MIGRATION TRENDS
IN THE
PITTSBURGH REGION
2000-2006

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1. Introduction and Summary

This report compiles population migration trends affecting the Pittsburgh Metropolitan Statistical Area (Metro SA) and a ten-county region of Southwestern Pennsylvania between the years 2000 and 2006. Internal Revenue Service (IRS) county-to-county migration data is used to compile gross and net migration flows of population. Section 2 of this report explains the data sources and methodology used to compile the migration statistics presented here. Section 3 compiles inter-regional migration statistics for the Pittsburgh region and other regions across the country. Section 4 compiles intra-regional migration data between ten individual counties within Southwestern Pennsylvania.

Net migration is one of three components of demographic change that result in population change: net migration, births and deaths. Net migration is the difference between in-migration and out-migration flows for a geographic region. Fertility rates and the age structure of the population affect natural population change, the difference between births and deaths. Net migration is typically only a small part of the total movement of population affecting a region. Net migration does not reflect the impact gross migration flows have on the changing composition of population in a region.[i] Migration data aggregated to the county level also does not reflect the impact migration can have on specific sub-regions or municipalities within individual counties. The pattern of residential location and migration within a region results in migration rates for specific municipalities that range far above or below county or regional averages.

IRS migration data show that between 2000 and 2006 a total of 216,738 people moved into the Pittsburgh Metropolitan Statistical Area (Metro SA), while 251,179 moved away, resulting in a net loss of population due to domestic migration of 34,441 people.

In addition to the flows of population moving in and out of the Pittsburgh Metro SA, there is a consistent exchange of population within the broader Southwestern Pennsylvania region. Between 2000 and 2006, 70,520 people moved from Allegheny County to one of the other nine counties defined here as part of Southwestern Pennsylvania, while 49,151 moved into Allegheny County. Southwestern Pennsylvania is defined here as the seven counties that comprise the Pittsburgh Metro SA: Allegheny, Armstrong, Beaver, Butler, Fayette, Washington and Westmoreland, along with three adjoining counties of Greene, Indiana and Lawrence. Figure 1 summarizes the cumulative migration flows between 2000-2006 both within and between the United States and two specific sub-regions of Southwestern Pennsylvania: Allegheny County and nine remaining counties.

Figure 1. Cumulative Southwestern Pennsylvania Migration Flows 2000-2006

Allegheny County

Remainder of SW PA*

70,520

49,151

139,482

119,104

123,377

106,701

Remainder of United States
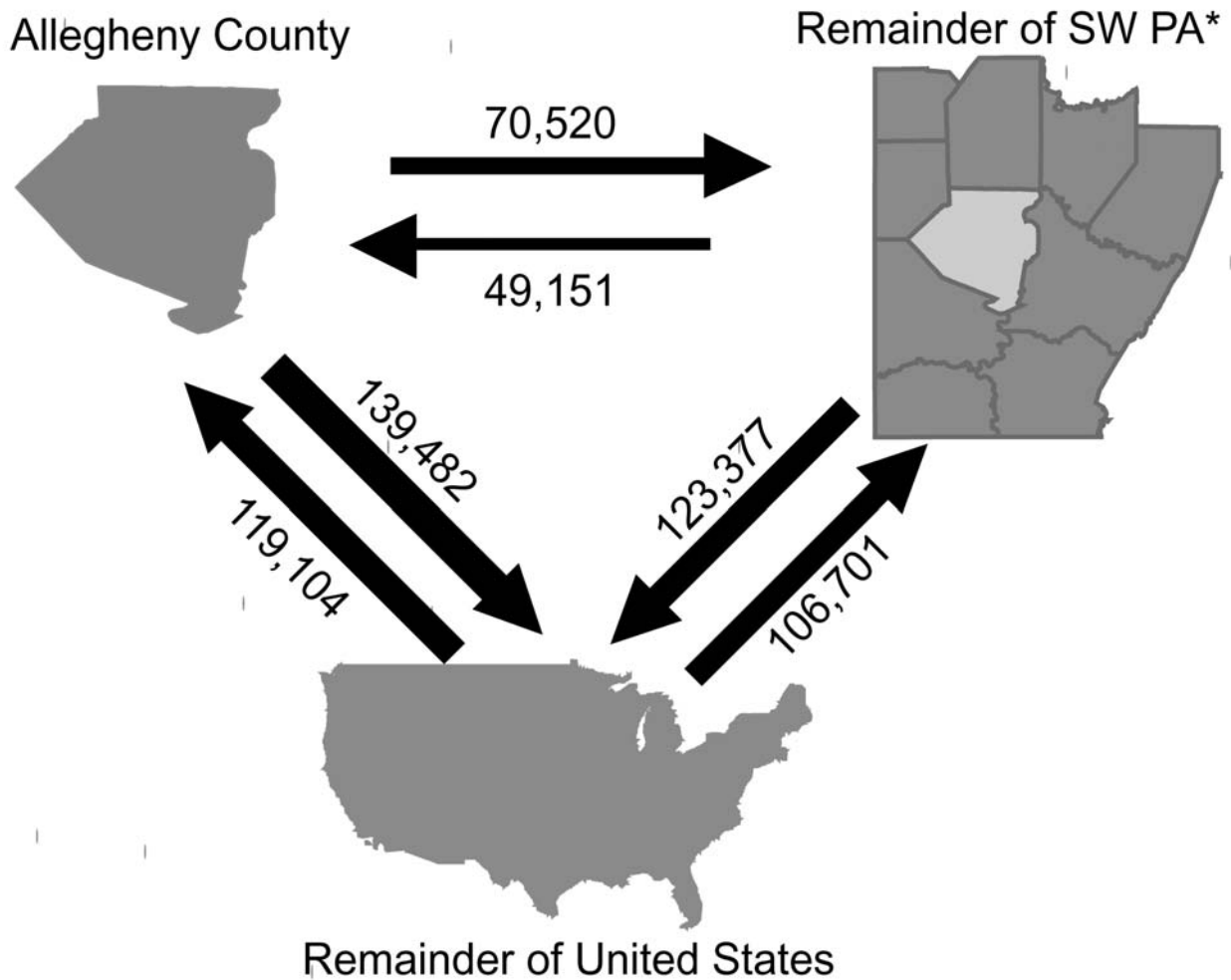
* Southwestern Pennsylvania defined here as Allegheny, Armstrong, Beaver, Butler, Fayette, Greene, Indiana, Lawrence, Washington and Westmoreland counties.

