Would School District Consolidation Lead to Cost Savings in Major Metropolitan Counties?

A Cost Function Analysis

August 2017

Prepared for

The University of Texas at Dallas Education Research Center and
The Texas Education Agency

Prepared by
Lori L. Taylor
Timothy J. Gronberg
Dennis W. Jansen

The authors thank the University of Texas at Dallas Education Research Center for research support on this project. All views expressed are those of the authors alone. The conclusions of this research do not necessarily reflect the opinion or official position of the Texas Education Agency or the State of Texas.

As in the 2014 report, this report uses a cost function analysis approach to predicting the likely effects of consolidation of the type and scale identified in TEC Section 12.1013(e). The basic approach is to estimate a model of campus spending that yields estimates of a best practice cost function and estimates of campus deviations from that cost frontier. The model provides estimates of cost economies or diseconomies associated with changes in district enrollment due to consolidation and of inefficiencies associated with changes in the structure of the education market. The approach implements a simulation of the proposed consolidations based on the results of the formal cost function analysis of the relationship between school performance and school district size.

This analysis supports four key findings.

1. The cost function estimates indicate substantial scale economies up to a district size of around 7,700 students and diseconomies as district size increases beyond about 7,700 students.
2. The cost function estimates indicate that increased market concentration leads to inefficiency and increased spending over and above what the cost function indicates is necessary to achieve specific outcomes with given environmental conditions.
3. There are no expected cost savings from consolidation to the county level in any of the counties under analysis. County-level consolidation increases the predicted expenditure per pupil by 9.9% in Bexar, 8.9% in Dallas, 11.5% Harris, 9.9% in Tarrant, and 3.9% in Travis. In addition to the predicted increases in the consolidating districts, expenditures are also expected to rise in the rest of their metropolitan areas (due to the loss of competition in those education markets).
4. A more limited and focused consolidation of districts that are currently eligible for size adjustments under the school funding formula could generate savings in three of the five counties under analysis, but the impact is quite small. Only the consolidation of the three school districts serving military bases in San Antonio was predicted to reduce spending by more than $62 per pupil.

Although the estimated range of economies to size is greater in the current study than in the 2014 study (the diseconomies set in at 3,200 students in the 2014 cost function estimates), the estimated increase in predicted spending remains. The spending increase prediction is robust because significant per pupil cost savings from increasing district size are, basically, exhausted at a very small district size. The existing districts in the specific counties under analysis already enjoy substantial economies of scale. Any modest potential cost savings from increased size are eclipsed by the expected loss of cost efficiency from the weakening of competitive incentives due to consolidation and from the diseconomies associated with very large districts.