

This report is based on data produced by the U.S. Census Bureau and may differ from data produced by other entities.

## Older Population Dependency Ratio, 1970-2010: An Indicator of Economic Health in the District

### Introduction

The economic health of a society can be determined by examining a multitude of factors. One of these factors, dependency ratios, does not look specifically at economic groups and aspects. Instead, dependency ratios point out broad trends in social support needs by examining the possible effects that occur as the population age structure (distribution of the population by age and sex) changes. Total dependency ratio, also known as the age dependency ratio, is calculated by dividing the number of dependent age persons (0-17 years and 65 years and older) by those considered non-dependent age (18-64 years). To specifically determine the older dependency ratio, the number of persons 65 years and older is divided by the population -aged 18-64 years. Dependency ratios assume that dependent populations, ages 0-17 and 65 and older, are economically reliant on the remaining population aged 18-64. Dependency ratios do not account for groups of individuals in the 18-64 age group that are not economically self-sufficient such as mentally impaired or severely disabled individuals, and thus the ratios should be used only as an indicator or guide to the economic health of an area or region.

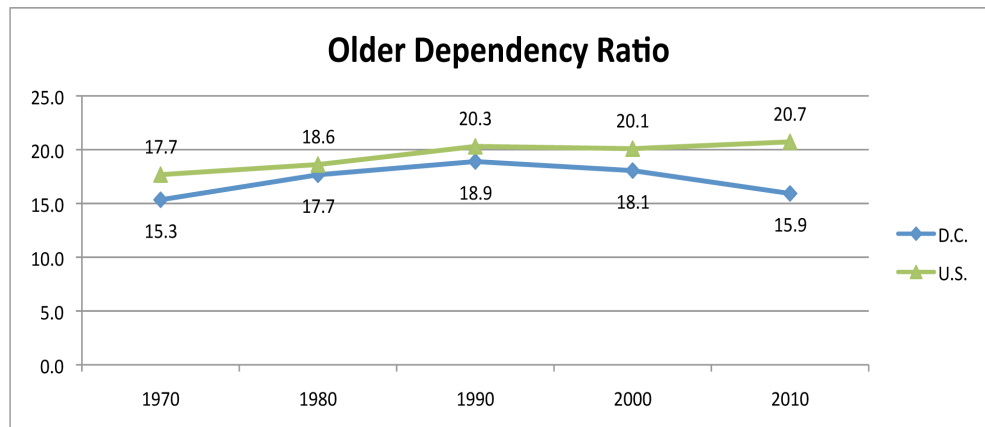
$$\text{Older Population Dependency Ratio} = \frac{\text{Number of people aged 65 and older}}{\text{Number of people aged 18-64}} \times 100$$

When the older dependency ratio is too high, a society may experience social and economic repercussions. It is assumed that the non-dependent population (aged 18-64 years) is providing care and financial support for the aging population, either through paying into Social Security, funding of programs through various government aging programs, or overall general health care assistance such as housing an aging family member in one's home. Populations with lower older dependency ratios experience benefits that range from more able-bodied workers paying taxes to lower demands for state medical resources and services for the elderly. There may also be fewer demands on services provided by non-profit agencies that assist the elderly, such as meals, affordable housing, and medical supplies.

### United States vs. District of Columbia

The United States has experienced relative stability in the older dependency ratio over the last three censuses – 20.3 in 1990, 20.1 in 2000, and 20.7 in 2010 (Figure 1). This is possibly due to the natural population changes from death, births, and migration. The dependency of the elderly population has increased across the country since the 1970 census by 3 points, from 17.7 to 20.7. This means there are 3 more individuals 65 and over for every 100 individuals age 18-64. The

Figure 1. Older Dependency Ratio for United States and District of Columbia



Source: U.S. Census Bureau, 1970 to 2010 Census

District of Columbia, on the other hand, has experienced a decline of the older dependency ratio from 18.9 in 1990 to 15.9 in 2010, returning almost completely to the ratio experienced in 1970 of 15.3.

