# Measuring a Liberal Education and its Relationship with Labor Market Outcomes: An Exploratory Analysis

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# Outline of presentation

1. Background & Motivation
2. Framework & Approach
3. Development of Index Scores
4. Exploratory Analyses & Findings
5. Limitations
6. Conclusion & Future Directions
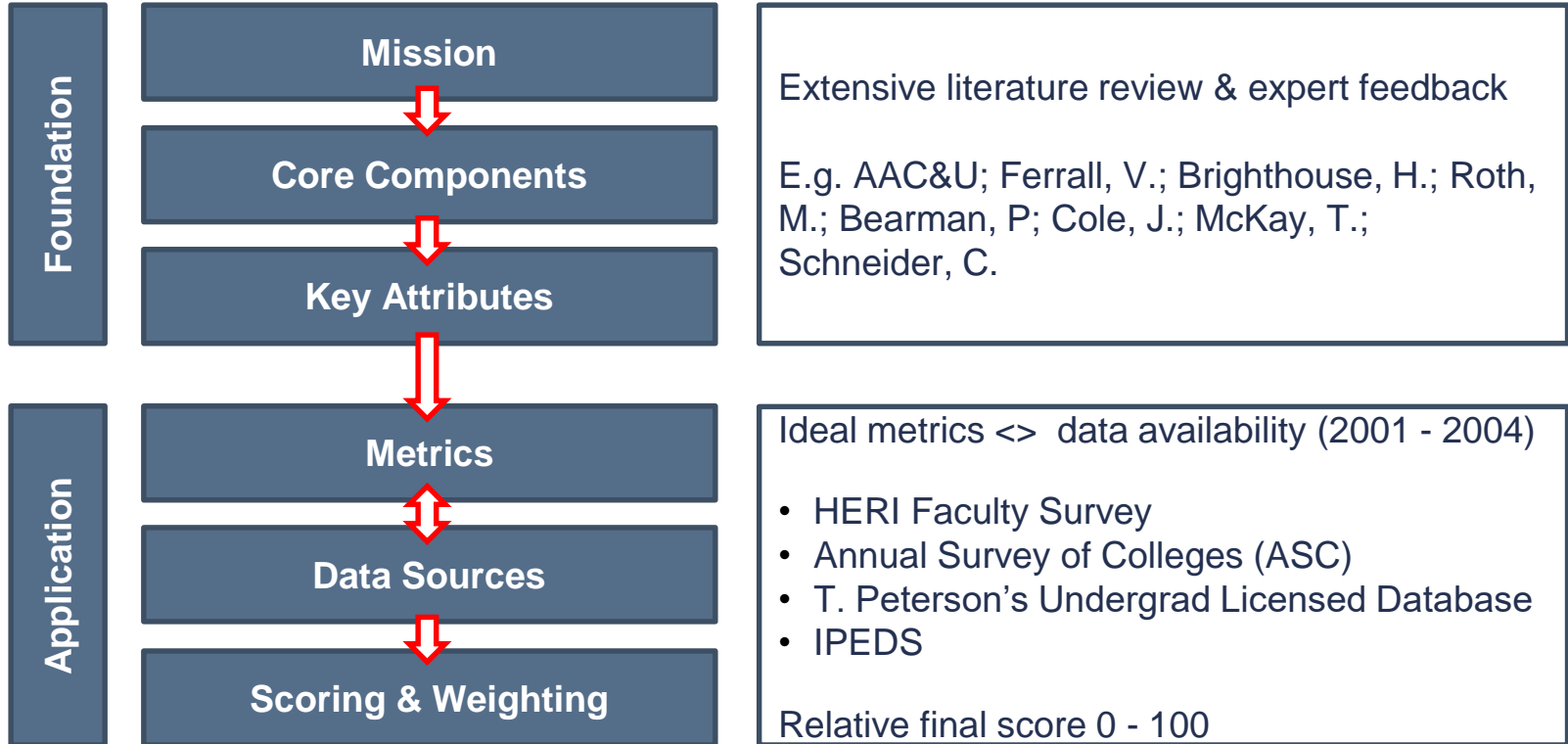
# Background & Motivation

- Ongoing but unsupported questioning of the value of the liberal arts & sciences - particularly its economic value for students.

