



INDEPENDENT FISCAL OFFICE

June 25, 2019

The Honorable David G. Argall
Senate of Pennsylvania
171 Main Capitol Building
Harrisburg, PA 17120

Dear Senator Argall:

This letter responds to your request that the Independent Fiscal Office (IFO) provide available data on educational attainment levels by age group for individuals migrating to and from Pennsylvania. This information request stems from the Senate Majority Policy Committee workshop discussion on the issue of youth outmigration that Ms. Lesley A. Rompalo and Ms. Karen E. Maynard participated in on April 30, 2019.

At the workshop, Ms. Maynard and Ms. Rompalo provided migration data by age group for young adults migrating to and from Pennsylvania using U.S. Census Bureau American Community Survey (ACS), Public Use Microdata Sample (PUMS) one-year files (multiple years). To add educational attainment to that data breakout, it is necessary to use the U.S. Census Bureau, ACS, PUMS five-year files to help mitigate large sample size error that could occur if the one-year files are used. The five-year files provide slightly different totals of migrating individuals, but still represent a general average of the five years covered.

The tables on the next two pages provide adult domestic migration to and from Pennsylvania using the 2010 and 2017 ACS PUMS five-year files.¹ The 2010 five-year data are included in the first table while the 2017 five-year data are included in the second table. The educational attainment groups include the following:

- "High school graduate or less" includes individuals who did not finish high school and individuals who completed high school or received a GED.
- "Some college, < Bachelor's" includes individuals who have taken some college courses or have their Associate's degree but have not received a Bachelor's degree.
- "Bachelor's or more" includes individuals who have received at least a Bachelor's degree.

These data are based on survey data and sample size will impact sampling error for the migrating groups listed in the table. Therefore, both tables display the 90 percent confidence intervals for each migrating group. For example, in the first table, the average number of adults leaving Pennsylvania per annum from

¹ Residents younger than 18 were excluded because nearly all had a high school degree or less.

2006 to 2010 is 186,743. A 90 percent confidence interval (+/- 4,595) means that there is a 90 percent confidence that the actual number of adults leaving the state is between 182,148 (186,743 – 4,595) and 191,338 (186,743 + 4,595). The confidence intervals are important to review with these data because some intervals are large given the small sample size within various migrating groups listed in the table.

Adult Domestic Migration by Age Group and Educational Attainment (2006-2010 per annum)

Educational Attainment	Age Group					Total
	18-19	20-24	25-34	35-64	65+	
Leaving PA						
High school graduate or less	10,597 (+/-978)	9,250 (+/-816)	10,263 (+/-917)	20,124 (+/-1,344)	8,445 (+/-835)	58,679 (+/-2,791)
Some college, < Bachelor's	10,566 ^b (+/-1,054)	14,152 (+/-1,225)	11,491 (+/-1,078)	14,336 (+/-1,018)	2,340 ^b (+/-379)	52,885 (+/-2,130)
Bachelor's or more	n.a. ^a -	20,369 (+/-1,361)	28,666 (+/-1,512)	22,739 (+/-1,455)	3,395 ^b (+/-446)	75,179 (+/-2,536)
Total Leaving PA	21,173 (+/-1,515)	43,771 (+/-2,059)	50,420 (+/-2,196)	57,199 (+/-2,168)	14,180 (+/-929)	186,743 (+/-4,595)
Moving to PA						
High school graduate or less	13,649 (+/-1,249)	10,985 ^b (+/-1,158)	15,438 (+/-1,259)	24,355 (+/-1,855)	6,439 ^b (+/-753)	70,866 (+/-3,341)
Some college, < Bachelor's	18,529 (+/-1,644)	15,835 (+/-1,468)	12,098 (+/-1,098)	16,025 (+/-1,303)	2,463 ^b (+/-494)	64,950 (+/-2,648)
Bachelor's or more	n.a. ^a -	12,454 (+/-1,092)	29,188 (+/-1,591)	23,146 (+/-1,550)	3,472 ^b (+/-615)	68,260 (+/-2,535)
Total Moving to PA	32,178 (+/-1,897)	39,274 (+/-1,926)	56,724 (+/-2,260)	63,526 (+/-2,920)	12,374 (+/-1,207)	204,076 (+/-4,709)
Adult Domestic Net Migration	11,005	-4,497	6,304	6,327	-1,806	17,333

Note: The values in parentheses represent the 90% confidence interval.

a. Not statistically significant.

b. Large confidence interval (confidence interval greater than 10% of the number of individuals in category). Caution should be used when utilizing these data.