Overall in 2010, there was a greater elderly dependency in the United States than in the District, 20.7 compared to 15.9 respectively.

### Distribution of Age and Sex

In 2010, the District of Columbia experienced an overall population increase of 5.2% from the 2000 census total. However, for the non-dependent population, aged 18-64, the District experienced an 11.6% increase, while the older dependent population, aged 65 and older, saw a 1.6% decrease (Table 1). The drastic difference between the changes that each age group experienced helps to explain the overall decrease in the older dependency ratio. The 18-64 age group experienced large growth specifically in the 20-24 and the 25-29 age groups (Figure 2), with an increase of 12,287 and 16,800 individuals respectively from 2000 to 2010. As more individuals migrate to the District within the 18-64 years non-dependent age group, this increases the dominator of the older dependency formula. Even though the number of persons aged 65 and older stayed relatively the same from 2000 to 2010, decreasing by just over a 1,000 persons (Table 1), the number of non-dependent persons to care for them increased, which drove the ratio down.

During both the 2010 and 2000 Censuses, Baby Boomers were part of the non-dependent population. Baby Boomers are individuals born between 1946 and 1964, during the post-World War II era. In 2010, Baby Boomers were between 46 and 64 years old and represented 30.5% of the non-dependent population; in 2000, they were 36 to 54 years old, representing 39.5% of the non-dependent population (Table 2). For the 2020 Census, Baby Boomers will range in age from 56 to 74 years and the majority will become part of the older dependent population (65 and older). Even though this is predicted to occur across the country as a whole, the District's largest age group in the 2010 census snap shot already is 25 to 29 years. In ten years those individuals will be 35-49 years old and still part of the large non-dependent dominator. Hence, it is logical to presume that as the Baby Boomers reach retirement, the older dependency ratio for the District may see a slight increase or may remain relatively stable.

**Table 1. D.C. Percent Change by Age Groups**

|              | Census 2000    | Census 2010    | Percent Change |
|--------------|----------------|----------------|----------------|
| Under 18     | 114,992        | 100,815        | -12.3%         |
| 18 to 64     | 387,169        | 432,099        | 11.6%          |
| 65 and Older | 69,898         | 68,809         | -1.6%          |
| <b>Total</b> | <b>572,059</b> | <b>601,723</b> | <b>5.2%</b>    |

Source: U.S. Census Bureau, 2000 and 2010 Censuses

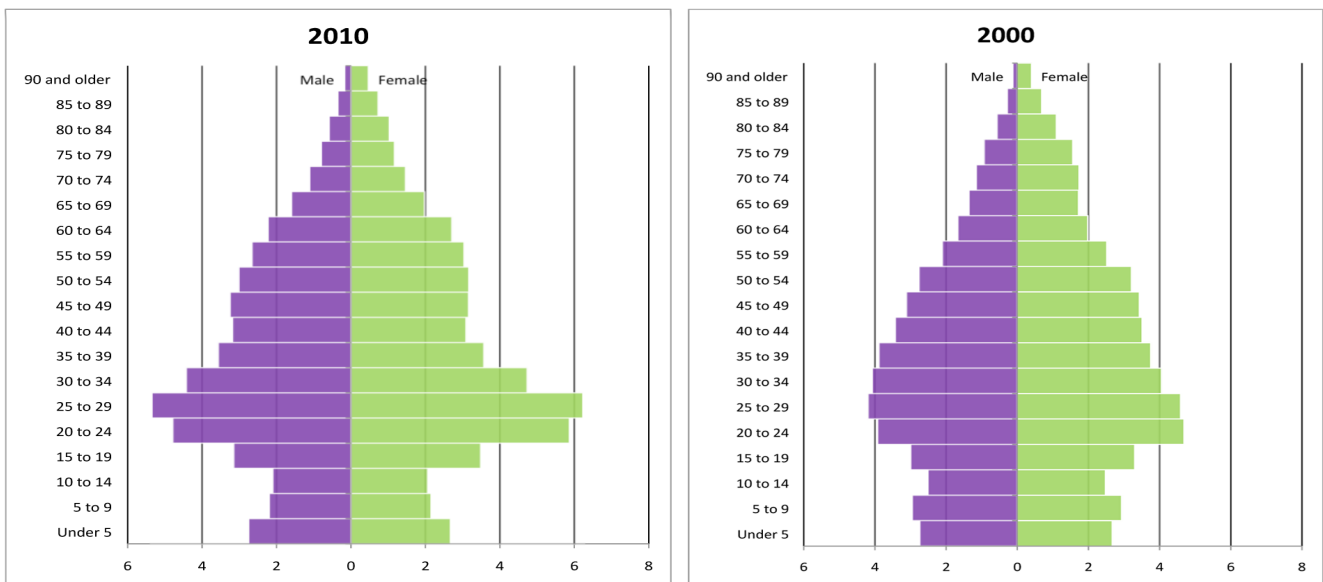
**Table 2. Baby Boomers Percentage of D.C. Non-Dependent Population**