- "A liberal arts college education is neither necessary nor sufficient for having received a liberal education" (Hill & Pisacreta, 2019).

1) What are the features that define a liberal arts and sciences educational experience, and to what extent are they offered by HEIs?

2) How are institutions' liberal arts and sciences educational offerings (LASEO) associated with their students' labor market outcomes?

→ **Develop a framework for defining and measuring a liberal arts and sciences educational experience.**

# LASEO Framework Goals

- Identify and describe key features of a liberal arts and sciences educational experience.

- Flexible enough to be applied in various contexts to capture both institutional offerings and student experiences.

- Measure the extent of institutions' educational offerings or of students' educational experiences.

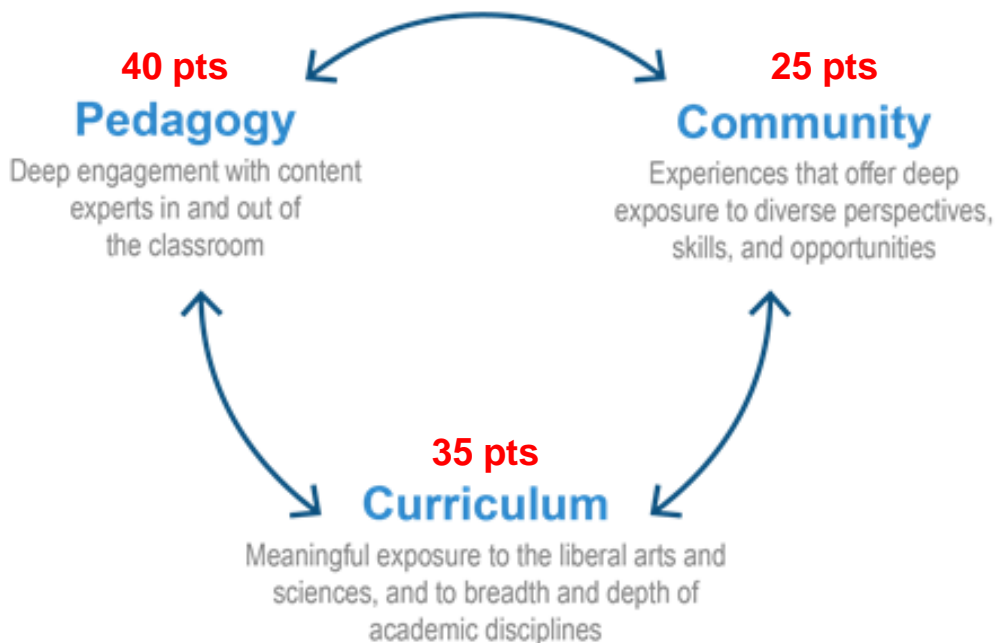- Does NOT aim to measure quality of offerings/experiences.

**Framework = Liberal education features (foundation) + Metrics (application)**

# LASEO Framework Process

**Foundation**

| Mission |
| --- |

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| Core Components |
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| Key Attributes |
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**Application**

| Metrics |
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| Data Sources |
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| Scoring & Weighting |
| --- |

Extensive literature review & expert feedback

E.g. AAC&U; Ferrall, V.; Brighthouse, H.; Roth, M.; Bearman, P; Cole, J.; McKay, T.; Schneider, C.

Ideal metrics <>  data availability (2001 - 2004)

