The University of Vermont

COLLEGE OF EDUCATION AND SOCIAL SERVICES

Response to Questions on Model/Weight Selection

Presentation to the Task Force on Pupil Weighting

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Making a Difference

Weights Derived from Models Using Data for Vermont Districts and Schools

		District Model	School Model
Student Needs	Poverty Rate (AOE)	0.61	2.97
	% of ELLs	0.09	1.58
	% with Mild Disabilities	1.80	3.15
	% with Severe Disabilities	0.45	2.15
Context			
Enrollment	<100 Students	0.21	0.26
	101–250		0.12
Population Density	<36 Persons per Square Mile	0.12	0.23
	36 to <55	0.06	0.17
	55 to <100	0.07	0.11
Grade Range	% Middle Grades Enrollment	1.20	1.23
	% Secondary Grades Enrollment	1.47	1.20

Making a Difference

Why multiple models & weights?

- Purpose:
  - To evaluate the consistency of our findings, based on different unites of analysis (districts and schools) and data sources (Vermont vs. Northeast region)

Comparison of District- vs. School-level Weights

District-level Weights

- Derived from cost function models that used data from Vermont School **Districts**
- Regional weight suggests that district-weight for student economic disadvantage is understated in District model
- ELL weight estimated in district model is problematic, due to enrollment patterns across VT districts
- Sparsity and size weights are consistent with Vermont school weights, since many small Vermont schools have ben organized as stand-alone districts

School-level Weights

- Derived from cost function models that used data from Vermont **Schools**
- Weight for economic disadvantage was most consistent with the regional model, after accounting for the difference in how the poverty rate (AOE) and %FRPL (CCD) were calculated
- Grade level weights differed with region. Regional models suggest that elementary students were more costly to educate

Making a Difference

Applying Enrollment & Population Density Weights

- Enrollment & population density weights are distinct and reflect the differences in costs for:
  - School size
  - ”Rurality” or ”sparsity”

- The weights can be applied separately or in combination in an equalized pupil calculation

Making a Difference

Application of Size & Sparsity Weights in Simulations

- In our simulations, we assume that:
  - The population density weights would be applied to districts with <100 persons per square mile
  - School size weights would only be applied in districts with <50 persons per square mile
    - The weight would be applied to the number of students in a district who attended schools with < 250 persons per square mile (i.e., “geographically-necessary” schools)

Making a Difference