| 2010 Non-Dependent Population | Number         | Percent       |
|-------------------------------|----------------|---------------|
| Age 18-45                     | 300,391        | 69.5%         |
| <b>Baby Boomers (46-64)</b>   | <b>131,708</b> | <b>30.5%</b>  |
| <b>2010 Total</b>             | <b>432,099</b> | <b>100.0%</b> |

| 2000 Non-Dependent Population | Number         | Percent       |
|-------------------------------|----------------|---------------|
| Age 18-35, 55-64              | 234,102        | 60.5%         |
| <b>Baby Boomers (36-54)</b>   | <b>153,067</b> | <b>39.5%</b>  |
| <b>2000 Total</b>             | <b>387,169</b> | <b>100.0%</b> |

Source: U.S. Census Bureau, 2000 and 2010 Censuses

**Figure 2. Percent Distribution of Population by Age and Sex for 2010 and 2000**



Source: U.S. Census Bureau, 2010 and 2000 Censuses

## Race, Ethnicity, and Older Dependency Ratio

Examining older dependency ratios for the different racial and ethnic subsets can illustrate the differences in age structure for minorities in the District.

Older dependency ratios for the white population and the black population in the District have experienced an inverse relationship over the past 50 years. The older dependency ratio decreased from 28.1 in 1970 to 12.4 in 2010 for the white population, and increased from 9.6 in 1970 to 21.9 in 2010 for the black population (Figure 3.) This could be the result of general population and migration shifts, changing family dynamics, or other factors. The changes in each race's population is further explained by examining the percent change of the age groups that comprise the older dependency ratio. The District's white population aged 18-64 grew by 18.6% from 1970 to 2010, while the white population aged 65 and older decreased by 46.6% during the same time period. The District's black population had an inverse experience. The 18-64 years old black population decreased by 37.2%, while the 65 and older population increased by 43.8% increase from 1970 to 2010 (Table 3).

The Hispanic population of the District showed a steady concentration of the elderly population over the past 40 years, with the lowest ratio being 6.0 in 2000 (Figure 3). The District's Hispanic population has increased in all age categories from 1980 to 2010, with a 206.9% increase for the 18 to 64 years old population and a 191.3% increase for the 65 years and older age group (Table 3). This steady increase across all age categories explains why the older dependency ratio for the Hispanic ethnicity has stayed within 1.5 points, with the lowest being 6.0 in 2000 and the highest at 7.4 in 1980 (Figure 3).

