ILLINOIS COMMISSION ON
EQUITABLE PUBLIC UNIVERSITY FUNDING

Proposed Model for Instruction and Student Services

“Top-Down” Approach to Calculating Adequacy Targets

Baseline Using Rev & Expend Report

- Start with the current structure and funding levels in the R&E report
- Move certain elements to match adequacy categories

Adjust the Base to Benchmarks

- The status quo in the R&E levels must be increased to provide sufficient base funding
- Adjust each category using an agreed-upon factor or better data source

Adjust for Equity

- Ensure equity by adding in weights for student, program, and institutional characteristics

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Developing Baseline Cost Using Current IL Expenditures

Examples of R&E Category Changes to Match Adequacy

To use the IBHE Revenue & Expenditure report for baseline costs, we had to realign some cost categories to match the components of the Adequacy conceptual model

Academic Support

- Put Museums and Galleries in “Public Service” component
- Exclude Hospital and Patient Services

Student Services

- Exclude Financial Assistance (address in Equitable Student Share) and Intercollegiate Athletics
- Move Financial Aid Administration to “Access” component

Instructional Programs

- A portion of Admissions, Registration, and Records goes into “Access” component

Choices in Calculating the Base

Current vs Historical

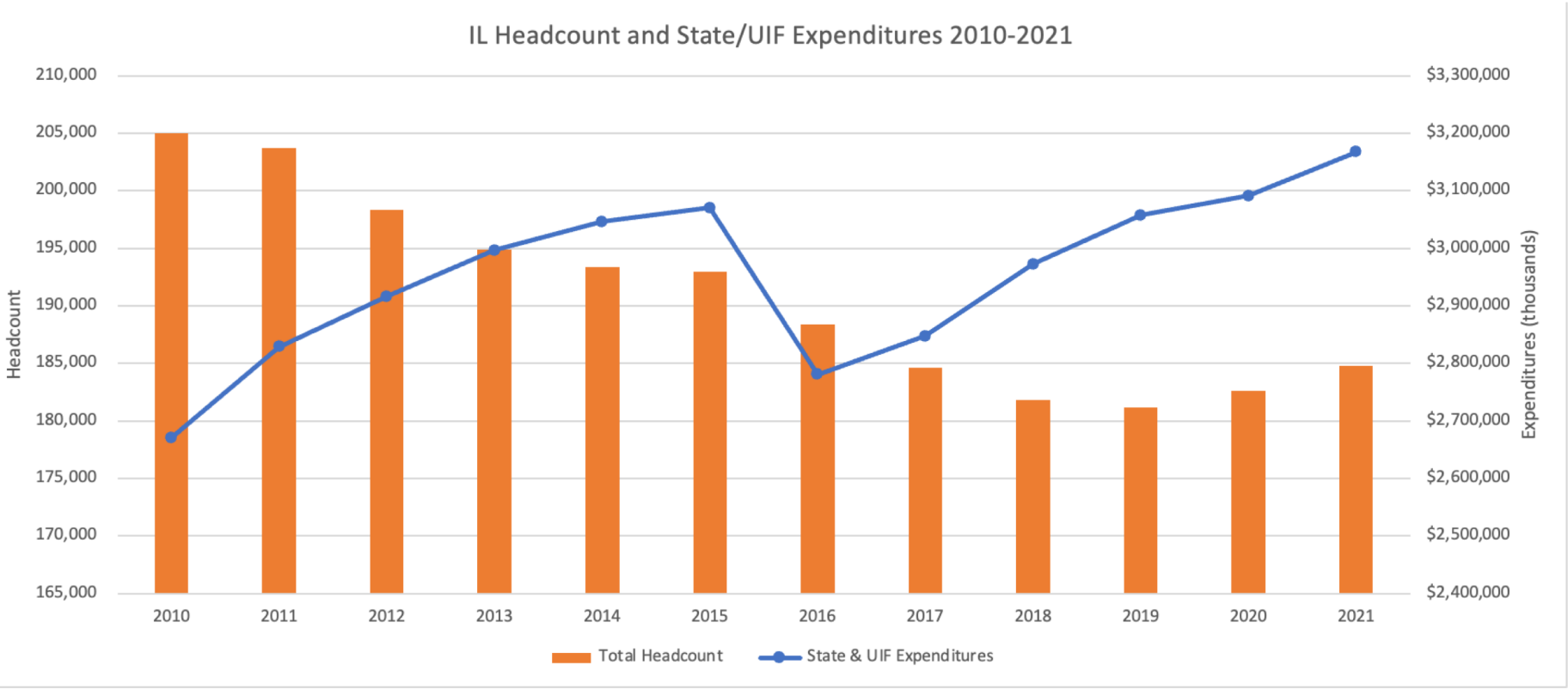
- Current spending per student is high relative to past years, partly due to declining enrollment at many schools (-5% from 2015) and increasing expenditures (3%).
- The average of 2022, 2015, and 2010 is about 10% less than 2022 levels.