- HERI Faculty Survey
- Annual Survey of Colleges (ASC)
- T. Peterson's Undergrad Licensed Database
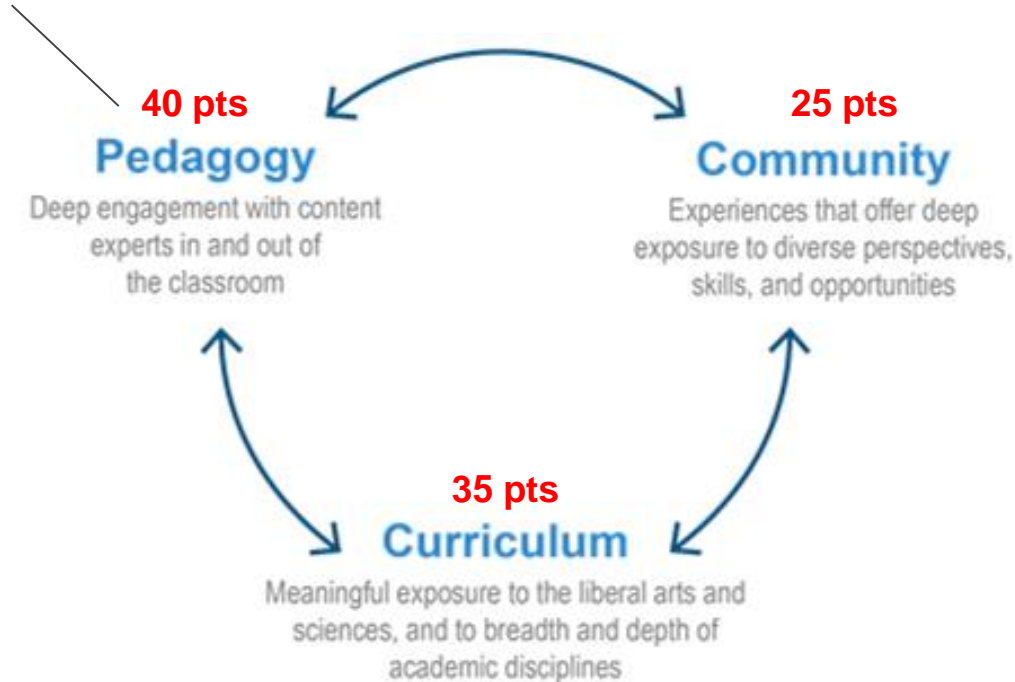- IPEDS

Relative final score 0 - 100

# Mission

Develop the liberally educated person

Impart intellectual and practical skills that lay the foundation for lifelong learning

Foster personal and social responsibility

**40 pts**

## Pedagogy

Deep engagement with content experts in and out of the classroom

**25 pts**

## Community

Experiences that offer deep exposure to diverse perspectives, skills, and opportunities

**35 pts**

## Curriculum

Meaningful exposure to the liberal arts and sciences, and to breadth and depth of academic disciplines
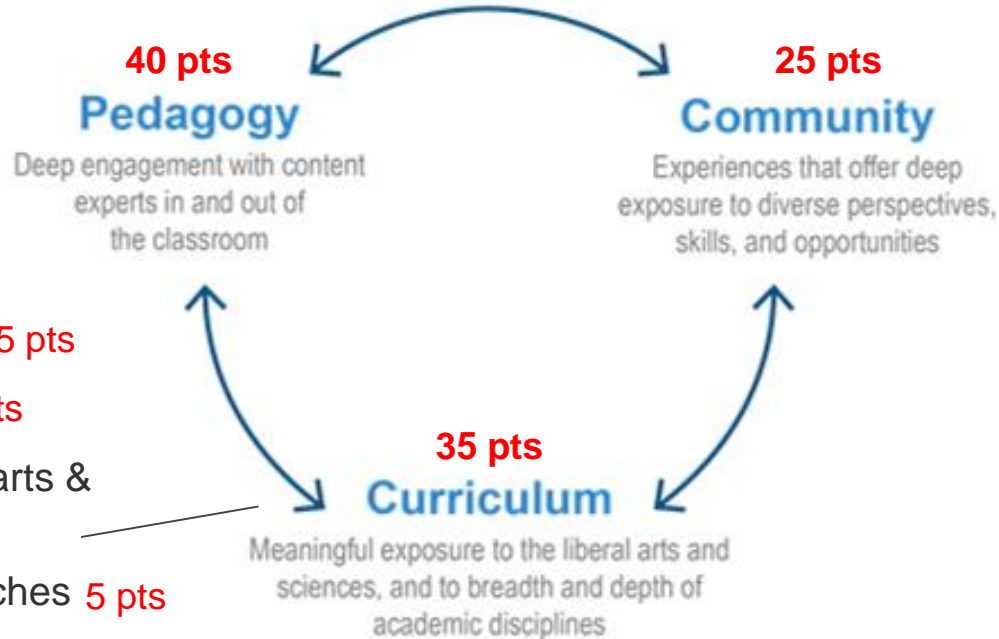
*Three components are interrelated and do not operate in silos*

