

Differences in College Choice by District: Evidence and Opportunities

Presentation for the Federal Reserve Bank of Richmond

Economic Education Joint Council

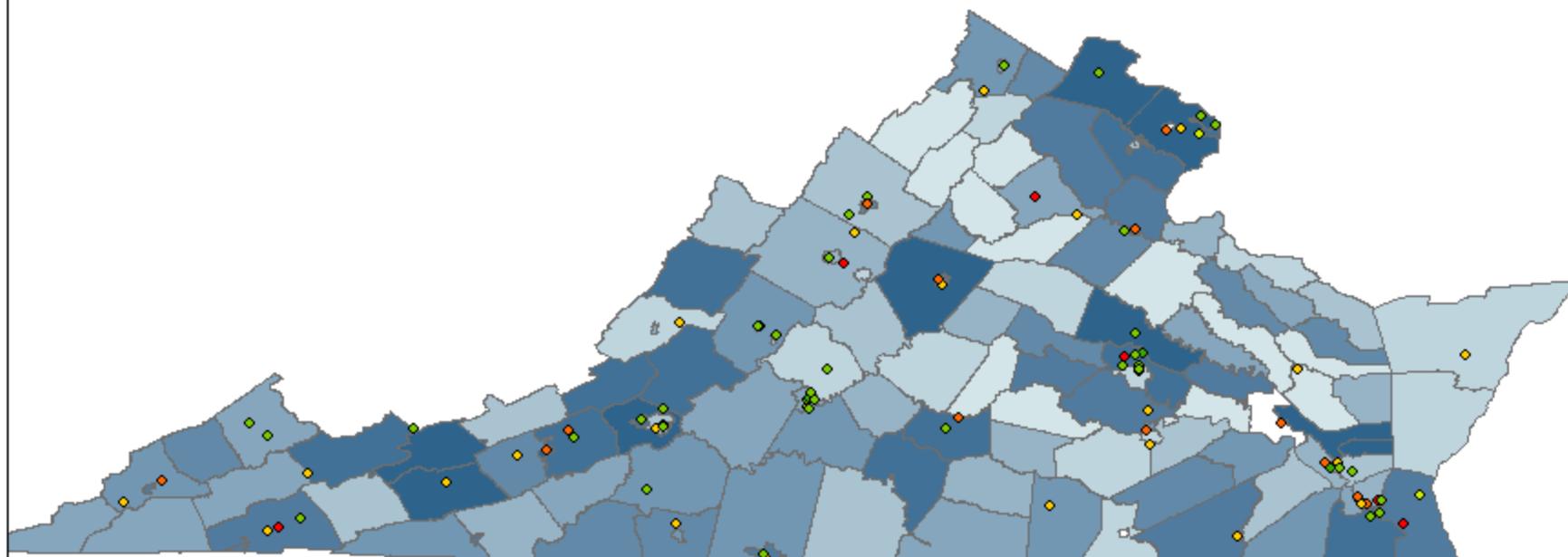
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University of Virginia and NBER

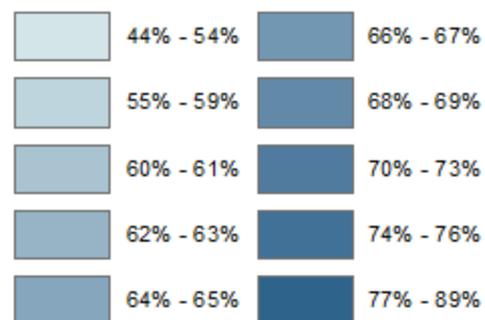
Premise and Starting Point

- If higher education is to serve as an engine of opportunity, college choice is increasingly important.
- Within states:
 - Differences among colleges in inputs & outcomes
 - District-level differences in where students attend
- Focus on Virginia
 - Much work examines variation across states or specific demographic groups; focus here is on districts

College Enrollment Rates: All 2- and 4-YR Colleges



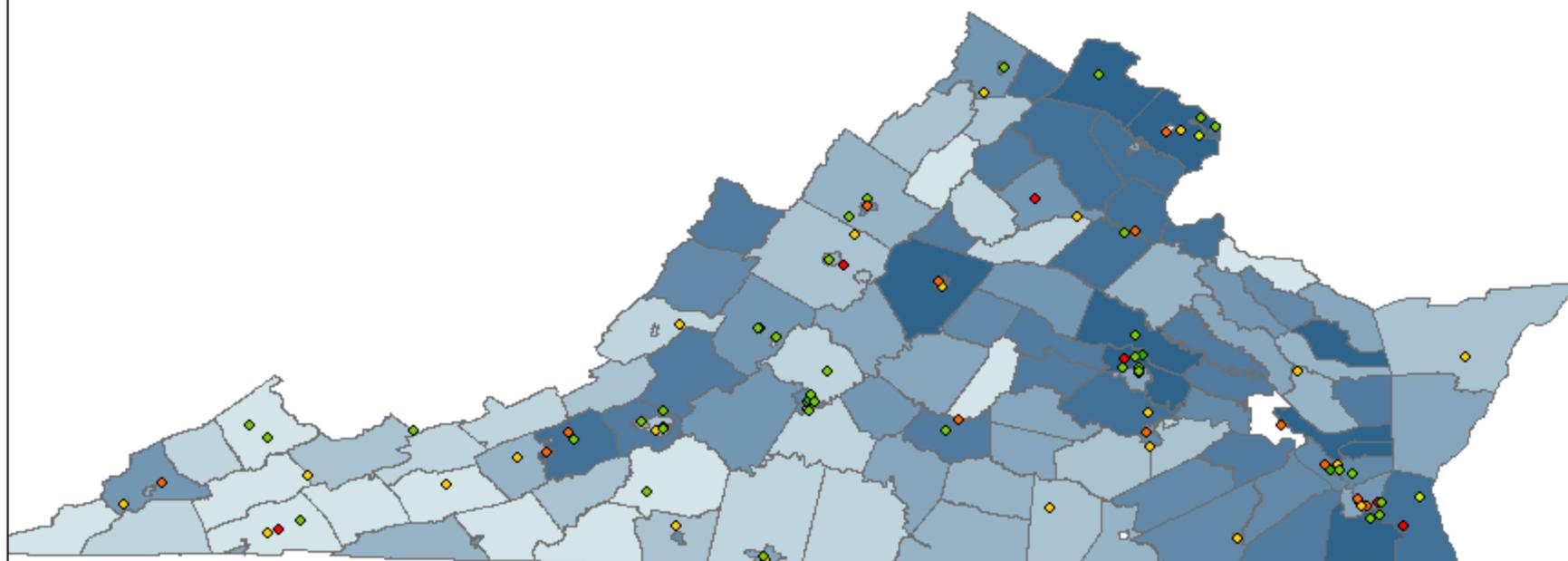
Enrollment Rate



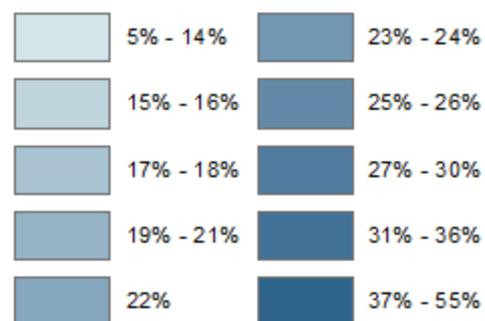
School Type

- ◆ Private not-for-profit, 2-year
- ◆ Private not-for-profit, 4-year or above
- ◆ Private not-for-profit, less-than 2-year
- ◆ Public, 2-year
- ◆ Public, 4-year or above
- ◆ Public, less-than 2-year