Headcount vs FTE

- Headcount is 6% higher than FTE.
- Headcount may make sense for student services, while FTE may make sense for instructional costs.

We will revisit these choices after discussing the full model framework.
It is possible the base could not impact on the final cost and allocation of the model, depending on how the base adjustment and equity adjustments are made.

Past Levels of Funding per Headcount



State and UIF Expenditures per Headcount 2010-2021

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
$13,028	$13,889	$14,704	$15,372	$15,755	$15,912	$14,758	$15,421	$16,350	$16,882	$16,932	$17,144

Choices in Calculating the Base

Expenditures from All Revenues or Only State Approps & UIF

- Nearly 75% of all expenditures from other revenue goes towards Mission and O&M costs.

- Expenditures from other revenue for Mission and O&M vary more widely across institutions than those for Instruction and Student Services.

Adequacy Component	FY2022 - All Rev Sources	FY2022 - State & UIF Revenue
Student Centered Access	$1,073	$827
Academic Supports	$1,073	$827
Non-Academic Supports	$1,003	$317
Core Instruction Costs	$10,714	$8,269
Mission (Research, Public Service, Artistry)	$8,281	$1,227
O&M	$6,828	$3,757
Total	**$28,973**	**$15,225**

Choices in Calculating the Base

Expenditures from All Revenues or Only State Approps & UIF

- Main drivers of the difference between All and State/UIF:
  - Non-Academic Supports: Student health and medical services, Social and Cultural Development
  - Mission: Community Services, Cooperative Extension Services, Research Centers, Individual/Project Research
  - O&M: Permanent Improvement, Repairs/Maintenance

Recommendation: Use ”All Revenue Sources” for expenditures that go towards Instruction and Student Services, as those are likely to impact adequacy and equity. Use “State & UIF Revenue” for expenditures that go towards Mission and O&M.

Baseline Cost per student

Adequacy Component	Base IL Expenditures (per Headcount) - Options		
	FY2022 - All Rev Sources	FY2022 - State & UIF Revenue	Recommendation (Mix)
Student Centered Access	$1,073	$827	$1,073
Academic Supports	$1,073	$827	$1,073
Non-Academic Supports	$1,003	$317	$1,003
Core Instruction Costs	$10,714	$8,269	$10,714
Mission (Research, Public Service, Artistry)	$8,281	$1,227	$1,227
O&M	$6,828	$3,757	$3,757
Total	**$28,973**	**$15,225**	**$18,848**

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Adjusting the Baseline to Benchmarks

Ways to Adjust to Benchmarks

1) Increase Funding to Reach an Outcome Target

- Calculate an adjustment necessary to move from current levels to a target level (e.g., graduation rate) based on research and data analysis linking spending to outcomes.

2) Identify Funding Levels of High-Performing Institutions

- Use different sources (IL historic highs in spending per FTE, 75th percentile IL or national spending, peer institutions with diverse student bodies and strong, equitable outcomes) to make informed decision about adequacy adjustment to current levels.

