Washington County, Maryland
County at a Crossroads

Matt Yoder
March 7, 2013

Author's Note

I researched and wrote this report for the course Urban and Regional Analysis, taught by Professor Andrew Greenlee at the University of Illinois at Urbana-Champaign. The goals of the project were to analyze data from the U.S. Census Bureau and other public sources, and to use those data in service of storytelling about a particular place. I chose to study Washington County because of its unique position at the crossroads of two distinct regions.

While the report examines a wide range of quantitative data, the supporting qualitative data are limited to resources I could access online and through the University library. Confirming my assumptions with residents and inviting them to shape the emerging story—usually key elements in the interpretive process—were not possible because of time constraints. As such, the story that emerges in the following pages is a partial view, useful only in combination with voices from Washington County itself.

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County at a Crossroads

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Located in the Appalachians of western Maryland, Washington County is bordered by the Mason-Dixon Line to the north and the Potomac River to the south. Nearly seventy miles northwest of Washington, D.C., Hagerstown is the primary city and county seat of Washington County.

Transportation—via road, railroad and canal—was central to Hagerstown's early history, gaining it the nickname the "Hub City."[1] Even today, Washington County continues to view its location as an asset. A recent report prepared by Urbanomics, Inc. for the county's Economic Development Commission (EDC) cites the county's location and transportation infrastructure as its primary competitive advantages.[2] In fact, the EDC promotes the county as the "Crossroads of the Mid-Atlantic."[3]

In recent decades, however, Washington County has become a hub of another sort. The outward expansion of the Washington, D.C. metropolitan area has placed Washington County within the reach of suburban commuters. As a result, the county finds itself at a literal and metaphorical crossroads. It faces new linkages and rapid growth from commuting and migration along the I-70/270 and I-81 corridors while its demographics largely continue to reflect its Appalachian roots. A service sector fueled by commuting and migration has softened the blow of declining manufacturing, but the county remains vulnerable to swings in the market because of its subsector specialization and dependence on several large employers.

The analysis that follows explores the relationship between the physical crossroads that defined Washington County's past and the metaphorical crossroads—defined by commuting and migration trends—that promises to shape its future.

Regional linkages increasingly shape Washington County.

Washington County falls at the crossroads of two regions, referred to here as the Eastern and Western regions (see *Map 1*). The Western Region contains rural, Appalachian counties in Maryland, Pennsylvania and West Virginia, while the Eastern Region falls within the populous Washington, D.C. metropolitan area. The study area composed of both regions includes the ten counties where at least 0.5 percent of Washington County residents worked or where at least 0.5 percent of the county's workforce lived in 2000.[4]

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[1] Mary H. Rubin, *Hagerstown* (Charleston, SC: Arcadia Publishing, 2010), ix – x.

[2] Don Aines, "Washington County location major plus in economic development strategic plan," *The Herald-Mail*, February 16, 2013, accessed February 25, 2013, http://www.herald-mail.com/news/hm-washington-county-location-major-plus-in-economic-development-strategic-plan-20130216,0,4538578.story.

[3] "Welcome to the Crossroads of the Mid-Atlantic," *Hagerstown-Washington County Economic Development Commission*, accessed February 25, 2013, http://hagerstownedc.org.

[4] The 0.5 percent threshold is somewhat arbitrary, but it captures 97.3 percent of the county's workforce and 96.3 percent of its working residents in 2000, suggesting the study area is an appropriate geography for analysis.

Commuting and migration linkages formed in recent decades suggest that different dynamics were at play in the Eastern and Western regions, and that Washington County served as a link between these regions. Net commuting within the study area tended to be west-to-east (see *Map 2*), while net migration tended to be east-to-west (see *Map 3*). Washington County was at the center of these trends, which were driven by affordability and industry considerations.

Commuting tends to occur west-to-east.

Commuting is a primary indicator of regional linkages, and Washington County experienced significant change in its commuting patterns in recent decades. In 1970, the regional economy was relatively localized. The county had similar numbers of jobs and resident workers, and most employed residents worked in the county (see *Table 1* and *Table 2*). Cross-county commuting took place primarily with three neighboring counties connected by interstate highways: Franklin County, Pennsylvania; Frederick County, Maryland; and Berkeley County, West Virginia. Inbound and outbound commuting largely were reciprocal, though already Franklin County sent more than twice as many workers to Washington County as it received.

Thirty years later, the workforce and the number of employed residents in Washington County had nearly doubled. During that time, the percentage of working residents employed in Washington County fell by more than 14 points. Most of the growth in outbound commuting occurred in two Maryland counties—Frederick and Montgomery—located on the I-70/270 corridor. The share of Washington County residents commuting to these counties more than quadrupled between 1970 and 2000. Inbound commuting to Washington County also increased, especially from neighboring Franklin and Berkeley counties.

In the picture that emerges, workers employed in the Eastern Region's I-70/I-270 corridor increasingly chose to live in Washington County. At the same time, workers from the Western Region—particularly those from the I-81 corridor—found employment in Washington County. While jobs grew slightly faster than resident workers, Washington County increased in importance both as an employment center for the Western Region and as a bedroom community for the Eastern Region.

Migration tends to occur east-to-west.

Very likely many of the commuters from Western Region counties once lived in Washington County (see *Table 3*). Washington County experienced a net increase of more than 1,200 migrants from the study area between 2000 and 2005. Of those who left Washington County, most moved to counties along the I-81 corridor, while net in-migration came largely from the I-70/270 corridor.

From 2000 to 2007, both the county and the Western Region as a whole experienced rapid growth, mainly as a result of internal migration (see *Table 4* and *Figure 1*). Meanwhile the Eastern Region and Maryland experienced slower overall growth based primarily on natural increase. Population increases from international migration to these geographies largely were offset by internal out-migration.

These trends in migration suggest an overall east-to-west movement of population within the study area. Washington County received an influx of migrants from counties in the Eastern Region, where a steady stream of immigrants kept demand for housing high. At

the same time, the newly arrived migrants displaced some Washington County residents, prompting them to move to more affordable counties in the Western Region.

Affordability and industry drive commuting and migration.

According to data from the 2007 – 2011 American Community Survey, more than one-third of Washington County households lived in housing that was not affordable based on their income (see *Table 5*).[5] On that metric, the county fell between the less affordable Eastern Region and the more affordable Western Region.

Similarly, in terms of the housing purchasing power of the median earner, Washington County was more affordable than all but one county in the Eastern Region and less affordable than all but one county in the Western Region (see *Table 6*). Its affordability rank within the region remained relatively constant over recent decades. These trends suggest that the east-to-west migration trends and the west-to-east commuting patterns Washington County experienced in recent decades were largely the driven by affordability concerns.

Changing sex and age distributions suggest that employment considerations also were an impetus for migration. Many of those moving to Washington County from other parts of the Eastern Region were members of the region's 1990 population bubble centered on age 30, creating a corresponding bubble in Washington County's 2010 population distribution (see *Figure 2* and *Table 7*). Yet net migration to the county was disproportionately male—particularly among 25- to 44-year-olds—during some periods (see *Table 8*). This trend suggests that migrants were attracted by particular industries that tend to employ early-career males.[6]

Migration and commuting have opposite effects on demographics.

Migration trends in recent decades mainly served to reinforce Washington County's existing race and education demographics, which mirrored those of the Western Region. At the same time, commuting created new opportunities for some of the county's residents and workers, changing its income demographics.

Racial and ethnic diversity have grown slowly.

A large majority of the Washington County's population identified as white in both 2000 and 2010, and the percentage of white residents fell by just three points during that decade (see *Table 9*). Washington County's lack of racial and ethnic diversity—and its slight increase in diversity—mirrored trends in the Western Region. By contrast, the Eastern Region was far more diverse, and its diversity grew at a much faster rate.

These trends reflect regional migration and immigration patterns. While the Eastern Region attracted immigrants who increased its diversity, those who moved from the Eastern Region to the Western Region resembled existing residents.

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[5] Affordability is defined using the federal threshold of 30 percent of household income.

[6] The persistent population imbalance between males and females in the county is due to the Hagerstown Correctional Complex, a campus containing three all-male state prisons. These prisons do not fully explain the gender imbalance in migration, however.

Education levels remain low.

Education levels largely mirrored the trends in race and ethnicity (see *Table 10*). The percentage of Washington County residents 25 years or older with at least a bachelor's degree increased by three points during the decade from 1990 to 2000, but remained well below the 2000 national average of 24 percent.[7] Educational achievement in the county closely matched the distribution in the Western Region. The Eastern Region, by contrast, was substantially more educated, with nearly half of the adult population holding at least a bachelor's degree in 2000. These trends suggest that migration did not raise Washington County's education level, creating challenges for some of the county's employers.[8]

Commuters are shaping the demographics of Washington County.

Commuters to Washington County tended to live predominantly in the areas of the Western Region just outside the county (see *Map 4*). Commuters who worked in other counties in the Eastern Region tended to commute to urban areas in those counties (see *Map 5*).

In both cases, these commuters were different from Washington County residents who worked within the county. Overall, cross-county commuters tended to be younger than in-county commuters, and they tended to earn more than those who lived and worked in Washington County (see *Table 11*, *Table 12* and *Appendix A*).[9] Commuters from the Western Region tended to work in goods-producing industries, while commuters from the Eastern Region more often worked in trade and transportation occupations.

Still, the benefits from commuting were not equally distributed among residents of Washington County. With a poverty rate of 11.2 percent, Washington County fell in the mid range of poverty in the Western Region and well above most counties in the Eastern Region (see *Map 6*). Without intervention, this economic divide between cross-county and in-county commuters could continue to grow, harming Washington County's overall economy.

Linkages have caused and responded to economic shifts.

Service has replaced manufacturing as the dominant sector.

In 1969, manufacturing accounted for nearly one third of all jobs in Washington County, reflecting its competitive advantage in goods production and distribution. From 1969 to 2000, however, the share of jobs in the manufacturing sector fell by half, and the share of jobs in the service sector doubled (see *Table 13*). These trends continued from 2001 to 2011, with further losses in manufacturing and gains in most service-sector industries (see *Table 14*). From 2001 to 2011, the largest increases in employment share occurred in retail and in health care and social assistance. By 2011, these industries were the largest employers in Washington County.

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[7] U.S. Census Bureau, 2000 Census, Table DP-2, accessed via American FactFinder, February 4, 2013.
[8] Don Aines, "Educational gap could hamper redevelopment efforts, according to EDC," *The Herald-Mail*, February 24, 2013, accessed February 25, 2013, http://www.herald-mail.com/news/hm-educational-gap-could-hamper-redevelopment-efforts-according-to-edc-20130224,0,3096320.story.
[9] These differences are consistent with the notion that affordability is a factor driving migration and commuting.

The shift from manufacturing to service jobs corresponds to the shift in commuting patterns. Under this model, commuters to the Washington, D.C. metropolitan area fueled an increased demand for services in Washington County. The new service jobs were filled both by Washington County residents and by an increasing number of commuters from neighboring counties in the Western Region.

Retail, finance and transportation are Washington County's leading industries.

By 2008, Washington County's industry specializations reflected both its role as a transportation hub and its growing service sector fed by commuting. The county had substantially higher-than-average per capita employment in retail, finance and insurance, and transportation and warehousing (see *Table 15*). With nearly 2,500 extra jobs compared to the national industry mix, transportation and warehousing was the most specialized industry, followed by finance and retail (see *Table 16*).

The Western Region shared Washington County's specialization in retail, and to a lesser extent, in transportation and warehousing. Meanwhile the Eastern Region contained substantially fewer jobs in both industries than would be suggested by the national industry mix.

Retail and transportation and warehousing are both space-intensive industries, which explains why they located on the periphery of the Washington, D.C. metropolitan area. In an increasingly interconnected region, warehouses could locate further from population centers, increasing Washington County's draw. Similarly, metropolitan shoppers were willing to drive the extra distance for lower prices, particularly when they increasingly commuted across county lines for work.

Subsector specializations include engine manufacturing, credit and warehousing.

At the subsector level, Washington County exhibited strong specializations in engine manufacturing, credit intermediation and warehousing in 2008 (see *Table 17* and *Table 18*). The Eastern Region was specialized in credit intermediation, and the Western Region was specialized in warehousing and engine manufacturing. In all cases, though, the regional specializations were less pronounced than those in Washington County.

In the cases of warehousing, the intersection of two major interstates constituted a clear competitive advantage. In the case of credit intermediation and engine manufacturing, the specializations were the result of large employers. In 2010, Citigroup employed more than 2,500 workers, many of them in its credit card business; Volvo Powertrain employed nearly 1,400 workers—more than one-fifth of the county's remaining manufacturing jobs—at its Hagerstown facility.[10]

Volatile unemployment and competitiveness are related to specialization.

From 1990 to 2011, both Washington County and the Western Region had more volatile unemployment rates than either the Eastern Region or the nation (see *Figure 3*). Until recent years, the county's unemployment rate tracked closely to the Western Region. The 2008 financial crisis hit the county hard, however, sending the unemployment rate well above both the regional and national averages. Washington County also experienced more

[10] "2012 Economic Data Summary," *Hagerstown-Washington County Economic Development Commission*, accessed February 25, 2013, http://hagerstownedc.org/sites/default/files/2012EDS.pdf.

seasonal variation in unemployment than the regions and the nation in recent decades (see *Figure 4*).

A shift share analysis reveals that, while Washington County's industry mix was slightly unfavorable from 1969 to 2011, the county's competitiveness within those industries varied widely (see *Figure 5*). The county was consistently competitive during the late 1980s and early 1990s, when inflation-adjusted gasoline prices were near their lowest levels.[11] Outside of that period, the county's regional competiveness was unpredictable, with wide swings from year to year.

