Demographic Trends and Enrollment in Wisconsin's Public Schools

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Abstract Submitted:
Between 1998 and 2003, 63% of Wisconsin's public school districts experienced declining enrollment. Declining enrollment has profound implications for schools: funding is tied to enrollment numbers and declining enrollment often means that administrators must consider school closures, cutting resources, and reducing staff. This paper examines the demographic trends behind enrollment decline and related policy decisions, including the impact of the Baby Boom generation and trends in births, migration, and racial/ethnic population change in the state. We examine enrollment decline spatially with attention to the location of school districts that are experiencing decline. Finally, we project future public school enrollment using a cohort component method and address questions such as: Will decline continue and to what extent? Where will decline occur? What conditions might mediate enrollment decline? We expect to find that enrollment will likely continue to decline over the next ten years, particularly in rural areas and inner-ring suburbs.

Extended Abstract:
The following is a draft outline of the paper we are working on. It is more of an outline than of a cohesive paper or summary. Data has been collected for a few pieces of information. We provide samples of the types of information that we will include here.

APL Background
The Applied Population Lab (APL) has been working with individual school districts across the state of Wisconsin since 1995 projecting school enrollment ten years into the future. Until recently, most districts contacted us because their enrollment was rapidly increasing and there was concern about overcrowding in the schools. Over the last two years, the APL has seen an increasing number of districts concerned about enrollment decline. Between 1998 and 2003, 63% of Wisconsin's public school districts experienced declining enrollment and 37% declined by more than 5%.

Goals of the Paper

1. To describe the demographic context for enrollment decline in Wisconsin
    a. Impact of Baby Boom generation
    b. Birth Trends
    c. Age-specific migration trends

2. To situate the policy-oriented context for concern, with respect to past, current, and possible future policies that impact school construction, funding, and referendums

3. To describe spatially where enrollment decline is occurring in comparison to growth

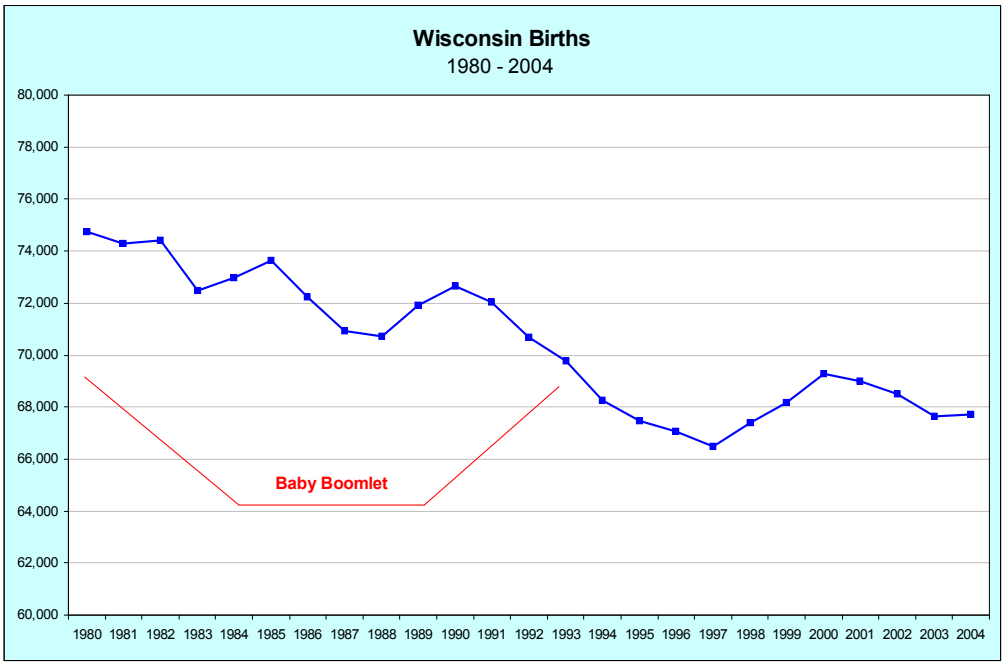
4. To evaluate the potential for in-migrating minority residents to alleviate enrollment decline in some districts

5. To project future school enrollment for the state as a whole, as well as rural, suburban, and urban areas, using four varieties of cohort component projection methods

