

# Headship Rates and Household Formation in New York State, 2012-2017

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## Introduction

Researchers and policy makers have long been interested in household formation and headship rates as they inform on a variety of social and economic outcomes pertaining to changing demographic trends. A household, as defined by the US Census Bureau, is a group of individuals occupying a housing unit, at their usual place of residence. Furthermore, households are subdivided into family and non-family households where individuals do not have to be related to be considered a household. The objective of this report is to present some key findings on the status of headship rates and household formation in New York State and discuss possible implications for the future.

The headship rate by age group is calculated by taking the number of householders in given age group and dividing by the total number of individuals in that age group. An increase in the adult population should be reflected in household formation patterns. Older individuals tend to display higher headship rates and a change in headship rates typically indicate changing social norms or patterns with respect to household formation. Housing demand projections are informed by factors including household formation and changes in the population. For this reason we focus on these indicators to make sense of any changes between the years 2012 and 2017 in New York State and the possible implications of changing patterns for the future.

## Key Findings

- Between the years 2012 and 2017 the overall population in New York State increased by 2.06%.
- In the year 2017 the total household population 16 and older in New York was 15,520,007, in 2012 it was 15,041,530. This was a percent increase of 3.18%.
- The headship rate in the year 2017 was 47.05%. In 2012 this figure was 48.07%.
- Between the years 2012 and 2017 the headship rate decreased for all age groups however, sharper declines were exhibited among the younger cohorts of 20-24 and 25-44.
- The average household size among family/non-family household types remained relatively unchanged ranging from 2.48 in 2012 to 2.49 in 2017.

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## Data and Methodology

The data acquired for this study comes from the Public Use Microdata Sample (PUMS) and was downloaded from the IPUMS (Integrated Public Use Microdata Sample) USA website. The sample includes the 2012 5-year estimates and the 2017 5-year samples from the American Community Survey (ACS). The ACS which replaced the long-form version of the decennial census in 2005 and gathers information from approximately 3.5 million individuals in the United States. Being the largest household survey administered by the US Census Bureau, it covers a wide range of topics including, language proficiency, income, level of education, and housing characteristics, just to name a few. Variables of interest include householder, age, and 'relate' which describes an individual's relationship to the householder, to help us analyze headship rates by age and other factors in the household formation process. The ACS includes a wide range of variables on household and individual characteristics that will enable us to perform our analysis of the headship rate, age distributions, along with the number of individuals who currently own or rent their housing unit. Household size describes the number of people living in a housing unit. The average household size is defined as the number of people in households divided by the total number of households (or householders). The number of households and household formation is affected by three main components: the growth in the adult population, changes in the age distribution, and changes in the headship rate. Here are some useful formulas to keep in mind:

$$\text{Number of households} = \text{Householders}_{16plus}$$

$$\text{Household Size} = \frac{\text{Population in Households}}{\text{Number of Households}}$$

$$\text{Household Size}_{Agegrp} = \frac{\text{Population in Households with householder}_{Agegrp}}{\text{householders}_{Agegrp}}$$

$$\text{Headship Rate} = \left( \frac{\text{Householders}_{16plus}}{\text{Household Population}_{16plus}} \right) \times 100\%$$

$$\text{Headship Rate}_{Agegrp} = \left( \frac{\text{Householders}_{Agegrp}}{\text{Household Population}_{Agegrp}} \right) \times 100\%$$

$$HHPopShare_{Agegrp} = \left( \frac{Household\ Population_{Agegrp}}{Household\ Population_{16plus}} \right) \times 100\%$$

Number of households

$$= \sum_{Agegrps} (Headship\ Rate_{Agegrp} * HHPopShare_{Agegrp} * Household\ Population_{16plus})$$