**Table 3. D.C. Percent Change by Age Group and Race/Ethnicity from 1970/80 to 2010**

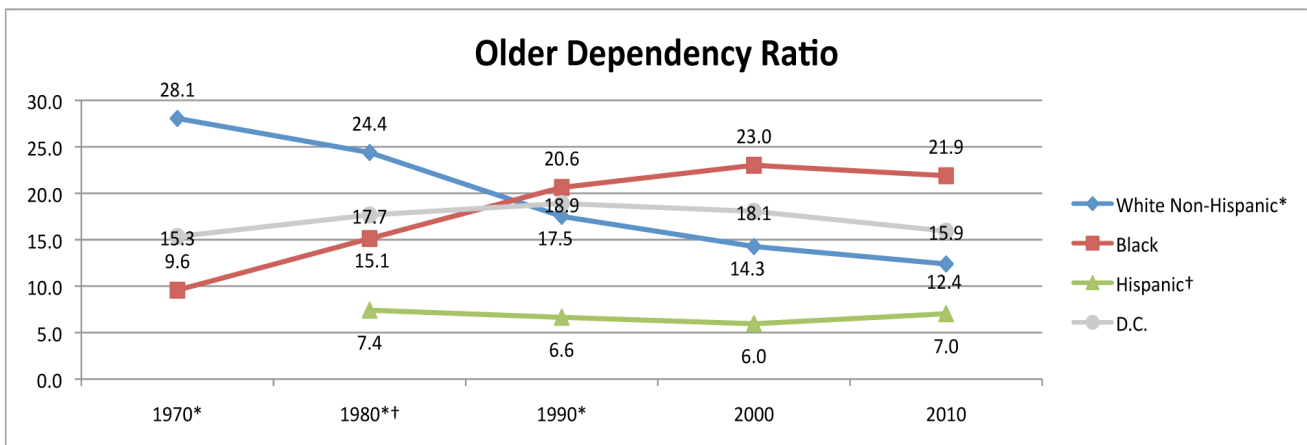
| White Non-Hispanic | Census 1970    | Census 2010    | Percent Change |
|--------------------|----------------|----------------|----------------|
| Under 18           | 24,938         | 17,531         | -29.7%         |
| 18 to 64           | 143,949        | 170,780        | 18.6%          |
| 65 and Older       | 40,385         | 21,153         | -47.6%         |
| <b>Total</b>       | <b>209,272</b> | <b>209,464</b> | <b>0.1%</b>    |

| Black        | Census 1970    | Census 2010    | Percent Change |
|--------------|----------------|----------------|----------------|
| Under 18     | 196,979        | 66,902         | -66.0%         |
| 18 to 64     | 310,975        | 195,441        | -37.2%         |
| 65 and Older | 29,758         | 42,782         | 43.8%          |
| <b>Total</b> | <b>537,712</b> | <b>305,125</b> | <b>-43.3%</b>  |

| Hispanic     | Census 1980   | Census 2010   | Percent Change |
|--------------|---------------|---------------|----------------|
| Under 18     | 3,715         | 12,041        | 224.1%         |
| 18 to 64     | 13,001        | 39,903        | 206.9%         |
| 65 and Older | 963           | 2,805         | 191.3%         |
| <b>Total</b> | <b>17,679</b> | <b>54,749</b> | <b>209.7%</b>  |