2. Methodology

This report compiles data from the Internal Revenue Service (IRS) County-to-County migration datasets. IRS migration data is a standard data source for studying population in the Pittsburgh region.[ii] The IRS migration data uses administrative records (income tax returns) from the IRS Individual Master File to produce statistics on the movement of people between counties across the country.[iii]   The Individual Master File includes a record for every Form 1040, 1040A and 1040EZ individual income tax return filed by citizens and resident aliens. Statistics derived from individual income tax returns are based on year over year changes in the addresses reported by tax filers. The IRS does not release any data on individual taxpayers, but aggregates the total number of people
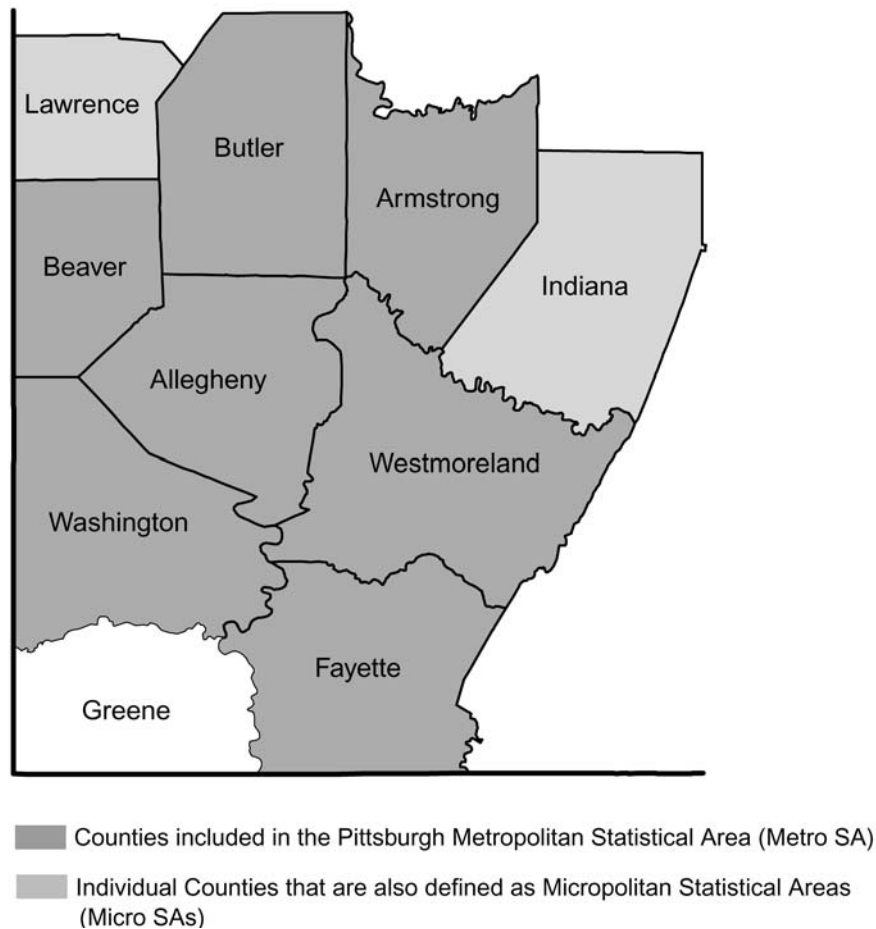
who move between each pair of counties. Additionally, data is suppressed for county-to-county migration flows with less than 10 filings in a given year. For each pair of counties which the IRS identifies as having a flow of migrants, the IRS reports the total number of filings along with the total number of exemptions claimed, the median Adjusted Gross Income and the aggregate Adjusted Gross Income for that set of filings. The migration data reported here reflects the total number of exemptions claimed on tax filings, which is considered to be a proxy for population.