### Headship Rates and household size by Age Group

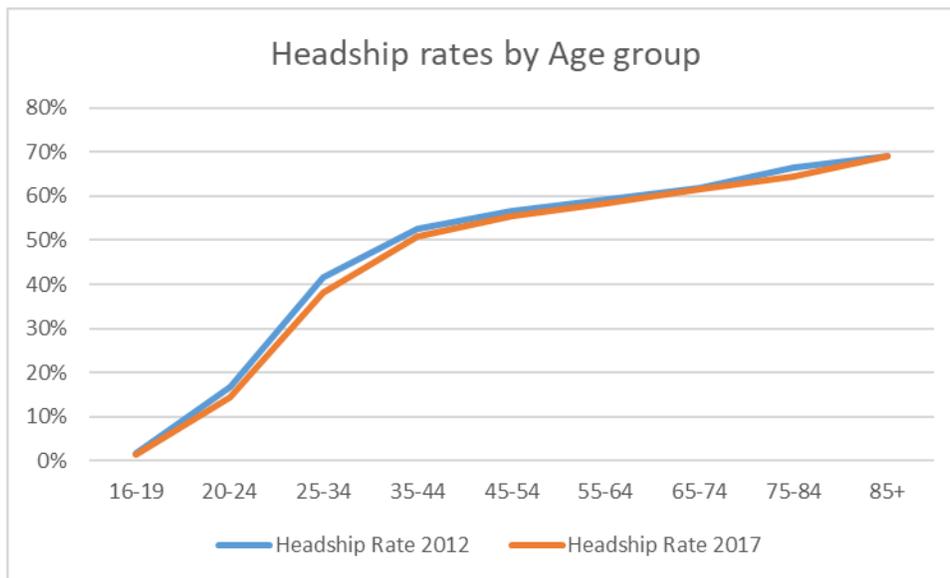


Figure 1: Headship Rates by Age Group

Looking at the headship rate by age group we can see a changing age distribution between these two years. The highest increase is seen in the older population starting at age 65, the baby boomer generation. The youngest age categories observed, 16-19 and 20-24, both saw decreases between the years 2012 and 2017.

We see yet another decrease in the headship rate between the age group 25-34 and 35-54 which can indicate individuals are moving out of the state once they start forming their own families.

Narrowing these findings and focusing on the young adult population, 25-34, a key demographic in NYS, we can see almost a 4 percentage point drop in the headship rate. This indicator dropped from 41.54% in 2012 to 38.18% in 2017 as shown in table 5.

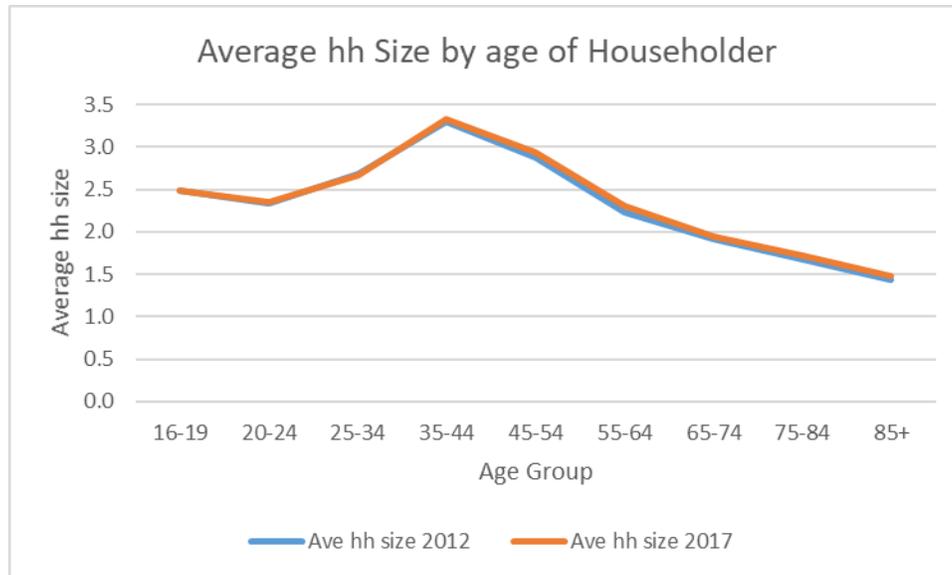


Figure 2: Average household size by Age of Householder

A higher headship rate points to larger number of households consisting of fewer adults. This is reflected in the older age groups starting at age 65 with a headship rate exceeding 60% which coincides with the average household size falling below 2 as displayed in figure 3. There is a drop in the 16-19 age group indicating which includes college age students leaving the state to attend university elsewhere.

The overall average household size by age of householder is displayed in figure 3. For the year 2017 the average household size is 2.49. The average household size in 2012 is 2.48.

### Changing Age Composition

It is of interest to break down the factors that make up new household formation. The shift in the age distribution between years 2012 and 2017 indicate an increase in the age group 25-34, decreases in the 35-44 and 45-54 categories. In 2017 again, we see an increase starting in age group 55-64.