Education and Related Spending (E&R) as Proxy Measure for Spending

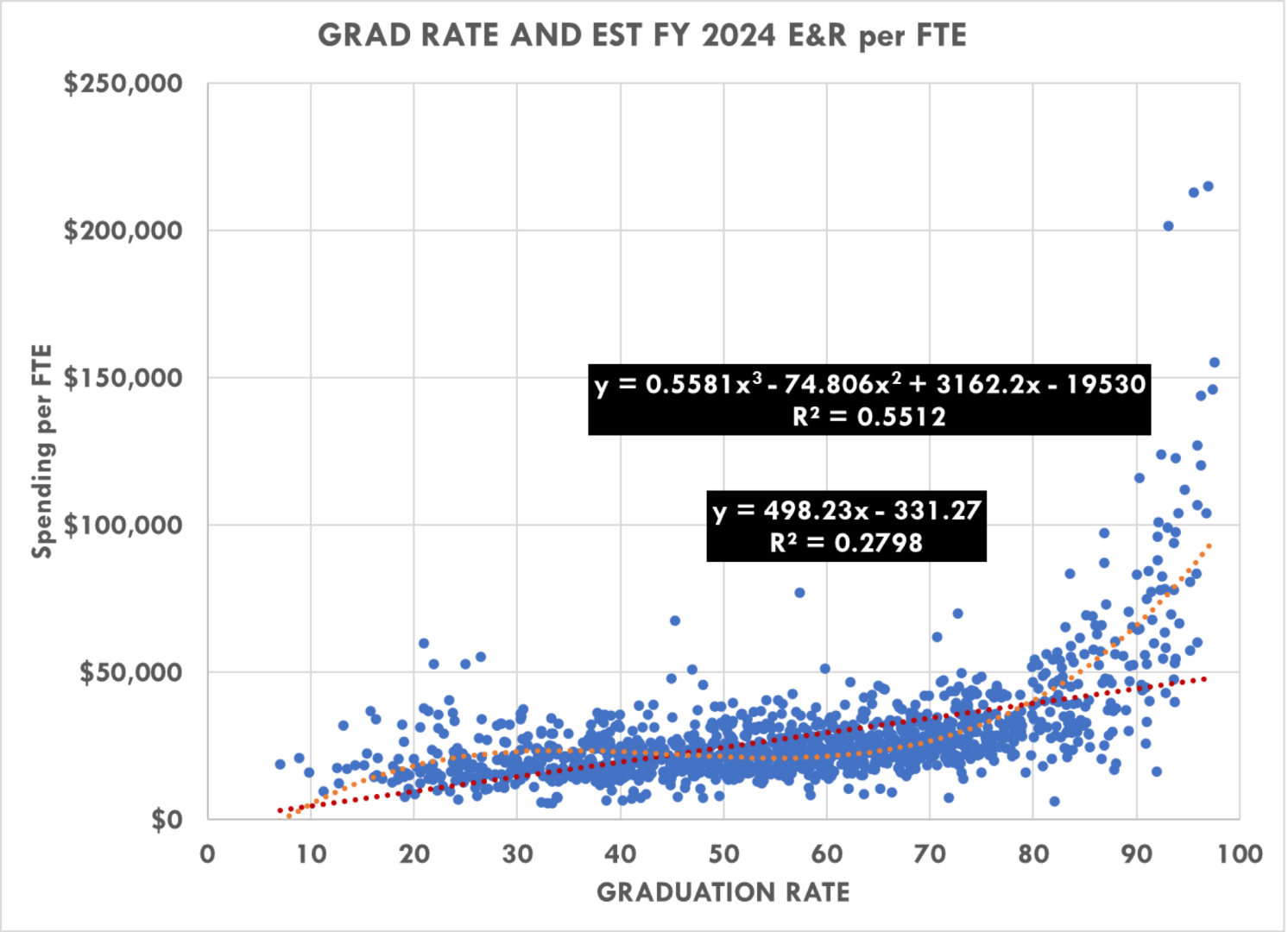
- Standard national benchmark measure of institutional spending from Delta Cost Project (https://www.air.org/project/delta-cost-project)
- Includes:
  - Instruction & departmental research, service (all)
  - Student Services (all)
  - Indirect costs
    - Academic support (partial)
    - Institutional support (partial)
- Excludes
  - Separately budgeted research and public service
  - Academic & institutional support attributable to separately budgeted research and public service
- Useful for high-level national benchmarking, but not Illinois-specific

Graduation Rate as Proxy Measure for Outcomes

- Good proxy measure across a large population of institutions to statistically differentiate outcomes
- Strong correlation with spending and with other outcomes
- Unreliable or incomplete measure across small numbers of institutions

Average Spending at Different Graduation Rates

Grad Rate	Average of Est. 2024 E&R per FTE	# of Public 4-year Institutions
0-9	$25,735	5
10-19	$18,399	36
20-29	$20,534	104
30-39	$20,872	168
40-49	$22,092	210
50-59	$23,884	272
60-69	$26,452	267
70-79	$30,403	191
80-89	$45,348	112
90-99	$85,408	61
Grand Total	$28,566	1426



Interpretation

An increase of one percentage point in the graduation rate is associated with a $498.23 increase in spending per FTE.