College Enrollment Rates: 4-YR Public Colleges



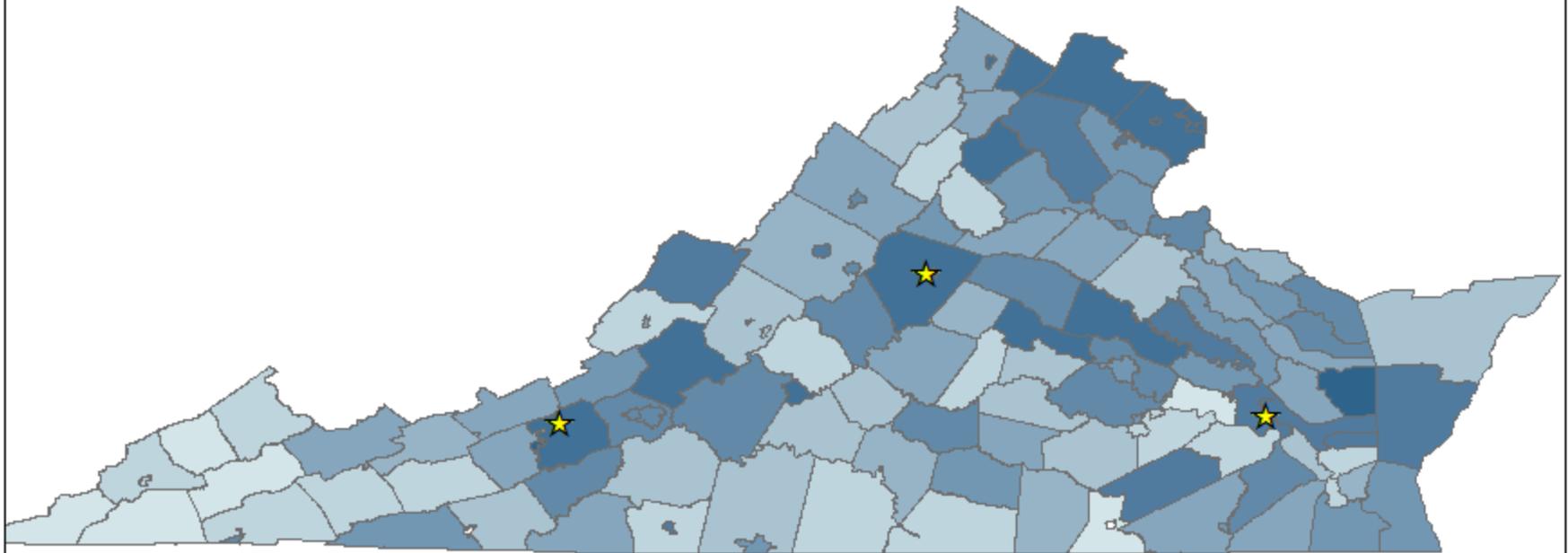
Enrollment Rate



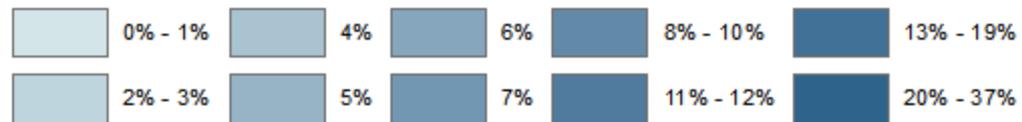
College Type

- ◆ Private not-for-profit, 2-year
- ◆ Private not-for-profit, 4-year or above
- ◆ Private not-for-profit, less-than 2-year
- ◆ Public, 2-year
- ◆ Public, 4-year or above
- ◆ Public, less-than 2-year

Enrollment in UVA, VT, or W&M



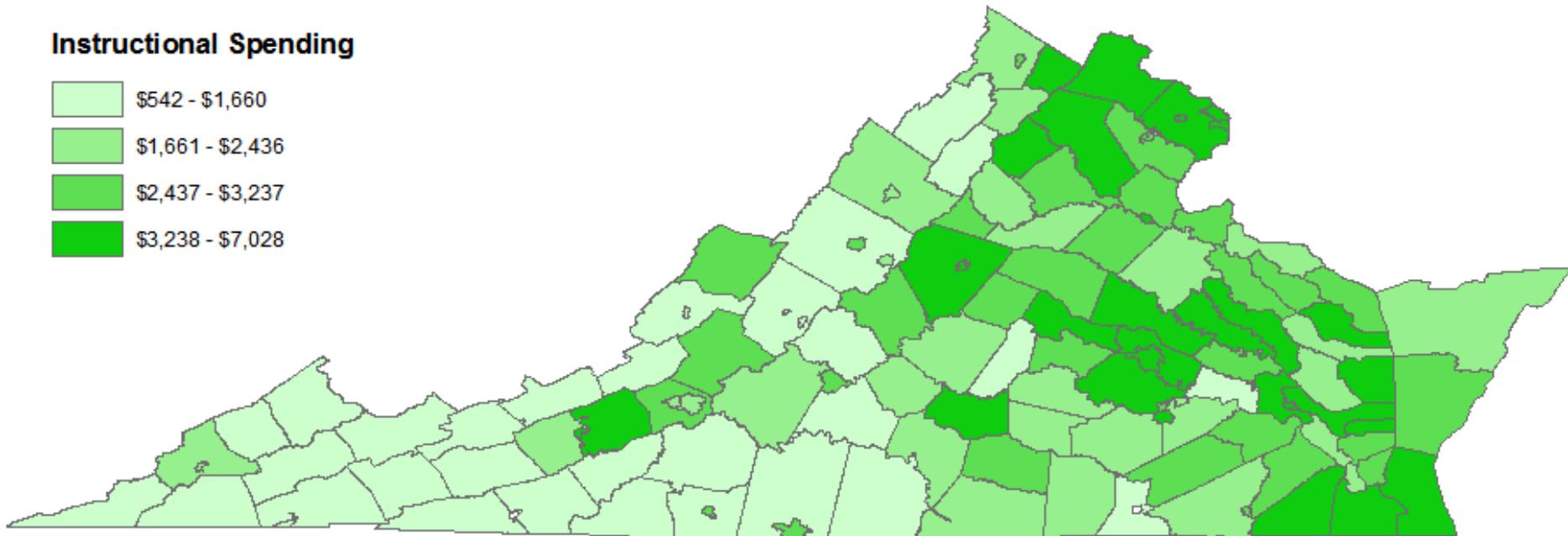
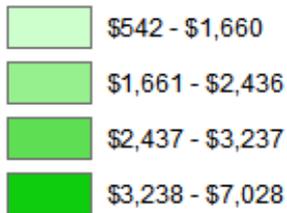
Enrollment Rate