For an analysis of inter-regional migration flows, data has been aggregated into gross and net migration flows between the Pittsburgh Metropolitan Statistical Area (Metro SA) and all other Core Based Statistical Areas (CBSAs) in the United States. CBSAs are new standards for the definition of regions introduced by the U.S. Office of Management and Budget (OMB) in 2003.[iv] CBSAs include both Metro SAs and a new type of statistical reporting area classification called *micropolitan* statistical areas (Micro SA)[v]. CBSAs are defined by concentrations of population in core counties with additional counties included in a particular CBSA based on the commuting patterns of workers between counties. Not used in this report is additional new type of geographic reporting area classification called combined statistical areas (CSAs). CSAs can be formed when adjoining CBSAs, either metropolitan or micropolitan, meet certain thresholds of workforce integration defined by commuting patterns of workers.

The current definition of the Pittsburgh Metro SA comprises seven counties in Southwestern Pennsylvania: Allegheny, Armstrong, Beaver, Butler, Fayette, Washington and Westmoreland counties. Two Micro SAs are defined in Southwestern Pennsylvania, including New Castle (Lawrence County) and Indiana County. In Southwestern Pennsylvania there currently exists one CSA: Pittsburgh-New Castle, which is an eight county area formed by the combination of the Pittsburgh MSA and the New Castle (Lawrence County) Micro SA.

This report also compiles county-level migration data for 10 individual counties in Southwestern Pennsylvania. These counties include the seven counties of the Pittsburgh Metro SA and also include the adjoining counties of Greene, Indiana and Lawrence. Figure 2 depicts the 10 counties of Southwestern Pennsylvania.

Data here are aggregated across six years of migration data between 2000 and 2006. The IRS reports migration data between successive years. The data here aggregates six years of annual data beginning with movers between the years 2000 and 2001 through those moving between 2005 and 2006. Where individuals moved both in and out of the Pittsburgh region over this time period, they are captured by the gross migration flows data for each move.

Figure 2. Southwestern Pennsylvania Counties

Counties included in the Pittsburgh Metropolitan Statistical Area (Metro SA)

Individual Counties that are also defined as Micropolitan Statistical Areas (Micro SAs)

IRS migration data is not a complete picture of migration flows in the United States. A significant amount of migration in the U.S. comes from international immigrants who are typically not residents needing to file IRS tax returns before entering the country. The IRS migration statistics mostly captures domestic, or internal, migration of population within the United States. The IRS data does not capture all domestic migration due to the fact that not everyone files a tax return. Students, seniors, those who have recently lost a spouse, or others with low income are some of the populations that are not captured well by IRS tax filings.[vi] Overall, the IRS migration data is estimated to capture over 80% of the movement of the population domestically within the U.S. [vii]

IRS migration data is one of the primary data sources used by the Census Bureau to calculate annual estimates of population change by county. The Census Bureau uses IRS migration data to derive net domestic migration rates for the household population under age 65. The Census Bureau calculates net domestic migration rates for the household population age 65 and older from tabulations of Medicare enrollees in each county obtained from the Centers for Medicare and Medicaid Service (CMS).

