Birth Cohort Geographic Mobility in the United States: 2005–2023

American Community Survey Reports

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INTRODUCTION

A population's composition and distribution are directly affected by geographic mobility, sometimes referred to as migration. Geographic mobility is the movement of people from one place to another. Rates of geographic mobility vary by key demographic, socioeconomic, and temporal factors. Importantly, changes in geographic mobility do not happen uniformly across all population groups.^{1,2}

A large and growing body of research tells us that age, calendar year, and birth cohort play essential roles in understanding a population at any one point in time.³ Of particular interest is the birth cohort—groups of people who were born in the same timeframe. These people pass through life together and experience key historical events at similar ages. Birth cohorts are often informally referred to as "generations."

This brief uses American Community Survey (ACS) 1-year data from 2005 to 2023 and examines all people 1 year or older and who were born after the year 1927. ACS respondents from these data years are assigned to one of six commonly recognized birth

¹ The U.S. Census Bureau has reviewed this data product to ensure appropriate access, use, and disclosure avoidance protection of the confidential source data used to produce this product (Data Management System [DMS] number: P-7533841, Disclosure Review Board [DRB] approval number: CBDRB-FY25-POP001-0034). cohorts based on their reported year of birth (Figure 1):^{4, 5, 6, 7}

- The Silent Generation (birth years from 1928 to 1945).
- The Baby Boomer Generation (birth years from 1946 to 1964).
- Generation X (birth years from 1965 to 1980).
- The Millennial Generation (birth years from 1981 to 1996).
- Generation Z (birth years from 1997 to 2012).
- Generation Alpha (birth years from 2013 onward).

Because each birth cohort has a nonoverlapping birth year range, each cohort occupies a unique age range in any given year.⁸ In 2005, only those in the Silent Generation were of retirement age (65 years and older). By 2011, the oldest of the Baby Boomers



U.S. Department of Commerce U.S. CENSUS BUREAU *census.gov*

² K. Kerns-D'Amore, B. McKenzie, and L. S. Locklear, "Migration in the United States: 2006 to 2019," *American Community Survey Reports*, 2023, <www.census.gov/content/dam/Census/library/ publications/2023/acs/acs-53.pdf>.

³ Y. Yang and K. C. Land, *Age-Period-Cohort Analysis New Models*, *Methods, and Empirical Applications*, CRC Press, 2013.

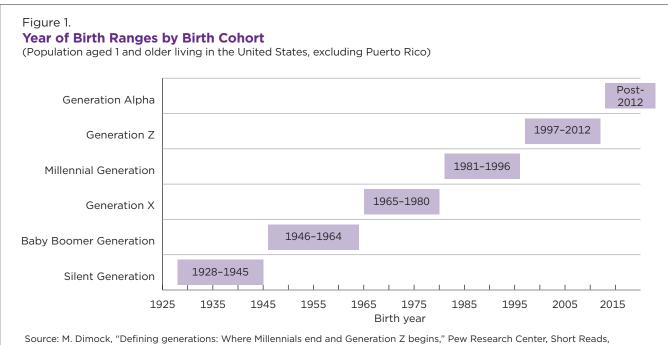
⁴ Beginning in 2006, ACS data for 2005 were released for geographic areas with populations of 65,000 and greater. For information on the ACS sample design and other topics, visit <www.census.gov/acs/>.

⁵ The COVID-19 pandemic posed challenges to collecting ACS data in 2020 and, as a result, the ACS experienced high rates of nonresponse. To address these concerns, the Census Bureau released "experimental" estimates for the 2020 ACS 1-year data. For this reason, 2020 ACS 1-year estimates are not included in these analyses. For more information, refer to <www.census.gov/programs-surveys/ acs/technical-documentation/user-notes/2021-02.html>.

⁶ Birth year ranges for these birth cohorts come from Pew Research at <www.pewresearch.org/short-reads/2019/01/17/ where-millennials-end-and-generation-z-begins/>.

⁷ The U.S. Census Bureau does not have official definitions for these birth cohorts. The birth year ranges for each birth cohort may vary slightly across Census Bureau products. The use of these categories does not imply that this is the preferred method of presenting or analyzing data.

