006-2010. (See [Chart 14](#) and [Chart 15](#)). Calvert County had the largest increase in the share of its residents holding local jobs (2.2 percentage points). Calvert has been a fast-growing county for decades, often leading the State in the rate of population expansion. Job growth this decade has also been relatively rapid with the percentage increase in wage and salary jobs between 2000 and 2006-2010 the largest in the State (23.1%). Nonetheless, the County remains a prototypical bedroom community, with the vast majority of resident's commuting elsewhere to work.

The biggest drop in the share of county residents holding jobs in their own County took place in Frederick County (-4.3 percentage points) and Somerset County (-4.0 percentage points), where the 2006-2010 share was about four percentage points below the 2000 share. There was very little change in the number of Somerset residents who live and work in the County between the two time periods, but there was a modest increase in the number of in-commuters into Somerset from Wicomico and Worcester counties. However, Somerset has shown no growth in wage and salary jobs between 2000 and 2006-2010 (-712, or -9.0%) and the margins of error for the in-commuting estimates are relatively large, so it is difficult to draw any definitive conclusions from this data.

For Frederick County, on the other hand, there was a relatively large increase in the number of residents who live and work in the County (60,270 to 68,885), but also large increases in both in commuters (+9,793) and out commuters (8,517). These gains in both in and out commuters were a function of the migration patterns during the 2000s in which Frederick County gained residents from Montgomery County, but also had out migration to Washington County and adjacent counties in Pennsylvania and West Virginia.

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