3. Inter-regional Migration

Inter-regional migration flows are defined here as the movement of people between Core Based Statistical Areas (CBSAs), which include both Metropolitan Statistical Areas (Metro SAs) and Micropolitan Statistical Areas (Micro SAs), across the United States.   Only migration flows that include an origination or destination within a CBSA are used to compile these inter-regional migration statistics. Migration to rural counties, or any county not included in a CBSA, is excluded from these compilations.

Figure 3 shows the annual gross migration flows in and out of the Pittsburgh Metro SA between 2000 and 2006. The migration flows for the Pittsburgh Metro SA have averaged 41,863 people moving out of the region annually between 2000-2006. Annual inflows of population have averaged 36,123 over the same period resulting in an annual net loss of population due to migration of 5,740.

Figure 3. Annual Migration Flows from IRS Data for the Pittsburgh Metro SA: 2000-2006
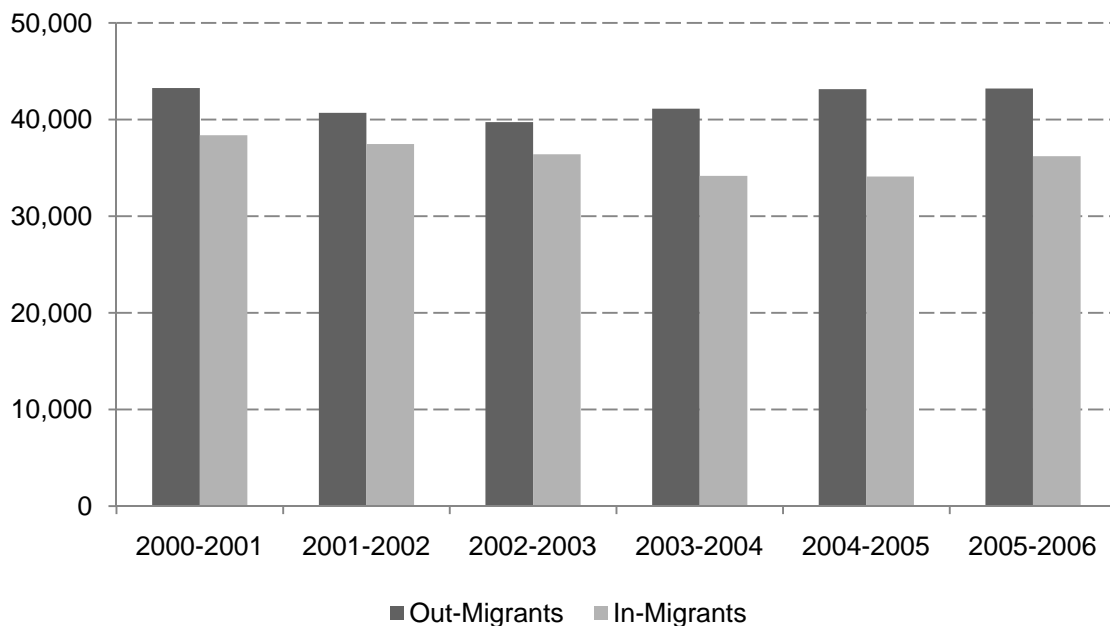
Table 1 lists the CBSAs across the U.S. that show the largest cumulative gross migration flows to or from the Pittsburgh Metro SA. Maps of gross migration flows between Pittsburgh and all CBSAs across the continental United States are shown in Figures 4 and 5.

The largest in-flows and out-flows of migration affecting the Pittsburgh Metro SA result from exchanges of population with the Washington, DC, Philadelphia and New York City Metro SAs. Smaller, but significant, migration flows are generated between Pittsburgh and nearby Micro SAs, including New Castle (Lawrence County), PA, Youngstown, OH, and Indiana, PA. Table 1 highlights the metropolitan and micropolitan areas with the

largest gross in and outflows of migration affecting the Pittsburgh Metro SA between 2000 and 2006.

Overall population change is determined by net migration flows, the difference between in-migration and out-migration. Table 2 shows the largest net migration flows, both inflows and outflows, respectively, affecting the Pittsburgh Metro SA. Figure 6 shows CBSAs that gained population from the Pittsburgh Metro SA between 2000-2006, while Figure 7 shows the pattern of CBSAs which lost population to the Pittsburgh Metro SA between 2000-2006.

Pittsburgh loses the most population to nearby large metropolitan areas.   Net migration between 2000 and 2006 is dominated by the loss of population to the Washington, DC MSA, which gained 3,535 more people from the Pittsburgh region than it lost between 2000 and 2006 and several regions in the south and west. Figures 3 and 4 depict these migration flows across the country.   Other regions which Pittsburgh lost significant population to include Tampa-St. Petersburg-Clearwater, FL (net loss of 2,470), Charlotte-Gastonia-Concord, NC-SC (-1,852), Atlanta-Sandy Springs-Marietta, GA (-1,781), and Phoenix-Mesa-Scottsdale, AZ (-1,630).