Identifying a Benchmark

PREDICTED E&R SPENDING LEVELS (IN EST. FY 2024 DOLLARS) FOR INSTITUTIONS WITH DIFFERENT GRADUATION RATES

		GRADUATION RATE				
		40	50	60	70	80
TOTAL	Polynomial	$ 22,987	$ 21,328	$ 21,450	$ 26,703	$ 40,435
	Linear	$ 19,598	$ 24,580	$ 29,563	$ 34,545	$ 39,527

- Schools with graduation rates of 80% have approximately $40,000 in education and related expenditures.
- We can calculate the compare IL figure and adjust the baseline by the percent difference (data forthcoming).
- Note: the baseline data on slide 8 is not comparable.

Graduation Rates as an Outcome Target

Other Research on Effect of Funding on Graduation Rates

Chakrabarti et al 2020 – "Experiencing a $1,000 per-FTE increase in state appropriations while enrolled in college increases the likelihood of earning a bachelor's degree by age 25 by 1.5pp for students first enrolled at a four-year institution."

Demings and Walters 2018 – "A 10% increase in institutional spending increases credentials awarded at community colleges by 14.5% and BA attainment at four-year institutions by 4.5%."

Bound et al 2019 - "A 10% decrease in state appropriations at public four-year research institutions results in a 3.6% decrease in bachelor's degree completion, a 7.2% decrease in Ph.D. completion, and has no statistically significant effect on master's degree completion."

Benchmarking Adjustment Options

Outcome Target

- Goal: Increase grad rate from 63.3% to 70% (6.7 pp)
- An additional $600/FTE increases completion by 1 pp
- Needed investment: **$4,276 per headcount**

High-Performing Institution Comparison

- Goal: Fund IL schools at a level comparable to those that achieve >80% graduation rates
- Current IL E&R expenditures: (TBD)
- E&R expenditures for high-grad-rate schools: $40,000
- Needed investment: (X% increase over current spending) or **$X per headcount**

Per Student Adjusted Base

Adequacy Component	Base IL Expenditures (per Headcount) Recommendation	Benchmark Adjustment - Options 70% Grad Rate	High-Performing Benchmark	Per Student Adjusted Base
Student Centered Access	$1,073	$4,276	$2,693	$1,404
Academic Supports	$1,073			$1,404
Non-Academic Supports	$1,003			$1,313
Core Instruction Costs	$10,714			$14,019
Mission (Research, Public Service, Artistry)	$1,227	TBD	TBD	$1,227
O&M	$3,757	TBD	TBD	$3,757
Total	**$18,848**	**$4,276**	**$2,693**	**$23,124**

Notes:

- We made the adjustment to Instruction and Student Service categories, not Mission and O&M. The rationale is that the Education & Related Expenditures used in the analysis of relationship between spending and graduation rates is most closely aligned with the costs in those categories. Adjustments to Mission and O&M are TBD.
- We plan to break out Core Instruction Costs by level and discipline. Each would get its proportional share of the benchmarking adjustment. The greater level of granularity will allow for program differentiation in building the Adequacy Targets.
- The High-Performing Benchmark adjustment is a placeholder, awaiting additional data.
- The Per Student Adjusted Base uses the 70% Grad Rate adjustment.

Benchmarking Adjustment Options

For Discussion

- Which adjustment option do you prefer – outcome target or high-performing comparison?
- If we use an outcome target, is a 70% grad rate the right target?
- If we use a high-performing comparison, which schools (with what graduation rate) should it benchmark against?
- Might this approach to a base adjustment , or a similar one, work for Mission or O&M as well?