Differences in “Who Benefits” from Public Higher Education in the State

Public Instructional Spending Per 12th Grade Student from District: 2014

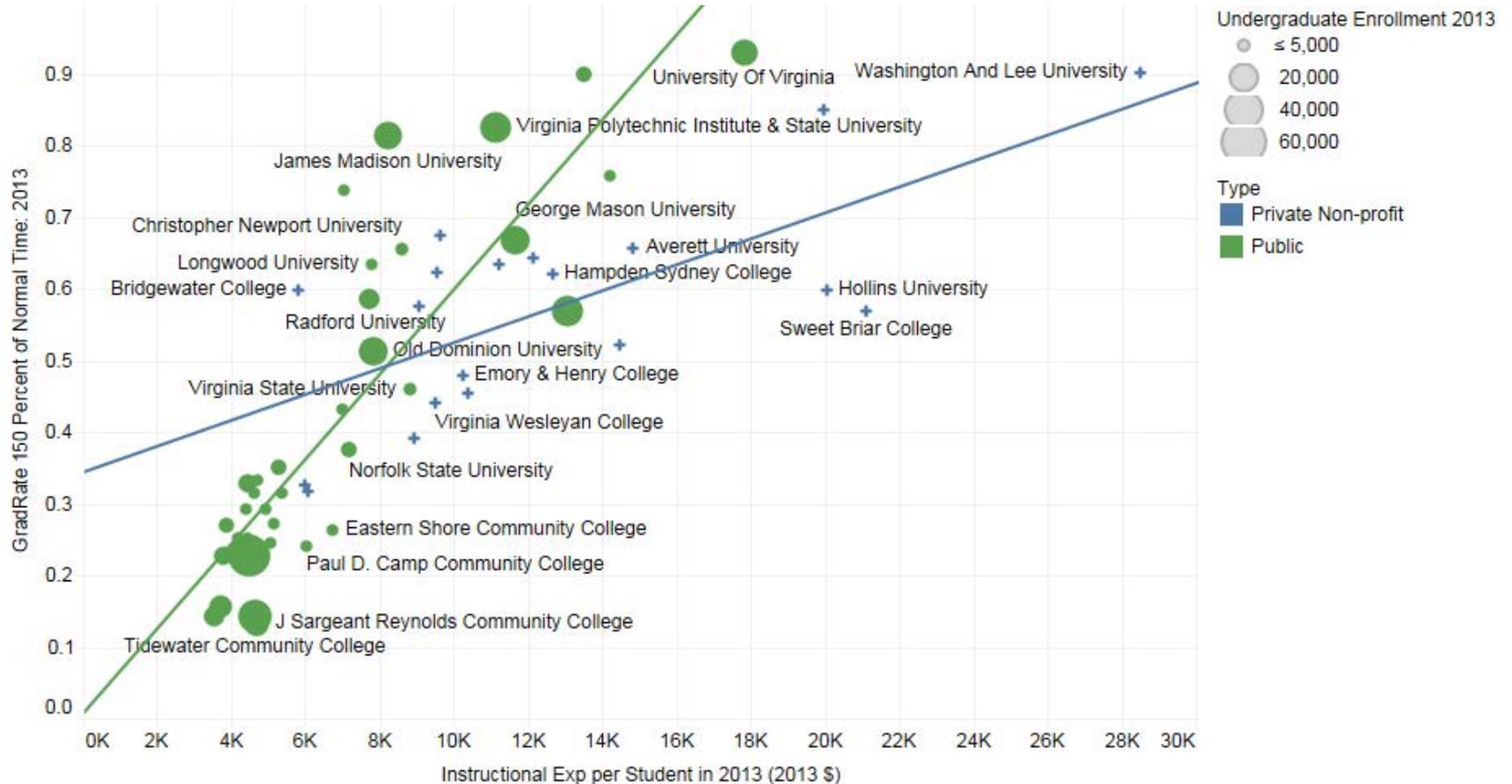
Instructional Spending



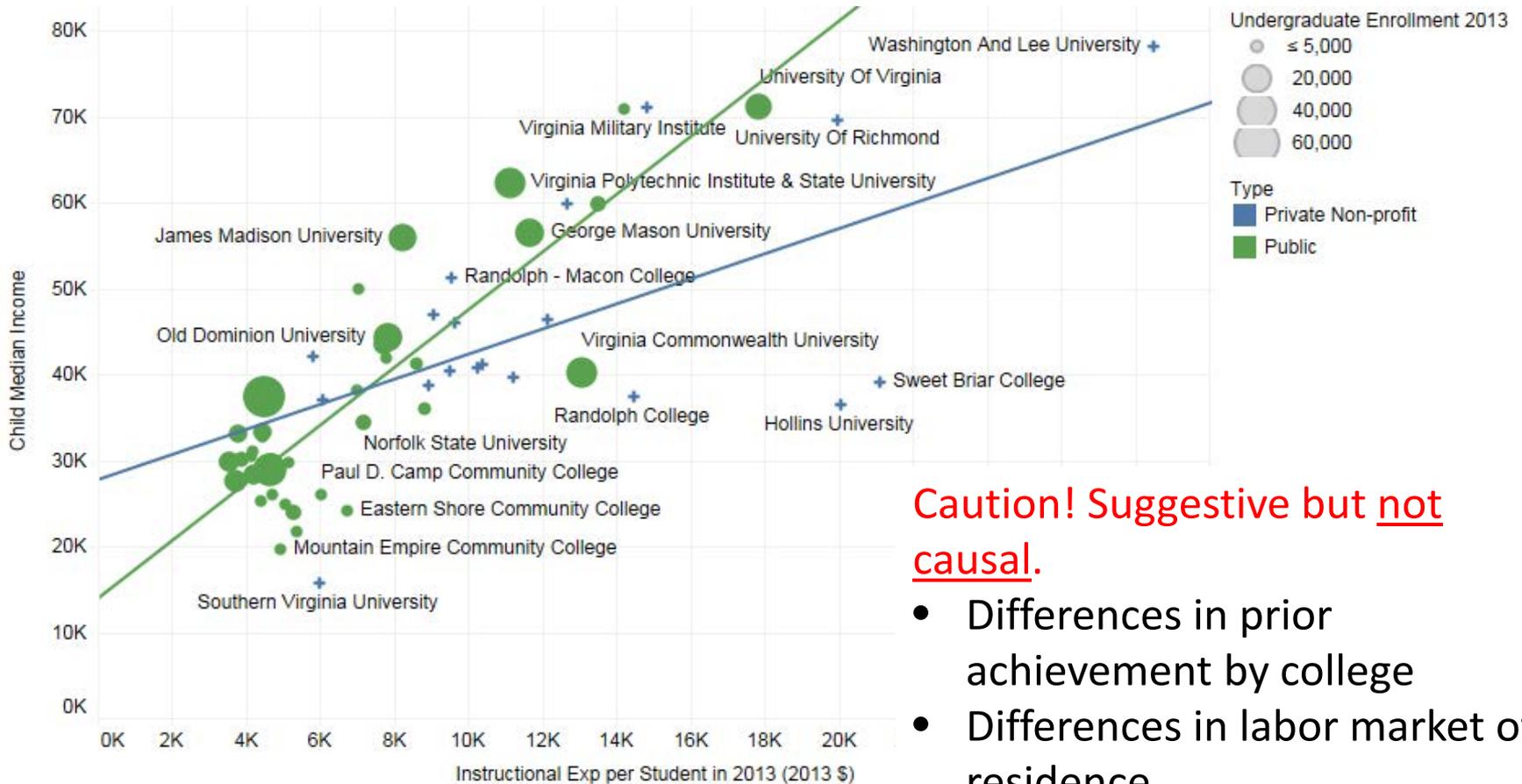
Outline & Overview

- *Supply side*: Within state markets, there are big differences in college inputs and outcomes
 - Graduation rates, resources, selectivity
 - Differences have increased over time
- *Demand side*: Where students grow up in a state is linked to where they enroll in college
- Explanations
 - Academic preparation
 - College prep
 - Preferences and community factors
- Policy opportunities

College Graduation: Virginia



Income: Virginia



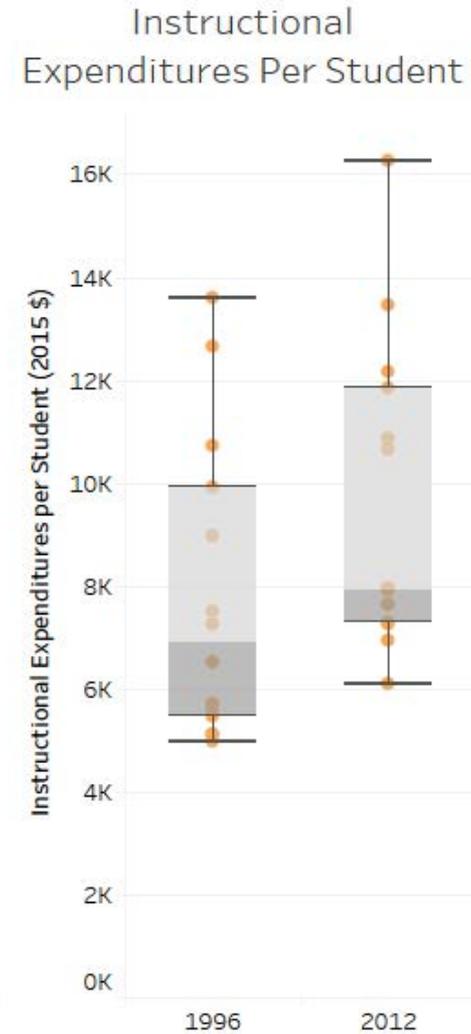
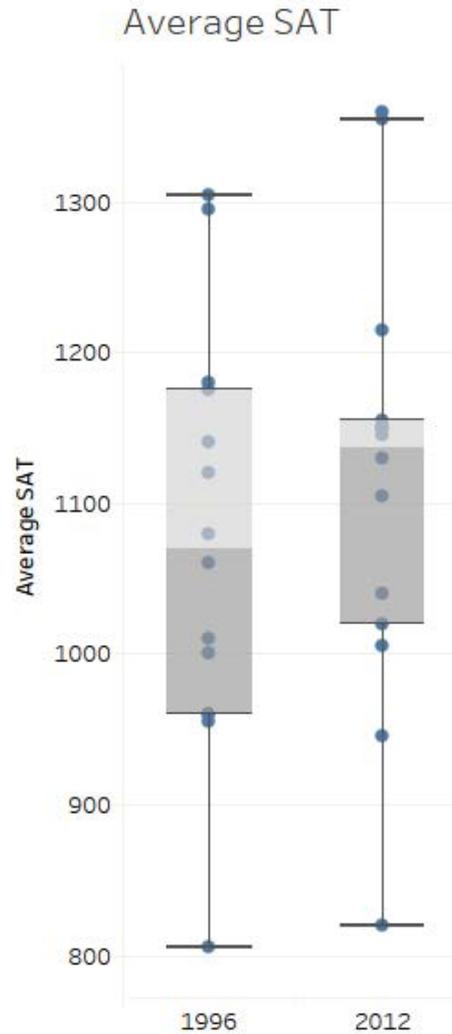
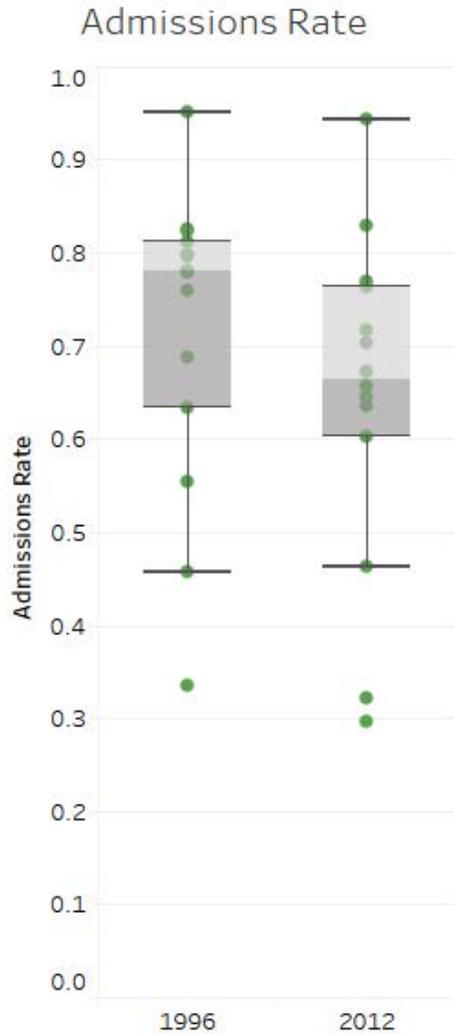
Caution! Suggestive but not causal.

- Differences in prior achievement by college
- Differences in labor market of residence

Have “supply side” features of Virginia market changed over time?