 $^{^{\}rm 8}$ For a description of age ranges by year and birth cohort, refer to Appendix Table 1.



2019, <www.pewresearch.org/short-reads/2019/01/17/where-millennials-end-and-generation-z-begins/>.

were of retirement age. Inversely, the Millennial Generation was split between childhood (under 18 years old) and adulthood until the year 2014, when the youngest millennial turned 18. The following year, 2015, the oldest members of Generation Z entered adulthood.

Variation within cohorts illuminates potential differences in geographic mobility. For instance, those under 18 years old typically do not have the ability to autonomously migrate, and therefore rely on parental decisions to move. Once 18 years old, many new adults will move out of their parents' residence, some to university dormitories and others elsewhere. Adults between 25 and 64 years old tend to be finished with their education and may move for reasons like employment or changes in marital status. Those 65 years and older have decidedly different mobility. Some are ending their professional careers and have newfound freedom to relocate if they so choose.

What Is the American Community Survey?

The American Community Survey (ACS) is a nationwide survey designed to provide communities with reliable and timely demographic, social, economic, and housing data for the nation, states, congressional districts, counties, places, and other localities every year. It has an annual sample size of about 3.5 million addresses across the United States and Puerto Rico and includes both housing units and group quarters (e.g., nursing homes and prisons). The ACS is conducted in every county throughout the nation and in every municipio in Puerto Rico, where it is called the Puerto Rico Community Survey. Beginning in 2006, ACS data for 2005 were released for geographic areas with populations of 65,000 and greater. For information on the ACS sample design and other topics, visit <www.census.gov/programs-surveys/acs/>.

MEASURING GEOGRAPHIC MOBILITY IN THE ACS

This report uses ACS 1-year data to examine the relationship between geographic mobility and birth cohort in the United States. The U.S. Census Bureau conducts the ACS annually to gather information about the socioeconomic, housing, and demographic characteristics of communities across the United States.⁹ The ACS asks whether people 1 year or older lived in their current residence at this time last year (Figure 2). If they report that they lived at their current residence last year, they were nonmovers. Those who report living

⁹ Estimates for Puerto Rico are not included in the national estimates provided in this report.

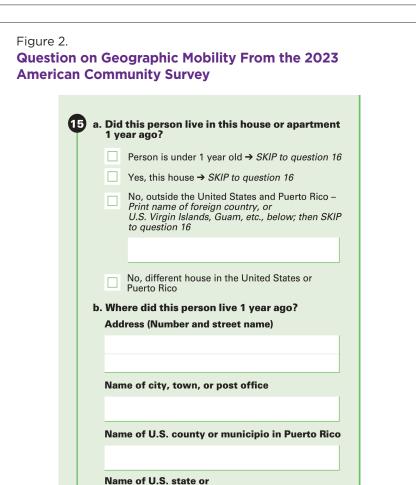
in a different residence last year were movers, or those who were geographically mobile. These movers are then asked to report their prior residence.

COMPOSITION OF U.S. POPULATION BY BIRTH COHORT OVER TIME

As time passes, the birth cohort composition of the population will necessarily change (Figure 3). New cohorts are born and grow, while older cohorts shrink. Between 2005 and 2023, the Silent Generation (those born between 1928 and 1945) decreased from 13.5 percent of the U.S. population to 5.3 percent. Baby Boomers (born between 1946 and 1964) declined from 28.8 percent of the population in 2005 to 21.0 percent in 2023. On the other end of the cohort spectrum, Generation Z (born between 1997 and 2012) occupied only 11.0 percent of the total population in 2005 and reached 21.0 percent by 2023.

GEOGRAPHIC MOBILITY BY BIRTH COHORT

At first glance, there was clear variation in geographic mobility across birth cohorts (Figure 4). Older cohorts (Silent Generation and Baby Boomers) tended to be less geographically mobile than younger cohorts (Millennials, Generation Z, and Generation Alpha). Between 2005 and 2021, the Silent Generation had lower mobility rates than any other birth cohort, with their lowest rate coming in at 5.3 percent in 2009. Baby Boomers had mobility rates just above the Silent Generation in these years, and in 2022 and 2023 they had lower mobility rates. Based on these two examples, much is to be learned by examining mobility rates both between and within birth cohorts.



