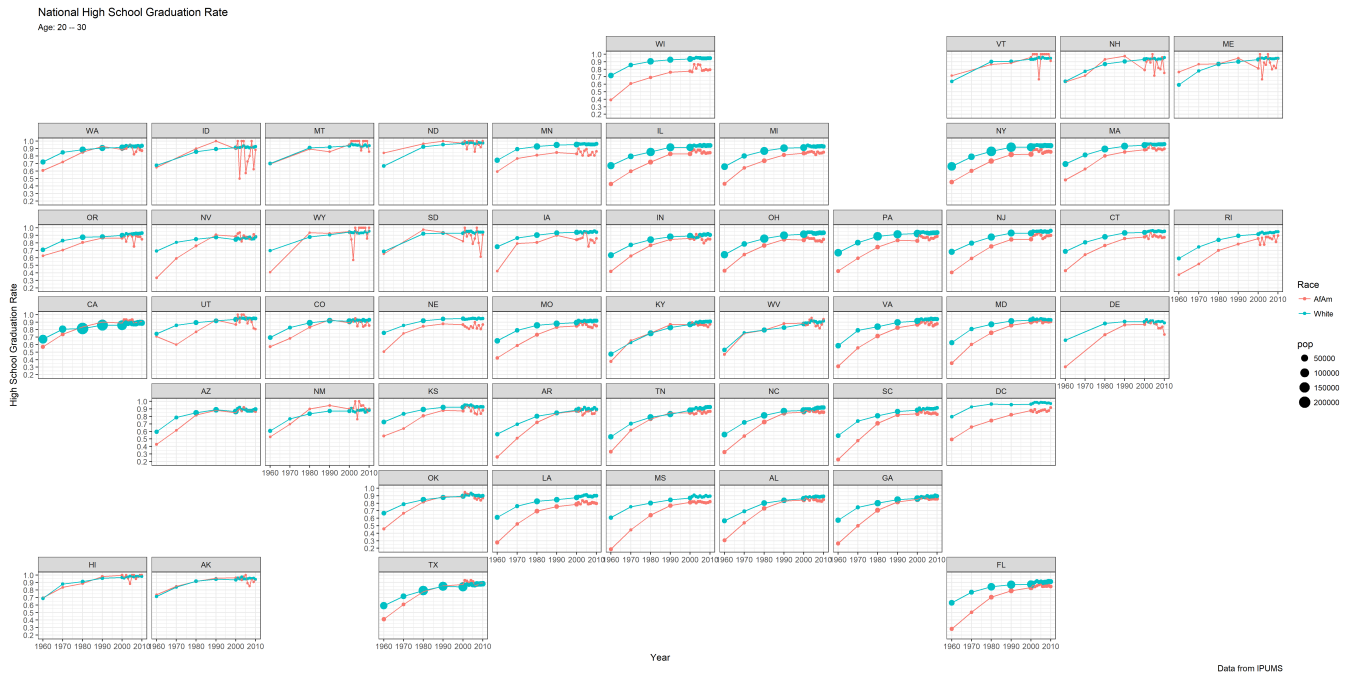


# High School Graduation Rates in the US

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The following is a brief analysis of high school graduation rates for African-Americans and Whites of ages 20-30 for each state in the US between 1960-2010. I will examine how the gap between African-American and White high school graduation rates has changed over time in different states.