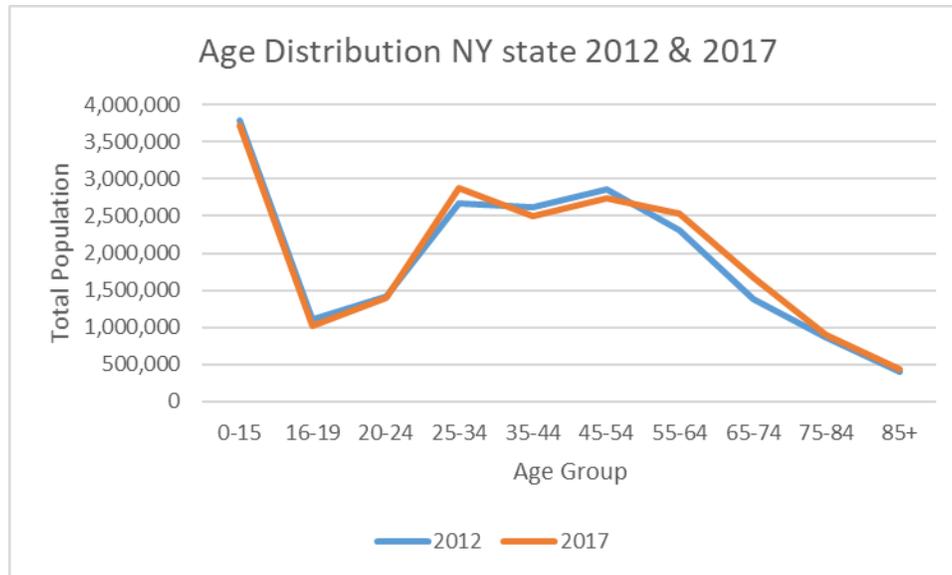


Figure 3: Age Distribution of New York State

### Living Arrangements of Young Adults in NYS

Natalia Siniavskaia, from the National Association of Home Builders, using 2017 ACS data performed an analysis of the living arrangements of young adults. The study finds that only 40% of individuals in the 25-34 age range are householders. The remainder of individuals who are not householders fall into various other categories such as spouse of a householder, unmarried partner, living with parents, roommates, or parents-in-law. This article describes the headship rate for age group 25-34 as a ‘new low’ with a potential 2.5 million young households missing from the market. The report at the National Association of Home Builders shows a continuous decline in the headship rate for young adults since 1990.

Looking at the 2012 and 2017 5-year data for New York State we can see similar patterns holding for this age group where most young adults are either a householder, a spouse, or live with a parent in New York State. There is a two percentage point decrease in the individuals who reside with their spouse for this age group between the two years. Alternatively, the percentage of individuals living with a parent for this age group increased by about 3 percentage points