Note: For more information, refer to

Puerto Rico

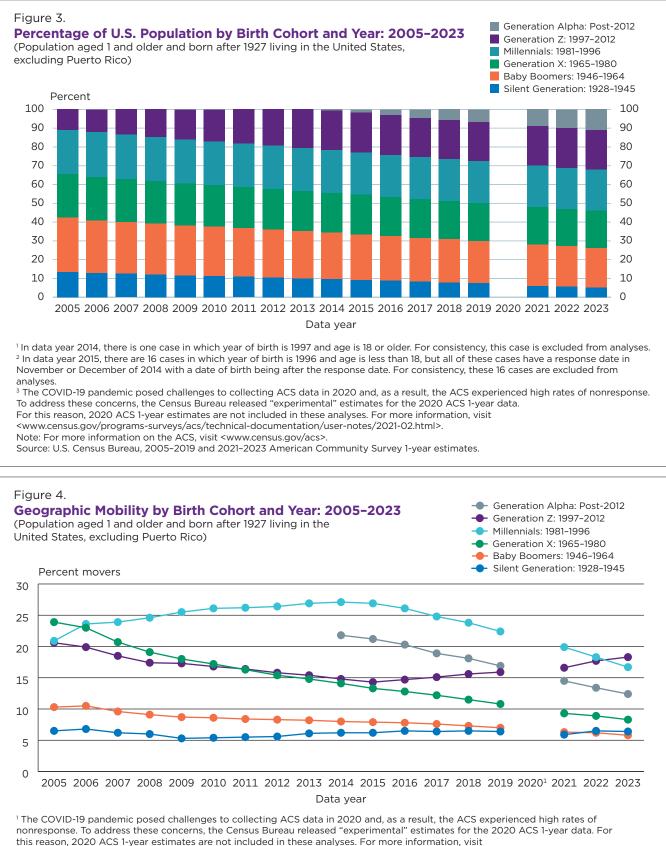
<www.census.gov/programs-surveys/acs/methodology/questionnaire-archive.html>. Source: U.S. Census Bureau, 2023 American Community Survey.

ZIP Code

The Silent Generation appears to be relatively stationary compared to all other cohorts across nearly every data year. In 2005, 6.5 percent of the Silent Generation (born between 1928 and 1945) had moved in the last year. By 2010, that rate fell to 5.4 percent. In 2023, when their ages ranged from 78 to 95 years old, 6.4 percent of the Silent Generation had moved in the last calendar year. Like the Silent Generation, Baby Boomers maintained relatively low mobility rates across all data years. Only two data years, 2005 and 2006, showed mover rates that exceeded 10 percent. From 2007 onward,

fewer than 10 percent of Baby Boomers moved in any given year, and, by 2023, 5.8 percent of the Baby Boomers had moved in the last year. Potential explanations for the trends observed in these cohorts relate to the age of the population and, perhaps, homeownership. Public ACS tables show that older members of the population move at lower rates than their younger peers.¹⁰ This is particularly

¹⁰ U.S. Census Bureau, "Geographic Mobility by Selected Characteristics in the United States," American Community Survey 1-year estimates, Subject Tables, Table S0701, 2023, <https://data.census.gov/table/ ACSSTIY2023.S0701?q=s0701>, accessed on October 24, 2024.



<www.census.gov/programs-surveys/acs/technical-documentation/user-notes/2021-02.html>.

Note: For more information on the ACS, visit <http://www.census.gov/acs>.

Source: U.S. Census Bureau, 2005-2019 and 2021-2023 American Community Surveys 1-year estimates.

evident among those aged 65 years and older. Older age groups also show higher homeownership rates, which may correspond with less geographic mobility. Those between the ages of 55 and 64, 65 and 74, and 75 to 84 all maintained homeownership rates above 70 percent in both the 2010 and 2020 Censuses.¹¹

In 2005, 23.9 percent of Generation X had moved in the last calendar year, the highest rate for this cohort for the entire period. The mobility rates for Generation X declined every calendar year, and by 2023 rested at 8.3 percent.