Cumulative net gains in population between 2000-2006 are mostly from smaller regions close to Pittsburgh, including Johnstown, PA (net gain of 797), Erie, PA (+444) and Wheeling, WV-OH (+340).

Table 1. Cumulative Migration Flows Affecting the Pittsburgh Metro SA 2000-2006

Ranked by Largest Inflows by CBSA	Into Pittsburgh	Migration Out of Pittsburgh	Net
Philadelphia-Camden-Wilmington	6,117	7,708	-1,591
New York-Northern New Jersey-Long Island	5,507	6,378	-871
Washington-Arlington-Alexandria	5,474	9,009	-3,535
Indiana[*]	5,237	5,093	144
Youngstown-Warren-Boardman	4,658	4,912	-254
New Castle[*]	4,271	4,900	-629
Erie	3,423	2,979	444
Cleveland-Elyria-Mentor	3,377	3,918	-541
Miami-Fort Lauderdale-Miami Beach	2,574	3,433	-859
Chicago-Naperville-Joliet	2,443	3,344	-901
Johnstown	2,421	1,624	797
Columbus	2,387	3,579	-1,192
Los Angeles-Long Beach-Santa Ana	2,291	2,907	-616
Baltimore-Towson	2,083	3,415	-1,332
Harrisburg-Carlisle	2,037	2,251	-214
Weirton-Steubenville	2,029	2,136	-107
Boston-Cambridge-Quincy	1,927	2,530	-603
Somerset[*]	1,782	1,805	-23
Tampa-St. Petersburg-Clearwater	1,687	4,157	-2,470
Atlanta-Sandy Springs-Marietta	1,670	3,451	-1,781
Ranked by Largest Outflows by CBSA			
Washington-Arlington-Alexandria	5,474	9,009	-3,535
Philadelphia-Camden-Wilmington	6,117	7,708	-1,591
New York-Northern New Jersey-Long Island	5,507	6,378	-871
Indiana[*]	5,237	5,093	144
Youngstown-Warren-Boardman	4,658	4,912	-254
New Castle[*]	4,271	4,900	-629
Tampa-St. Petersburg-Clearwater	1,687	4,157	-2,470
Cleveland-Elyria-Mentor	3,377	3,918	-541
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Atlanta-Sandy Springs-Marietta	1,670	3,451	-1,781
Miami-Fort Lauderdale-Miami Beach	2,574	3,433	-859
Baltimore-Towson	2,083	3,415	-1,332
Chicago-Naperville-Joliet	2,443	3,344	-901
Phoenix-Mesa-Scottsdale	1,599	3,229	-1,630
Erie	3,423	2,979	444
Los Angeles-Long Beach-Santa Ana	2,291	2,907	-616
Charlotte-Gastonia-Concord	812	2,664	-1,852
Boston-Cambridge-Quincy	1,927	2,530	-603
Harrisburg-Carlisle	2,037	2,251	-214
Orlando-Kissimmee	923	2,225	-1,302

* Micropolitan Statistical Area. All other regions are Metropolitan Statistical Areas.
Source: University Center for Social and Urban Research, University of Pittsburgh, from IRS data