1. “Inputs” have become more stratified
2. Labor market returns to college quality have increased*
3. Most resource-intensive schools have become more selective

Selectivity at Virginia Universities

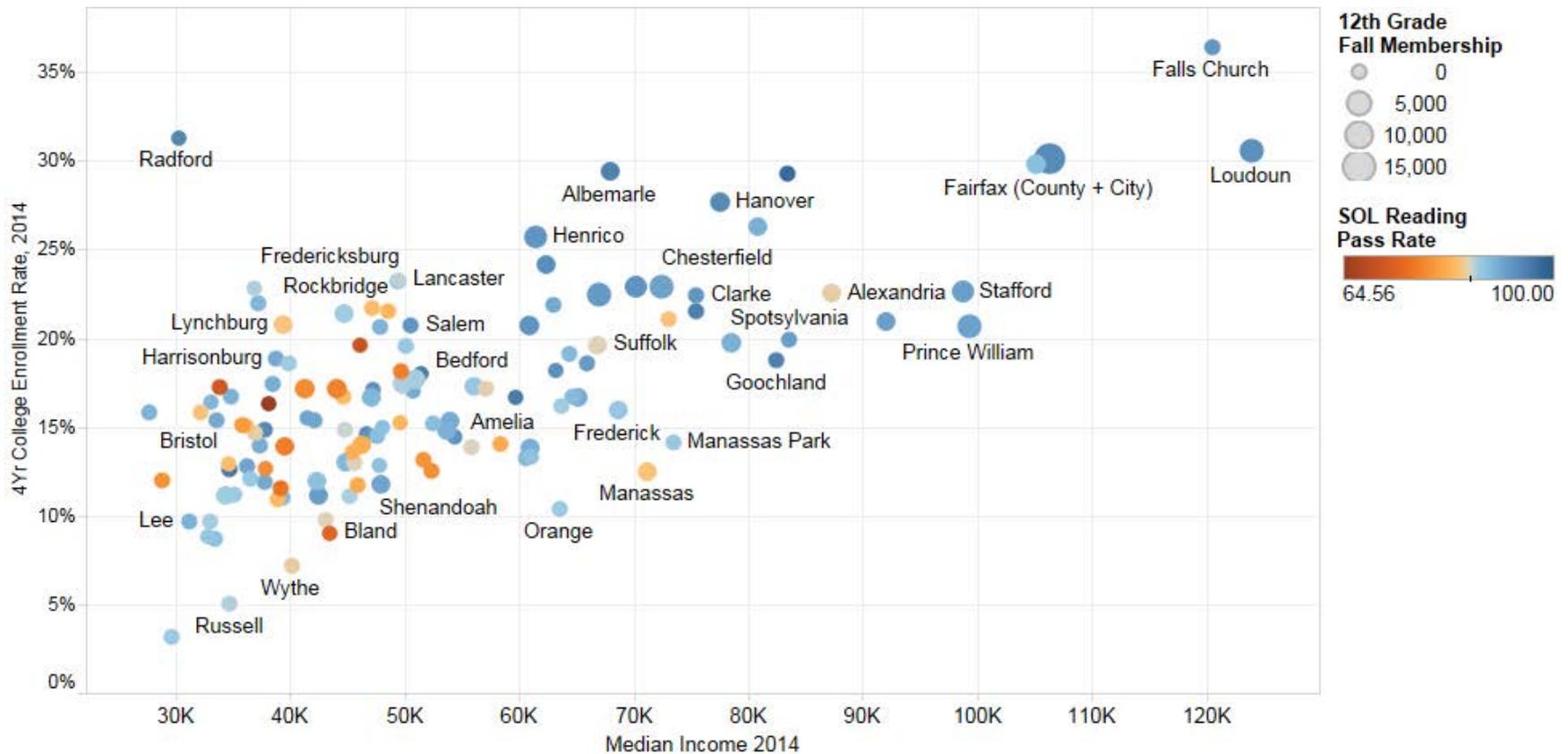


College Choice and College Outcomes by District

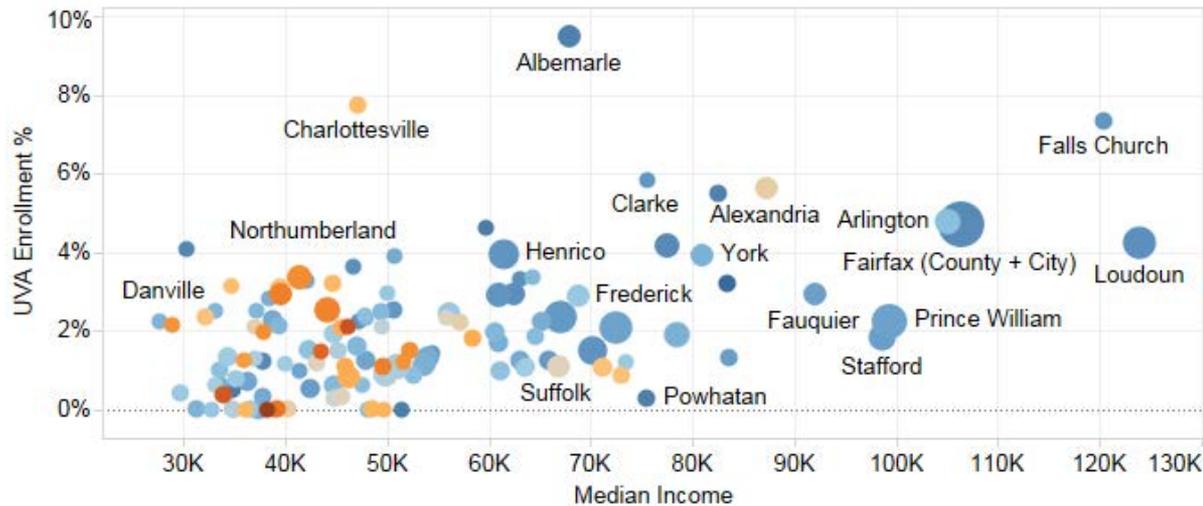
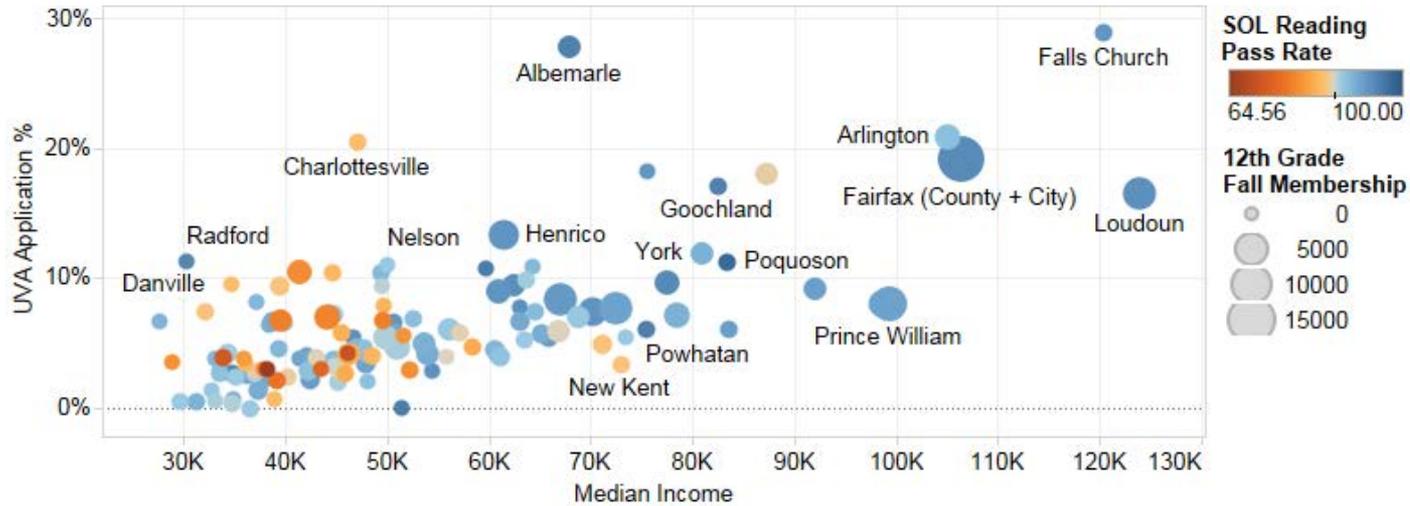
Application-enrollment by district characteristics