The volatility of Washington County's unemployment is explained in part by its specializations in finance and transportation, which are sensitive to market shifts and prone to layoffs during slow periods. Yet the regional (county) shift component suggests that industry specializations were not the only factors contributing to the county's economic volatility.

At first glance, Washington County appeared have a highly diversified economy in 2008, with an industry employment distribution not unlike that of the nation (see *Figure* 6). Zooming in to the subsector level, however, the county was more specialized than it first appeared (see *Figure 7*). These specializations in niche markets—along with the influence of large employers like Citigroup and Volvo Powertrain—made Washington County especially vulnerable to shifts in the national and regional economies.

Commuting and migration promise to shape a growing region.

Washington County's growth boom may be yet to come.

Driven by commuting and migration, Washington County's population grew by nearly 12 percent between 2000 and 2010, a significant increase when compared to nine percent growth in Maryland and 10 percent nationally.[12] Yet long-range regional trends suggest the county's real growth boom may be yet to come.

In the Eastern Region, the trend has been toward "growth bubbles" beginning with Washington, D.C. and advancing to counties along the I-70/270 corridor (see *Figure 8*). In this pattern, counties gain population share, then begin to stabilize, and eventually lose share as development moves further outward. Montgomery County appeared to be near the peak of its population share growth in 2011, and Frederick County was beginning to climb in share in the 1990s and 2000s. If this trend continues, Washington County could experience population growth—driven by the Eastern Region—that would significantly increase its influence in both regions.

Washington County is at a crossroads.

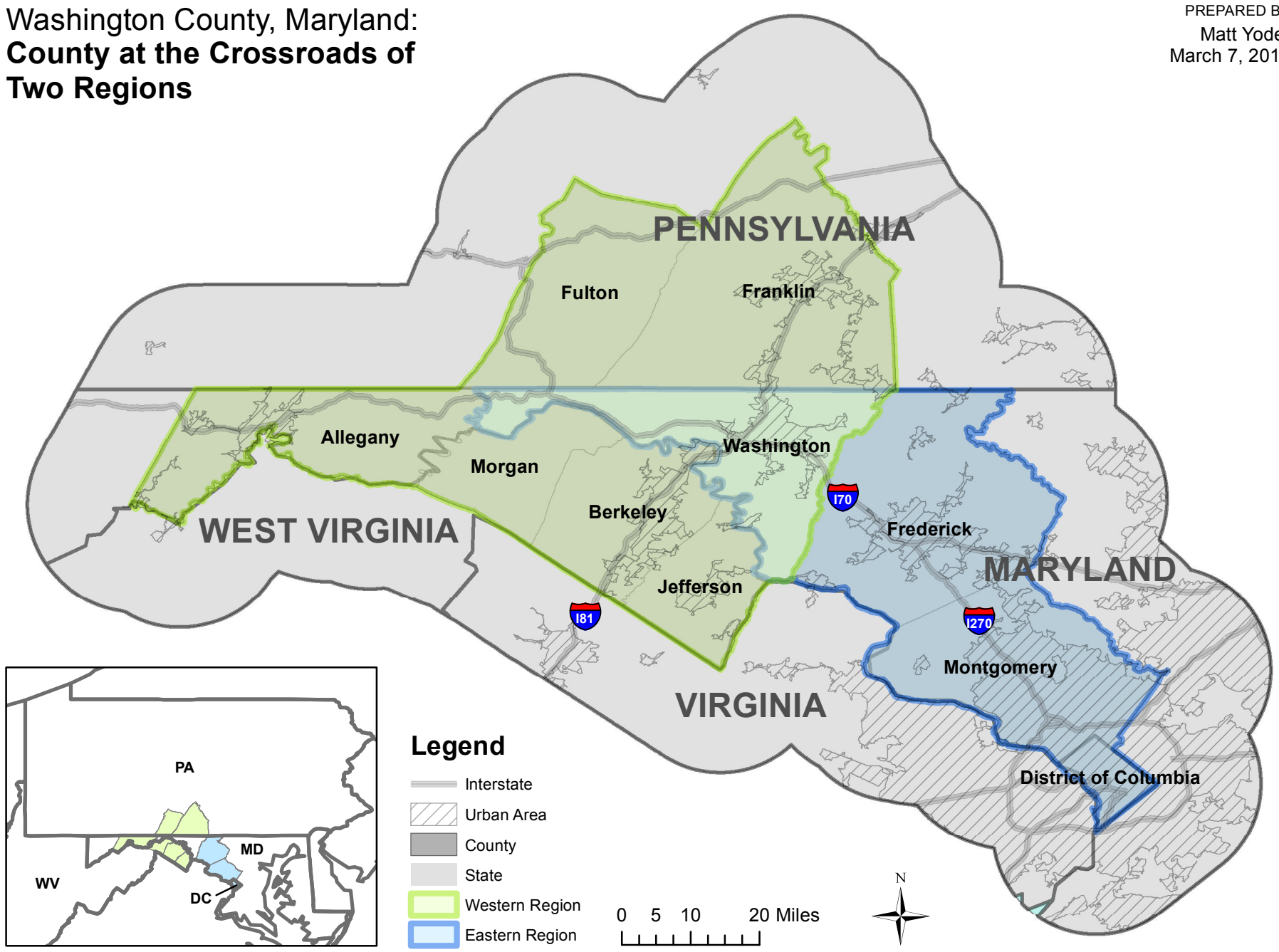
With growing regional linkages, Washington County has increasingly become a place of residence for commuters to the Eastern Region and an employment center for residents of the Western Region. Commuting opportunities have increased the earnings of some

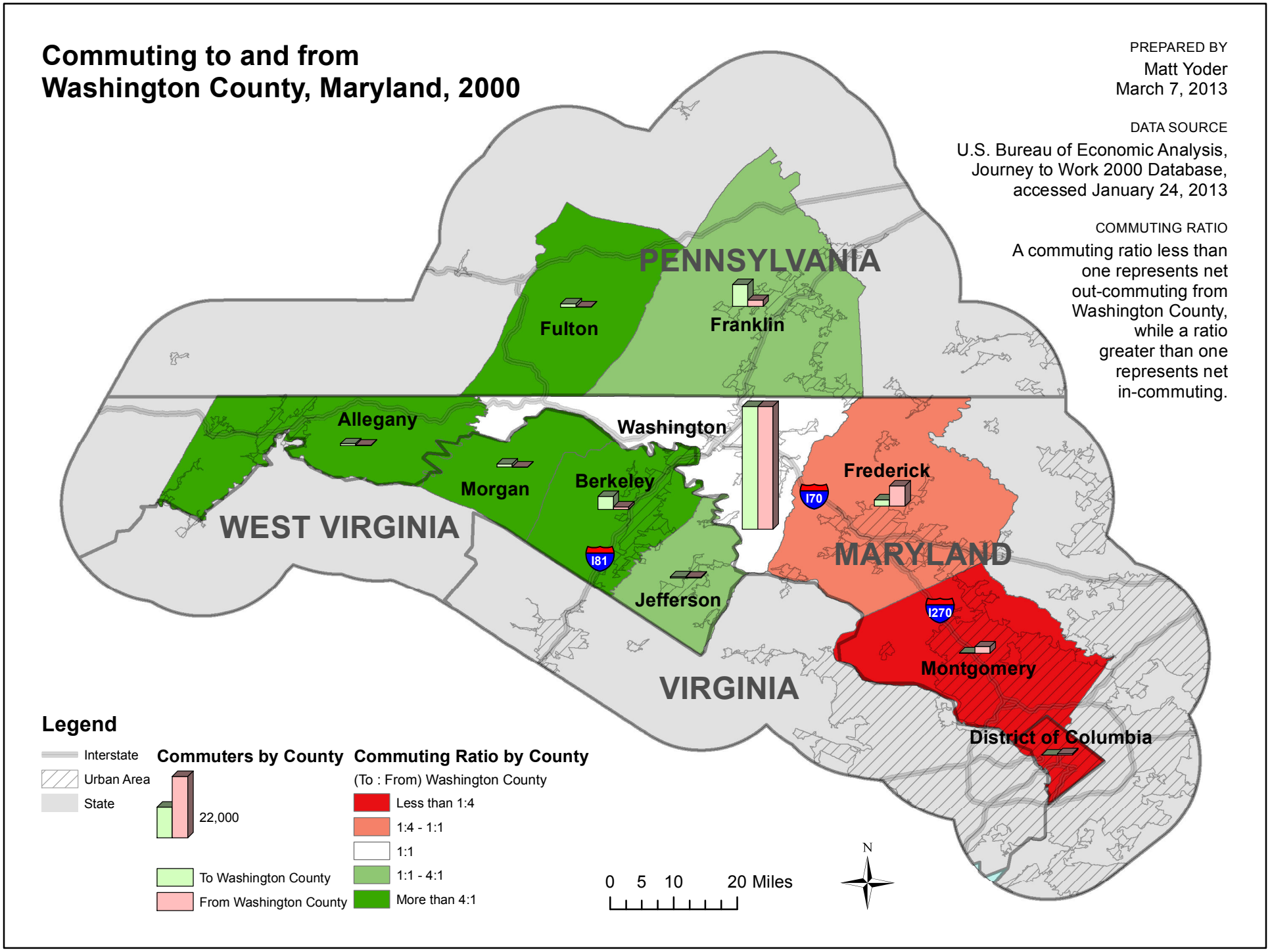
[11] "Historical Gasoline Prices, 1929-2011," U.S. Department of Energy, last modified August 20, 2012, http://www1.eere.energy.gov/vehiclesandfuels/facts/2012_fotw741.html.
[12] U.S. Census Bureau, 2000 Census, Table P001 and 2010 Census, Table P1, accessed via American FactFinder, February 8, 2013.

residents and workers, but migration has reinforced other demographics: in their race, ethnicity and education, the migrants have been similar to the county's current residents.

Though the intersection of two interstates in Washington County continues to play an important role, internal migrants to the county and inbound and outbound commuters increasingly shape its economy. These commuters and migrants have created new demand for services, softening the blow dealt by a rapidly shrinking manufacturing base. At the same time, the regional connectivity they have helped to foster has allowed the retail and transportation sectors to flourish. Even so, subsector specialization and large employers in the county leave it vulnerable to fluctuations in the larger economy.

The new realities created by connectivity, commuting and migration represent a new type of crossroads for Washington County. It can capitalize on its identity as a service-oriented commuting hub, or it can attempt to recreate the location-based industries of generations past. With the prospect of even more rapid growth on the horizon, the decision has significant implications. Whichever path it chooses, the county is certain to remain at the crossroads of two dynamic—albeit different—regions.


Washington County, Maryland:
County at the Crossroads of Two Regions
PREPARED BY
Matt Yoder
March 7, 2013
PENNSYLVANIA
Fulton
Franklin
Allegany
Morgan
Washington
Berkeley
Jefferson
Frederick
Montgomery
WEST VIRGINIA
MARYLAND
VIRGINIA
District of Columbia
I70
I81
I270
PA
MD
WV
DC
Legend
Interstate
Urban Area
County
State
Western Region
Eastern Region
0 5 10 20 Miles
N


Commuting to and from
Washington County, Maryland, 2000
PREPARED BY
Matt Yoder
March 7, 2013
DATA SOURCE
U.S. Bureau of Economic Analysis, Journey to Work 2000 Database, accessed January 24, 2013
COMMUTING RATIO
A commuting ratio less than one represents net out-commuting from Washington County, while a ratio greater than one represents net in-commuting.
PENNSYLVANIA
Fulton
Franklin
Allegany
Washington
Morgan
Berkeley
Frederick
I70
WEST VIRGINIA
MARYLAND
I81
Jefferson
I270
Montgomery
VIRGINIA
District of Columbia
Legend
Interstate
Urban Area
State
Commuters by County
22,000
To Washington County
From Washington County
Commuting Ratio by County
(To : From) Washington County
Less than 1:4
1:4 - 1:1
1:1
1:1 - 4:1
More than 4:1
0 5 10 20 Miles
N