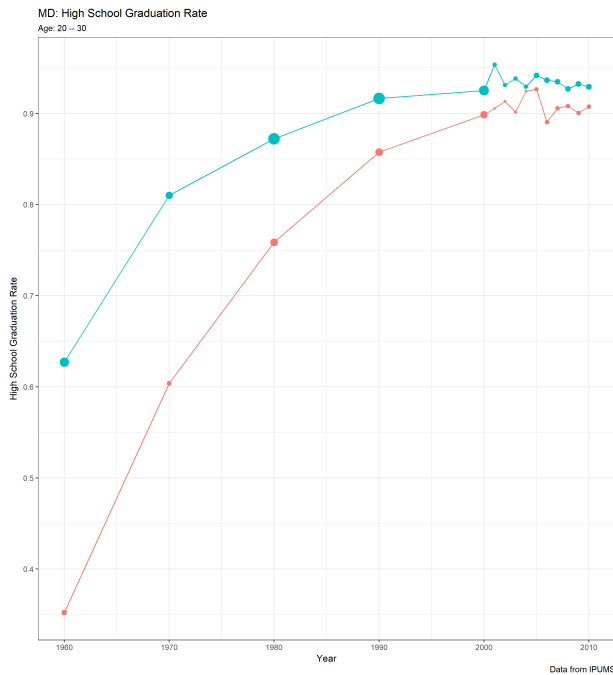
Given the spatial nature of the data, one can present graphs retaining the spatial component, or present each state individually. In the first case, the national plot shows a clear general trend – both African-Americans and Whites have seen increased high school graduation rates in all states from 1960-2010 at roughly the same rate<sup>1</sup>. This rate has slowed down over time, most likely as educating each additional individual is more expensive as the rate approaches 100%. One may also observe a non-monotonic and larger variation in the African-American graduation rate in the states of Alaska, Idaho, and Maine in the 2000s. This difference in rate is more likely due to a combination of low relative African-American population and small sample size, than an actual change in the graduation rate. Unfortunately, IPUMS restricts the accessible sample size in the data. Access to more data could better inform why the difference exists. Similarly, this may explain the missing data in Montana or Idaho in the 1970s.



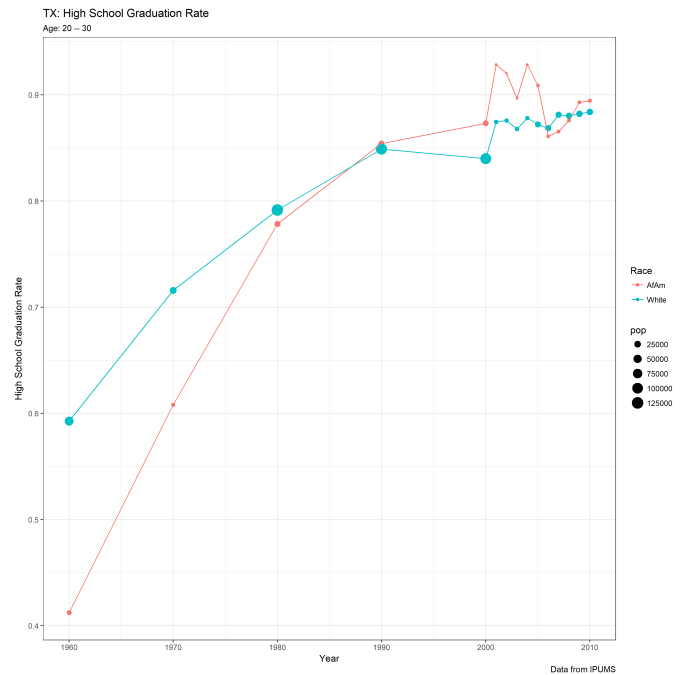
**Figure 1:** National Graduation Rate per State

In all states, the gap in the high school graduate rate between African-Americans and Whites has severely reduced over time. In many states, the gap has dissipated altogether in the 2000s. Interestingly, the reduction of the gap is observed regardless of initial conditions and location. However, some locations such as Midwest states, DC, and Louisiana continue to have a +10% discrepancy.