- Committed expert faculty 12 pts

- Teaching practices & settings that foster active learning 22 pts

- Deep engagement with instructors 6 pts

• Prevalence of engaged learning practices used in the classroom (e.g. class discussion, multiple drafts of written work…) 12 pts
• Share of undergraduate class sections < 20 students 5 pts
• Average class section size 5 pts

**40 pts**

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**Curriculum**

Meaningful exposure to the liberal arts and sciences, and to breadth and depth of academic disciplines

Score based on combination of: (range of 0 - 15 pts)
- Core curriculum or university-wide distribution requirement
- Math or Science requirement
- Foreign language requirement

**40 pts**

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**Curriculum**
Meaningful exposure to the liberal arts and sciences, and to breadth and depth of academic disciplines
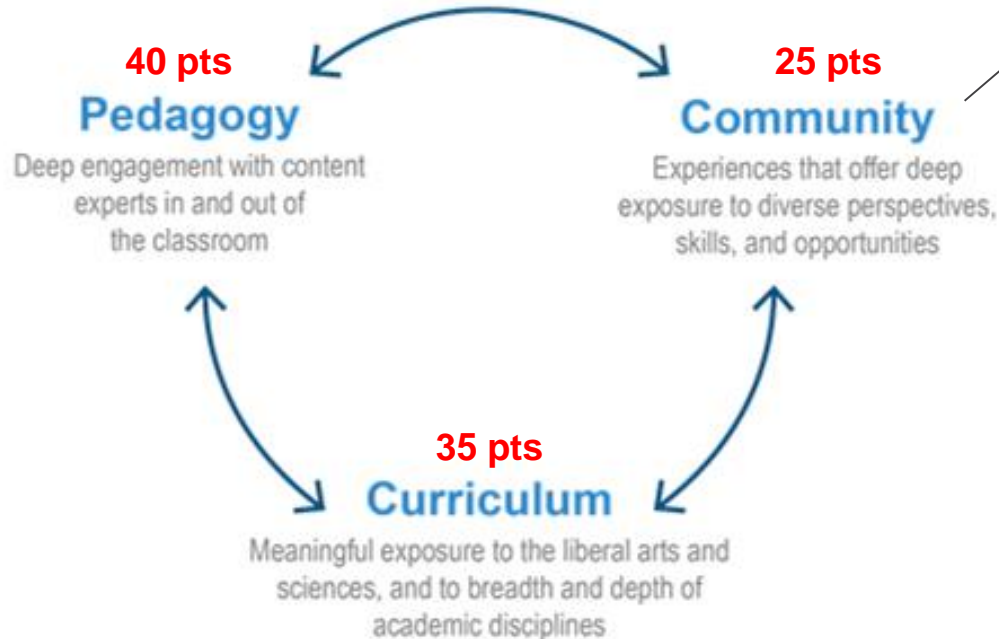
- Breadth of curriculum  15 pts
- Depth of curriculum  5 pts
- Exposure to the liberal arts & sciences 10 pts
- Student-guided approaches  5 pts

- Share of undergraduates accommodated in housing – 5 pts
- Demographic diversity of undergraduate student body – 5 pts

- Sustained social interactions with diverse sets of peers 10 pts
- Knowledge and skills beyond direct course of study 10 pts
- Diverse array of extracurricular activities 5 pts

**40 pts**

**Pedagogy**

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**25 pts**

**Community**

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**Curriculum**

Meaningful exposure to the liberal arts and sciences, and to breadth and depth of academic disciplines

A9 $f_x$ Pedagogy

# Liberal Arts and Sciences Educational Offering (LASEO) Framework

Last Updated on 09/24/2020

For background information on the project and its motivations, as well as the development of the LASEO Framework, see the full report, "Measuring a Liberal Education and its Relationship with Labor Market Outcomes: An Exploratory