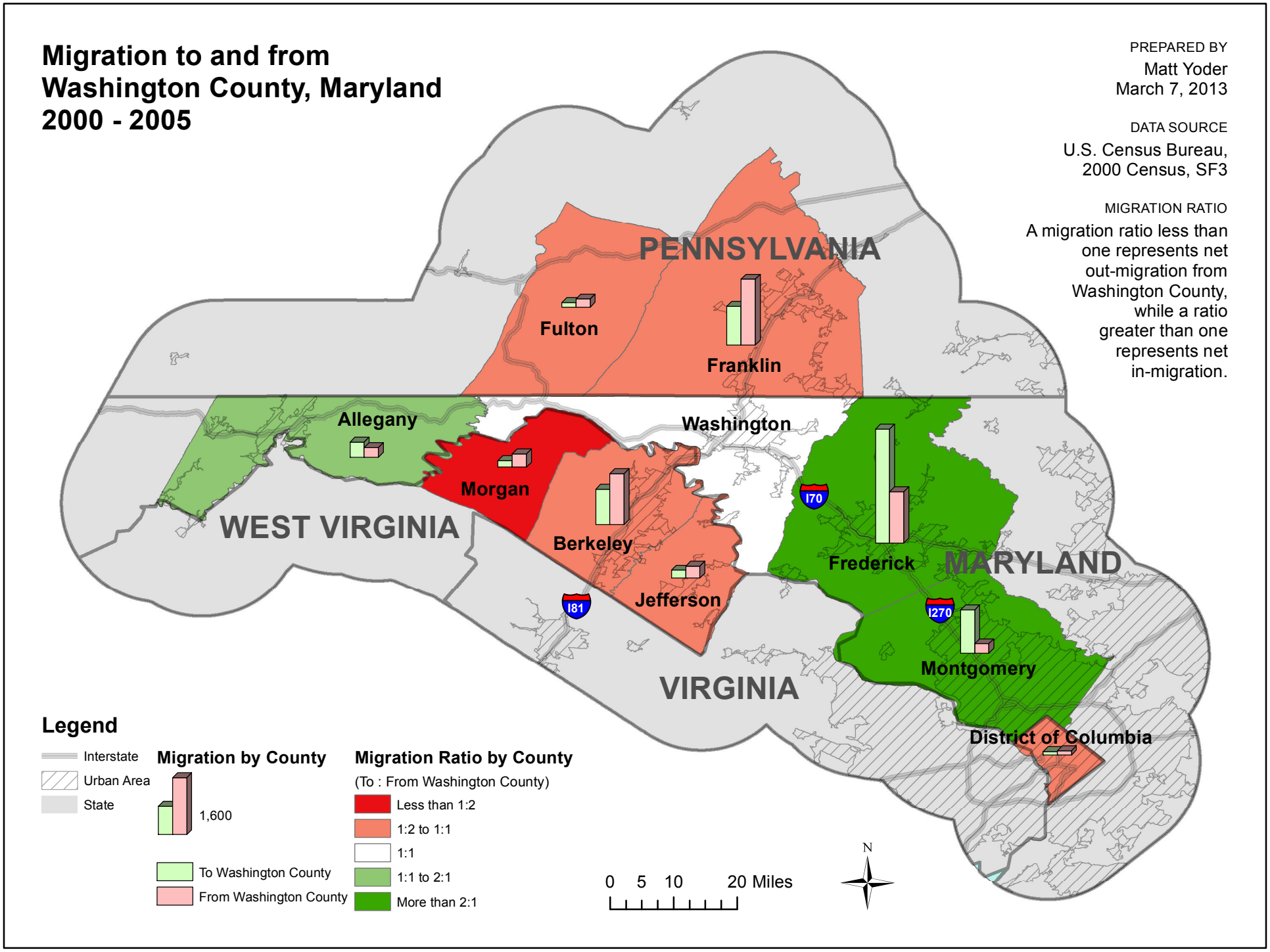

Migration to and from
Washington County, Maryland
2000 - 2005
PREPARED BY
Matt Yoder
March 7, 2013
DATA SOURCE
U.S. Census Bureau,
2000 Census, SF3
MIGRATION RATIO
A migration ratio less than one represents net out-migration from Washington County, while a ratio greater than one represents net in-migration.
PENNSYLVANIA
Fulton
Franklin
Allegany
Washington
Morgan
Berkeley
Jefferson
WEST VIRGINIA
VIRGINIA
I70
I81
I270
Frederick
MARYLAND
Montgomery
District of Columbia
Legend
Interstate
Urban Area
State
Migration by County
1,600
To Washington County
From Washington County
Migration Ratio by County
(To : From Washington County)
Less than 1:2
1:2 to 1:1
1:1
1:1 to 2:1
More than 2:1
0 5 10 20 Miles
N

Table 1

Increasing Share of Commuters from the Western Region

Number of Workers Commuting within or to Washington County, 1970 -2000

Residence County	Region[1]	1970	2000	Share 1970	Cumulative 1970	Share 2000	Cumulative 2000
Washington Co., MD	C	32,234	44,220	86.4%	86.4%	68.8%	68.8%
Franklin Co., PA	W	2,553	7,840	6.8%	93.2%	12.2%	81.0%
Berkeley Co., WV	W	507	4,695	1.4%	94.6%	7.3%	88.3%
Frederick Co., MD	E	705	2,150	1.9%	96.4%	3.3%	91.6%
Morgan Co., WV	W	448	1169	1.2%	97.6%	1.8%	93.4%
Fulton Co., PA	W	321	1134	0.9%	98.5%	1.8%	95.2%
Allegany Co., MD	W	177	665	0.5%	99.0%	1.0%	96.2%
Jefferson Co., WV	W	192	489	0.5%	99.5%	0.8%	97.0%
Montgomery Co., MD	E	27	218	0.1%	99.6%	0.3%	97.3%
District of Columbia	E	0	0	0.0%	99.6%	0.0%	97.3%
Total Washington County Workforce[2]		37,327	64,301				

[1]Under Region, C=Central County, E=Eastern Region and W=Western Region. [2]Totals include flows from all U.S. counties, not just those shown in the table.
Source: U.S. Bureau of Economic Analysis, Journey to Work 2000 Database, accessed January 24, 2013.

Table 2

Increasing Share of Commuters to the Eastern Region

Commuting Destinations for Working Washington County Residents, 1970 - 2000

Work County	Region[1]	1970	2000	Share 1970	Cumulative 1970	Share 2000	Cumulative 2000
Washington Co., MD	C	32,234	44,220	87.9%	87.9%	73.5%	73.5%
Frederick Co., MD	E	917	7,150	2.5%	90.4%	11.9%	85.3%
Montgomery Co., MD	E	293	2,355	0.8%	91.2%	3.9%	89.3%
Franklin Co., PA	W	1,056	2,135	2.9%	94.0%	3.5%	92.8%
Berkeley Co., WV	W	531	925	1.4%	95.5%	1.5%	94.3%
District of Columbia	E	193	474	0.5%	96.0%	0.8%	95.1%
Jefferson Co., WV	W	125	394	0.3%	96.3%	0.7%	95.8%
Morgan Co., WV	W	141	128	0.4%	96.7%	0.2%	96.0%
Allegany Co., MD	W	43	108	0.1%	96.8%	0.2%	96.2%
Fulton Co., PA	W	50	85	0.1%	97.0%	0.1%	96.3%
Total Working Residents of Washington County[2]		36,690	60,194				

[1]Under Region, C=Central County, E=Eastern Region and W=Western Region. [2]Totals include flows to all U.S. counties, not just those shown in the table. The total for 1970 excludes 3,206 "not reported" responses. Source: U.S. Bureau of Economic Analysis, Journey to Work 2000 Database, accessed January 24, 2013.

Table 3

In Migration From the Eastern Region and Out Migration to the Western Region

Washington County's Migration Patterns, 2000 - 2005

Regional County	To Washington Co.	From Washington Co.	Net To Washington Co.
Frederick Co., MD	3,118	1,402	1,716
Montgomery Co., MD	1,190	260	930
Allegany Co., MD	417	262	155
District of Columbia	86	114	-28
Fulton Co., PA	125	221	-96
Jefferson Co., WV	218	329	-111
Morgan Co., WV	176	362	-186
Berkeley Co., WV	972	1,396	-424
Franklin Co., PA	1,062	1,803	-741
Total	7,364	6,149	1,215
Region			
Western Region	2,970	4,373	-1,403
Eastern Region	4,394	1,776	2,618

Source: U.S. Census Bureau, 2000 Census, SF3.

Table 4

Washington County's Growth through Internal Migration, 2000 - 2007

Geography	Births		Deaths		International Migration		Internal Migration	
	Change	Percent	Change	Percent	Change	Percent	Change	Percent
Western Region	45,588	9.4%	-35,800	-7.4%	1,766	0.4%	48,220	10.0%
Washington County	12,551	9.5%	-9,489	-7.2%	505	0.4%	10,172	7.7%
Eastern Region	188,354	10.6%	-99,749	-5.6%	94,214	5.3%	-79,733	-4.5%
Maryland	543,744	10.3%	-315,834	-6.0%	135,800	2.6%	-54,415	-1.0%

Data represent the period from 4/1/2000 to 7/1/2007. Percentages are calculated based on the population on 4/1/2000. Source: U.S. Census Bureau, Components of Population Change, accessed February 2009.

Figure 1

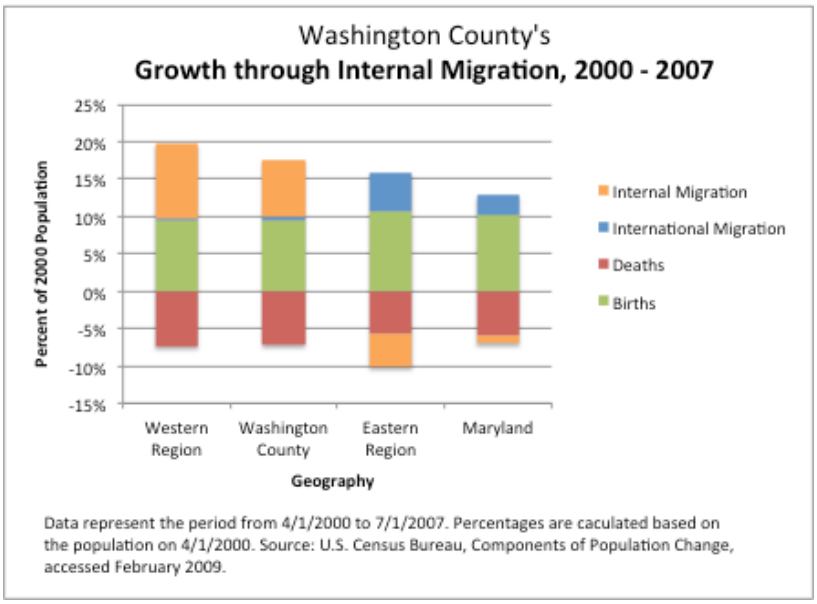


Table 5

Less Affordable than the Western Region, More Affordable than the Eastern Region

Monthly Housing Cost in Washington County, 2007 - 2011 Estimates

County	Region[1]	Total Housing Units	Homeowners		Renters		All Households	
			Less than 30 Percent of Income	30 Percent or More of Income	Less than 30 Percent of Income	30 Percent or More of Income	Less than 30 Percent of Income	30 Percent or More of Income
District of Columbia	E	260,136	68.1%	31.9%	53.5%	46.5%	59.8%	40.2%
Montgomery Co., MD	E	355,434	67.3%	32.7%	50.9%	49.1%	62.2%	37.8%
Washington Co., MD	C	55,485	71.5%	28.5%	54.7%	45.3%	65.9%	34.1%
Frederick Co., MD	E	85,048	69.6%	30.4%	56.2%	43.8%	66.4%	33.6%
Jefferson Co., WV	W	19,415	68.9%	31.1%	62.0%	38.0%	67.3%	32.7%
Berkeley Co., WV	W	39,303	73.3%	26.7%	51.8%	48.2%	68.1%	31.9%
Franklin Co., PA	W	58,032	74.8%	25.2%	61.8%	38.2%	71.3%	28.7%
Allegany Co., MD	W	28,596	77.8%	22.2%	58.3%	41.7%	71.9%	28.1%
Morgan Co., WV	W	7,171	78.0%	22.0%	62.4%	37.6%	72.8%	27.2%
Fulton Co., PA	W	5,929	75.7%	24.3%	68.9%	31.1%	74.2%	25.8%
Region								
Eastern Region	E	756,103	68.2%	31.8%	52.8%	47.2%	62.1%	37.9%
Western Region	W	213,931	73.7%	26.3%	57.7%	42.3%	69.2%	30.8%

[1]Under Region, C=Central County, E=Eastern Region and W=Western Region. Source: U.S. Census Bureau, 2007 - 2011 American Community Survey, 5-Year Estimates, Table B25106, retrieved from National Historical GIS, February 25, 2013.

Table 6

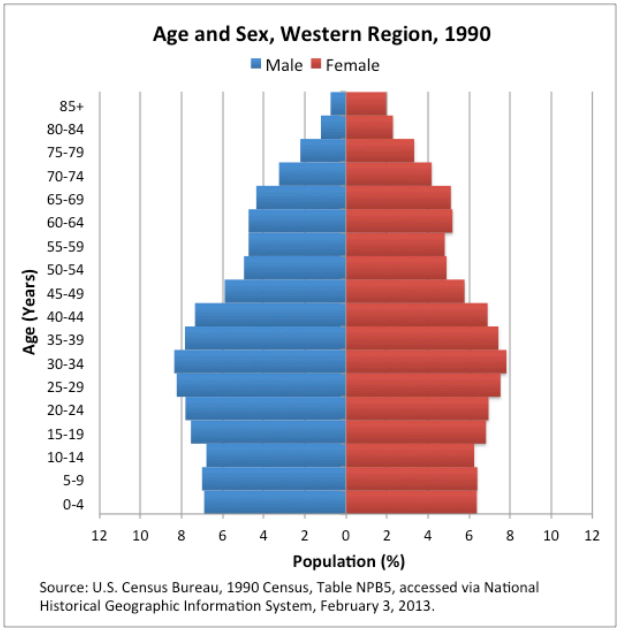
Steady Affordability Compared to the Study Area