Source: U.S. Census Bureau; 1970, 1980, and 2010 Censuses

**Figure 3. Older Dependency Ratio for Race and Ethnicity**



Source: U.S. Census Bureau, 1970 to 2010 Census

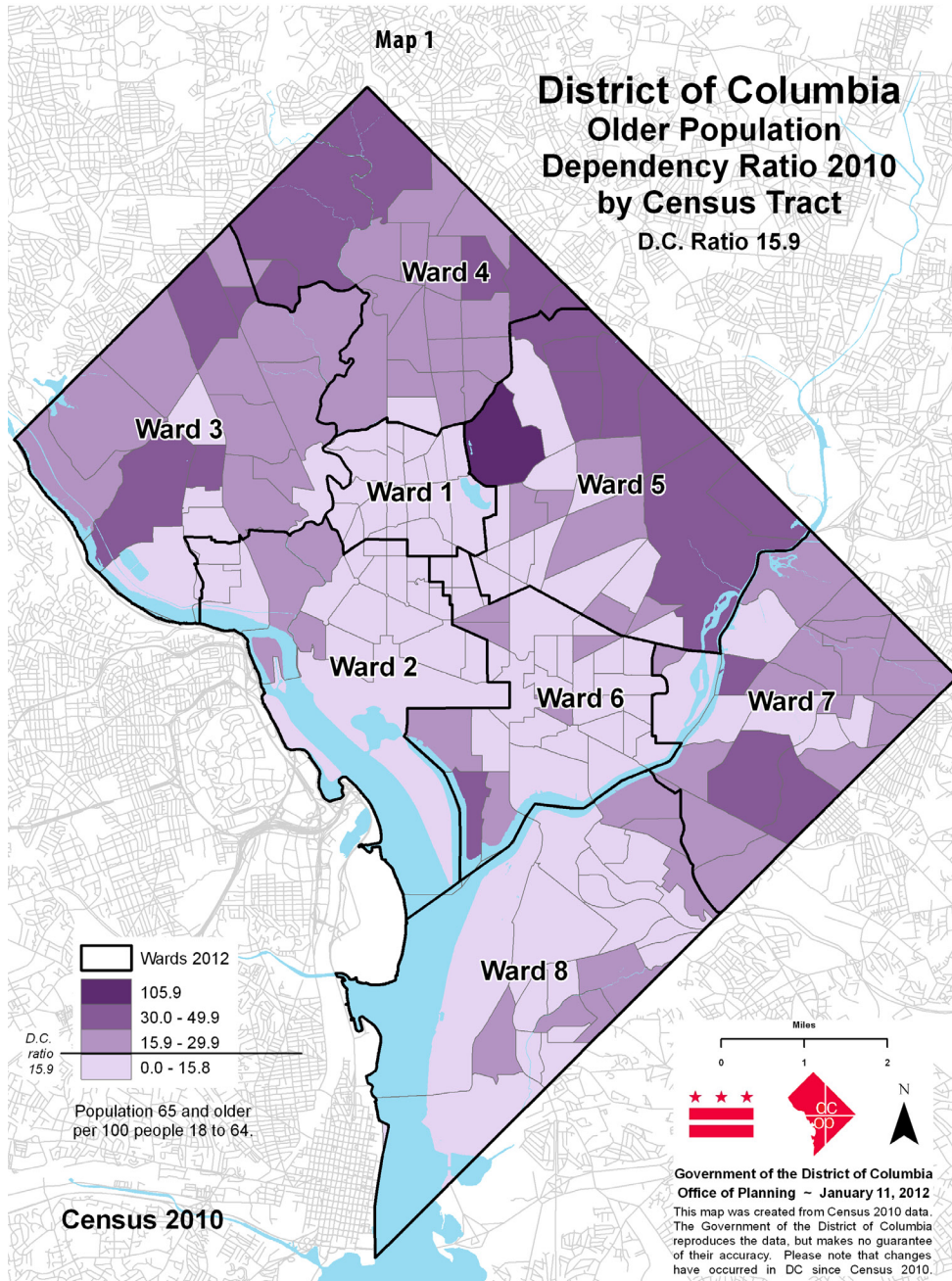
\*Total white population alone for 1970, 1980, 1990, no distinction between White Non-Hispanic and White Hispanic

† Spanish Origin was captured in 1980

## Older Dependency by Census Tract

The older dependency ratio was somewhat evenly dispersed across the city in 2010, as shown in Map 1. The census tract with the lowest older dependency ratio was tract 62.02 with a ratio of zero, located in Ward 2. Census tract 62.02 is where the National Mall, White House, and other monuments are located, with a low population of 33 individuals and no one over the age of 65. However, the overall range for the older

dependency ratios for the census tracts in Ward 2 were 0 to 25.9. The census tracts in Ward 1 had the overall lowest older dependency ratios for the Wards, with none higher than the District average of 15.9. Ward 5 had the census tract with the highest older dependency ratio, tract 23.02 with a ratio of 105.9. The high ratio of tract 23.02 was expected due to the presence of the Armed Forces Retirement Home (formerly the U.S. Soldiers' Home).



For more information contact:  
D.C. Office of Planning State Data Center  
1100 4th Street SW, Suite E650, Washington, DC 20024  
202.442.7600 ph 202.442.7638 fax  
[www.planning.dc.gov](http://www.planning.dc.gov)