Source: U.S. Census Bureau, American Community Survey (ACS), Public Use Microdata Sample (PUMS), 2010 five-year file.

Adult Domestic Migration by Age Group and Educational Attainment (2013-2017 per annum)

Educational Attainment	Age Group					Total
	18-19	20-24	25-34	35-64	65+	
Leaving PA						
High school graduate or less	7,550 ^b (+/-910)	8,415 ^b (+/-875)	10,706 ^b (+/-1,342)	20,961 (+/-1,554)	9,309 ^b (+/-976)	56,941 (+/-2,821)
Some college, < Bachelor's	11,290 (+/-860)	14,237 (+/-1,266)	14,067 (+/-1,347)	19,580 (+/-1,441)	4,622 ^b (+/-626)	63,796 (+/-2,844)
Bachelor's or more	n.a. ^a -	20,316 (+/-1,646)	40,694 (+/-2,314)	28,932 (+/-1,627)	7,145 ^b (+/-748)	97,087 (+/-3,364)
Total Leaving PA	18,855 (+/-1,192)	42,968 (+/-2,145)	65,467 (+/-3,331)	69,473 (+/-2,740)	21,076 (+/-1,495)	217,839 (+/-5,904)
Moving to PA						
High school graduate or less	10,117 (+/-935)	7,390 ^b (+/-1,003)	9,232 ^b (+/-1,340)	20,234 (+/-1,698)	7,607 (+/-697)	54,580 (+/-2,780)
Some college, < Bachelor's	17,025 (+/-1,062)	14,333 (+/-1,383)	12,563 (+/-1,178)	13,869 (+/-1,168)	2,876 ^b (+/-489)	59,972 (+/-2,779)
Bachelor's or more	n.a. ^c -	11,722 ^b (+/-1,257)	35,116 (+/-1,931)	25,886 (+/-2,190)	5,280 ^b (+/-761)	68,073 (+/-3,551)
Total Moving to PA	27,208 (+/-1,509)	33,445 (+/-2,396)	60,926 (+/-2,511)	59,989 (+/-3,213)	15,763 (+/-1,198)	197,331 (+/-5,963)
Adult Domestic Net Migration	8,353	-9,523	-4,541	-9,484	-5,313	-20,508

Note: The values in parentheses represent the 90% confidence interval.

a. Not statistically significant.

b. Large confidence interval (confidence interval greater than 10% of the number of individuals in category). Caution should be used when utilizing these data.

c. Excluded due to large confidence interval (confidence interval greater than 90% of number of individuals in category).

Source: U.S. Census Bureau, American Community Survey (ACS), Public Use Microdata Sample (PUMS) 2017 five-year file.

Using the data provided in the previous two tables, from 2006 to 2010, roughly 40 percent of adults leaving Pennsylvania had at least a Bachelor's degree. By 2013 through 2017, that percentage had increased to roughly 45 percent. For adults coming to Pennsylvania in both time periods, roughly a third had at least a Bachelor's degree.

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From 2006 to 2010, roughly 48 percent of the working age population (25 to 64 year olds) leaving the Commonwealth had at least a Bachelor's degree. From 2013 to 2017, that figure climbed slightly to 52 percent. For those age 25 to 64 moving to Pennsylvania during those two time periods, 44 percent (2006-2010) and 50 percent (2013-2017) had at least a Bachelor's degree.

I hope that you find this information useful. Consistent with IFO policy, this letter will be posted to the office's website on the third business day following transmittal. Please do not hesitate to contact me if you have any questions or comments.

Sincerely,



Mathew J. Knittel
Director, Independent Fiscal Office