Median House Value and Median Household Income in Washington County, 1990 - 2011

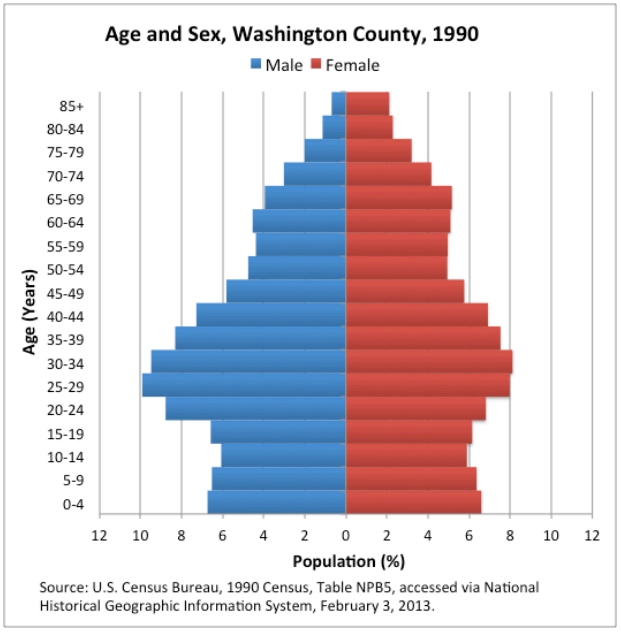
County	Region[1]	1990 Census				2000 Census				2007 - 2011 ACS Estimates			
		Median House Value ($)[2]	Median Household Income ($)[3]	Years of Income[4]	Rank	Median House Value ($)[2]	Median Household Income ($)[3]	Years of Income[4]	Rank	Median House Value ($)[2]	Median Household Income ($)[3]	Years of Income[4]	Rank
District of Columbia	E	123,900	30,727	4.03	10	157,200	40,127	3.92	10	442,600	61,835	7.16	10
Montgomery Co., MD	E	200,800	54,089	3.71	9	221,800	71,551	3.10	9	469,900	95,660	4.91	9
Morgan Co., WV	W	61,900	24,372	2.54	4	89,200	35,016	2.55	4	165,900	36,703	4.52	8
Washington Co., MD	C	83,000	29,632	2.80	7	115,000	40,617	2.83	8	230,500	53,180	4.33	7
Frederick Co., MD	E	129,500	41,382	3.13	8	160,200	60,276	2.66	7	335,600	82,668	4.06	6
Jefferson Co., WV	W	84,100	30,941	2.72	6	116,700	44,374	2.63	6	237,100	65,285	3.63	5
Fulton Co., PA	W	50,700	23,736	2.14	1	83,900	34,882	2.41	2	161,300	45,960	3.51	4
Berkeley Co., WV	W	70,600	27,412	2.58	5	99,700	38,763	2.57	5	183,000	52,504	3.49	3
Franklin Co., PA	W	70,500	28,806	2.45	3	97,800	40,476	2.42	3	177,800	51,171	3.47	2
Allegany Co., MD	W	46,700	21,546	2.17	2	71,100	30,821	2.31	1	123,300	39,408	3.13	1

[1]Under Region, C=Central County, E=Eastern Region and W=Western Region. [2]Median values are for owner-occupied houses. [3]1990, 2000 and ACS income figures are reported in 1989, 1999 and 2011 dollars, respectively. [4]Years of income represents the number of years worth of income the median household would have to spend to purchase the median house. Sources: U.S. Census Bureau, 1990 Census, Tables NP80A and NH23B, retrieved from National Historical GIS, February 25, 2013. U.S. Census Bureau, 2000 Census, Tables NP053A and NH076A, retrieved from National Historical GIS, February 25, 2013. U.S. Census Bureau, 2007 - 2011 American Community Survey, 5-Year Estimates, Tables B25077 and B19013 retrieved from American FactFinder, February 25, 2013.

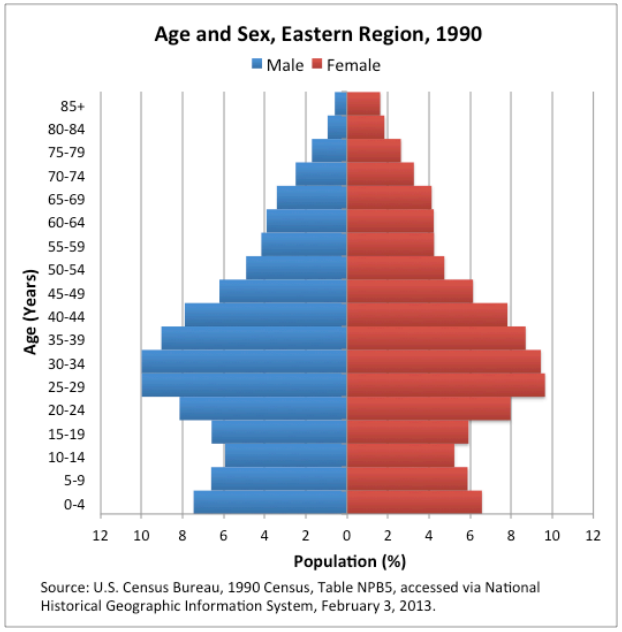
Figure 2



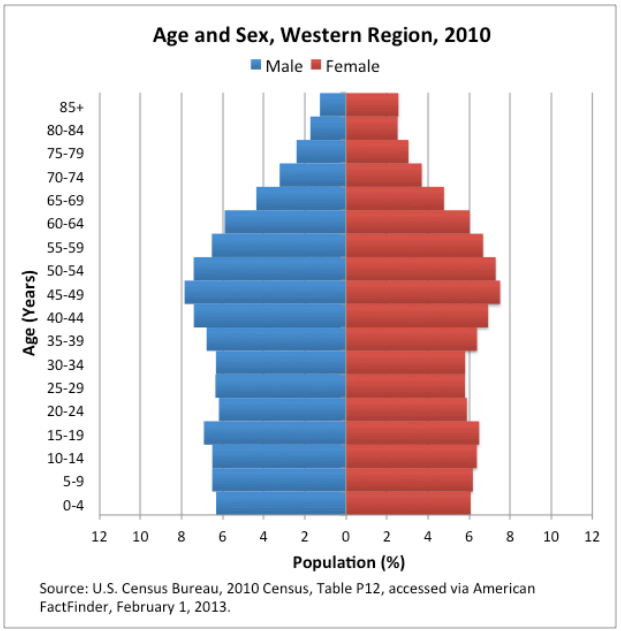
Source: U.S. Census Bureau, 1990 Census, Table NPB5, accessed via National Historical Geographic Information System, February 3, 2013.



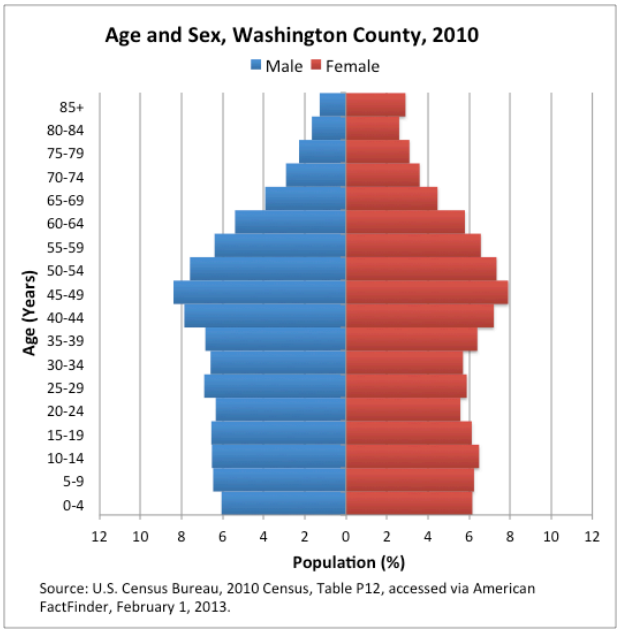
Source: U.S. Census Bureau, 1990 Census, Table NPB5, accessed via National Historical Geographic Information System, February 3, 2013.



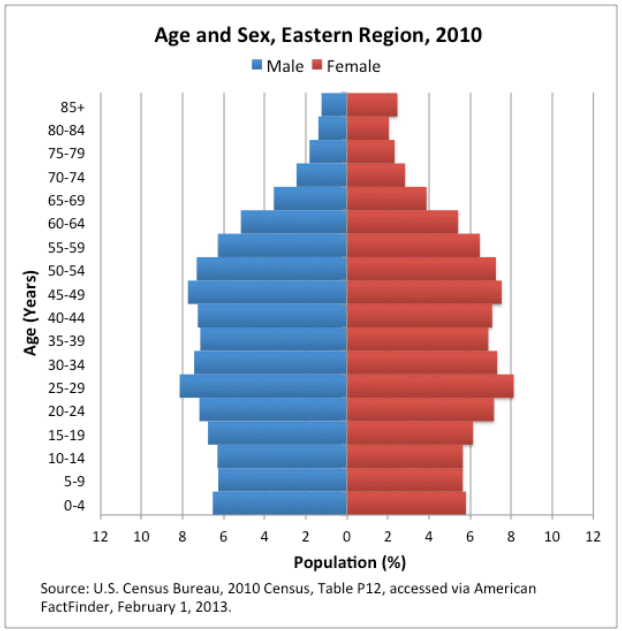
Source: U.S. Census Bureau, 1990 Census, Table NPB5, accessed via National Historical Geographic Information System, February 3, 2013.



Source: U.S. Census Bureau, 2010 Census, Table P12, accessed via American FactFinder, February 1, 2013.



Source: U.S. Census Bureau, 2010 Census, Table P12, accessed via American FactFinder, February 1, 2013.



Source: U.S. Census Bureau, 2010 Census, Table P12, accessed via American FactFinder, February 1, 2013.

Table 7

Washington County's Age and Sex Distribution, 1990 - 2010: Increasingly Similar to Eastern Region

	Western Region				Washington County				Eastern Region			
	1990		2010		1990		2010		1990		2010	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Population	210,930	213,903	272,843	266,666	60,152	57,476	72,680	68,567	771,110	823,070	915,636	968,306
Age (Percent of Population)												
0 to 9	14.2%	13.3%	13.2%	12.9%	13.5%	13.6%	12.9%	13.1%	14.3%	12.9%	13.1%	12.0%
10 to 19	14.6%	13.6%	13.8%	13.5%	12.9%	12.6%	13.5%	13.3%	12.7%	11.6%	13.4%	12.3%
20 to 29	16.4%	15.1%	12.9%	12.3%	19.0%	15.5%	13.6%	12.1%	18.4%	18.2%	15.7%	16.0%
30 to 39	16.5%	15.9%	13.5%	12.8%	18.1%	16.4%	13.8%	12.8%	19.3%	18.8%	15.0%	14.9%
40 to 49	13.5%	13.2%	15.7%	15.2%	13.3%	13.3%	16.8%	16.0%	14.3%	14.5%	15.4%	15.3%
50 to 59	9.9%	10.1%	14.4%	14.7%	9.3%	10.4%	14.4%	14.7%	9.2%	9.3%	14.0%	14.4%
60 to 69	9.3%	10.8%	10.6%	11.4%	8.6%	10.7%	9.6%	10.9%	7.4%	8.7%	9.0%	9.7%
70 to 79	5.6%	7.8%	5.8%	7.1%	5.1%	7.7%	5.4%	7.1%	4.3%	6.1%	4.4%	5.4%
80 and above	2.0%	4.4%	3.1%	5.3%	1.9%	4.6%	3.0%	5.8%	1.6%	3.6%	2.7%	4.7%

Sources: U.S. Census Bureau, 1990 Census, Table NPB5, accessed via National Historical Geographic Information System , February 4, 2013. U.S. Census Bureau, 2010 Census, Table P12, accessed via American FactFinder, February 1, 2013.

Table 8

Disproportionately Male In-Migration During Some Periods

Net In-Migration by Age and Sex, 1985 - 2000

	1985 - 1990						1995 - 2000					
	Western Region		Washington County		Eastern Region		Western Region		Washington County		Eastern Region	
Age	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
5 to 24	2,823	2,117	1,391	603	10,307	15,329	3,108	1,667	1,630	35	7,625	11,870
25 to 44	5,376	3,164	2,336	991	16,522	13,220	7,567	2,856	4,460	660	14,545	9,220
45 to 64	1,487	1,085	616	115	548	-547	1,798	1,748	-51	-46	-4,416	-3,371
65 and older	781	723	27	292	-1,631	-277	346	619	-62	275	-2,652	-717
Total	10,467	7,089	4,370	2,001	25,746	27,725	12,819	6,890	5,977	924	15,102	17,002

Sources: U.S. Census Bureau, 1990 Census, Summary File 3. U.S. Census Bureau, 2000 Census, Summary File 3.

Table 9

Growing Racial and Ethnic Diversity in Washington County, 2000 - 2010

	Western Region			Washington County			Eastern Region		
	2000	2010	Change 2000 - 2010	2000	2010	Change 2000 - 2010	2000	2010	Change 2000 - 2010
Population	483,465	562,188	78,723	131,923	147,430	15,507	1,772,600	1,954,315	181,715
Race (Percent of Population)[1]									
White	93.7%	90.9%	-2.8%	90.7%	87.4%	-3.2%	60.3%	59.2%	-1.0%
Black or African American	5.3%	7.7%	2.4%	8.2%	11.1%	2.9%	29.2%	27.4%	-1.8%
Asian	0.8%	1.3%	0.6%	1.0%	1.8%	0.8%	7.4%	9.8%	2.4%
American Indian or Alaskan Native	0.5%	0.7%	0.3%	0.5%	0.8%	0.3%	0.7%	1.0%	0.2%
Some Other Race	0.7%	1.6%	0.9%	0.7%	1.6%	0.8%	5.3%	6.3%	1.0%
Ethnicity (Percent of Population)									
Hispanic or Latino	1.3%	3.4%	2.1%	1.2%	3.5%	2.3%	8.6%	12.4%	3.8%
Non Hispanic or Latino	98.7%	96.6%	-2.1%	98.8%	96.5%	-2.3%	91.4%	87.6%	-3.8%

[1] Race identifications were alone or in combination (i.e. respondents could select more than one race). As a result, the percentages do not add up to 100%. U.S. Census Bureau, 2000 Census, Tables P001, P008 and QTP5 accessed via American FactFinder, February 1, 2013. U.S. Census Bureau, 2010 Census, Tables P1, P4 and P6, accessed via American FactFinder, February 1, 2013.