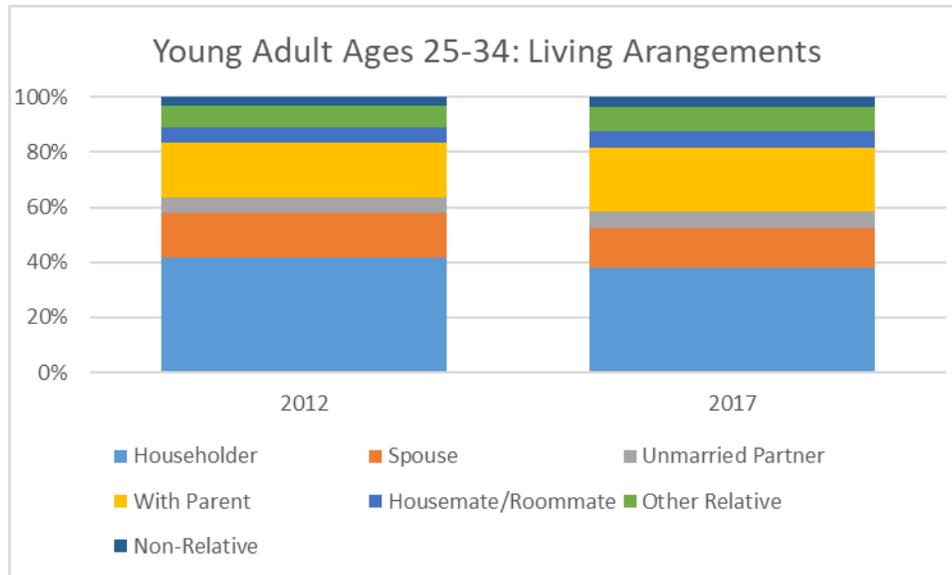


Figure 4: Living Arrangements of Young Adults Ages 25-34

Table 1: Living Arrangements of Young Adults in NYS Age 25-34

Year	Householder	Spouse	Unmarried Partner	With Parent	Housemate/Roommate	Other Relative	Non-Relative
2012	41.54%	16.35%	5.80%	19.80%	5.31%	8.28%	2.93%
2017	38.18%	14.33%	5.77%	23.36%	5.89%	9.02%	3.44%

Household formation and home ownership are important life events and while in the past these objectives were achieved by a certain age in previous generations, we are seeing that given a variety of factors this is not holding true for younger generations. Furthermore, it is perceived that young adults are postponing moving out on their own and building marriages and households at later stages in life than their earlier counterparts. A similar analysis is performed for the 35-44 age group to see if this idea is supported by the data. Between the years 2012 and 2017 there is a two percentage point drop in the headship rate as shown in table 5. More individuals have moved away from living with an unmarried partner to marriage, with parents, or housemates compared to the previous cohort. A larger percentage of individuals are now living with their spouse compared to the 25-34 group however, we should note that the share of people living with a spouse in this age group dropped by one percentage point.

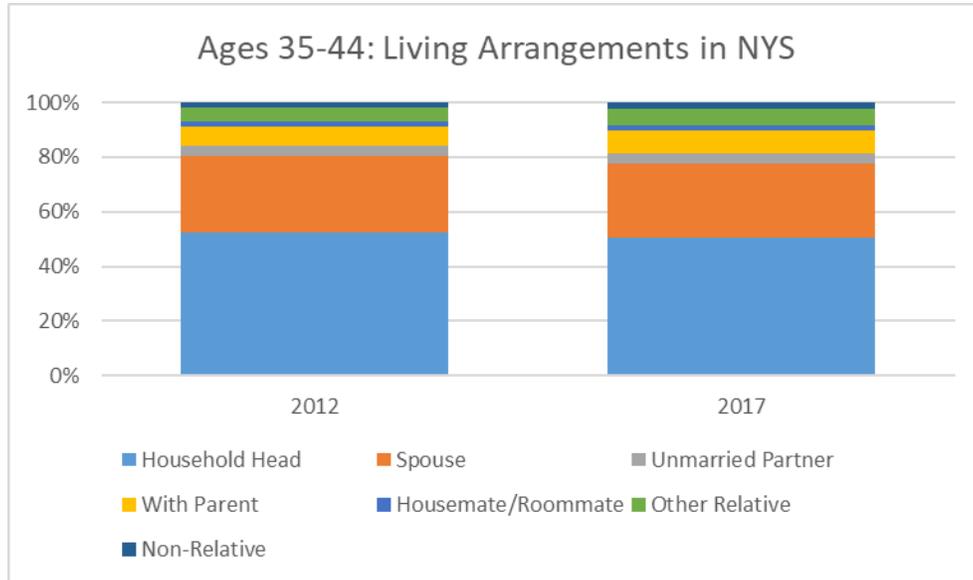


Figure 5: Living Arrangements of those Age 35-44

Table 2: Living Arrangements of those Age 35-44

Year	Householder	Spouse	Unmarried Partner	With Parent	Housemate/ Roommate	Other Relative	Non-Relative
2012	52.65%	27.65%	3.73%	7.08%	1.79%	5.42%	1.68%
2017	50.74%	26.70%	3.88%	8.33%	2.14%	5.95%	2.26%