Adjusting for Equity

Ways to Adjust for Equity

1) **Increase funding to reach an outcome target (e.g. eliminate gaps)**

2) **Translate best-practice interventions (cost and impact) into a weight or add-on**

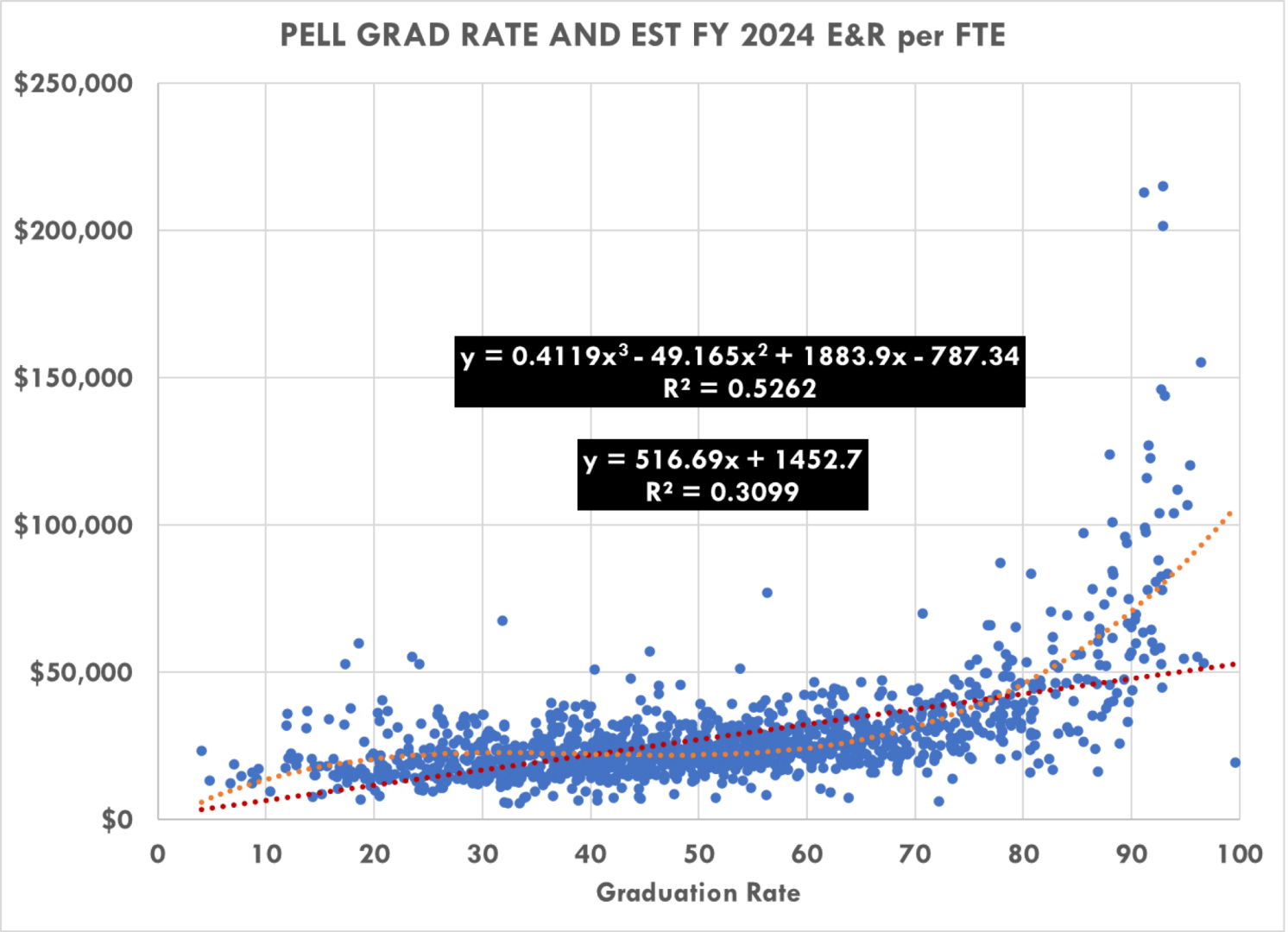
Analysis of Spending to Achieve Similar Grad Rates for Pell and BIPOC Students