Table 10

Washington County Education Levels, 1990 - 2011: Reflecting Trends in the Western Region

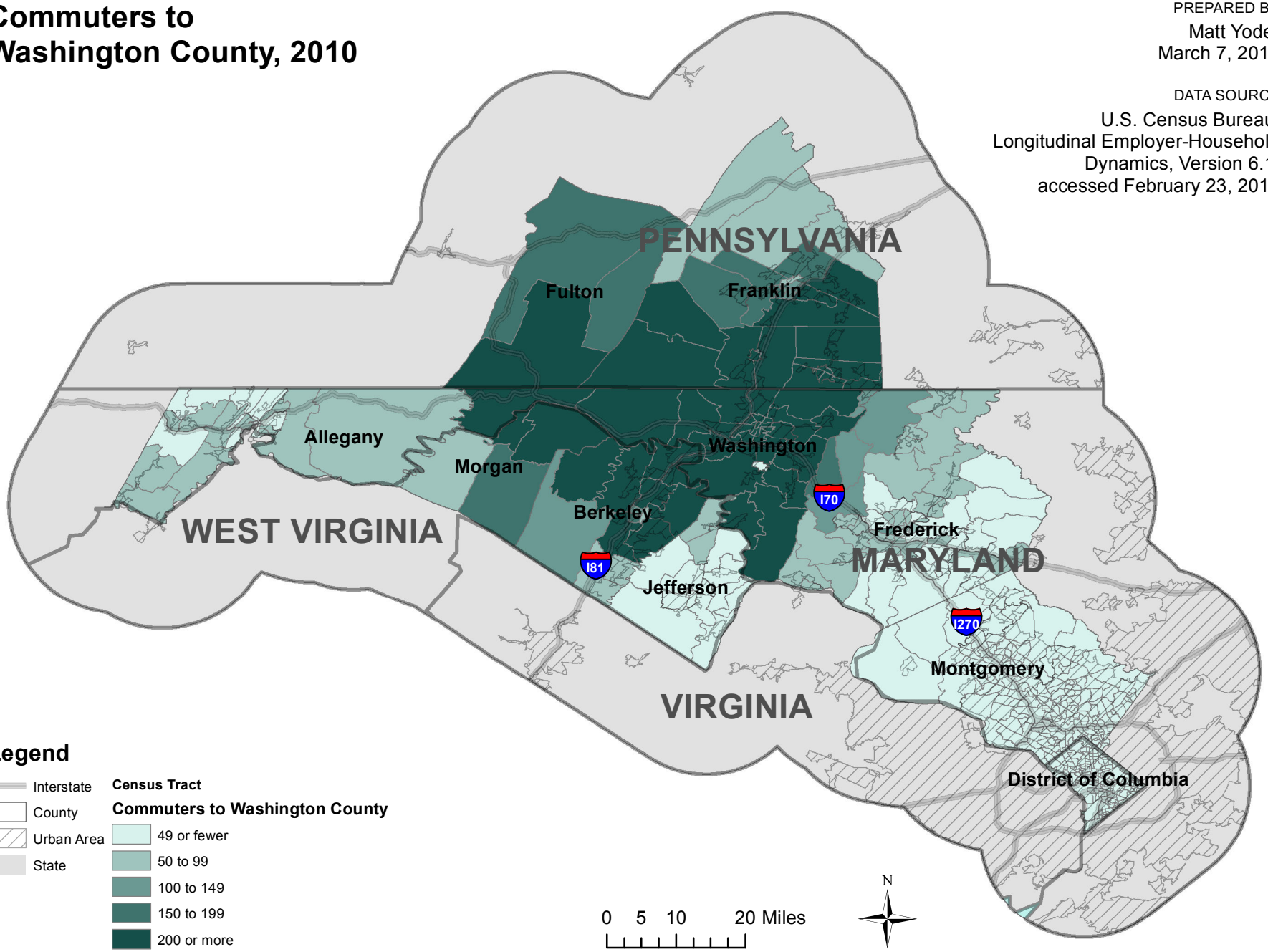
	Western Region				Washington County				Eastern Region			
	1990	2000	Change 1990 - 2000	ACS 2007 - 2011	1990	2000	Change 1990 - 2000	ACS 2007 - 2011	1990	2000	Change 1990 - 2000	ACS 2007 - 2011
Population: 25 years and older	288,216	327,825	39,609	380,199	81,140	90,371	9,231	100,687	1,098,104	1,196,196	98,092	1,316,776
Education (Percent of Population)[1]												
Not a High School Graduate	30.9%	21.7%	-9.2%	15.2%	30.7%	22.2%	-8.5%	15.8%	18.4%	15.0%	-3.4%	10.6%
High School Graduate	39.2%	41.4%	2.2%	40.2%	37.2%	38.9%	1.7%	37.2%	21.4%	19.9%	-1.5%	19.1%
Some College[2]	17.8%	21.9%	4.1%	25.5%	20.7%	24.3%	3.6%	28.0%	21.7%	21.1%	-0.6%	20.7%
Bachelor's Degree	7.1%	8.8%	1.7%	11.8%	6.6%	8.8%	2.3%	12.0%	20.2%	21.9%	1.8%	23.8%
Advanced Degree[3]	5.0%	6.1%	1.2%	7.3%	4.8%	5.8%	1.0%	7.0%	18.3%	22.0%	3.7%	25.8%

[1] Counts include all residents age 25 or older. [2] Some college includes associate's degrees. [3] Advanced degrees include master's degrees, professional degrees and doctorates. Sources: U.S. Census Bureau, 1990 Census, Table NPB44, accessed via National Historical Geographic Information System , February 3, 2013. U.S. Census Bureau, 2000 Census, Table P037, accessed via American FactFinder, February 1, 2013. U.S. Census Bureau, 2007 - 2011 American Community Survey, 5-Year Estimates, Table B15002, accessed via American FactFinder, February 1, 2013.

Commuters to Washington County, 2010

PREPARED BY
Matt Yoder
March 7, 2013

DATA SOURCE
U.S. Census Bureau, Longitudinal Employer-Household Dynamics, Version 6.1, accessed February 23, 2013



Commuters from Washington County, 2010

PREPARED BY
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March 7, 2013

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U.S. Census Bureau, Longitudinal Employer-Household Dynamics, Version 6.1, accessed February 23, 2013

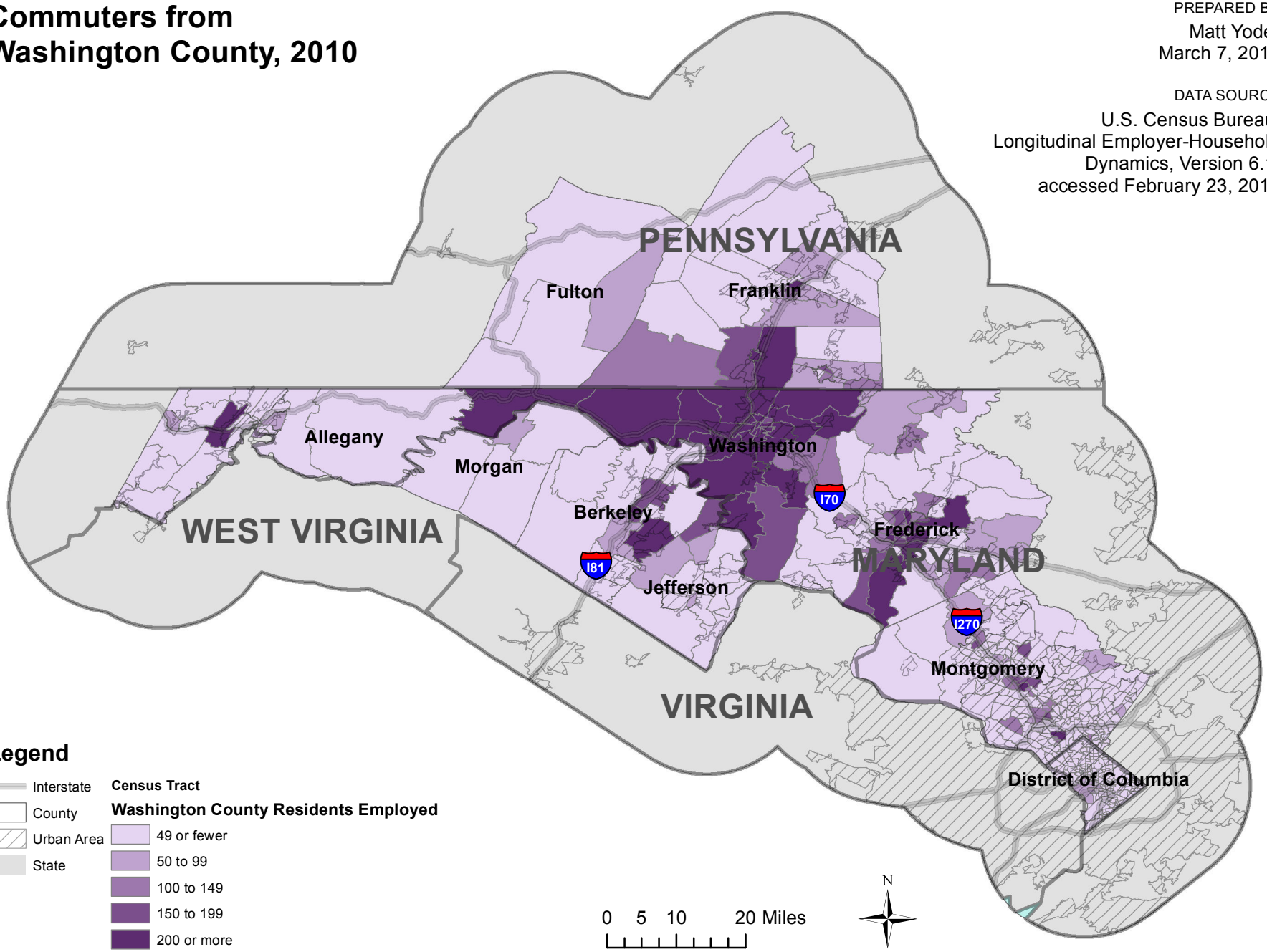


Table 11

Workforce by Residence[1]

Jobs Held by the Washington County Workforce by Residence Location and Worker Age, Earnings and Industry, 2010

		Worker Age			Yearly Earnings			Industry		
Estimated Jobs by Cateogory[2]	**Total**	**29 or Younger**	**30 to 54**	**55 and Older**	**$15,000 or Less**	**$15,001 to $30,000**	**$30,001 or More**	**Goods Producing**	**Trade, Transp. and Utilities**	**Other Service**
	52,830	11,532	30,381	10,917	12,730	22,561	17,539	7,669	10,349	34,812
Estimated Share of Jobs by Cateogory[2]										
Washington County	60.5%	59.9%	59.0%	65.4%	67.7%	61.1%	54.6%	59.9%	56.9%	61.8%
Eastern Region (excluding Washington County)	10.3%	13.2%	9.5%	9.4%	12.7%	8.2%	11.3%	5.5%	13.6%	10.3%
Western Region (excluding Washington County)	29.2%	26.9%	31.5%	25.2%	19.6%	30.8%	34.1%	34.6%	29.5%	27.9%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Difference from Geographical Jobs Distribution										
Washington County	–	-0.6%	-1.5%	4.9%	7.2%	0.6%	-5.9%	-0.7%	-3.7%	1.2%
Eastern Region (excluding Washington County)	–	2.9%	-0.8%	-0.9%	2.4%	-2.1%	1.0%	-4.7%	3.3%	0.1%
Western Region (excluding Washington County)	–	-2.3%	2.3%	-4.0%	-9.6%	1.6%	4.9%	5.4%	0.3%	-1.3%

[1]For a detailed explanation of this table, see Appendix A. [2]Estimates are based on statistical modeling. Source: U.S. Census Bureau, Longitudinal Employer-Household Dynamics, Version 6.1, accessed February 23, 2013.

Table 12

Employed Residents by Employment Location[1]

Jobs Held by Washington County Residents by Location and Worker Age, Earnings and Industry, 2010

		Worker Age			Yearly Earnings			Industry		
Estimated Jobs by Cateogory[2]	**Total**	**29 or Younger**	**30 to 54**	**55 and Older**	**$15,000 or Less**	**$15,001 to $30,000**	**$30,001 or More**	**Goods Producing**	**Trade, Transp. and Utilities**	**Other Service**
	52,000	11,188	30,161	10,651	12,473	20,477	19,050	7,828	9,400	34,772
Estimated Share of Jobs by Cateogory[2]										
Washington County	61.5%	61.8%	59.4%	67.0%	69.1%	67.3%	50.3%	58.7%	62.6%	61.8%
Eastern Region (excluding Washington County)	28.8%	28.2%	31.1%	23.0%	21.2%	23.7%	39.3%	30.5%	24.3%	29.7%
Western Region (excluding Washington County)	9.7%	10.1%	9.5%	9.9%	9.7%	9.0%	10.4%	10.9%	13.1%	8.5%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Difference from Geographical Jobs Distribution										
Washington County	–	0.3%	-2.1%	5.6%	7.6%	5.8%	-11.2%	-2.8%	1.1%	0.3%
Eastern Region (excluding Washington County)	–	-0.6%	2.3%	-5.8%	-7.6%	-5.1%	10.5%	1.6%	-4.5%	0.8%
Western Region (excluding Washington County)	–	0.4%	-0.2%	0.2%	0.0%	-0.7%	0.7%	1.2%	3.4%	-1.2%

[1]For a detailed explanation of this table, see Appendix A. [2]Estimates are based on statistical modeling. Source: U.S. Census Bureau, Longitudinal Employer-Household Dynamics, Version 6.1, accessed February 23, 2013.