- Median income
- District-specific effects persist

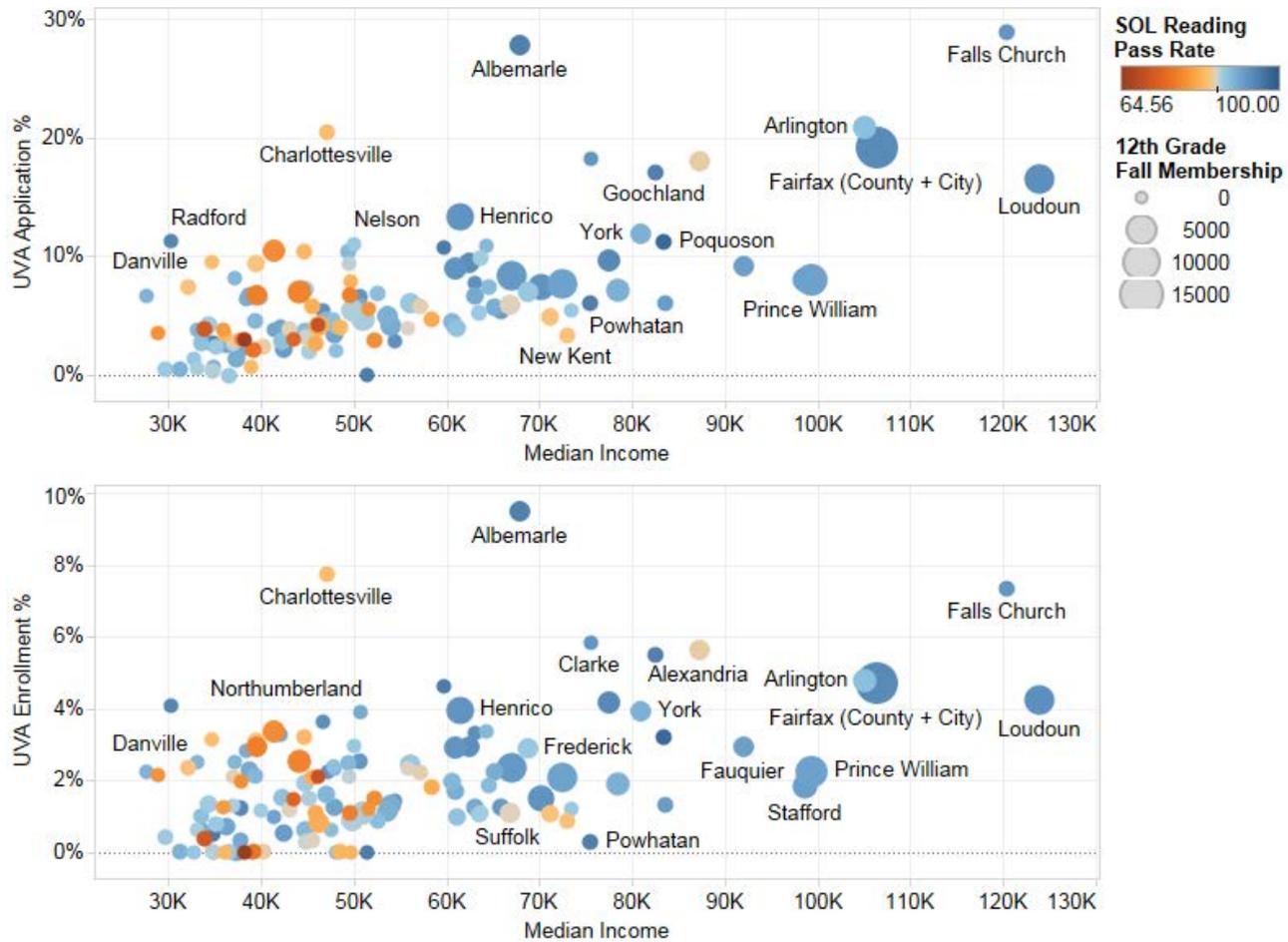
Overall Differences in 4-Year Enrollment



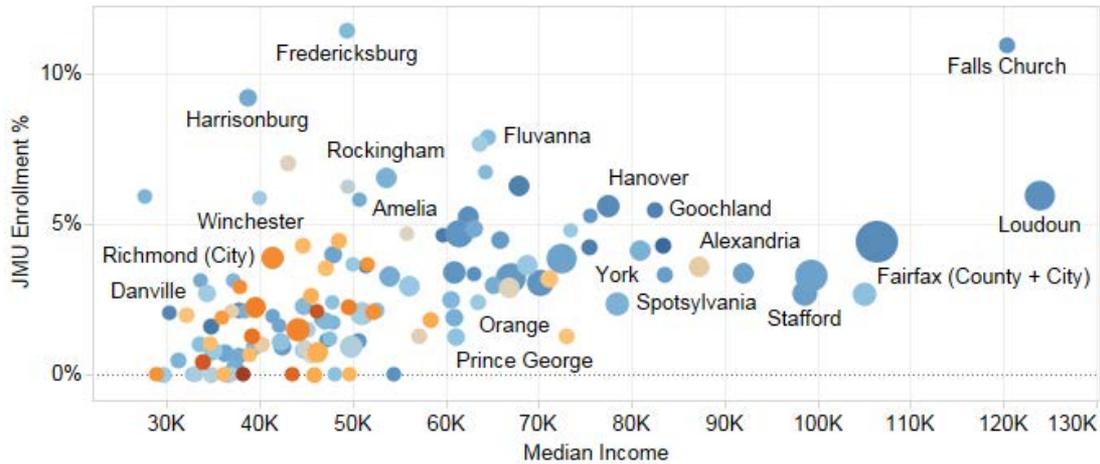
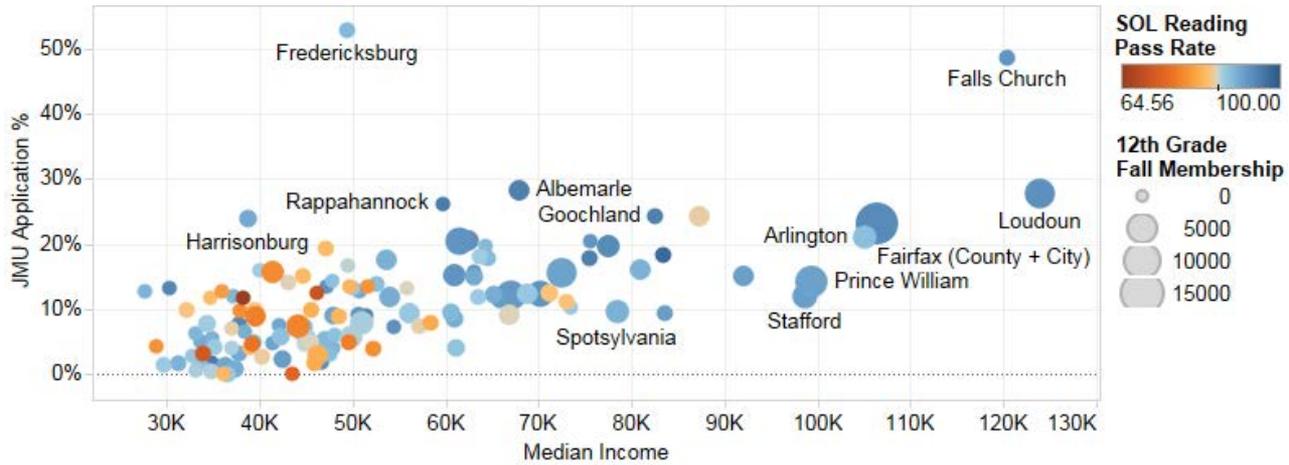
University of Virginia



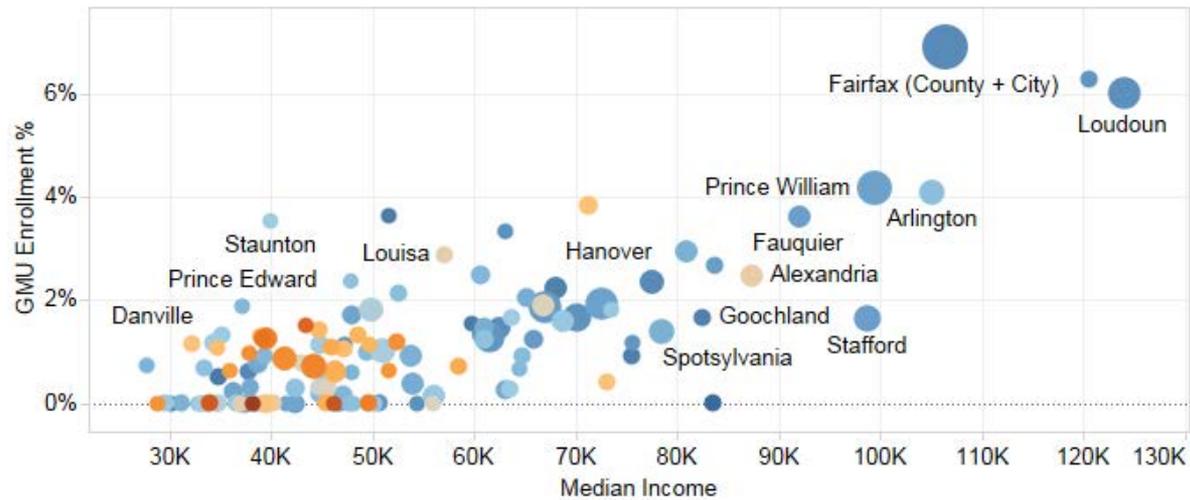
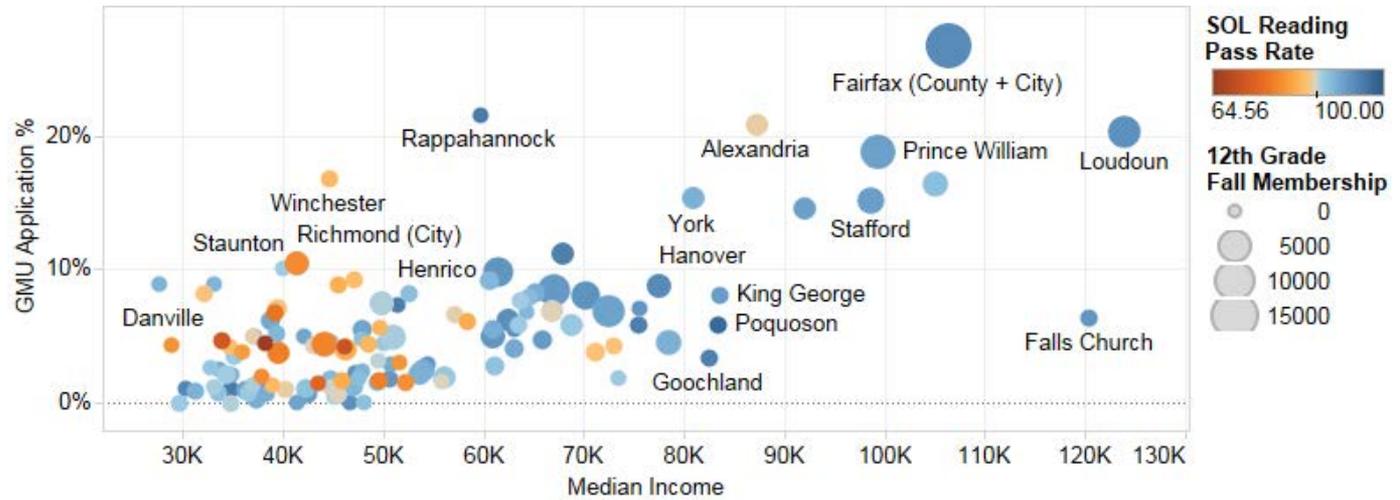
College of William & Mary