The most geographically mobile birth cohort between 2006 and 2022 was Millennials (born between 1981 and 1996). In 2006, when Millennials' ages ranged from 10 to 25, 23.6 percent moved in the last year. In 2014, that rate increased to 27.1 percent, the highest mobility rate for any birth cohort between 2005 and 2023. The years 2005 and 2023 were the only points in which mover rates for Millennials fell below Generation X and then Generation Z, respectively. The final year of this period marked the lowest mobility rate for Millennials at 16.7 percent.

Generation Z, the youngest generation to have a mover rate in every data year in the period, displayed mover rates that appeared as an inversion of Millennials'. Rather than increasing between 2005 and 2014, the mover rates for Generation Z generally declined. In 2005, when Generation Z ranged from ages 1 to 9, 20.6 percent moved in the last year. That year marked the highest mover rate of the period. By 2014, 14.8 percent of Generation Z had moved in the last year. Interestingly, Generation Z was the only cohort to experience increasing geographic mobility between 2019 (the year immediately preceding the COVID-19 pandemic) and 2023. Between 2021 and 2023, the mover rates for Generation Z increased from 16.6 percent to 18.3 percent.

Generation Alpha (those born after 2012) entered the universe of movers in 2014 with a mover rate of 21.8 percent.¹² This cohort's mover rate declined each year between 2014 and 2023, when it reached 12.4 percent. Generation X and Generation Alpha are the only birth cohorts to experience annual declines for each year in the universe.

BIRTH COHORT GEOGRAPHIC MOBILITY BY AGE GROUPS

The benefit of examining geographic mobility by birth cohort is that the data allow for disaggregation. It is possible to break out birth cohorts into meaningful age groups to better understand mobility across the life course. Four important age groups are 1- to 17-year-olds (i.e., childhood/adolescence), 18- to 24-year-olds (i.e., young adulthood, college-age), 25- to 64-year-olds (i.e., adulthood, working-age), and 65 years old and older (i.e., retirement-age).

Aged 1 to 17

Geographic mobility among those aged 1 to 17 is typically not an autonomous decision. Because these people are children or adolescents, their mobility reflects that of their guardians. As such, this group is unique when compared to the other three age groups. Geographic mobility rates for 1- to 17-year-olds generally fell below about 22.0 percent (Figure 5).

Millennials fell into this age group between the years 2005 and 2014. Child Millennials had lower geographic mobility rates in every year they were in universe than the total Millennial population (Figure 4). For example, in 2010, Millennials between the ages of 1 and 17 had a mover rate of 12.3 percent (Figure 5), while the total Millennial mover rate that year was 26.1 percent (Figure 4).

Between 2005 and 2014, all of Generation Z fell between 1 and 17 years old, meaning that the geographic mobility rate for this age group matches the total Generation Z geographic mobility rate in these years. Between survey years 2015 and 2023, the geographic mobility rate for Generation Z was lower in the 1 to 17 age group (Figure 5) than the Generation Z total (Figure 4). Interestingly, child Generation Z maintained higher geographic mobility rates than child Millennials between 2005 and 2014.

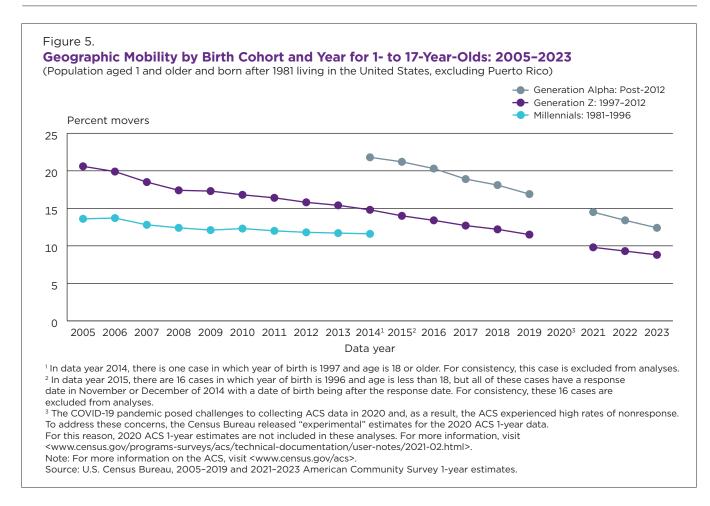
All of Generation Alpha, who entered the universe of potential movers in 2014, were between the ages of 1 and 17 during the period. As such, this age group's mover rate does not differ from that of the total Generation Alpha.