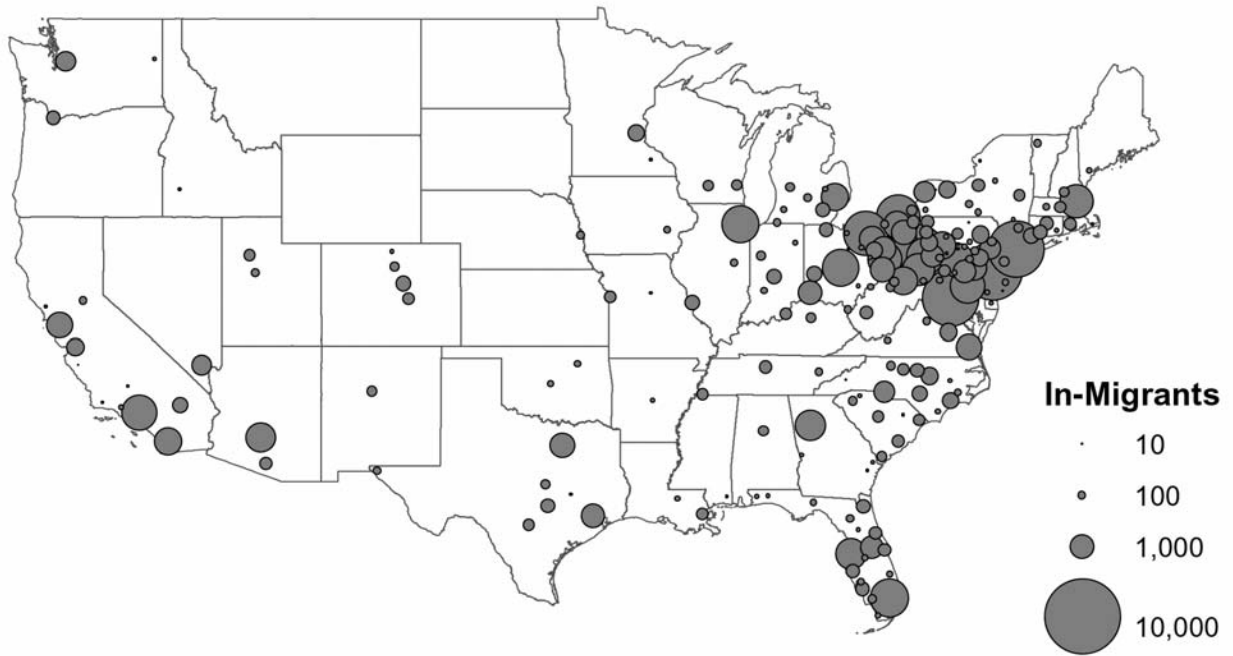**Figure 4. Origination of Pittsburgh In-Migrants by CBSA: 2000-2006**

Figure 5. Destinations of Pittsburgh Out-Migrants by CBSA: 2000-2006

Table 2. Cumulative Net Migration Flows Affecting the Pittsburgh Metro SA 2000-2006

| Largest Net Inmigration Flows by CBSA | Migration | | |
	Into Pittsburgh	Out of Pittsburgh	Net
Johnstown	2,421	1,624	797
Erie	3,423	2,979	444
Wheeling	1,075	735	340
Scranton--Wilkes-Barre	537	337	200
Altoona	855	692	163
Allentown-Bethlehem-Easton	773	613	160
St. Marys[*]	275	127	148
Indiana[1]	5,237	5,093	144
Williamsport	241	120	121
DuBois[*]	572	463	109
Jacksonville	484	381	103
Bradford[1]	295	195	100
Syracuse	302	203	99
Huntington-Ashland	107	17	90
Charleston	309	224	85
Omaha-Council Bluffs	112	27	85
Lancaster	1,130	1,048	82
Warren[*]	293	211	82
Morgantown	1,380	1,306	74
Cumberland	91	18	73
Largest Net Outmigration by CBSA			
Washington-Arlington-Alexandria	5,474	9,009	-3,535
Tampa-St. Petersburg-Clearwater	1,687	4,157	-2,470
Charlotte-Gastonia-Concord	812	2,664	-1,852
Atlanta-Sandy Springs-Marietta	1,670	3,451	-1,781
Phoenix-Mesa-Scottsdale	1,599	3,229	-1,630
Philadelphia-Camden-Wilmington	6,117	7,708	-1,591
Baltimore-Towson	2,083	3,415	-1,332
Orlando-Kissimmee	923	2,225	-1,302
Columbus	2,387	3,579	-1,192
Raleigh-Cary	539	1,522	-983
Cape Coral-Fort Myers	364	1,287	-923
Chicago-Naperville-Joliet	2,443	3,344	-901
New York-Northern New Jersey-Long Island	5,507	6,378	-871
Miami-Fort Lauderdale-Miami Beach	2,574	3,433	-859
Las Vegas-Paradise	744	1,596	-852
Sarasota-Bradenton-Venice	380	1,212	-832
Houston-Sugar Land-Baytown	943	1,766	-823
Jacksonville	363	1,124	-761
New Castle[*]	4,271	4,900	-629
Los Angeles-Long Beach-Santa Ana	2,291	2,907	-616

* Micropolitan Statistical Area. All other regions are Metropolitan Statistical Areas.
Source: University Center for Social and Urban Research, University of Pittsburgh, from IRS data

Figure 6. Cumulative Net Inmigration to Pittsburgh by CBSA: 2000-2006

Figure 7. Cumulative Net Outmigration from Pittsburgh by CBSA: 2000-2006

# 4. Intra-regional Migration within Southwestern Pennsylvania

This section compiles county level migration flows between the 10 counties within Southwestern Pennsylvania. These counties include the seven counties that comprise the Pittsburgh Metropolitan Statistical Area (Metro SA) and include adjoining Greene, Indiana and Lawrence counties. Overall, 176,672 people moved between counties within Southwestern Pennsylvania between 2000 and 2006.