PREDICTED E&R SPENDING LEVELS (IN EST. FY 2024 DOLLARS) FOR INSTITUTIONS WITH DIFFERENT GRADUATION RATES

		GRADUATION RATE				
		40	50	60	70	80
BIPOC	Polynomial	$ 22,347	$ 22,409	$ 25,103	$ 32,633	$ 47,208
	Linear	$ 23,629	$ 28,581	$ 33,532	$ 38,484	$ 43,436
PELL	Polynomial	$ 22,266	$ 21,983	$ 24,223	$ 31,459	$ 46,161
	Linear	$ 22,120	$ 27,287	$ 32,454	$ 37,621	$ 42,788
TOTAL	Polynomial	$ 22,987	$ 21,328	$ 21,450	$ 26,703	$ 40,435
	Linear	$ 19,598	$ 24,580	$ 29,563	$ 34,545	$ 39,527
BIPOC DIFFERENCE	Polynomial	$ (640)	$ 1,082	$ 3,652	$ 5,930	$ 6,773
	Linear	$ 4,031	$ 4,000	$ 3,970	$ 3,939	$ 3,909
PELL DIFFERENCE	Polynomial	$ (721)	$ 655	$ 2,773	$ 4,756	$ 5,727
	Linear	$ 2,522	$ 2,707	$ 2,892	$ 3,076	$ 3,261

Implications of Analysis

- Outcome gaps for low-income and students of color correlate with different levels of spending
- Institutions with **60%** graduation rates for **students of color** spend about **$4,000** (13-17%) more per student than institutions with 60% overall graduation rates.
- Institutions with **70%** graduation rates for **students of color** spend about **$4,000-6,000** (11-22%) more per student than institutions with 70% overall graduation rates
- Institutions with **60%** graduation rates for **Pell students** spend about **$3,000** (10-13%) more per student than institution with 60% overall graduation rates.
- Institutions with **70%** graduation rates for **Pell students** spend about **$3,000-$5,000** (9-18%) more per student than institutions with 70% overall graduation rates.
- Data suggest a correlation not causation, relationship between spending and outcomes that is necessary but not sufficient
- Research and practice data from Illinois and elsewhere illustrate the mechanism for spending to improve outcomes



Interpretation

An increase of one percentage point in the Pell graduation rate is associated with a $516.69 increase in spending per FTE.

Funding to an Outcome Target – Equity

- Example: Eliminate grad rate gap between Pell and non-Pell students (13 pp)
- An additional $600/FTE increases completion by 1 pp
- Needed investment: **$8,299 Pell recipient** (44% above the adjusted per student base)

- This approach is difficult to implement in a formula, as it would require estimates for gaps for students with multiple characteristics. But it helps provide a benchmark of the total cost of adjustments using other approaches.

Best Practice Interventions

- In this approach, we identify research-based interventions specific to each adequacy component that improve outcomes and equity for target populations

    - Student Centered Access
    - Academic & Non-Academic Supports
    - Core Instruction Costs

Best practices: Student-Centered Access

- The equity adjustment could match funding to programs that increase the enrollment of traditionally underrepresented students

- Bottom Line has the most rigorous evaluation and impact among those listed here, but there may be others

Best Practices in Enrolling Historically Marginalized Students	
Upward Bound	$4,900 per student
Bottom Line	$1,000 per student
Talent Search	$540 per student
College Advising Corps	$170 per student

Discussion Questions:

- Are there other practices that should be part of the add-on to the access component?

- Which students should get this add-on in the formula?

- How can we apply the add-on to ensure schools enrolling lots of first-gen, low-income students are adequately funded for their work AND schools with low enrollment are incentivized to increase their outreach and recruitment?

Best practices: Academic & Non-Academic Supports

- For academic and non-academic supports, we recommend a set of combined “packages” of different service levels (high, medium, low).
- The cost of each package can be based on comprehensive interventions (e.g., ASAP, Opening Doors, One Million Degrees, etc.) that use a suite of services which overlap with key elements the topic teams identified such as high levels of advising, financial assistance, tutoring, career services.
- It is easier to build a cost range based on a suite of services than building one from individual interventions.
- We can add interventions to the package if they address some aspect of academic/non-academic supports not typically covered by the comprehensive interventions.