<sup>1</sup>The first difference national plot at the end of the document provides additional evidence for this claim

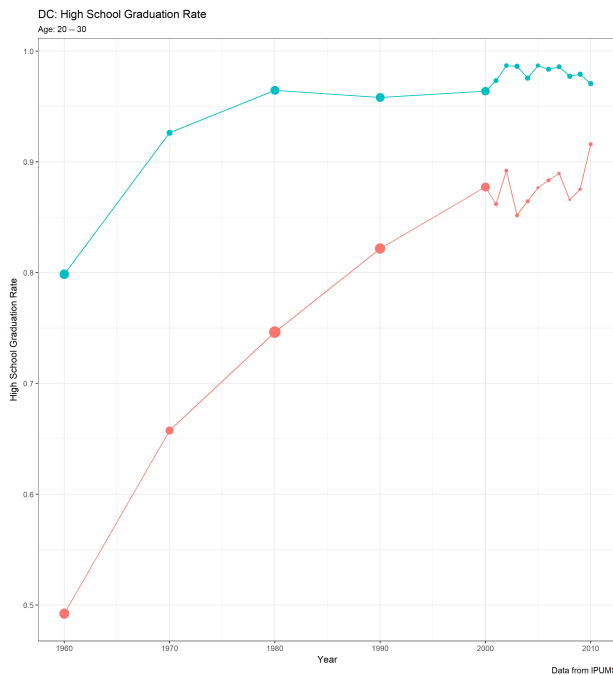


(a) Maryland High School Graduation Rate

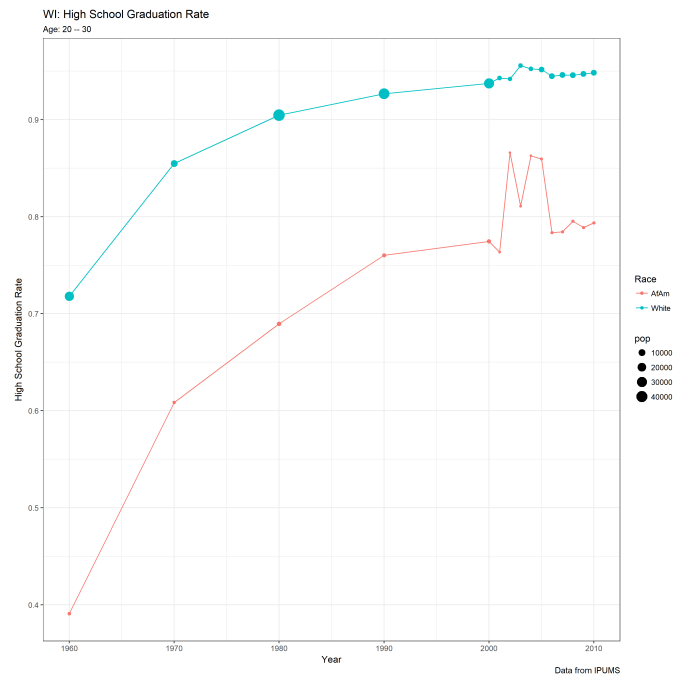


(b) Texas High School Graduation Rate

**Figure 2:** Two states with sizable African American population and negligible discrepancy in graduation rate

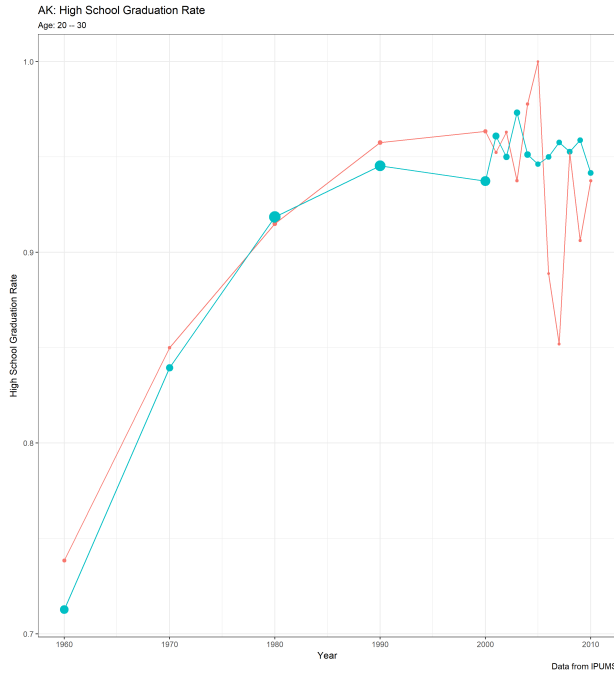


(a) Iowa High School Graduation Rate

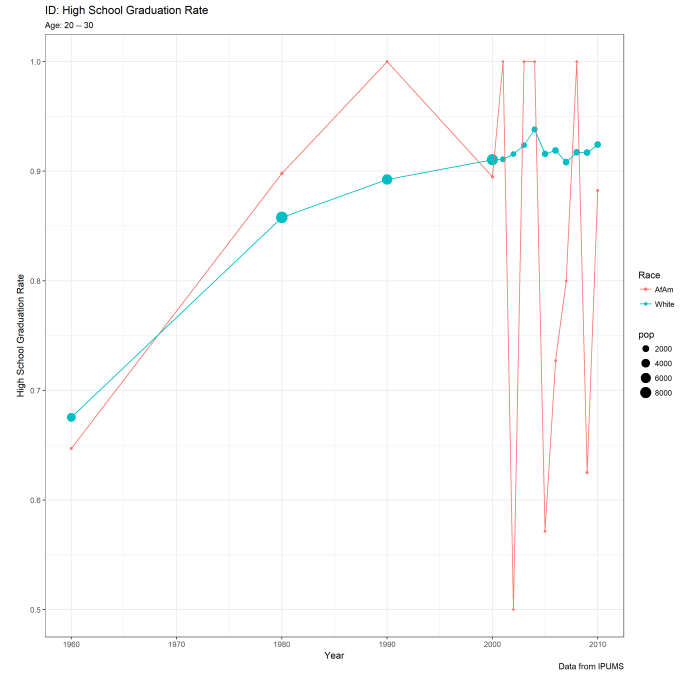


(b) Wisconsin High School Graduation Rate

**Figure 3:** Midwest State and DC that continue to maintain a gap between graduation rates

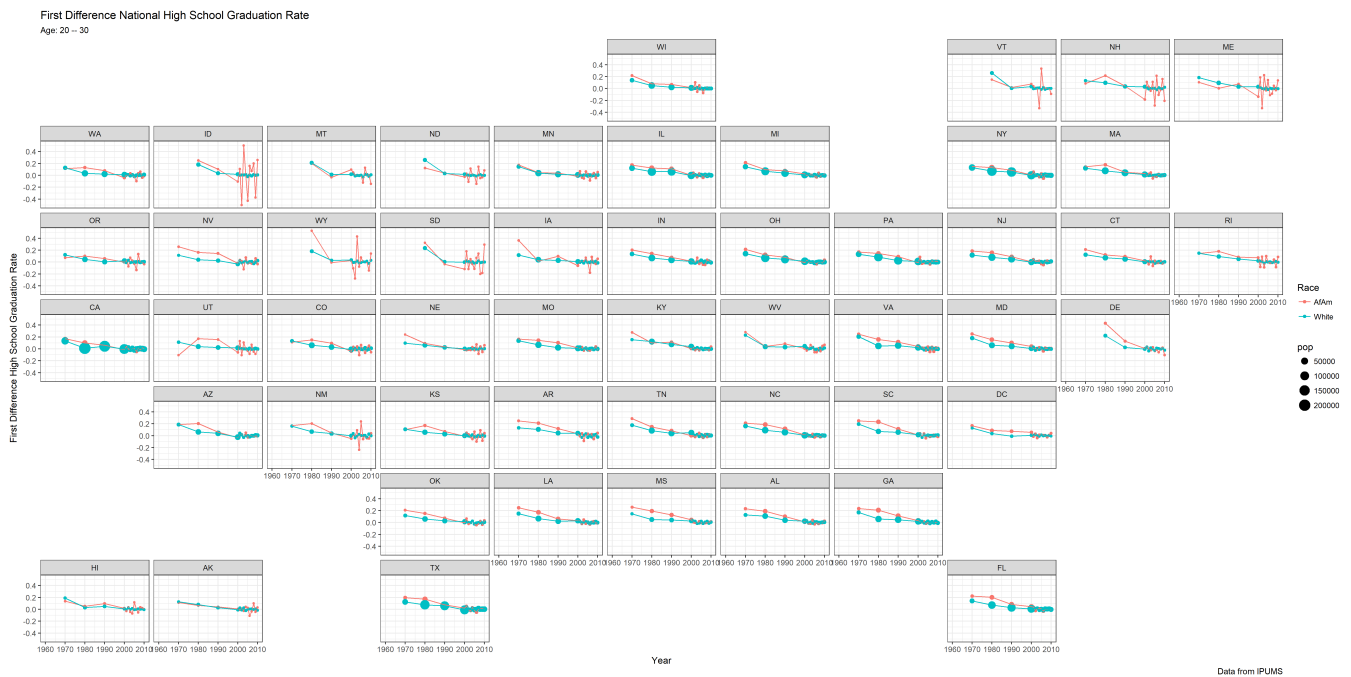


(a) Alaska High School Graduation Rate



(b) Idaho High School Graduation Rate

**Figure 4:** Example states with large variation of graduation rate for African American in the 2000s. Notice the small population size.



**Figure 5:** First Difference of National Graduation Rate per State

| Sample                            | Density |
|-----------------------------------|---------|
| <a href="#">1960 5%</a>           | 5.0%    |
| <a href="#">1970 1% metro fm1</a> | 1.0%    |