Migration flows within the region are dominated by flows to and from Allegheny County. Figure 8 shows the annual flow of migration between Allegheny County and the nine remaining counties of the Southwestern Pennsylvania between 2000 and 2006. On average just under 12 thousand people move annually from Allegheny County to one of the nine remaining counties in Southwestern Pennsylvania, compared to an average of just over eight thousand moving into Allegheny County from within the region. Net migration from Allegheny County to remainder of Southwestern Pennsylvania has averaged over 3,500 annually since 2000.

Table 3 shows the cumulative migration flows between each pair of counties within Southwestern Pennsylvania between 2000 and 2006. The largest county-to-county migration over this period is 22,194 people who moved from Allegheny County to Westmoreland County followed by 17,203 who moved from Allegheny County to Washington County. Over this period a total of 70,520 people moved out of Allegheny County to one of the nine other counties in the Southwestern Pennsylvania region, while 49,151 people moved from those counties into Allegheny County.

Table 4 compiles the cumulative net migration between each pair of counties within Southwestern Pennsylvania between 2000 and 2006. The largest net migration flows are between Allegheny County and other counties within the Pittsburgh MSA. The largest net migration was from Allegheny County to Westmoreland, Washington and Butler counties, which had cumulative net migration flows of 6,730, 6,496 and 6,384, respectively, between 2000 and 2006.

Figure 8. Annual Migration Flows within Southwestern Pennsylvania: 2000-2006
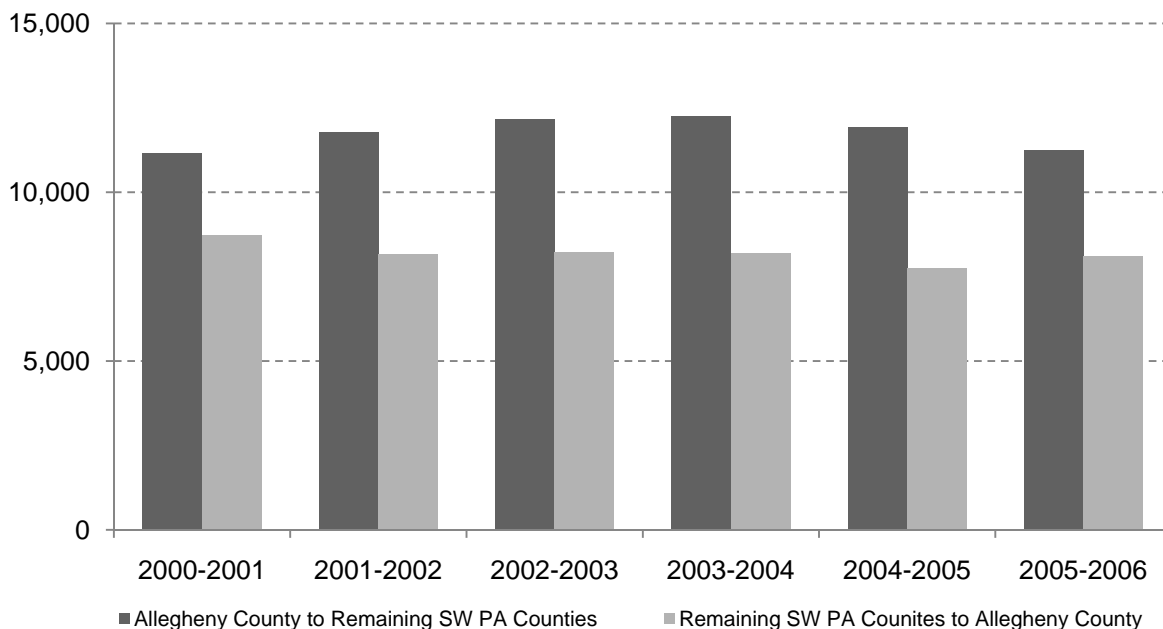
Source: University Center for Social and Urban Research, University of Pittsburgh, from IRS data