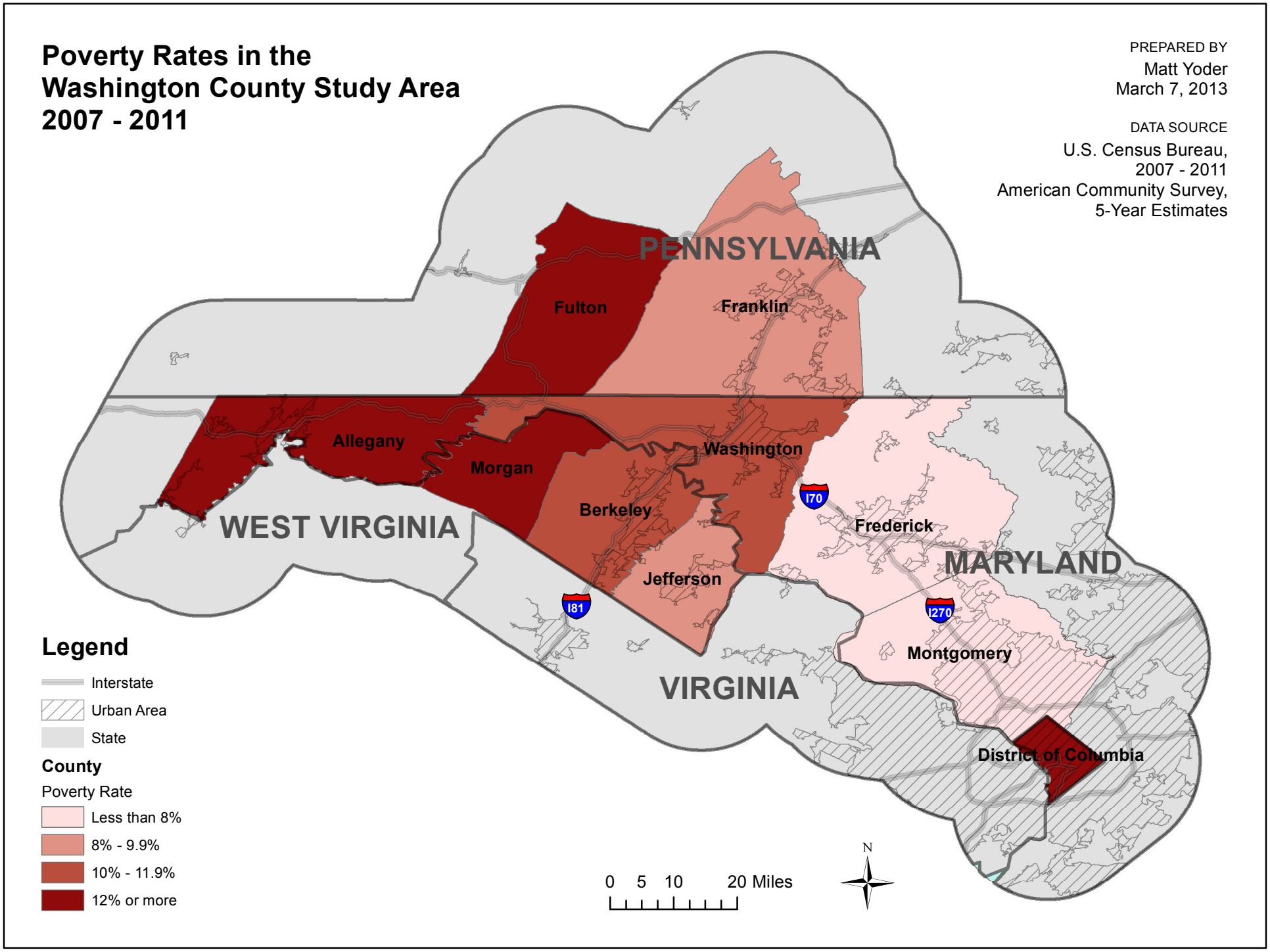

Poverty Rates in the
Washington County Study Area
2007 - 2011
PREPARED BY
Matt Yoder
March 7, 2013
DATA SOURCE
U.S. Census Bureau,
2007 - 2011
American Community Survey,
5-Year Estimates
PENNSYLVANIA
Fulton
Franklin
Allegany
Morgan
Washington
Berkeley
Jefferson
WEST VIRGINIA
I70
Frederick
MARYLAND
I81
I270
Montgomery
VIRGINIA
District of Columbia
Legend
Interstate
Urban Area
State
County
Poverty Rate
Less than 8%
8% - 9.9%
10% - 11.9%
12% or more
0 5 10 20 Miles
N

Table 13

Manufacturing to Service

Change in Washington County's Industry Mix: 1969 - 2000

	1969[1]		2000[2]		Change: 1969 - 2000	
	Employment	Share	Employment	Share	Employment	Share
Total Employment	45,669	100.0%	74,880	100.0%	29,211	—
Employment by Type						
Wage and salary employment	40,614	88.9%	67,476	90.1%	26,862	1.2%
Proprietors employment	5,055	11.1%	7,404	9.9%	2,349	-1.2%
Farm proprietors employment	970	2.1%	807	1.1%	-163	-1.0%
Nonfarm proprietors employment[3]	4,085	8.9%	6,597	8.8%	2,512	-0.1%
Employment by Sector						
Farm employment	1,669	3.7%	1,150	1.5%	-519	-2.1%
Nonfarm employment	44,000	96.3%	73,730	98.5%	29,730	2.1%
Private nonfarm employment	37,080	81.2%	65,195	87.1%	28,115	5.9%
Agricultural services, forestry, fishing and mining[4]	207	0.5%	686	0.9%	479	0.5%
Construction	2,278	5.0%	4,662	6.2%	2,384	1.2%
Manufacturing	14,086	30.8%	10,760	14.4%	-3,326	-16.5%
Transportation and public utilities	3,463	7.6%	4,023	5.4%	560	-2.2%
Wholesale trade	1,525	3.3%	3,824	5.1%	2,299	1.8%
Retail trade	7,082	15.5%	13,827	18.5%	6,745	3.0%
Finance, insurance, and real estate	1,788	3.9%	5,353	7.1%	3,565	3.2%
Services	6,651	14.6%	22,060	29.5%	15,409	14.9%
Government and government enterprises	6,920	15.2%	8,535	11.4%	1,615	-3.8%
Federal, civilian	927	2.0%	660	0.9%	-267	-1.1%
Military	1,729	3.8%	487	0.7%	-1,242	-3.1%
State and local[5]	4,264	9.3%	7,388	9.9%	3,124	0.5%
State government	—	—	2,784	3.7%	—	—
Local government	—	—	4,604	6.1%	—	—

[1]1969 estimates are based on the 1967 SIC. [2]2000 estimates are based on the 1987 SIC. [3]Excludes limited partners. [4]Industries combined because of suppressed data. [5]State and local government employment were not separated until 1979. Source: U.S. Bureau of Economic Analysis, Regional Economic Information System, Table CA25, accessed February 14, 2013.

Table 14

Emergence of Retail and Health Care and Social Assistance

Change in Washington County's Industry Mix: 2001 - 2011

	2001[1]		2011[2]		Change: 2001 - 2011	
	Employment	Share	Employment	Share	Employment	Share
Total Employment	75,963	100.0%	78,953	100.0%	2,990	—
Employment by Type						
Wage and salary employment	68,609	90.3%	69,101	87.5%	492	-2.8%
Proprietors employment	7,354	9.7%	9,852	12.5%	2,498	2.8%
Farm proprietors employment	793	1.0%	740	0.9%	-53	-0.1%
Nonfarm proprietors employment[3]	6,561	8.6%	9,112	11.5%	2,551	2.9%
Employment by Sector						
Farm employment	1,124	1.5%	1,014	1.3%	-110	-0.2%
Nonfarm employment	74,839	98.5%	77,939	98.7%	3,100	0.2%
Private nonfarm employment	66,357	87.4%	68,284	86.5%	1,927	-0.9%
Forestry, fishing, mining, utilities and wholesale trade[4]	3,496	4.6%	2,502	3.2%	-994	-1.4%
Construction	4,837	6.4%	4,105	5.2%	-732	-1.2%
Manufacturing	10,121	13.3%	6,723	8.5%	-3,398	-4.8%
Retail trade	10,303	13.6%	12,022	15.2%	1,719	1.7%
Transportation and warehousing	3,824	5.0%	4,156	5.3%	332	0.2%
Information	1,108	1.5%	990	1.3%	-118	-0.2%
Finance and insurance	6,710	8.8%	6,750	8.5%	40	-0.3%
Real estate and rental and leasing	1,205	1.6%	1,919	2.4%	714	0.8%
Professional, scientific, and technical services	2,732	3.6%	2,778	3.5%	46	-0.1%
Management of companies and enterprises	351	0.5%	339	0.4%	-12	0.0%
Administrative and waste management services	2,593	3.4%	3,760	4.8%	1,167	1.3%
Educational services	630	0.8%	862	1.1%	232	0.3%
Health care and social assistance	8,926	11.8%	10,697	13.5%	1,771	1.8%
Arts, entertainment, and recreation	916	1.2%	1,429	1.8%	513	0.6%
Accommodation and food services	4,709	6.2%	5,581	7.1%	872	0.9%
Other services, except public administration	3,896	5.1%	3,671	4.6%	-225	-0.5%
Government and government enterprises	8,482	11.2%	9,655	12.2%	1,173	1.1%
Federal, civilian	570	0.8%	725	0.9%	155	0.2%
Military	489	0.6%	486	0.6%	-3	0.0%
State and local	7,423	9.8%	8,444	10.7%	1,021	0.9%
State government	2,809	3.7%	2,584	3.3%	-225	-0.4%
Local government	4,614	6.1%	5,860	7.4%	1,246	1.3%

[1] 2001 estimates are based on the 2002 NAICS. [2] 2011 estimates are based on the 2012 NAICS. [3] Excludes limited partners. [4] Industries combined because of suppressed data.
Source: U.S. Bureau of Economic Analysis, Regional Economic Information System, Table CA25N, accessed February 14, 2013.

Table 15

Specialization in the Retail, Finance and Transportation Sectors

Employment by Industry in Washington County, 2008

Industry	Washington County		Employment Per 1,000 Residents[1]			
	Employment Estimate	Businesses	Washington County	Western Region	Eastern Region	United States
Retail trade	10,466	648	71	52	46	51
Health care and social assistance	9,716	410	66	54	70	56
Manufacturing	7,185	147	49	46	14	42
Finance and insurance	5,889	199	40	16	28	21
Accommodation and food services	5,598	298	38	32	50	39
Transportation and warehousing	4,728	158	32	18	6	14
Construction	3,610	448	24	18	27	23
Administrative and support[2]	2,752	166	19	13	50	33
Other services (except public administration)	2,313	415	16	15	52	18
Wholesale trade	2,303	161	16	13	12	20
Professional, scientific, and technical services	2,063	243	14	22	91	26
Information	1,731	52	12	8	23	11
Arts, entertainment, and recreation	709	57	5	8	8	7
Real estate and rental and leasing	644	128	4	3	14	7
Educational services	576	27	4	4	31	10
Management of companies and enterprises	480	21	3	2	14	9
Utilities	288	5	2	1	1	2
Mining, quarrying, and oil and gas extraction	29	2	0	1	0	2
Industries not classified	6	3	0	0	0	0
Agriculture, forestry, fishing and hunting	2	1	0	0	0	1
Total	61,014	3,589	414	327	538	392

[1]Employment per 1,000 residents is based on 2010 population estimates.[2]Includes waste management and remediation services. Source: U.S. Census Bureau, 2008 County Business Patterns. U.S. Census Bureau, 2010 Census, Table P1, accessed February 15, 2013.

Table 16

Specialization in Retail, Finance and Transportation

Location Quotients and Extra Jobs for Washington County, 2008

Industry	Washington County			Western Region			Eastern Region		
	Jobs Estimate	Location Quotient[1]	Extra Jobs	Jobs Estimate	Location Quotient[1]	Extra Jobs	Jobs Estimate	Location Quotient[1]	Extra Jobs
Transportation and warehousing	4,728	2.11	2,488	10,056	1.49	3,311	12,542	0.32	-26,075
Finance and insurance	5,889	1.79	2,603	9,190	0.93	-705	54,694	0.97	-1,955
Retail trade	10,466	1.33	2,587	29,425	1.24	5,698	90,360	0.67	-45,485
Health care and social assistance	9,716	1.12	1,028	30,472	1.16	4,310	137,727	0.92	-12,060
Manufacturing	7,185	1.09	577	26,002	1.31	6,102	26,559	0.23	-87,375
Construction	3,610	1.02	56	10,092	0.94	-612	51,824	0.85	-9,454
Information	1,731	1.00	-2	4,675	0.90	-544	45,718	1.53	15,841
Accommodation and food services	5,598	0.93	-420	18,202	1.00	80	97,925	0.94	-5,831
Utilities	288	0.89	-35	605	0.62	-366	2,781	0.50	-2,781
Other services (except public administration)	2,313	0.84	-438	8,295	1.00	10	102,030	2.15	54,594
Industries not classified	6	0.77	-1	20	0.86	-3	140	1.04	7
Wholesale trade	2,303	0.74	-808	7,112	0.76	-2,256	22,746	0.42	-30,890
Arts, entertainment, and recreation	709	0.68	-335	4,226	1.34	1,082	15,900	0.88	-2,102
Real estate and rental and leasing	644	0.58	-464	1,816	0.54	-1,521	26,503	1.39	7,396
Administrative and support[2]	2,752	0.53	-2,407	7,493	0.48	-8,043	98,334	1.11	9,383
Professional, scientific, and technical services	2,063	0.51	-1,990	12,310	1.01	104	178,571	2.56	108,687
Educational services	576	0.36	-1,009	2,434	0.51	-2,340	60,584	2.22	33,256
Management of companies and enterprises	480	0.33	-977	1,065	0.24	-3,322	26,609	1.06	1,490
Mining, quarrying, and oil and gas extraction	29	0.09	-288	713	0.75	-243	514	0.09	-4,960
Agriculture, forestry, fishing and hunting	2	0.02	-82	120	0.47	-134	116	0.08	-1,338
Total	61,014			183,722			1,051,839		

[1]The reference area for location quotients is the United States.[2]Includes waste management and remediation services. Source: U.S. Census Bureau, 2008 County Business Patterns.