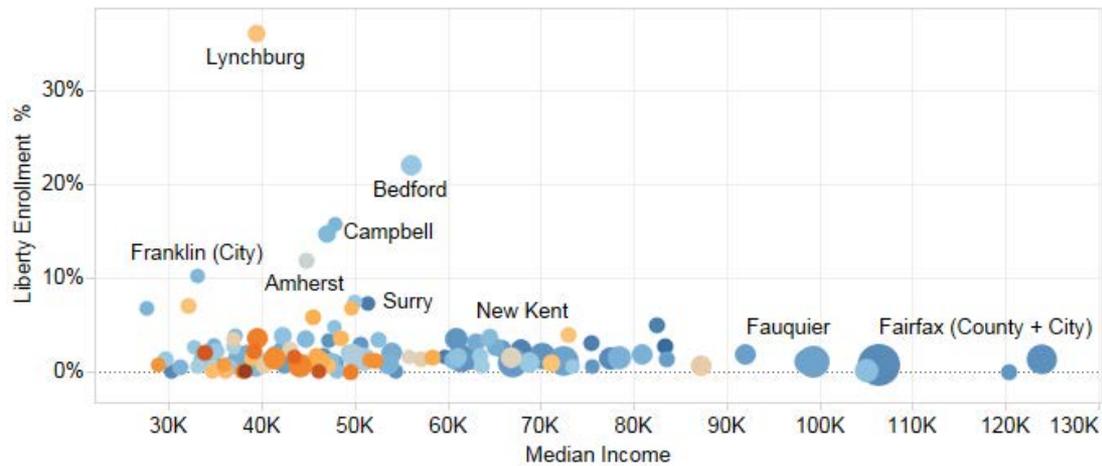
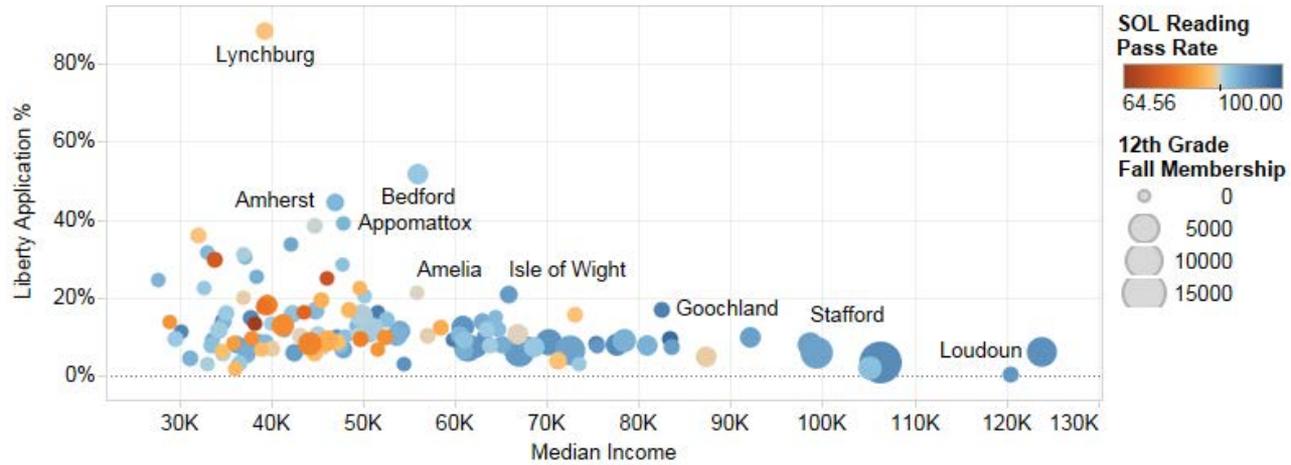
James Madison University



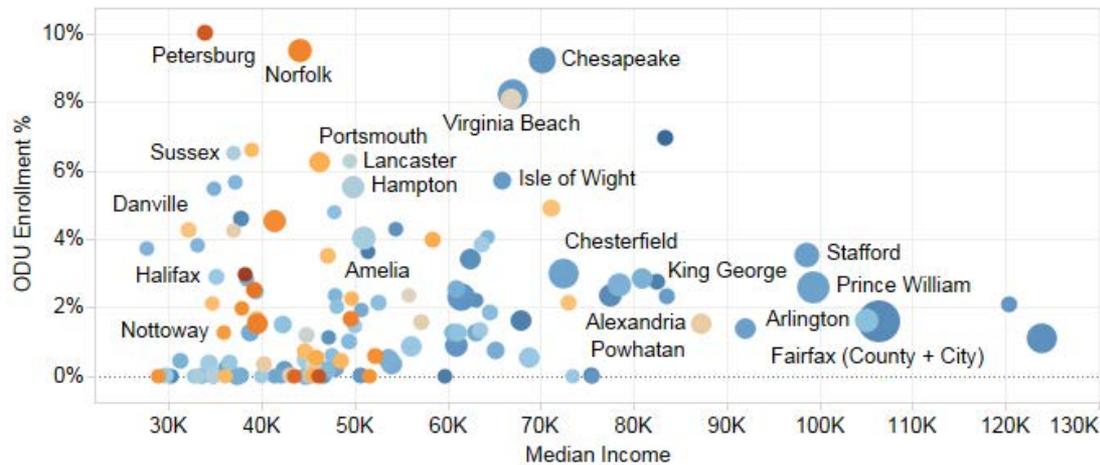
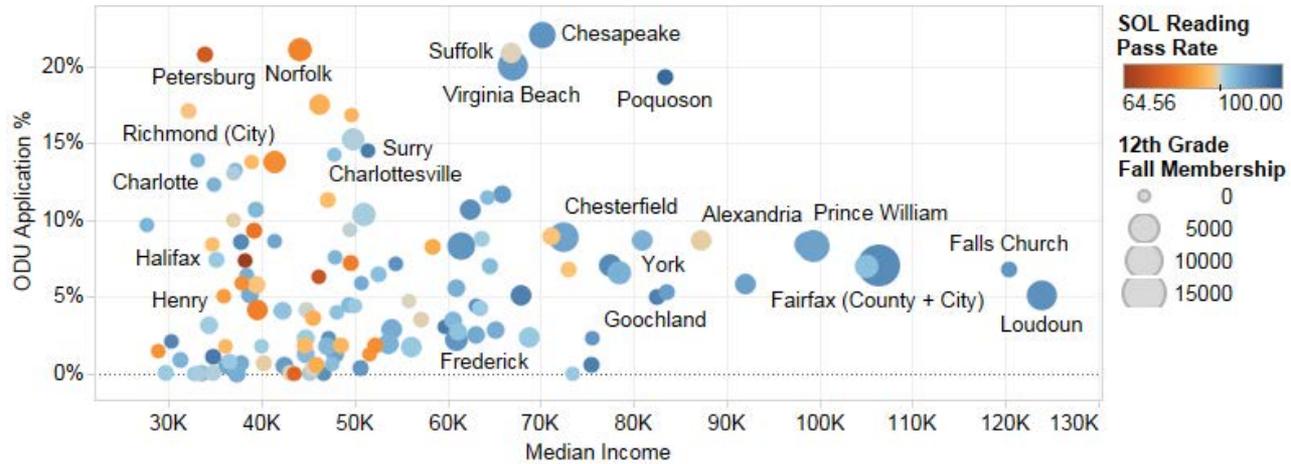
George Mason University



