Summary of Findings from Study of Pupil Weights in Vermont's Education Funding Formula

Testimony to the
Vermont House Committee on Ways and Means

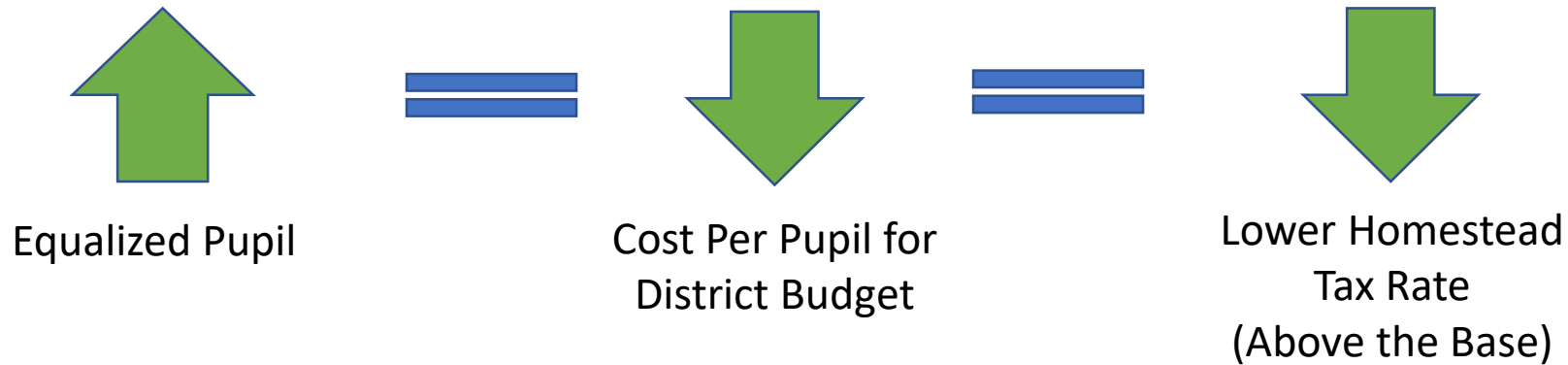January 16, 2020

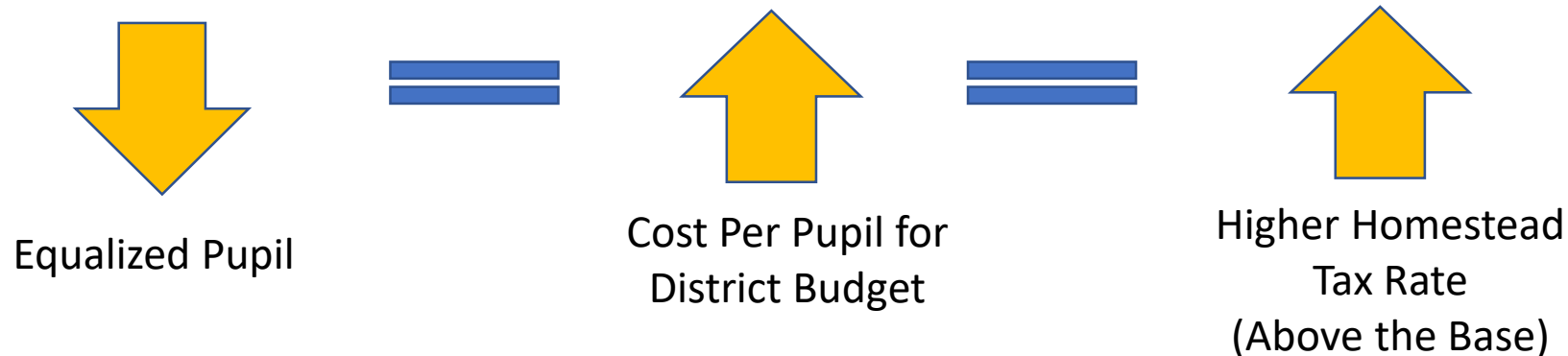Tammy Kolbe University of Vermont

The University of Vermont

Impact of Equalized Pupil Calculation on Tax Rates

Assuming the same level of education spending in a school district, the number of equalized pupils in a district impacts local tax capacity.
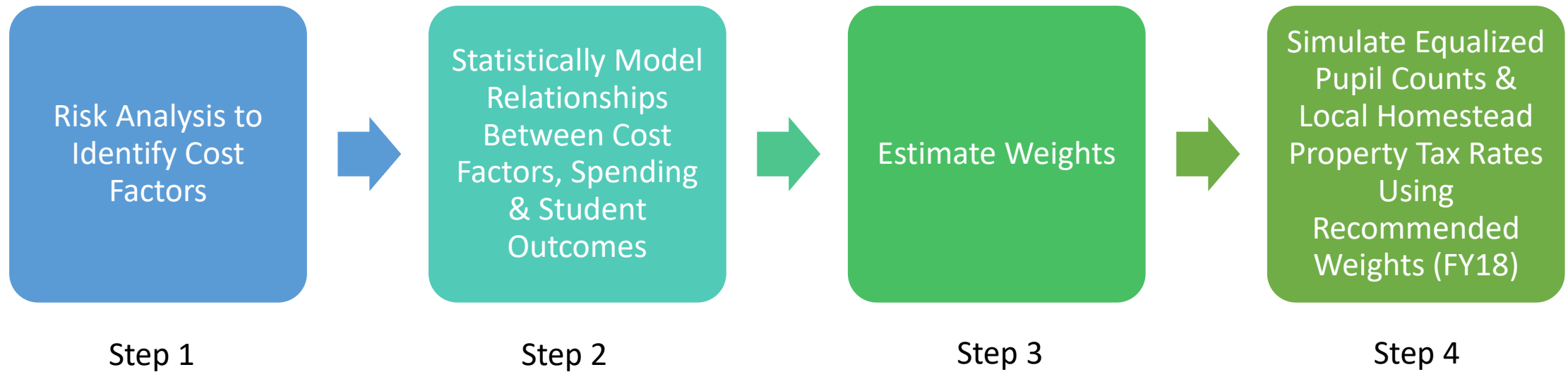
Example 1

Equalized Pupil

Cost Per Pupil for District Budget

Lower Homestead Tax Rate
(Above the Base)

Example 2

Equalized Pupil

Cost Per Pupil for District Budget

Higher Homestead Tax Rate
(Above the Base)

Analysis Steps

| Risk Analysis to Identify Cost Factors | → | Statistically Model Relationships Between Cost Factors, Spending & Student Outcomes | → | Estimate Weights | → | Simulate Equalized Pupil Counts & Local Homestead Property Tax Rates Using Recommended Weights (FY18) |

Step 1   Step 2   Step 3   Step 4

Cost factors & weights were empirically-derived using sophisticated statistical models, based on national, regional and state education spending data.

Recommended Weights for Equalized Pupil Calculation

- Recommended weights were derived from the **Vermont-specific school-level models**.

- Weights derived from the school-level model were **most consistent** with those derived using data for **districts in the Northeast region**, particularly the weights for economic disadvantage and ELLs.

Cost Factor	Measure	Weight Value	
		Existing Weight (1)	Weights Recommended by Cost Function Models (2)
Student Needs	Poverty Rate (AOE)	0.25	2.97
	% of ELLs	0.20	1.58
Context			
Enrollment	<100 Students		0.26
	101–250		0.12
Population Density	<36 Persons per Square Mile		0.23
	36 to <55		0.17
	55 to <100		0.11
Grade Range	% Middle Grades Enrollment		1.23
	% Secondary Grades Enrollment	1.13	1.20
	Pre-kindergarten	0.46	

The decision to adopt weights from column 2 assumes that policymakers decide to: 1) not make adjustments to the SPED census grant at this time; or 2) adjust for differences in special education costs by modifying the census block grant calculation.