Table 17

Subsector Specializations in Engine Manufacturing, Credit Intermediation and Warehousing

Employment by Subsector in Washington County, 2008

Top 15 Subsectors by Washington County Employment[2]	Washington County		Employment Per 1,000 Residents[1]			
	Employment Estimate	Businesses	Washington County	Western Region	Eastern Region	United States
Nondepository credit intermediation	2,567	21	17	5	5	2
Full-service restaurants	2,531	94	17	13	20	15
Limited-service eating places	2,209	128	15	13	14	14
Activities related to credit intermediation	2,010	15	14	4	2	1
General medical and surgical hospitals	2,000	1	14	17	20	17
Warehousing and storage	1,849	17	13	8	1	2
Grocery stores	1,513	34	10	9	9	8
General freight trucking	1,509	57	10	5	1	3
Offices of physicians	1,307	110	9	6	9	7
Engine, turbine, and power transmission equipment manufacturing	1,250	1	8	3	1	0
Building equipment contractors	1,131	130	8	5	7	7
Community care facilities for the elderly	1,012	16	7	5	4	3
Clothing stores	1,010	78	7	3	5	4
Printing and related support activities	913	11	6	5	2	2
Automobile dealers	896	20	6	5	4	4
Total	23,706	733	161	105	104	89
Percent of all Jobs and Establishments	38.9%	20.4%	38.9%	32.2%	19.4%	22.7%

[1]Employment per 1,000 residents is based on 2010 population estimates.[2]Subsectors are listed at the NAICS 4-digit level. Source: U.S. Census Bureau, 2008 County Business Patterns. U.S. Census Bureau, 2010 Census, Table P1, accessed February 15, 2013.

Table 18

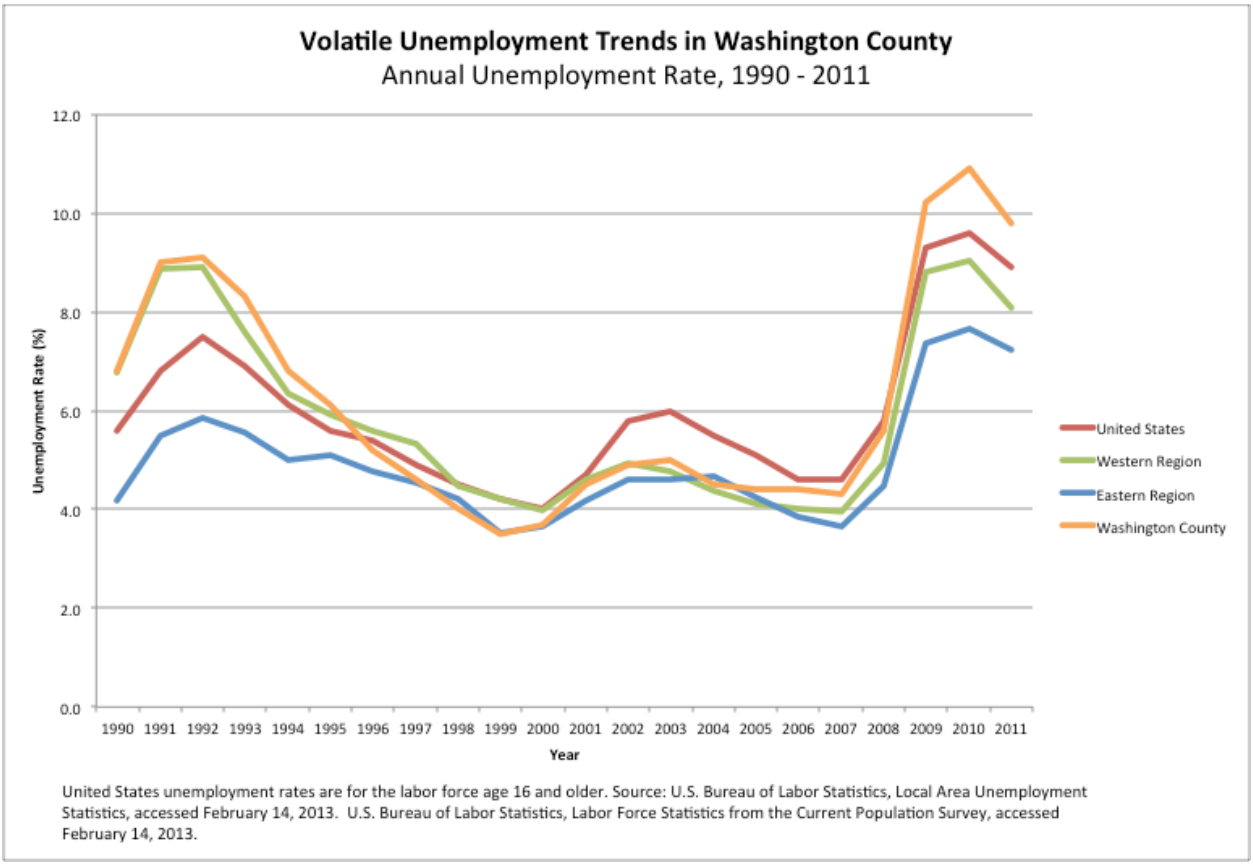
Subsector Specialization in Engine Manufacturing, Credit Intermediation and Warehousing

Location Quotients and Extra Jobs for Washington County, 2008

Top 15 Subsectors by Washington County Employment[2]	Washington County			Western Region			Eastern Region		
	Jobs Estimate	Location Quotient[1]	Extra Jobs	Jobs Estimate	Location Quotient[1]	Extra Jobs	Jobs Estimate	Location Quotient[1]	Extra Jobs
Engine, turbine, and power transmission equipment manufacturing	1,250	22.52	1,195	1,624	9.72	1,457	1,250	1.31	294
Activities related to credit intermediation	2,010	13.40	1,861	2,055	4.55	1,604	4,164	1.61	1,579
Nondepository credit intermediation	2,567	7.88	2,242	2,724	2.78	1,744	10,395	1.85	4,782
Warehousing and storage	1,849	5.21	1,495	4,445	4.16	3,378	2,551	0.42	-3,563
General freight trucking	1,509	3.16	1,031	2,724	1.89	1,285	1,945	0.24	-6,296
Printing and related support activities	913	2.89	597	2,822	2.96	1,870	4,054	0.74	-1,397
Community care facilities for the elderly	1,012	2.58	620	2,746	2.32	1,563	7,040	1.04	266
Clothing stores	1,010	1.55	361	1,840	0.94	-116	9,829	0.88	-1,369
Automobile dealers	896	1.42	264	2,619	1.37	714	7,792	0.71	-3,115
Offices of physicians	1,307	1.19	211	3,571	1.08	269	17,752	0.94	-1,154
Grocery stores	1,513	1.17	216	5,069	1.30	1,163	18,245	0.82	-4,120
Building equipment contractors	1,131	1.11	114	2,721	0.89	-343	13,159	0.75	-4,386
Full-service restaurants	2,531	1.07	156	7,108	0.99	-46	39,294	0.96	-1,664
Limited-service eating places	2,209	1.04	77	7,400	1.15	980	26,514	0.72	-10,243
General medical and surgical hospitals	2,000	0.77	-591	9,747	1.25	1,946	39,760	0.89	-4,903
Total	61,014			183,722			1,051,839		

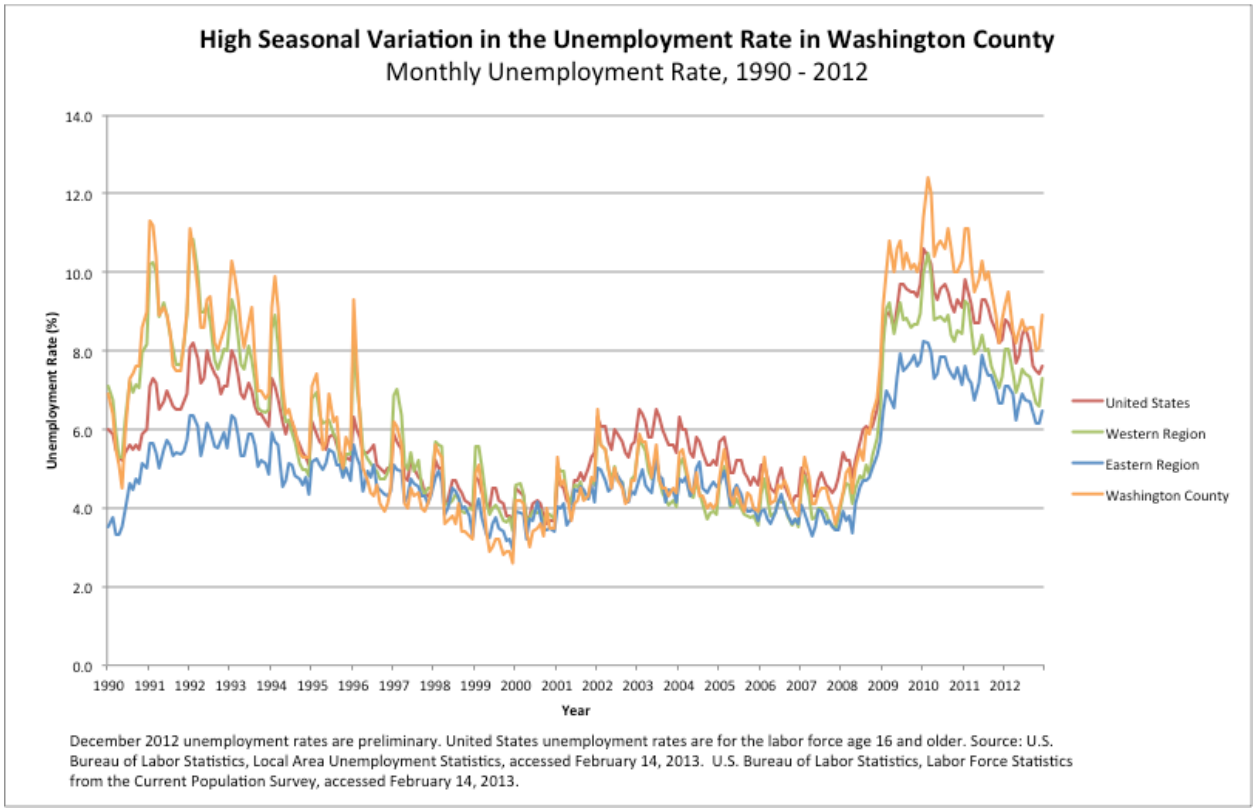
[1]The reference area for location quotients is the United States. [2]Subsectors are listed at the NAICS 4-digit level. Source: U.S. Census Bureau, 2008 County Business Patterns.

Figure 3



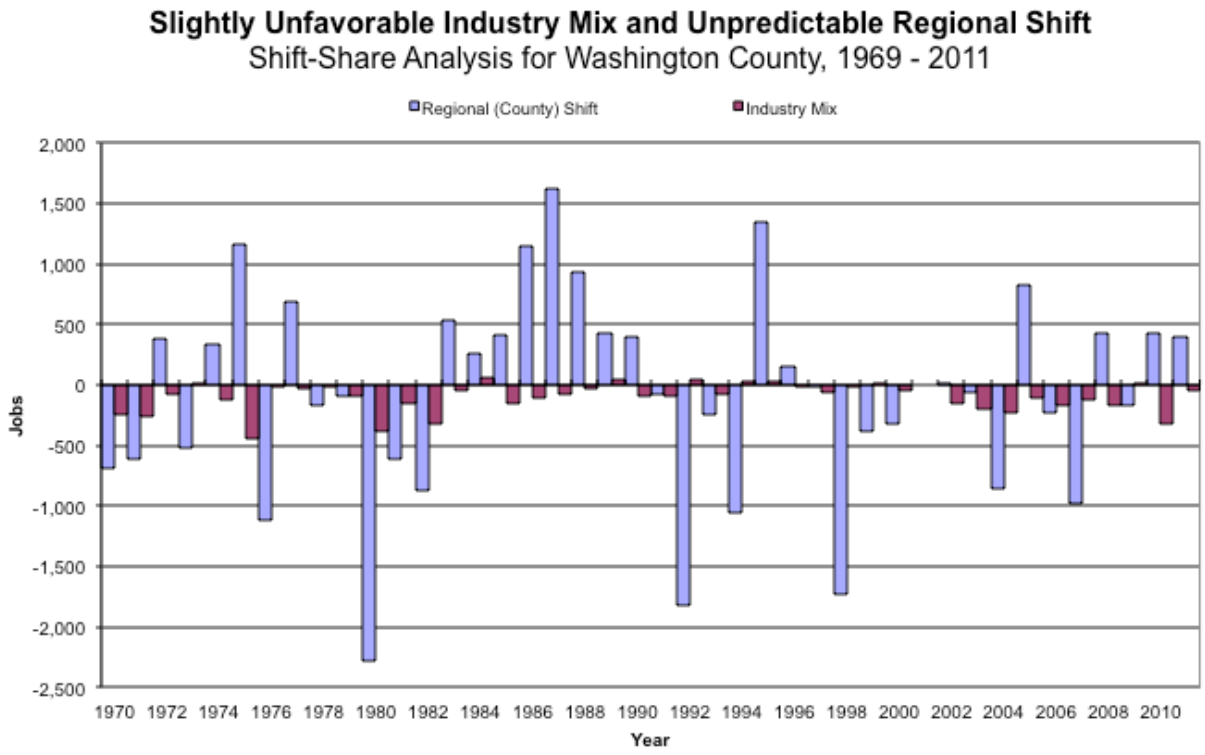
United States unemployment rates are for the labor force age 16 and older. Source: U.S. Bureau of Labor Statistics, Local Area Unemployment Statistics, accessed February 14, 2013. U.S. Bureau of Labor Statistics, Labor Force Statistics from the Current Population Survey, accessed February 14, 2013.