Aged 18 to 24

18- to 24-year-olds represent the early stages of adulthood and college-age individuals. In this age group, many people leave their childhood home and relocate to attend college or university or to establish their own households. Millennials at ages 18 to 24 had higher geographic mobility rates (Figure 6) than the total Millennial estimates in each survey year of ACS data (Figures 4). In 2021, the

¹¹ M. Cromwell and C. Mazur, "Housing Characteristics: 2020," *2020 Census Briefs*, 2023, <https://www2.census.gov/library/ publications/decennial/2020/census-briefs/ c2020br-09.pdf>.

 $^{^{\}mbox{\tiny 12}}$ Movers, as defined in the ACS, must be 1 year old or over.



final year that Millennials fell into this age group, the total geographic mobility rate for Millennials aged 18 to 24 was 27.8 percent and the geographic mobility rate for all Millennials was 19.9 percent.

Generation Z at ages 18 to 24 also had higher mover rates than the total Generation Z geographic mobility rate between 2015 and 2023 (Figure 4). In 2023, 26.6 percent of Generation Z between 18 to 24 years old moved in the last year (Figure 6), and 18.3 percent of all Generation Z did the same (Figure 4).

Aged 25 to 64

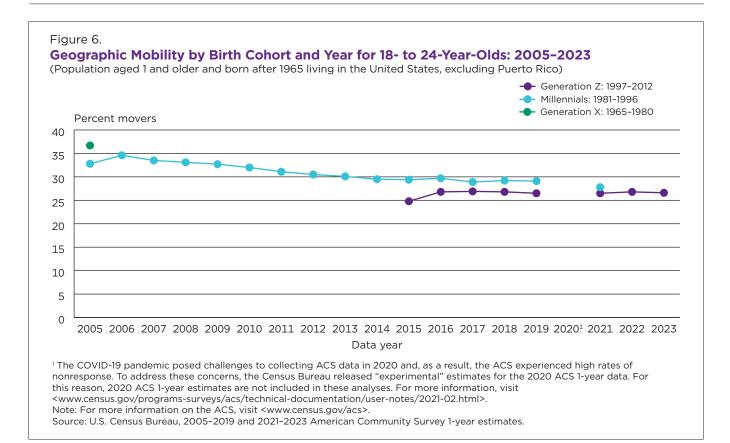
The age group of 25- to 64-yearolds reflects working-age adults. People in this group often have completed their educations, if they attended post-high school education, and entered the workforce. The oldest Millennials in the 25 to 64 age category were between the ages of 25 and 41 for this period. Millennials in this age group largely maintained higher mover rates than the total Millennial mover rates found in Figure 4. In survey year 2006, 36.4 percent of Millennials 24 to 64 years old moved in the last year, the highest geographic mobility rate of any birth cohort at any age (Figure 7). In other words, over one-third of Millennials aged 25 to 64 moved in the last year in this survey year.¹³

Generation X fell entirely within the 25- to 64-year-olds age group between survey years 2006 and 2023, so their working-age mobility rate was the same as their overall mobility rate.

For the years 2005 to 2023, Baby Boomers in the 25 to 64 age category were between the ages of 41 and 64. Between 2005 and 2012, the geographic mobility rates for Baby Boomers 25 to 64 years old were not different than the total Baby Boomer rates (Figure 4). From 2013 onward, Baby Boomers aged 25 to 64 had higher geographic mobility than all Baby Boomers. For instance, in 2023, 6.5 percent of Baby Boomers aged 25 to 64 (Figure 7) and 5.8 percent of all Baby Boomers (Figure 4) moved in the last year, respectively.