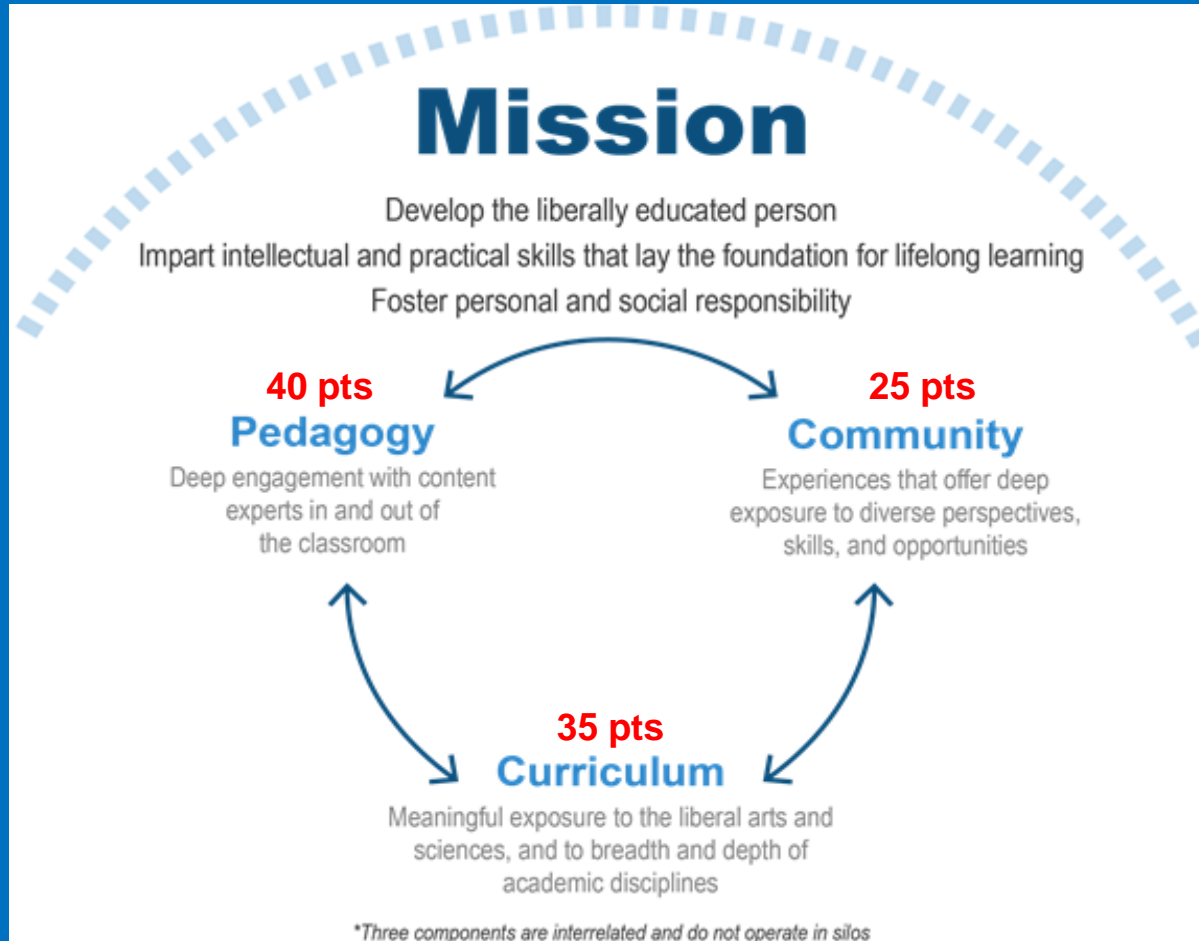### Mission of a Liberal Arts and Sciences Education
Develop the liberally educated person
Impart intellectual and practical skills that lay the foundation for lifelong learning
*(i.e. inquiry and analysis, critical and creative thinking; written and oral communication; teamwork; problem solving; quantitative literacy; information literacy)*
Foster personal and social responsibility
*(i.e. civic knowledge and engagement, intercultural knowledge and experience, ethical reasoning and actions)*

| Framework Foundation | | Framework Application | | | | |
|---|---|---|---|---|---|---|
| Component | Attribute | Institution-Level Proxy Metrics | Calculation Details | Scoring | Dataset | Notes |
| | Instruction by committed and invested faculty with content expertise<br><br>12 pts | Share of full-time undergraduate faculty who are teaching-focused and have a doctoral degree in the same general discipline as the department of their current faculty appointment | Numerator: total number of full-time undergraduate faculty who are teaching-focused and have a doctoral degree in the same general discipline as the department of their current faculty appointment<br><br>Denominator: total number of full-time undergraduate faculty<br><br>Faculty responses were weighted to adjust for response bias in terms of gender and faculty rank and aggregated to | Metric values for institutions were ordered, ranked, and assigned a point total that reflects the fraction of values at or below their value. Institutions with a metric value of 0 received 0 points.<br><br>Weight: 12 pts | HERI | Full-time undergraduate faculty were identified by HERI. We categorized those faculty as teaching-focused if their principal activity was teaching. |