### Headship Rates by Sex and Age

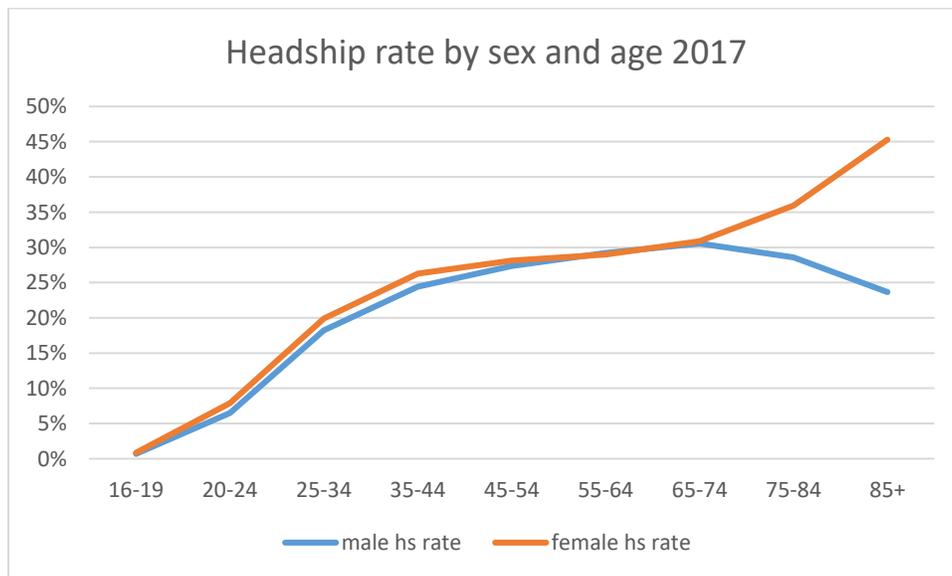


Figure 6: Headship Rate by Sex and Age, 2017

Headship rates broken down by age and sex are similar up until we reach the 65-74 age group. There is a large increase in the female headship rate starting at age 75 which is consistent with longer life expectancy rates for women as well as a higher sex ratio in older age groups. It is important to note that there are no established rules regarding the designation of an individual as a householder when the household includes a married or cohabiting couple.

### Headship Rates by Major Race and Age Group

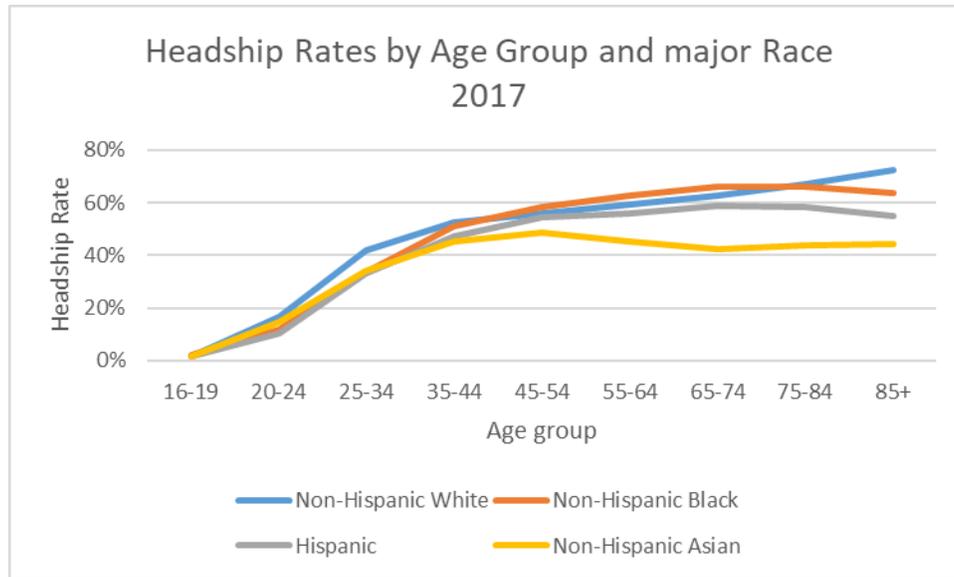


Figure 7: Headship Rates by Age Group and Major Race

The headship rate by age is consistently higher for Non-Hispanic Whites at most stages of the age distribution. Non-Hispanic White alone group exhibits higher headship rates prior to age 45 with Non-Hispanic Black alone exhibiting higher headship rates between the ages of 45-74.

White householders are the more dominant group in New York State at the moment however, as minority population increases we will begin to see growing diversity in the composition of new householders in the coming decades. Lower headship rates exhibited by Asians in the older age groups might be attributed to a larger number of non-family households or perhaps a growing number of multigenerational households.

## Housing Tenure by Age group

Breaking down renters versus home owners by age we can see that home ownership peaks between the ages of 45 and 74. Prior to age group 45-54 we see a higher number of renters in New York State.

