The age dependency ratio gives us an idea of how many potential workers are in any given area to support those considered too young or too old to work. The ratio is calculated by the U.S. Census Bureau using data collected in the American Community Survey. It uses the combined number of individuals under the age of 18 years and those 65 and over, divided by the number of individuals aged 18 to 64 and multiplied by 100.

Age dependency ratio is a combination of the child dependency ratio, the ratio of children to workforce age population, and old age dependency ratio, the ratio of older residents to workforce age population. An example: From 2011 to 2016, the age dependency ratio of the United States was 60.3, consisting of the child dependency ration (37) plus the old age dependency ratio (23.2).

For child dependency ratio, a lower rate ratio can be both good and bad as it implies relatively more workers are available in a given area to care for younger residents. However, it can also imply a natural decline in population as fewer births may not match the number of deaths in a given area. As a result, the total population of a given area begins to decline over time.

For old age dependency ratio, a lower ratio implies more workers are available in a given area to care for older residents, while a higher dependency ratio implies an area will have a more difficult time supporting its elderly population and the greater proportional need for healthcare, nursing homes and similar services. A higher ratio would indicate more financial stress between working people and dependents.
Older Residents Stay in Workforce Longer

One criticism of the age dependency ratio has been the change in work habits of individuals aged 65 and older as people live longer. In 2009, 31 percent of individuals ages 65 to 74 were employed in the state. By 2016, that figure had grown to an estimated 34 percent. There appears to be similar increases in labor force participation in the group over 74 years of age.

Source: Census Bureau ACS 1-Yr 2009 - 2016, Table S2301

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Population Density and Dependency Ratios

While there are more older and younger residents in the more densely populated areas of the state, there is also a higher number of individuals of workforce age to support them. In other words, there is an inverse relationship between population density and dependency ratios in the state. The more densely populated the area, the lower the age dependency ratio.

In North Dakota, the 10 highest census tracts in population density (residents per square mile) have an average age dependency ratio of 40.2, consisting of 15.6 old age and 24.5 child dependency ratios. The most densely populated census tract in the state is Tract 5.02 of Cass County, the area to the north of downtown Fargo. This area has an estimated population density of 9,329, but a dependency ratio of only 12.5.

In the state’s 10 least densely populated census tracts, the average age dependency ratio was 76.4, consisting of 37.8 old age dependency and 38.6 child dependency. The least densely populated census tract in the state is Tract 9650 in Slope County with .55 persons per square mile. It had a dependency ratio of 81.2, consisting of an old age dependency of 42.8 and a child dependency ratio of 38.4.

Source: Census Bureau ACS 5-Yr 2016, Table S0101 and 2017 Gazetteer, Census Tract File for North Dakota

U.S. and North Dakota Child and Old Age Dependency Ratios 2007-2016

Since 2007, the child dependency ratio of the U.S. has gradually declined, while North Dakota’s has remained the same or grown slightly. The U.S. old age dependency ratio has gradually risen, while North Dakota’s has remained the same or grown slightly. The result of these changes is that relative to the U.S., the state of North Dakota has been able to maintain a slightly more favorable age dependency than the nation as a whole.

Source: Census Bureau ACS 1-Yr 2007 - 2016, Tables GCT0105, GTC0106 and GTC0107