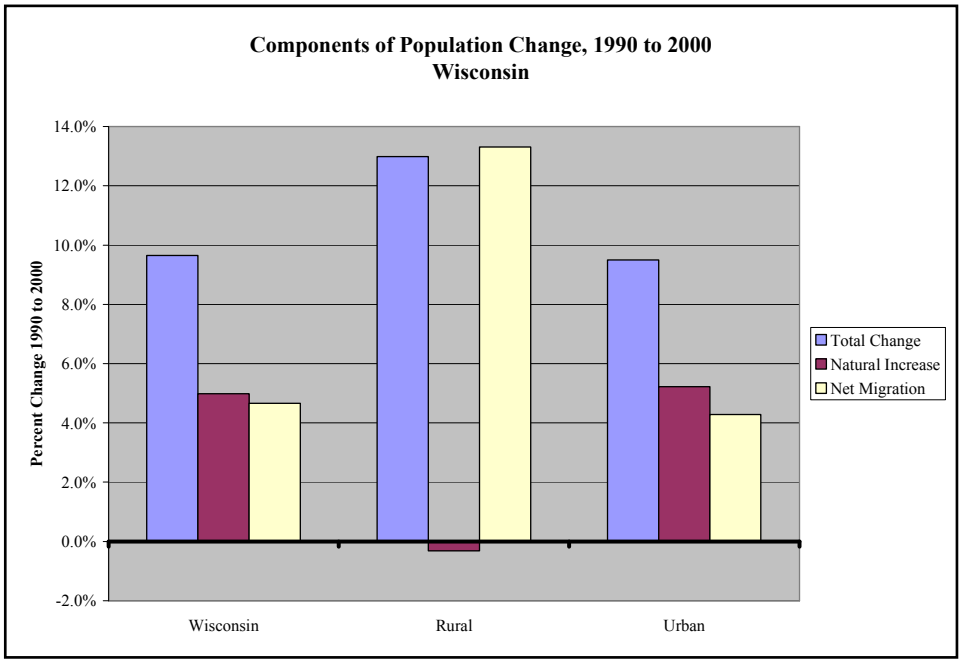
6. To project future school enrollment for particular regions of the state using four varieties of cohort component projection (Rural North, Twin Cities Suburbanization, Green Bay and Fox Valley Metro Area, Southwest, Madison Area and surrounding counties, Milwaukee area and surrounding counties)

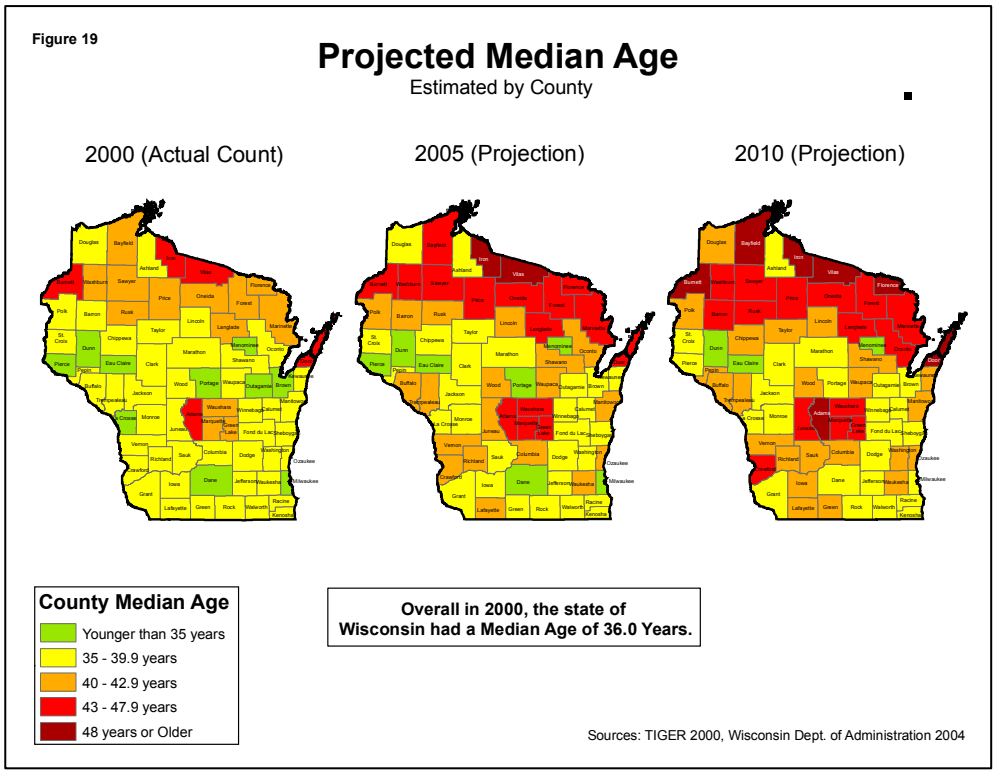
Demographic Background

Births in Wisconsin were relatively high in the 1980's and early 1990's, as the Baby Boom generation was in their prime child-bearing years. This created large cohorts of children who were moving through the school system throughout the 1990's. Most school districts in the state experienced growing enrollment during this time and state level policies were enacted to promote construction of new schools. Since about 1995, few children have been born in comparison to the previous decade, and in the last five years, many school districts have seen relatively small cohorts of Kindergarteners entering their schools. In sum, as the of the children of Baby Boomers move through the school system, the incoming cohorts of younger children who are currently at the elementary level have been too small to replace the large cohorts who came before.