LASEO Framework

**https://sr.ithaka.org/our-work/measuring-a-liberal-education/**

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# Questions about the LASEO Framework?



Mission

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Foster personal and social responsibility

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Pedagogy

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experts in and out of
the classroom

**25 pts**

Community

Experiences that offer deep
exposure to diverse perspectives,
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*Three components are interrelated and do not operate in silos

# LASEO Index Scores
## Eligible Institutions and Final Sample

- Initial sample: 3,864 accredited, degree-granting, and undergraduate-enrolling institutions in the US in the early 2000s.

- Limited sample based on available data.

- Only 34 two-year institutions had sufficient data - excluded from analyses.

- Final sample: 454 four-year institutions.

# LASEO Index Scores
## Descriptive Data by Component

|  | n | Mean | SD | Min | Max |
|---|---|---|---|---|---|
| **LASEO index score** | **454** | **61** | **13** | **21** | **91** |
| Pedagogy score (out of 40 points) | 454 | 20 | 7 | 2 | 36 |
| Curriculum score (out of 35 points) | 454 | 25 | 5 | 4 | 35 |
| Community score (out of 25 points) | 454 | 17 | 3 | 7 | 23 |

# LASEO Index Scores
## Descriptive Data by Institutional Type

|  | n | Mean | SD | Min | Max |
|---|---|---|---|---|---|
| **Full sample** | **454** | **61** | **13** | **21** | **91** |
| Liberal arts institutions | 114 | 75 | 9 | 55 | 91 |
| Non-liberal arts institutions | 340 | 57 | 10 | 21 | 86 |
| Private institutions | 318 | 65 | 12 | 29 | 91 |
| Public institutions | 136 | 53 | 10 | 21 | 86 |

# Exploratory Analyses
## Analytic Approach

- Examined relationship between LASEO scores of sampled institutions in early 2000s and mid-career student outcomes in 2014.
  - Full sample of 454 institutions
  - Subsample of 340 non-liberal arts institutions

- Analytic models
  - Model 1: bivariate regression - no control variables.
  - Model 2: multivariate regression - with control variables.

- Data sources
  - IPEDS
  - Opportunity Insights
  - College Scorecard

# Exploratory Analyses

## Outcome Variables

- Six-year graduation rate (academic achievement outcome)
- Mid-career earnings
- Net price-to-earnings ratio
- Intergenerational income mobility rate
- Seven-year loan repayment rate

## Control Variables

- Seven different institutional and student demographic characteristics typically associated with outcomes of interest (e.g. educational spending, student SAT scores, and parental income)

# Findings

## Full Sample – 454 institutions

- No relationships between LASEO scores and all five outcomes after including control variables (i.e. accounting for other relevant factors)

- Positive relationship with secondary outcome - institutions' success rate
  - i.e. the likelihood that students whose parents are in bottom 40% of income distribution move to top 40% by their early 30s.

## Subsample – 340 non-liberal arts institutions

- Similar findings to full sample, with one exception:
  - Positive relationship with six-year graduation rates (in model 2); strongest among community component

# Study Limitations

## Framework application

- Subjective and dependent on sets of assumptions
- Based on limited data availability

## Institution-level statistics and analyses

- Do not account for within-institution variation
- Do not account for student take-up of offerings
- Non-representative sample of four-year institutions

# Conclusion & Future Directions

- A novel approach to conceptualizing and measuring a liberal education

- Springboard for new applications and extensions

- Captured variation in LASEO and associations with student outcomes
  - Absence of significant associations contributes to literature
  - Potential positive implications for subgroups of students

- We invite you to pressure-test and extend our approach

# Thank You

Questions about our analyses or findings?

**https://sr.ithaka.org/our-work/measuring-a-liberal-education/**

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