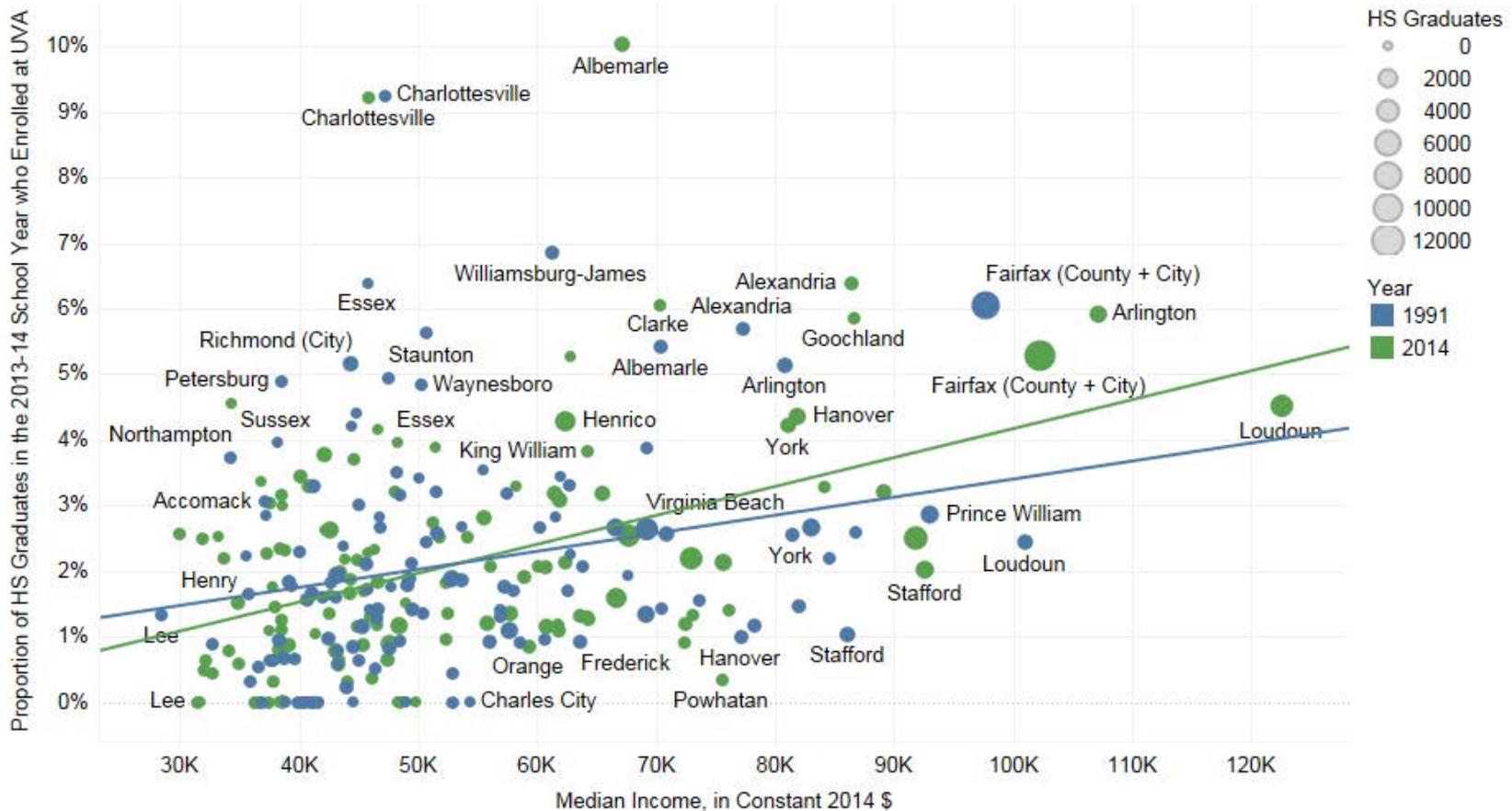
Liberty University



Old Dominion University



Changes over Time: UVa



Thought Experiment (Absent Full Data)

1. Adjust for differences in 8th grade achievement at the individual level, would we still see differences linked to districts **Yes!**
2. Adjust for differences in achievement and college prep indicators (SAT scores, AP tests), would we still see differences linked to districts? **Yes, but a lot smaller! Not causal.**
3. How much of residual difference is related to parental socio-economic characteristics?
Big residual differences linked to districts, not fully explained by income / achievement

Summary of Pictures

Outcome: Application Rate

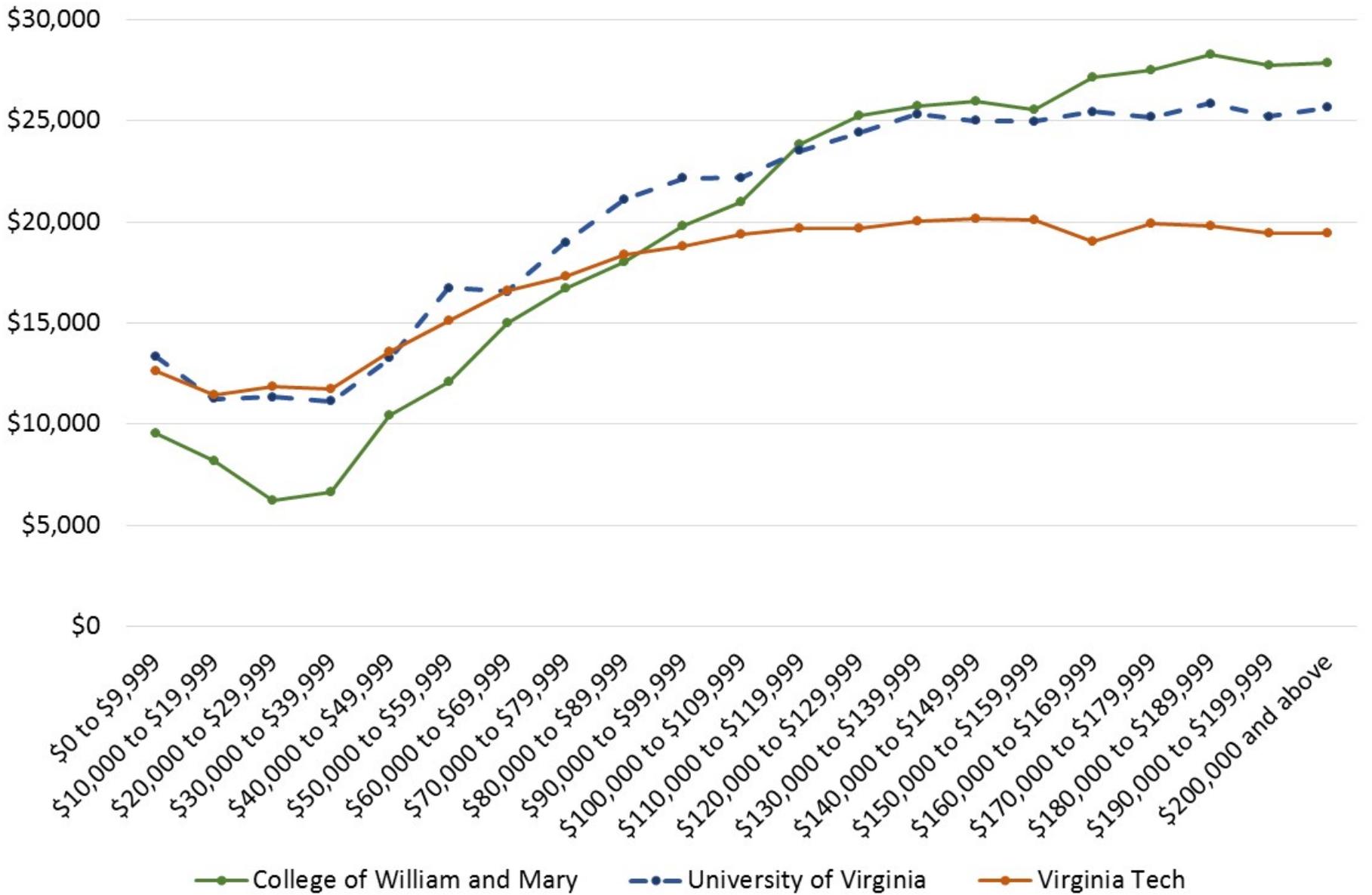
Implied Impact of \$10k increase in Median Income (pp)

	Income	Income + 8th
James Madison University	2.57	2.49
University of Virginia	1.69	1.68
Old Dominion	0.37	0.53
Liberty University	-1.63	-1.53
College of W & M	1.16	1.16
George Mason	1.60	1.68
Virginia Tech	1.95	1.82

What factors differ among districts / schools affecting college choice?