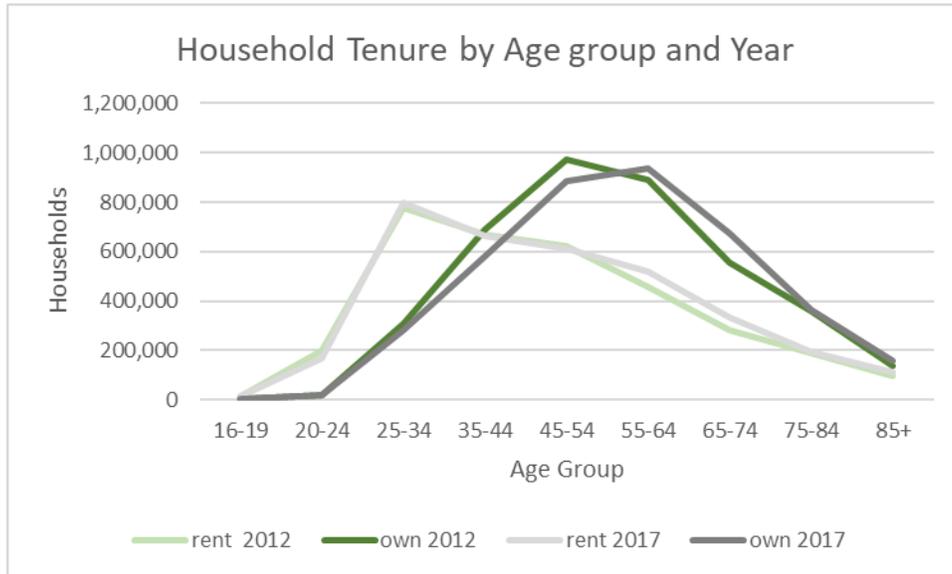


Figure 8: Household tenure by Age Group and Year

Average household size by Tenure		
	2012	2017
Renter	2.42	2.47
Owner	2.75	2.77
American Fact Finder Table B25010		

Table 3: Average Household Size by Housing Tenure

## Household Size and Household Type

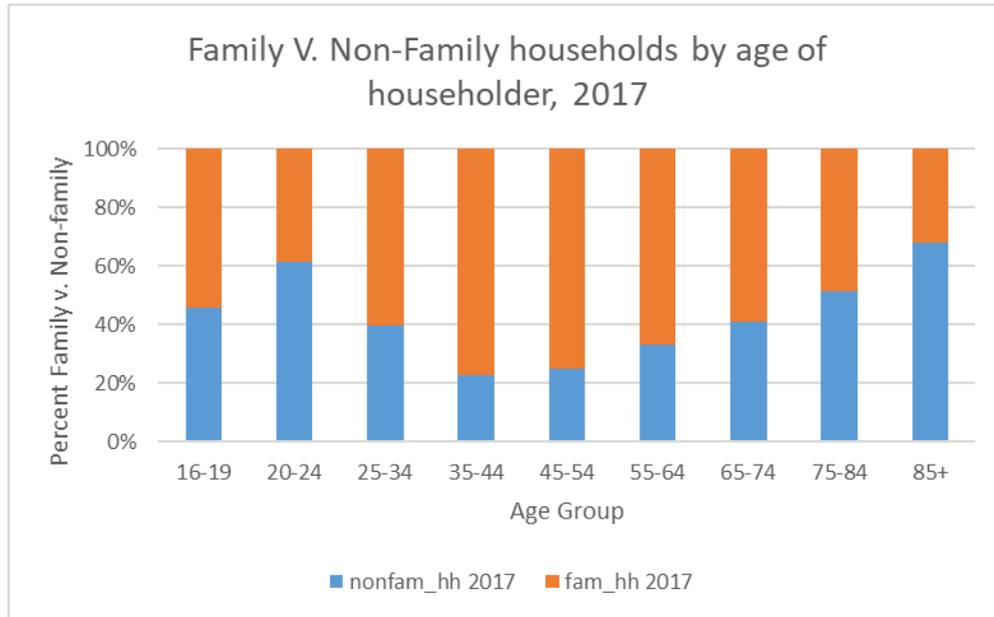


Figure 9: Family v. Non-Family households and Average household size

Households can be classified into family and non-family households. Typically family households are larger than non-family households.

