

MEMORANDUM

TO: Mayor Jim Kenney of Philadelphia, Pennsylvania
FROM: Stephanie Onuaja, Data Scientist at the Department of Prisons
DATE: November 07, 2021
RE: Population and Housing Projections for 2020 and 2030

In 2010, Philadelphia experienced a rise in its population after many years of decline. Our projections for 2020 and 2030 suggest that the population will continue in an upward trend. As our population grows, the composition of our projected population will shift significantly and so will the demand for housing. We have recognized three points to be considered from our projections for Philadelphia.

Philadelphia's population is estimated to grow to 1,604,403 people in 2020 and 1,637,080 in 2030

It is projected that the population would increase by 5% in 2020 and by 2% in 2030. Our results are based on a Cohort Survival Model (CSM) developed based on data extracted from the 1-year ACS estimates for population and CDC Wonder database for natality and mortality. This model takes a systematic approach to project the population by accounting for the compositional changes (by age and sex) that will occur in the population. We took into consideration other models of population projection, which forecast future populations based on historical and recent trends. Conversely, the CSM ages the population by age cohorts and integrates survival, death, and migration rates to produce a detailed and reliable forecast for the city of Philadelphia. Using this model, we also projected housing demands for the total population and every age cohort. The forecast suggests a steady increase in Philadelphia's total population and significant growth of certain age cohorts in 2020 and 2030.

The population below 25 years will remain the largest make-up of the population, but the middle-aged and older population of Philadelphia are forecasted to grow rapidly

Based on our CSM projections, the population of Philadelphians from the age of 35 to 84 are projected to grow rapidly in 2020 and 2030. In 2020, it is forecasted the 25 to 44 age cohort and the 55 to 64 age cohort would grow significantly. The age cohorts that were projected to grow

in 2020 show up in the succeeding age cohorts in 2030. Consequently, we see substantial growth in the 35 to 54 age cohort and the 65 to 84 age cohort in 2030.

Homeownership will continue as the primary form of tenure, though but the share of older renters will grow

Our tenure projections forecast that homeowners would account for 56% of households, and renters would account for 44% in 2030. The age cohort from 45 to 74 will account for 60% of homeowners in 2020 and 57% of homeowners in 2030. It is also projected that homeownership within the 34 to 45 years bracket will grow in 2020 and 2030. Our projections show that there would be an increased demand for single-family units and other typologies that support homeownership for different lifestyles and household types.

Apart from the increase in homeownership, it is forecasted that there will be an increased demand for renter units from the population above the age of 45. Our housing stock for renters will need to reflect this increased demand.

Conclusion: Future Strategies

There are some strategies that the city could take to address the needs of Philadelphia's growing and changing population and its housing stock:

- The youth population will remain the largest portion of Philadelphia's population. The city should invest in its public education and focus on raising the quality of education for Philadelphia's youth.
- The city should strategize on how to attract new employers and industries and support existing industries in the city to retain the young and middle-aged working population in Philadelphia.
- The city should allocate resources for services and facilities that support older adults in Philadelphia such as access to hospitals, nursing homes, and assisted living facilities. Additionally, our housing stock should accommodate older adults with different levels of mobility or cognitive impairment.