People in the Silent Generation for the 25 to 64 age category fell between the ages of 59 and 64 for

¹³ The oldest Millennials in 2023 were 42 years old.



the years 2005 to 2010. The Silent Generation maintained higher mover rates for each year between 2005 and 2010 for respondents 25 to 64 years old relative to the total Silent Generation. These are the only data years where the Silent Generation fell into this age group.

Survey year 2022 marked the first year Generation Z entered the 25 to 64 age group. In 2022 and 2023, Generation Z in this age group were aged 25 or 26. In both 2022 and 2023, Generation Z in this age group had higher geographic mobility than the total Generation Z.

Aged 65 and Older

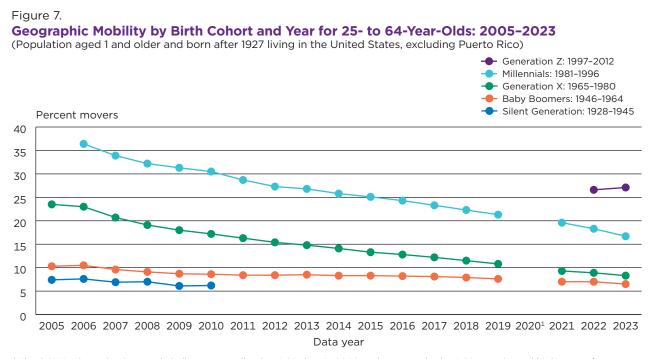
Age 65 typically reflects retirement in the United States. At this stage of life, many end their professional careers or shift to part-time work. This allows for greater flexibility in terms of geographic mobility. Those in oldest ends of this age range may also encounter new barriers to geographic mobility in the form of illness or disability. The only birth cohorts in this age range were the Silent Generation and the Baby Boomer Generation.

Baby Boomers aged 65 and older had lower geographic mobility rates than Baby Boomers as a whole. In 2023, 5.3 percent of Baby Boomers aged 65 and older (Figure 8) moved in the previous year, compared to 5.8 percent of all Baby Boomers (Figure 4).

The Silent Generation 65 years and older had lower geographic mobility rates than the total Silent Generation between 2005 and 2008 and, by 2009, they were essentially the same. By 2011, all members of the Silent Generation were 65 years and older, meaning that their geographic mobility rates did not differ from that of the total Silent Generation.

SUMMARY

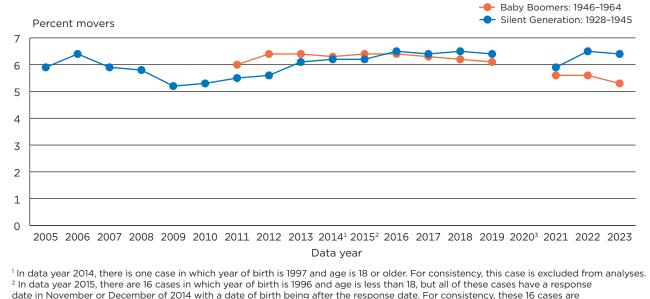
Time is an essential component in understanding geographic mobility. As the ACS 1-year data show, changes in geographic mobility are not uniform over time. Across most survey years in the ACS 1-year data, the Millennial Generation had the highest geographic mobility rates compared to all other birth cohorts. These higher rates persisted even with overall declines in geographic mobility from 2015 to 2022. The Silent Generation and Baby Boomers experienced low and relatively stable geographic mobility rates across the period. Between survey years 2021 and 2023, the first 3 years of ACS 1-year data available following the onset of the COVID-19 pandemic, only Generation Z saw increased geographic mobility.



¹ The COVID-19 pandemic posed challenges to collecting ACS data in 2020 and, as a result, the ACS experienced high rates of nonresponse. To address these concerns, the Census Bureau released "experimental" estimates for the 2020 ACS 1-year data. For this reason, 2020 ACS 1-year estimates are not included in these analyses. For more information, visit <www.census.gov/programs-surveys/acs/technical-documentation/user-notes/2021-02.html>. Note: For more information on the ACS, visit <www.census.gov/acs>. Source: U.S. Census Bureau, 2005-2019 and 2021-2023 American Community Survey 1-year estimates.

Figure 8.