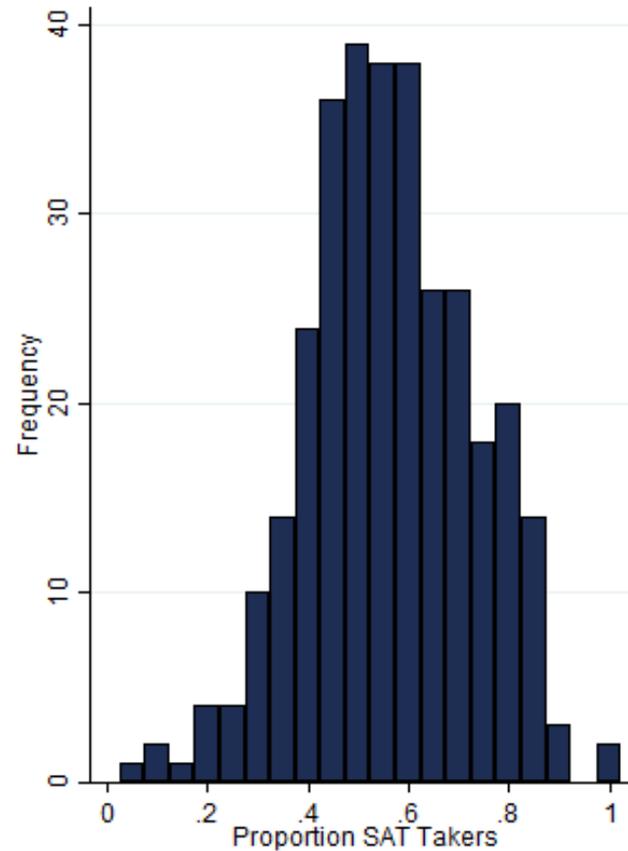
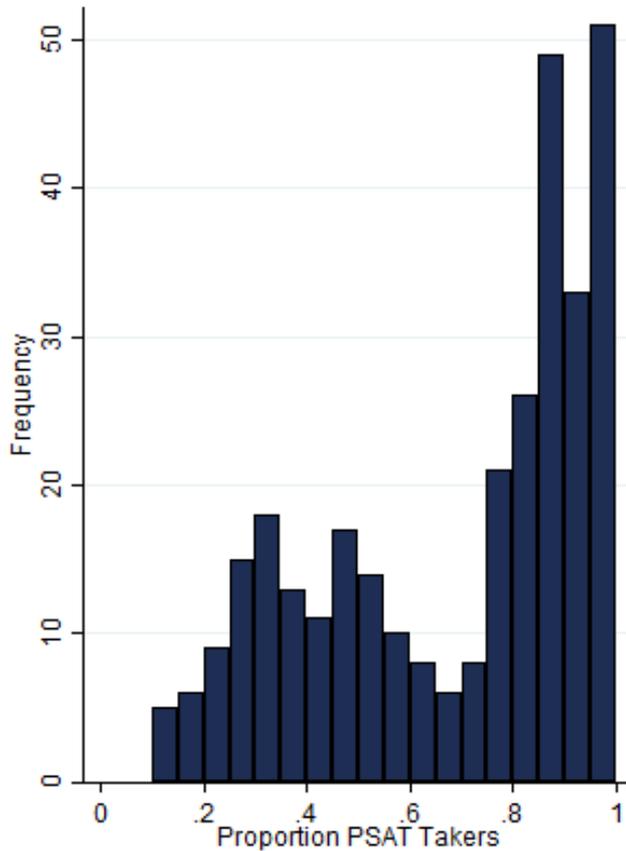
- i) Student achievement
- ii) Family circumstances (parental income)
 - Differences in net price ?
- iii) College choice processes / guidance**
 - Navigation of application process
 - PSAT / SAT exams
 - Completing multiple applications
 - Student / family preferences
 - Knowledge of different institutions

Net Price by Family Income Range, In-state Students, SCHEV Data

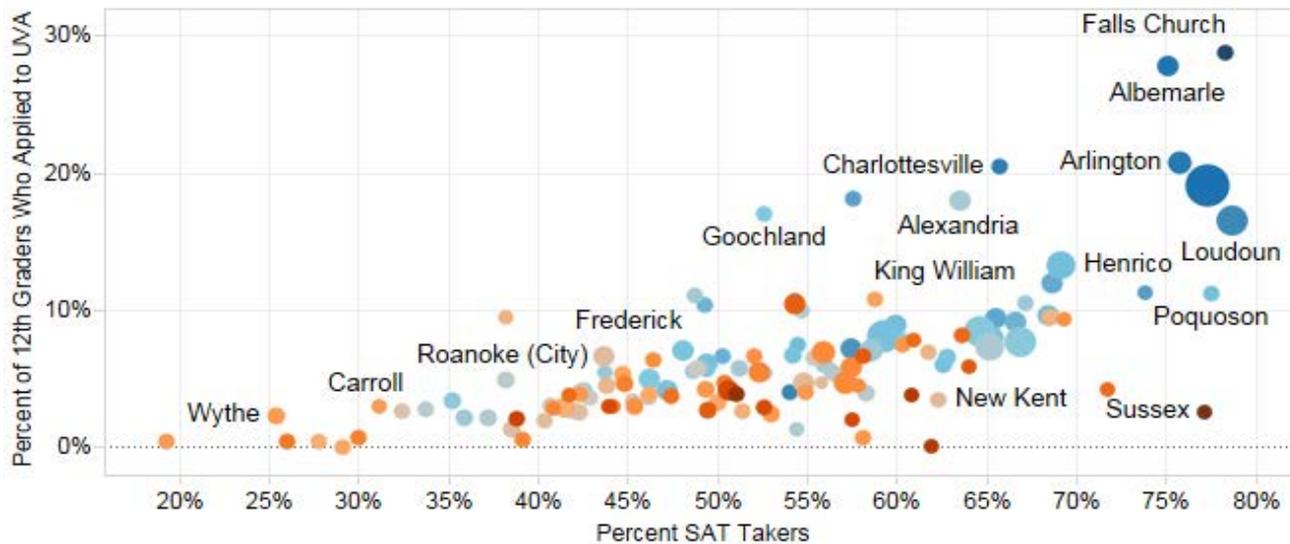
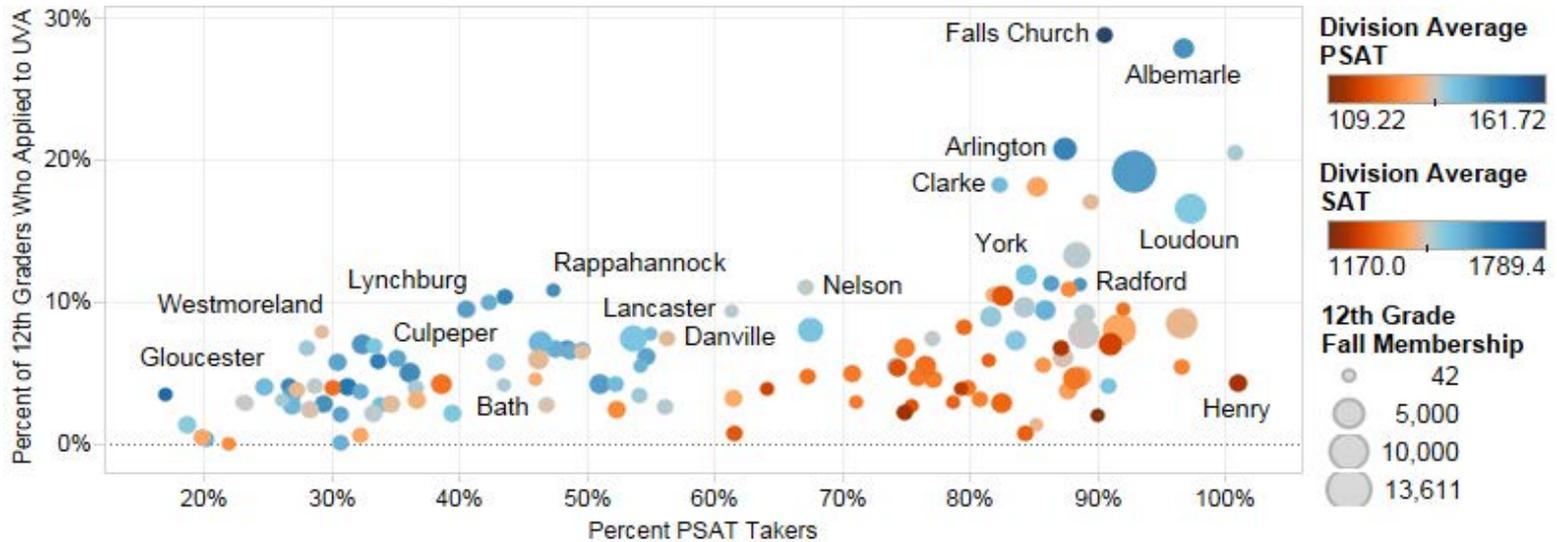


Completing Key Hurdles

Frequency of Schools by Proportion Test-Takers



Completing Key Hurdles



Implied Role of Testing Hurdles

Implied Impact of \$10k increase in Median Income (pp)

	Income	Income + 8th	Income+ 8th + SAT
James Madison University	2.57	2.49	0.09
University of Virginia	1.69	1.68	0.05
Old Dominion	0.37	0.53	0.06
Liberty University	-1.63	-1.53	-0.25
College of W & M	1.16	1.16	0.06
George Mason	1.60	1.68	0.13
Virginia Tech	1.95	1.82	0.00

Be clear: SAT test taking is symptomatic not causal!

What other differences across districts determine test-taking?

Variation in Access to PSAT Testing

- Loudoun: Free, mandatory PSAT or PSAT 8/9 testing for 9th-11th grades.
- Greene: Free and mandatory for 10th grade, free and optional for 9th and 11th grades.
- Surry: Optional PSAT administered during school day. Fee charged to students.
- Pulaski: “... (SOLs) possibly carry the most weight in terms of consequences for failure...In addition to the SOLs, Pulaski County Public Schools’ students participate in the SAT and PSAT...”

Emphasize: PSAT as symptom not the full cause of differences in approach to college choice

Looking ahead

- What are potential policy approaches?
 - Collective action / outreach by colleges and universities
 - District and school-level innovations
 - Need to use data to target resources and interventions
 - No “silver bullet” – need for demonstration and evaluation

Thank You!