PROGRAM	COST	SERVICE	IMPACT	CONTEXT
CUNY ASAP	$4,676 ($5,428 counting costs of retention)	Advisors, full-time enrollment, financial assistance incl for basic needs, tutoring, career services. *Advisor ratio of 1:120-150 students*	17 pp increase in grad rates	NY and OH CCs, dev ed students
CUNY ACE		Monthly seminar, monthly advisor meeting, four-year academic plan for on-time graduation, career services, required internship	17 pp increase in BA completion	NY public 4yr colleges, first year students, 80% low-income
Project Quest	$12,464 (22% of cost is financial aid)	Advising, financial aid, academic supports, counseling, referrals to outside agencies, meetings on life skills (overall more workforce training focused)	13 pp increase in postsec attainment	Adults earning AA and 1-year certificates at CCs in health, business, IT, manufacturing
Opening Doors	$2,461	Learning Communities – linked courses, counseling, tutoring, and textbook voucher	4.6 pp increase in completers	CC students in NY
One Million Degrees		Program coordinators, tutors, professional development coaches, and financial stipends *Coordinator ratio of 1:65*	11-16 percent increase in retention	Students at City Colleges of Chicago
TRIO Student Support Services	$1,752	Academic advising, may also include tutoring, labs, workshops, special courses.		Low-income, first-gen students (all types of colleges)
Bottom Line	"increases BA attainment by over 2 pp per	Access advising (pre-college) and Success advising (in college support)	7.6 pp (16%) increase in BA completion, but only 1.6 pp due to in-	IL, OH, NY, MA Low-income, first-gen students

Other Academic & Non-Academic Support Comparisons

- UI-Chicago example
  - ~$6,900 per student cost for student services not including financial assistance; includes some of what is counted in the base amount.
  - Includes: Health & Wellness programs, pilot programs like Summer College and Accelerate Your Success, Cultural Centers, Academic Success programs and centers, and the Dean of Students.
- Other organizations using holistic services we spoke to:
  - HOPE Chicago, National Louis University, One Million Degrees, CUNY
  - Range of program costs: $2,500-$5,000

"Package" of Academic & Non-Academic Supports and Cost Per Student for Equity Adjustment		
High	**Medium**	**Low**
$6,000	$4,000	$2,000

Package costs based on the range of services listed in prior slides – the most effective had higher costs around $5,000 per student.

Consider these costs in the context of the $8,300 per Pell student to eliminate grad rate gaps.

Recommended approach to identifying which students would be eligible for the equity add-on associated with each "package" :

- Base the level of service needed on the current outcomes gap in IL, creating tiers based on natural breaks in the data

- Students with multiple characteristics would be placed into the highest of their tiers +1 (e.g. a Pell adult learner's highest tier is "High" so they would be "Intensive")

Tier	Student	Grad rate gap
Intensive	EBF Tier 1 school	?%
	High + Other	
High	BIPOC	17%
	Pell	13%
	EBF Tier 2 school	?%
	Medium + Other	
Medium	Student w/ Disability	?%
	Adult learner	?%
	Student parent	?%
Low	Transfer student	?%
	Rural student	?%

Adjustments for Equity

Student Characteristics for Weighting
Low-income
Race/ethnicity
First-generation
Academic preparation level
K-12 district resource (e.g., EBF Tier)
Students with disabilities*
Student parents*
Adult learner
Employment history*

We may not be able to create add-ons for all the student populations identified by the Adequacy work group. But many of the characteristics overlap and correlate.

* IL does not have data in its system to identify retention or graduation rate gaps for this characteristic

Supports Not Included in Most Comprehensive Interventions

Some common student services are not part of many of the comprehensive evidence-based practices we reviewed. Therefore, we could add in additional equity adjustments for these components based on estimates of costs for these services

Non-academic:

- Health services
- Counseling (incl mental health)
- Basic needs supports

Academic:

- First-Year Seminars and Bridge programs (TRIO?)
- Career Connections, Work-Based Learning

Academic & Non-Academic Support Adjustments

Discussion Questions:

- Does a tiered set of services approach make sense?
- Are the number of tiers (3) and costs right?
- Is the approach to identifying which students get which tier of service right?
- What other services or interventions should be included in the equity add-on for these components?

Best practices: Core Instructional Costs

- Most of the adjustments to close equity gaps would be through Academic & Non-Academic Supports
- The Adequacy Work Group included a recommendation to include the costs of recruiting and retaining a more diverse faculty.
- UI-Chicago Underrepresented Faculty Recruitment Programs: **$667 per student**
- **Discussion Questions:**
  - Are there other programs to use as benchmarks for this adjustment?
  - Are there other equity adjustments to instruction costs that should be made?

Equity Adjustments

Adequacy Component	Per Student Adjusted Base	Equity Adjustments
Student Centered Access	$1,404	$1,000
Academic Supports	$1,404	$2,000-$6,000
Non-Academic Supports	$1,313	
Core Instruction Costs	$14,019	$667
Mission (Research, Public Service, Artistry)	$1,227	TBD
O&M	$3,757	TBD
Total	**$23,124**	**$3,667-$7,667**