Percentage of Movers by Birth Cohort and Year for Those Aged 65 and Older: 2005–2023 (Population aged 1 and older and born after 1927 living in the United States, excluding Puerto Rico)



date in November or December of 2014 with a date of birth being after the response date. For consistency, these 16 cases are excluded from analyses

³ The COVID-19 pandemic posed challenges to collecting ACS data in 2020 and, as a result, the ACS experienced high rates of nonresponse. To address these concerns, the Census Bureau released "experimental" estimates for the 2020 ACS 1-year data. For this reason, 2020 ACS 1-year estimates are not included in these analyses. For more information, visit

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Source: U.S. Census Bureau, 2006-2019 and 2021-2023 American Community Survey 1-year estimates.

Disaggregating birth cohorts by age group shows that geographic mobility rates differed even within birth cohorts. College-age Millennials and Generation Z had higher geographic mobility rates than their respective total birth cohort estimates. Baby Boomers had lower geographic mobility for those 65 years and older than all Baby Boomers. This report only begins to shed light on the complex nature of geographic mobility and highlights some of the key characteristics associated with its variability.

SOURCE AND ACCURACY

The data presented in this report are based on American Community Survey (ACS) samples interviewed from January 1 through December 31 for each of the years between 2005 and 2019 and each of the years between 2021 and 2023. The estimates based on these samples describe the average values of person, household, and housing unit characteristics over this period of collection. Sampling error is the uncertainty between an estimate based on a sample and the corresponding value that would be obtained if the estimate were based on the entire population (as from a census). Measures of sampling error are

provided in the form of margins of error for all estimates included in this report. All comparative statements in this report have undergone statistical testing at the 90 percent confidence level, unless otherwise noted. In addition to sampling error, nonsampling error may be introduced during any of the operations used to collect and process survey data, such as editing, reviewing, or keying data from questionnaires. For more information on sampling and estimation methods, confidentiality protection, and sampling and nonsampling errors, refer to the 2023 ACS Accuracy of the Data document at <www.census.gov/ programs-surveys/acs/technicaldocumentation.html>.

Appendix Table 1. Age Ranges for Each Birth Cohort by Data Year

(Population aged 1 or older and born after 1927 living in the United States, excluding Puerto Rico)

Data year	Silent Generation: 1928-1945	Baby Boomers: 1946-1964	Generation X: 1965–1980	Millennials: 1981–1996	Generation Z: 1997–2012	Generation Alpha: Post-2012
2005	59-76	40-58	24-39	8-23	1-7	N
2006	60-77	41-59	25-40	9-24	1-8	N
2007	61-78	42-60	26-41	10-25	1-9	N
2008	62-79	43-61	27-42	11-26	1-10	N
2009	63-80	44-62	28-43	12-27	1-11	N
2010	64-81	45-63	29-44	13-28	1-12	N
2011	65-82	46-64	30-45	14-29	1-13	N
2012	66-83	47-65	31-46	15-30	1-14	N
2013	67-84	48-66	32-47	16-31	1-15	N
2014	68-85	49-67	33-48	17-32	1-16	1
2015	69-86	50-68	34-49	18-33	2-17	1-2
2016	70-87	51-69	35-50	19-34	3-18	1-3
2017	71-88	52-70	36-51	20-35	4-19	1-4
2018	72-89	53-71	37-52	21-36	5-20	1-5
2019	73-90	54-72	38-53	22-37	6-21	1-6
2020	Х	X	Х	Х	Х	Х
2021	75-92	56-74	40-55	24-39	8-23	1-8
2022	76-93	57-75	41-56	25-40	9-24	1-9
2023	77-94	58-76	42-57	26-41	10-25	1-10

N Not available. Generation Alpha entered the universe of movers in 2014.

X Not applicable. The COVID-19 pandemic posed challenges to collecting ACS data in 2020 and, as a result, the ACS experienced high rates of nonresponse. To address these concerns, the Census Bureau released "experimental" estimates for the 2020 ACS 1-year data. For this reason, 2020 ACS 1-year estimates are not included in these analyses. For more information, visit <www.census.gov/programs-surveys/acs/technical-documentation/user-notes/2021-02.html>.

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