Figure 4



December 2012 unemployment rates are preliminary. United States unemployment rates are for the labor force age 16 and older. Source: U.S. Bureau of Labor Statistics, Local Area Unemployment Statistics, accessed February 14, 2013. U.S. Bureau of Labor Statistics, Labor Force Statistics from the Current Population Survey, accessed February 14, 2013.

Figure 5



Redacted employment counts in forestry, mining, utilities and wholesale trade were estimated based on county and national trends.
Source: U.S. Bureau of Economic Analysis, Regional Economic Information System, Tables CA25 and CA25N, accessed February 14, 2013.

Figure 6

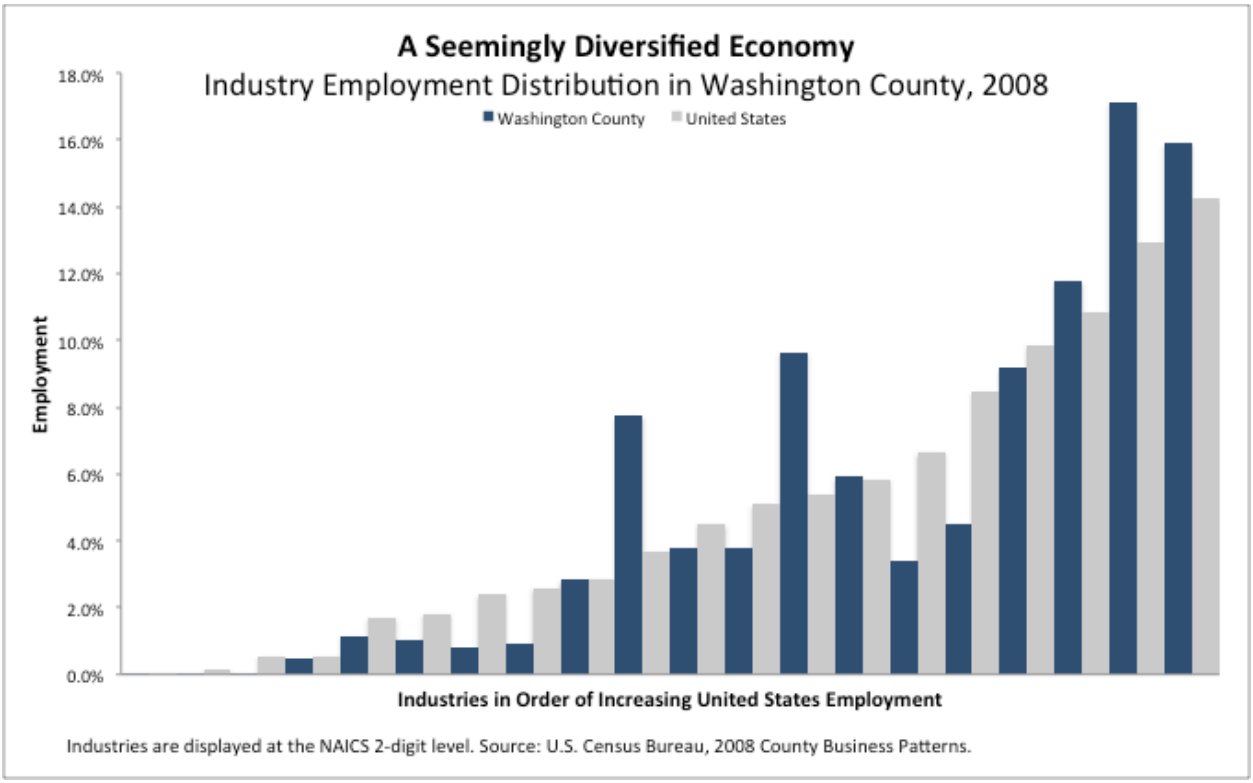


Figure 7

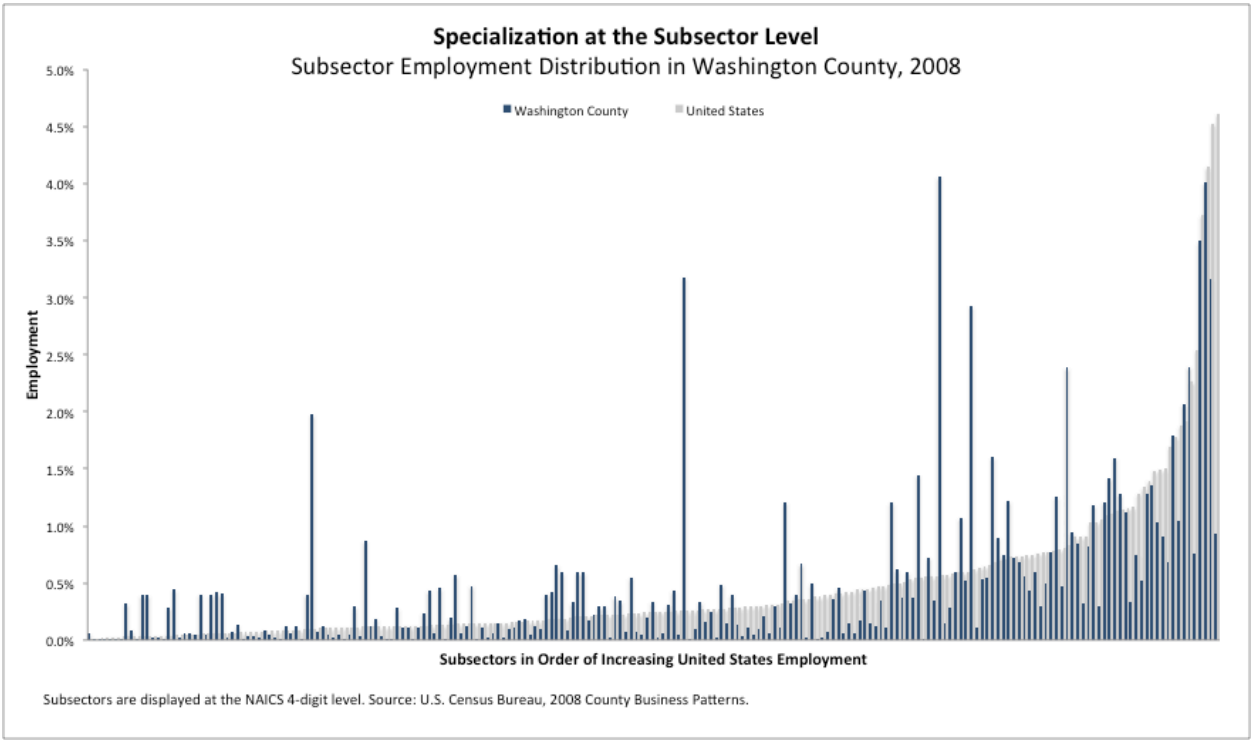
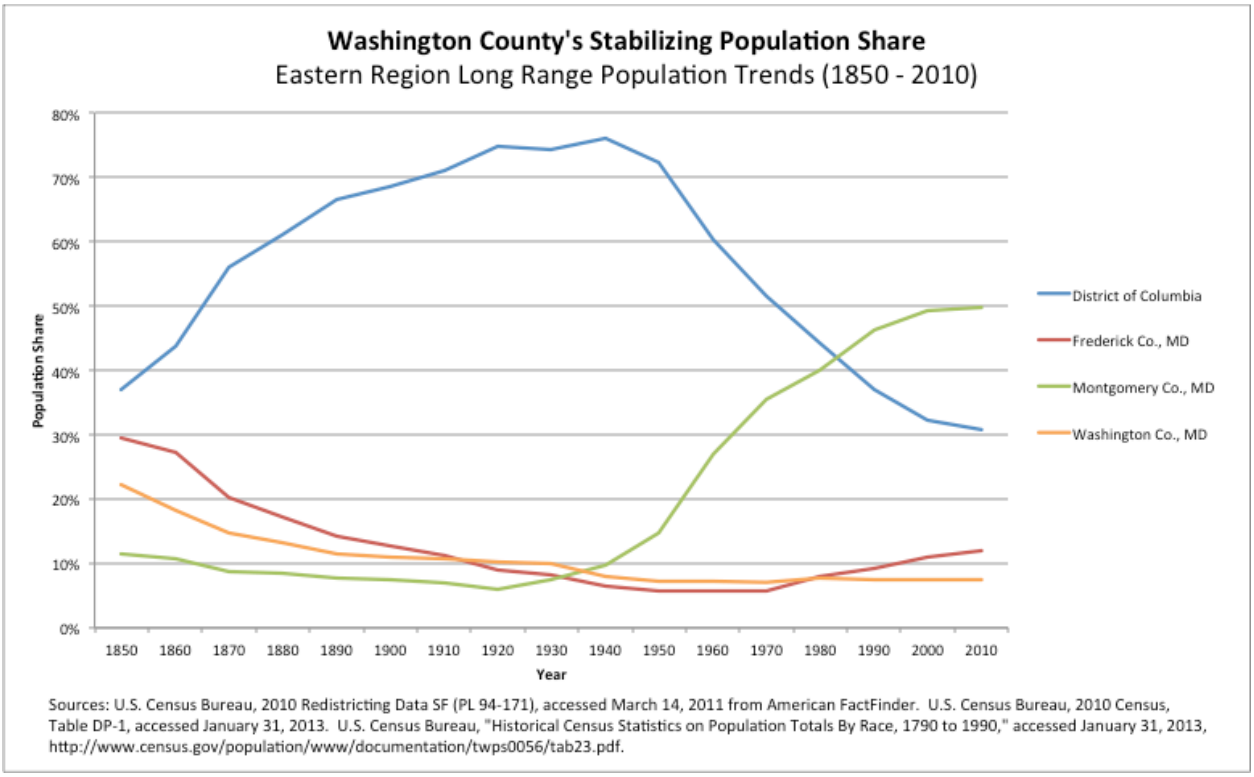


Figure 8



Sources: U.S. Census Bureau, 2010 Redistricting Data SF (PL 94-171), accessed March 14, 2011 from American FactFinder. U.S. Census Bureau, 2010 Census, Table DP-1, accessed January 31, 2013. U.S. Census Bureau, "Historical Census Statistics on Population Totals By Race, 1790 to 1990," accessed January 31, 2013, http://www.census.gov/population/www/documentation/twps0056/tab23.pdf.

Appendix A: About the Commuter Distribution Tables

The commuter distribution tables segment commuters to and from Washington County based on their location of residence or employment as well as three demographic characteristics: age, earnings and industry. The distributions are derived from the Census Bureau's Longitudinal Employer-Household Dynamics (LEHD) program, which combines Census data with other state and federal sources, including the Quarterly Workforce Indicators.

The data produced by LEHD are not counts. Instead, they are based on statistical modeling. As a result, the data are not always consistent with count-based data, such as the Census Bureau's Journey to Work dataset. In the case of Washington County, commuting between the county and the Baltimore area is represented very differently in these two datasets. For the study area, however, estimates from LEHD appear largely consistent with data from other federal sources.

Reading and Interpreting the Tables

Each table includes three sections. In the first, "Estimated Jobs by Category," raw job estimates for the study area are displayed for each of the segments. In the second, "Estimated Share of Jobs by Category," the numbers represent the percentage of total jobs in each segment that occur in the given geography. In the final section, "Difference from Geographical Jobs Distribution," the numbers represent the difference between the percentage of jobs in the segment that fall within the given geography and the percentage of total jobs in that geography. Geographies that fall below the expected share for a particular segment are shown in red, while those that exceed the expected share are shown in blue.

Looking at *Table 11*, for example, we see that 19.6 percent of the low-earning (less than $15,000 per year) jobs in Washington County were held by commuters from the Western Region. Overall, however, commuters from the Western Region made up 29.2 percent of the county's workforce. As a result, the difference from the geographical distribution for low-earning commuters from the Western Region was -9.6 percent. Looking up the column, we see that the 9.6 percent of low-earning jobs that we would have expected to be filled by Western Region residents based on the geographical distribution of jobs was unequally distributed among Washington County and Eastern Region residents. At the same time, Western Region residents held a 4.9 percent greater share of the high-earning (more than $40,000 per year) jobs than would have been predicted by the geographical distribution of jobs. Based on these findings, we can conclude that proportionally more residents of the Western Region held high-earning jobs compared to the entire Washington County workforce.