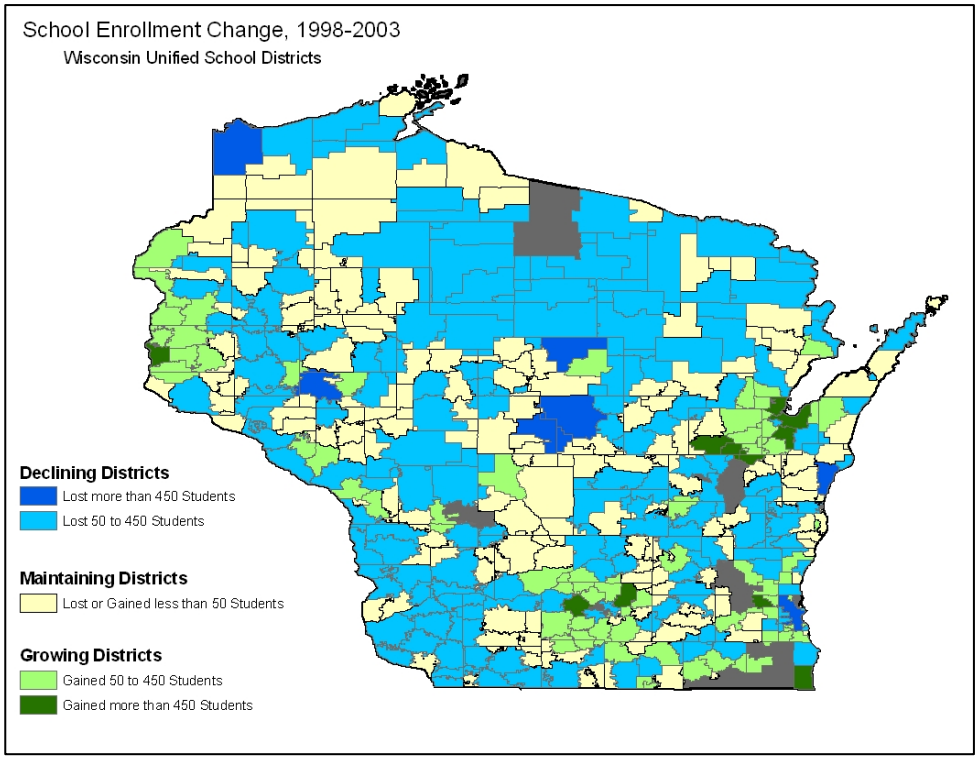


The state of Wisconsin has a rapidly aging population, especially in rural areas. Between 1990 and 2000, rural Wisconsin experienced more deaths than births. Net in-migration to rural areas has kept the population growing; yet, young adults tend to out-migrate from rural areas, and a large portion of the in-migrants have been of retirement age, exacerbating the aging of the population. In several counties (mostly in the northern part of the state) the estimated median age for 2005 is over 45 years.





The following draft map shows enrollment change in Wisconsin's unified school districts 1998-2003. Areas shaded in gray are excluded in this draft because they are not unified K-12 districts. As the rural population ages, many districts in rural areas are experiencing severe enrollment decline. Also, some districts at the inner-ring of urban areas (especially Milwaukee and Green Bay) are declining. These inner-ring type areas were popular destinations for Baby Boomers in the 1970s when they were buying homes and establishing their families. Since that time, the land has been fully developed, essentially land-locking the school district from any new development. Where Baby Boomers have aged in place, there has been little room for turnover to younger families and districts experiencing decline.



Wisconsin's minority population is growing, especially of Hispanic and Hmong people. There is some potential for minority population growth to alleviate some of the decline that some school districts are experiencing.

Enrollment Projections

We will generate cohort component projections (2006-2015) grade by grade for Wisconsin's public schools, and specifically for rural, suburban, and urban school districts. The projection process combines enrollment history, birth data, population projections, and migration information to create reasonable assumptions about future growth scenarios and the likely impact on the school district.

We will generate these projections using four slightly different methods some of which weigh recent trends more heavily than others. Our Baseline projection model projects enrollment using the assumption that average trends year to year, grade to grade, will

continue into the future. This model extrapolates long term enrollment and birth trends into the future, and it excludes outliers. The Last 5 Year Trend and Last 2 Year "Trend" models weigh changes in the last 5 and 2 years, respectively, more heavily. The Kindergarten Regression model uses trends in Kindergarten enrollment to project future Kindergarteners, rather than relying on birth information.

In making these projections, we will consider the potential for changing minority population to impact future school enrollment.