Adjusting for Differences Across School Districts in the Incidence and Need for Students With Disabilities (SWD)
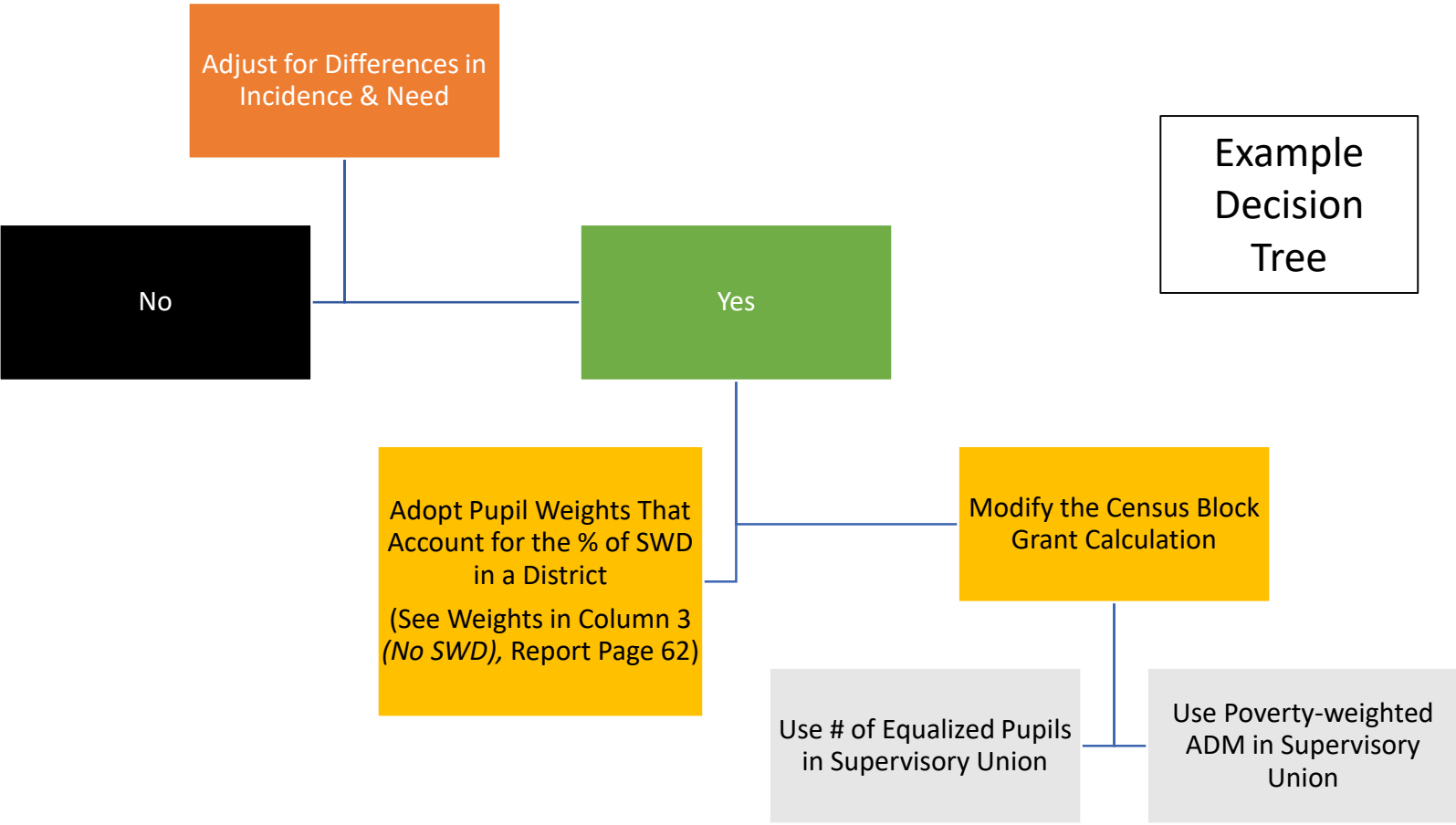
Options Considered for
Revising Special Education Census Grant Calculation

Simulation Scenarios	Student Count	Uniform Base Amount
Status Quo	FY2018 PK–12 ADM	$1,930 per capita
Option 1	Equalized Pupil Count	$1,930 per capita
Option 2	Poverty-Weighted Pupil Count	$1,156[a]

[a] For total state special education appropriations to remain unchanged from what is anticipated by current law, the denominator used when calculating the uniform base amount is modified to be the number of poverty-weighted pupils (not PK–12 ADM).

Summary of Equalized Pupil Calculation Simulation Scenarios

	Existing Weights	Scenario A — Apply Weights Estimated Using Models Without Controls for Special Education		Scenario B — Apply Weights Estimated Using Models With Controls for Special Education	
		Simulation A.1 (VT Estimation)	Simulation A.2 (Substitute Regional ELL Weight)	Simulation B.1 (VT Estimation)	Simulation B.2 (Substitute Regional ELL Weight)
Student Needs					
Economically Disadvantaged Student Count	0.25	3.14	3.14	2.97	2.97
ELL Student Count	0.20	**0.57**	**1.33**	**1.58**	**1.27**
Other Cost Factors					
Grade Range					
% of Students Enrolled in Grades 6–8		1.23	1.23	1.23	1.23
% of Students Enrolled in Grades 9–12	1.13	1.13	1.13	1.20	1.20
Population Density					
<36 persons per square mile		.23	.23	.23	.23
36–54 persons per square mile		.17	.17	.17	.17
55–100 persons per square mile		.11	.11	.11	.11
School Size (conditional on population density)					
<100 students		.24	.24	.26	.26
101–250 students		.12	.12	.12	.12
Prekindergarten Student Count	0.46	0.46	0.46	0.46	0.46
Adjustments to Special Education Census Grant		No adjustment to census grant. Adjustments for special education cost are reflected in a district's equalized pupil calculation.		Revise census grant calculation. Change the number of pupils used in the calculation to either (1) the number of equalized pupils (Option 1) or (2) the number of poverty-weighted pupils (Option 2).	

*Simulations assume that school size weights are applied **only** in districts located in sparsely populated areas of the state (<55 persons per square mile).*