## Comparisons between years 2012 and 2017

Table 4: Overview of changes in NYS between the years 2012 and 2017

	2012	2017	Difference	% Change
Total Population	19,398,125	19,798,228	400,103	2.06%
Household Population	18,810,163	19,220,855	410,692	2.18%
Household Population 16+	15,041,530	15,520,077	478,547	3.18%
Number of Households	7,230,494	7,302,118	71,624	0.99%
Ave. Household Size	2.60	2.63	0.03	1.18%
Headship Rate	0.48	0.47	-0.01	-2.12%

This two year period saw an increase in the total population of 19,398,125 in 2012 to 19,798,228, or a 2% increase. The number of total households increased by 1%. We also saw a 3% increase in the household population. In the year 2012 the total number of households in New York State was 7,230,494 while in 2017 that number was 7,302,118. The overall headship rate decreased by 2.12% indication of fewer households and more adults per household.

In the year 2017 the non-group quarters population age sixteen and older in New York State was 15,520,077 with the number of family households being 4.45 million and the number of non-family households being equal to 2.4 million. This was an increase from the previous five years where total number of household was 7,230,494. The number of family households was 4.46 and the number of non-family households was 2.33 million. The average household size was 2.48. Every age group experienced a decrease in the headship rate pointing to larger households with more adults throughout the age distribution.

Table 5: Detailed view of changes in NYS between the years 2012 and 2017

Age	Householders 2012	Pop in Households 2012	Ave hh size 2012	Headship rate 2012	Householders 2017	Pop in households 2017	Ave hh size 2017	Headship rate 2017
16-19	15,125	965,065	2.48	1.57%	13,361	872,873	2.49	1.53%
20-24	217,093	1,288,170	2.34	16.85%	185,230	1,287,928	2.35	14.38%
25-34	1,084,082	2,609,822	2.69	41.54%	1,077,390	2,821,731	2.66	38.18%
35-44	1,357,793	2,578,681	3.30	52.65%	1,243,521	2,450,776	3.33	50.74%
45-54	1,592,862	2,809,426	2.88	56.70%	1,495,691	2,696,568	2.94	55.47%
55-64	1,347,998	2,278,867	2.23	59.15%	1,455,450	2,499,555	2.31	58.23%
65-74	836,549	1,352,922	1.91	61.83%	1,009,191	1,642,924	1.94	61.43%
75-84	547,742	824,404	1.67	66.44%	555,201	860,424	1.72	64.53%
85+	231,250	334,173	1.44	69.20%	267,083	387,298	1.49	68.96%
total	7,230,494	15,041,530	2.48	48.07%	7,302,118	15,520,077	2.49	47.05%

We know that three factors influence household formation: the headship rate, total population and age composition. It is useful to understand how potential changes in each of those components can impact household formation and the resulting magnitude of those differences. We observe the following scenarios. Starting with the number of households from year 2012 we change the headship rate which would lead to a decrease in the number of household of -3.4%. Changes in the headship rate and the age composition while holding the total population constant results in a percentage decrease of 2.1% in the number of households. The largest positive determinant of household formation results from changes in the age composition and the total population with a percentage increase of 4.5%.

Table 6: Potential Outcomes

Age composition	Total population	Households	% Diff from 2012
2012	2012	7,230,494	
2012	2012	6,983,631	-3.4%
2017	2012	7,323,260	1.3%
2012	2017	7,460,533	3.2%
2017	2012	7,076,964	-2.1%
2012	2017	7,205,816	-0.3%
2017	2017	7,556,250	4.5%
2017	2017	7,302,118	1.0%

## Conclusion

Headship rates in New York State are declining across all age groups indicating that the number of adults sharing households is increasing, particularly among the young adult population between the ages of 25 and 34. This group of individuals has recently experienced a variety of factors that might contribute to the slowdown in household formation including postponing marriage, student debt and a stagnation in wage growth. The lower headship rates across all age groups might point to considerable impacts on housing demand in the future. While this analysis was conducted at the state level, future work hopes to focus on the economic region level in order to further understand any spatial differences that may arise. Household formation is indicative of changing trends in demographics and changes in age distribution along with changing attitudes towards social norms. Household formation patterns are also highly responsive to changes in the economy and reflect the current economic climate. It is important to understand the components and current state of household formation in order to gain some insight regarding what occur in the future. This report has shed some light on recent trends on household formation in the state of New York and informed on some possible outcomes for the future of households in the state.

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## Sources

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## Notes

All descriptive statistics are weighted using individual person weights.