| <a href="#">1970 1% metro fm2</a> | 1.0%    |
| <a href="#">1980 5% state</a>     | 5.0%    |
| <a href="#">1990 5%</a>           | 5.0%    |
| <a href="#">2000 5%</a>           | 5.0%    |
| <a href="#">2001 ACS</a>          | 0.43%   |
| <a href="#">2002 ACS</a>          | 0.38%   |
| <a href="#">2003 ACS</a>          | 0.42%   |
| <a href="#">2004 ACS</a>          | 0.42%   |
| <a href="#">2005 ACS</a>          | 1.0%    |
| <a href="#">2006 ACS</a>          | 1.0%    |
| <a href="#">2007 ACS</a>          | 1.0%    |
| <a href="#">2008 ACS</a>          | 1.0%    |
| <a href="#">2009 ACS</a>          | 1.0%    |
| <a href="#">2010 ACS</a>          | 1.0%    |

**Figure 6:** Data Sample Rate and Location

| Type | Variable                         | Label                                     | Case Selection          |
|------|----------------------------------|---|-------------------------|
| H    | <a href="#">YEAR</a>             | Census year                               | --                      |
| H    | <a href="#">DATANUM</a>          | Data set number                           | --                      |
| H    | <a href="#">SERIAL</a>           | Household serial number                   | --                      |
| H    | <a href="#">HHWT</a>             | Household weight                          | --                      |
| H    | <a href="#">STATEFIP</a>         | State (FIPS code)                         | --                      |
| H    | <a href="#">GQ</a>               | Group quarters status                     | --                      |
| P    | <a href="#">PERNUM</a>           | Person number in sample unit              | --                      |
| P    | <a href="#">PERWT</a>            | Person weight                             | --                      |
| P    | <a href="#">AGE</a>              | Age                                       | <a href="#">details</a> |
| P    | <a href="#">RACE</a> (general)   | Race [general version]                    | <a href="#">details</a> |
| P    | <a href="#">RACED</a> (detailed) | Race [detailed version]                   | --                      |
| P    | <a href="#">EDUC</a> (general)   | Educational attainment [general version]  | --                      |
| P    | <a href="#">EDUCD</a> (detailed) | Educational attainment [detailed version] | --                      |

**Figure 7:** Variable Dictionary