Table 3. Cumulative Migration Flows Within Southwestern Pennsylvania 2000-2006

Destination County

Originating County	Allegheny	Armstrong	Beaver	Butler	Fayette	Greene	Indiana	Lawrence	Washington	Westmoreland	Subtotal
Allegheny		2,492	9,243	14,673	2,140	483	997	1,095	17,203	22,194	70,520
Armstrong	2,107		37	1,746	*	*	1,168	*	21	3,054	8,133
Beaver	7,445	16		2,364	44	*	66	2,088	542	376	12,941
Butler	8,289	1,438	2,525		59	*	182	1,428	376	797	15,094
Fayette	2,083	*	40	73		937	50	*	2,385	4,686	10,254
Greene	455	*	*	*	792		*	*	1,701	135	3,083
Indiana	1,393	1,029	88	181	50	*		*	161	2,335	5,237
Lawrence	1,208	*	1,743	1,266	*	*	*		14	40	4,271
Washington	10,707	*	523	378	2,150	1,561	96	44		2,335	17,794
Westmoreland	15,464	3,109	396	1,223	4,359	150	2,244	110	2,290		29,345
Subtotal:	49,151	8,084	14,595	21,904	9,594	3,131	4,803	4,765	24,693	35,952	

Table 4. Cumulative Net Migration Within Southwestern Pennsylvania 2000-2006

Destination County

Originating County	Armstrong	Beaver	Butler	Fayette	Greene	Indiana	Lawrence	Washington	Westmoreland
Allegheny	385	1,798	6,384	57	28	-396	-113	6,496	6,730
Armstrong		21	308	*	*	139	*	21	-55
Beaver			-161	4	*	-22	345	19	-20
Butler				-14	*	1	162	-2	-426
Fayette					145	0	*	235	327
Greene						*	*	140	-15
Indiana							*	65	91
Lawrence								-30	-70
Washington									45

* 10 or fewer tax filings between counties
Source: University Center for Social and Urban Research, University of Pittsburgh, from IRS data

Notes

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[i] For more on the demographic changes affecting the Pittsburgh region see Peter Morrison. "A Demographic Overview of Metropolitan Pittsburgh", RAND IP-256, Santa Monica, CA, 2003.

[ii] Some previous reports that have used IRS migration data to study population change in the Pittsburgh region include: Ghambir Batta, "Migration Patterns and Trends of the Ten-County Region of Southwestern Pennsylvania, 1980 – 1985", City of Pittsburgh Department of City Planning, 1987; Christine Nolan, "The Public Policy Implications of Current Population Dynamics in the Pittsburgh Metropolitan Region", Graduate School of Public and International Affairs, University of Pittsburgh. September 1996; Christopher Briem, "Population Migration and the Pittsburgh Region: Update for 1999-2000", University Center for Social and Urban Research, University of Pittsburgh. December 2001; Lena Andrews, "Origins and Destinations of Pittsburgh Migrants", Center for Economic Development, Carnegie Mellon University, April 1, 2004.

[iii] For more on the collection of IRS migration data see: Emily Gross, "Internal Revenue Service Area-To-Area Migration Data: Strengths, Limitations, and Current Trends", Internal Revenue Service, 2005, on the Internet at http://www.irs.gov/pub/irs-soi/05gross.pdf.

[iv] For more on the changes in the definition of metropolitan regions see OMB Bulletin No. 03-04 Attachment: Metropolitan Statistical Areas, Micropolitan Statistical Areas, Combined Statistical Areas. New England City And Town Areas. Combined New England City And Town Areas 2003 Lists 1 through 8. Statistical and Science Policy Branch. Office of Information and Regulatory Affairs. Office of Management and Budget. 2003.

[v] The new geographical categories of both metropolitan and micropolitan statistical areas makes the previously used abbreviation "MSA" confusing. For this report the abbreviations Metro SA and Micro SA are used to designate the two types of core based statistical areas (CBSAs).

[vi] The concentration of students in Allegheny County has another potential bias in IRS migration statistics. Students who are claimed on their parents tax return will not be captured by this data. However, students are more likely to file independently as they get older. If a student begins filing an independent tax return while in school and then moves away they will be captured by this data when they leave even though they were not captured when they arrived. This pattern matches that found in. "Migration analysis: A case study for local public policy " by Paul R. Voss, Roger B. Hammer and Ann M. Meier; Population Research and Policy Review 20: 587–603, 2001. See footnote 5 p.600.

[vii] For the Pittsburgh region, net migration data compiled for 2000-2006 in this report accounts for an average of 76% of the net migration estimates promulgated by the Census Bureau it its annual population estimates over that period. Compared to the nation, differences in coverage could be accounted for by the higher than average elderly population or student population in the region.