

Appendix C

Methodology for Elementary School Wealth Cluster Creation

To analyze data collected and provided by school districts using a wealth cluster lens, this book includes an analysis of Elementary School Wealth Clusters. Wealthiest elementary school districts are designated by ES1, the poorest elementary school districts are designated as ES5.

To create these clusters, each town was assigned to the school district its elementary students attend. 2000 census data for each town was then aggregated to determine the following four factors for each district.

- ◆ Median Family Income of 1999
- ◆ Per Capita Income of 1999
- ◆ Percent of 0-17 Year Olds Below Poverty Level
- ◆ Percent of Persons Below 185% of Poverty Level

For single-town school districts these measures were exactly the same as for the town. For each school district serving multiple towns, aggregate measures were calculated. The raw counts of individuals and poverty status were summed across all towns from which students are enrolled in the district, then divided by the sum of all persons for whom the census determined poverty status in those towns. The results are district-wide poverty-related rates. Each such district's per capita income (PCI) was calculated by first multiplying the PCI of each town sending students to its schools by the town's population to obtain a gross income for each town. The gross incomes of the towns were then added and the total was divided by the total population in that district, resulting in the combined PCI. For each school district serving multiple towns, the median family income (MFI) could not be determined, as the actual distribution of all incomes is not released by the census. A weighted average of MFI of the towns was therefore developed by multiplying the MFI of each town by the count of families in that town. Results were summed across all the towns sending elementary students to that district, then divided by the aggregate number of families in those towns.

The mean and standard deviation of each of the four measures over 154 elementary school districts (plus Chatham) was calculated. Calculations were not included for tiny unincorporated places and locations. The 234 municipalities accounted for 1,235,550 of the state's 1,235,786 population in

2000.) The value for each district town on each measure was converted to standard deviation units above or below the mean (a standardized distribution). For the direct income measures positive standard deviations indicate higher incomes. For the poverty percentages, negative standard deviations indicated higher incomes, so each standard value was multiplied by -1.0 in order that positive numbers would indicate better community economics. Standardized deviation measures were then cut so that no number above +2.5762 and no number below -2.5762 was allowed. Numbers above or below were set at these maximum and minimum figures. (This was done to ensure that any district's far-outlier status did not allow one measure to take on too much importance when compared to the other three measures.) The four adjusted numbers for each town, one for each of the four measures, were then added. This effectively ensured relatively equal weighting for each of the four measures.

The districts were then sorted in order from high to low. New Castle had a total of 8.14 and Stratford had a total of -8.15. Beginning with the districts with the highest scores, the topmost municipalities that taken together had an aggregate population that was close to 247,157 (20% of the total population of 1,235,786) were identified. That group of districts constituted the wealthiest cluster and labeled "Cluster ES1." "ES" is used to distinguish these (E)lementary (S)chool clusters from the basic municipal clusters. Beginning with the next municipality, the next group of districts with as close to 247,157 population as possible were identified. These were labeled "Cluster ES2." Collectively they are above state average but not as wealthy as Cluster ES1. This process was repeated two more times, thus selecting the districts for the middle group, Cluster ES3, and the next to lowest group, Cluster ES4. The districts that remained formed Cluster ES5. A specific listing of elementary school districts is included as Appendix D.

The results are displayed in the following table.

Cluster	Count of Districts	Population 0-17	Population All Ages
ES1: Wealthiest	33	68,007	245,653
ES2	33	64,297	249,232
ES3: Middle	26	56,536	249,613
ES4	30	56,804	242,899
ES5: Poorest	33	57,718	248,153