Comparing Direct Entrants and Transfer Students Using Multiple Informational Sources

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Part of a demonstration project funded through the ILDS Grant

- Funded by IBHE, managed by DePaul, implemented by IERC
- Part of the p-20 initiative in Illinois
- Project intent is:
  - Gain experience in using a longitudinal data sets
  - Explore issues in merging data
  - Demonstrate types of questions that can be addressed
  - Identify additional data elements institutions would want to use

Project Concept

- Hybrid approach combining:
  - high school graduating class (pipeline)
  - institutional-level records (college cohort)
- Using multiple sources of information
- Includes both public and private high school graduates

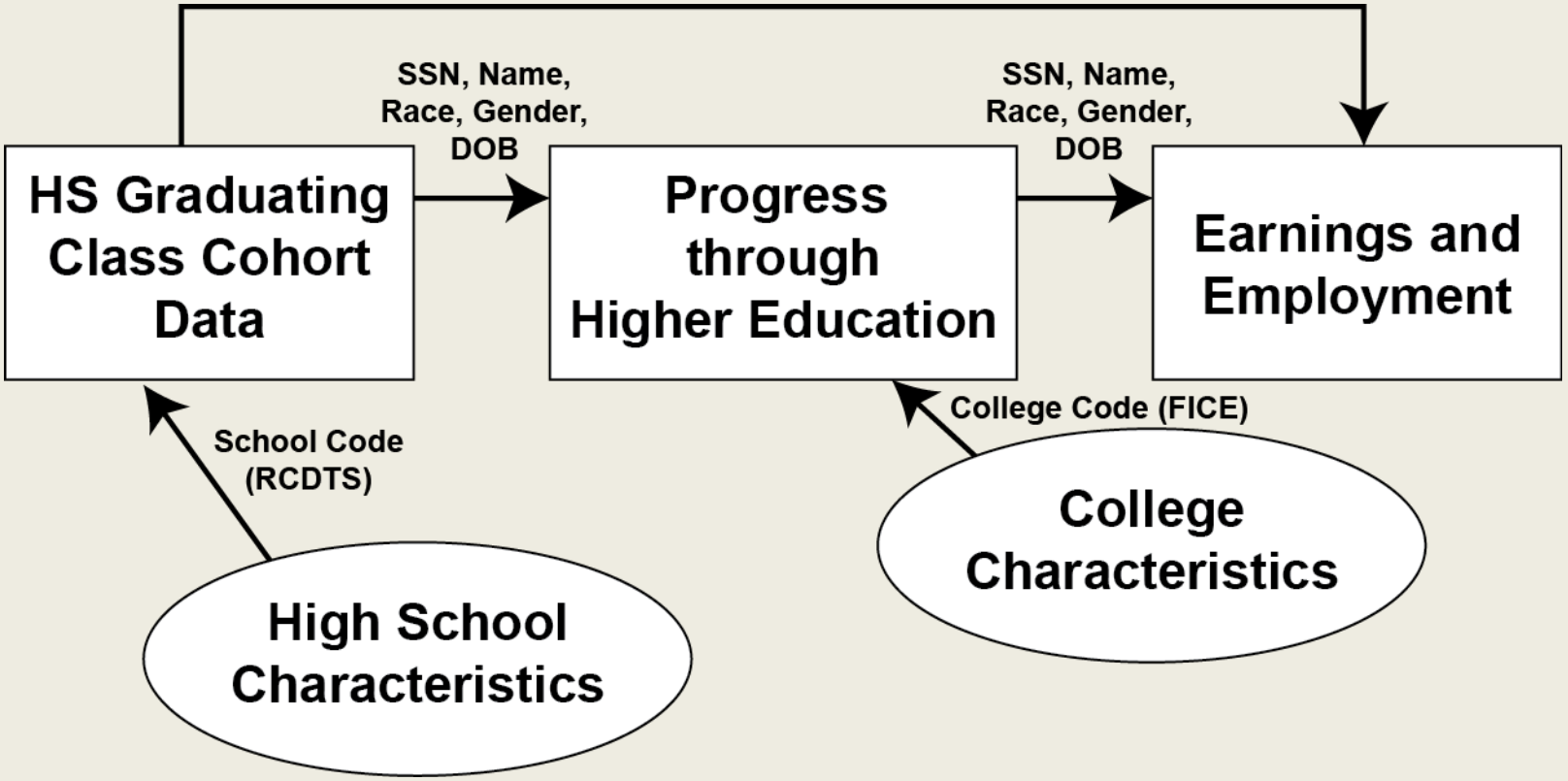
Data Sources

- **Earnings Information (Illinois-specific)**
- **College level data similar to ILDS (parallels IHEC reporting requirements) for one public four-year and one private four-year**
  - Enrollment
  - Degree Completion
  - Demographics
  - Transfer Hours
- **Illinois High School Class of 2003 (source IBHE and ACT)**
  - PSAE/ACT
    - Student Information
    - College Readiness Measures
  - National Student Clearinghouse
    - Enrollment/Transfer Patterns
    - Degree completion beyond the institutions of reference

Benefits of the Approach

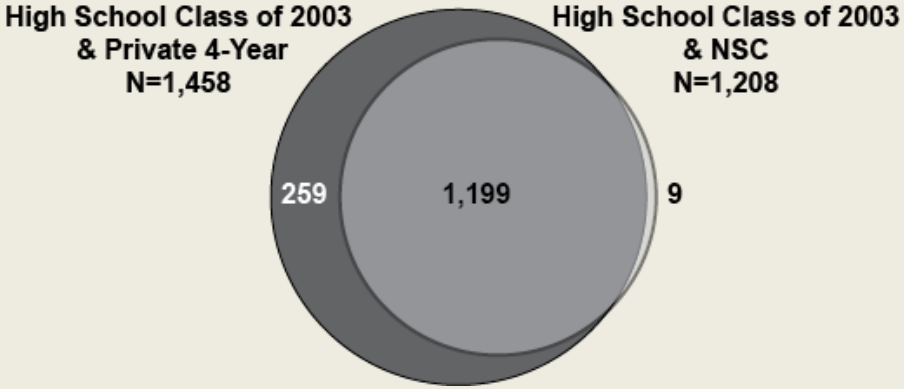
- Additional information on the transfer students that colleges do not normally collect.
- Explore churn among the direct entrants, specifically how different enrollment/transfer patterns impact bachelor's completion.
- Augment institutional data sources with degree completion information from the NSC for both transfer students and native students
  - Degrees completed elsewhere prior to and after enrolling at one of the institutions of reference

Conceptual Diagram of Full Study

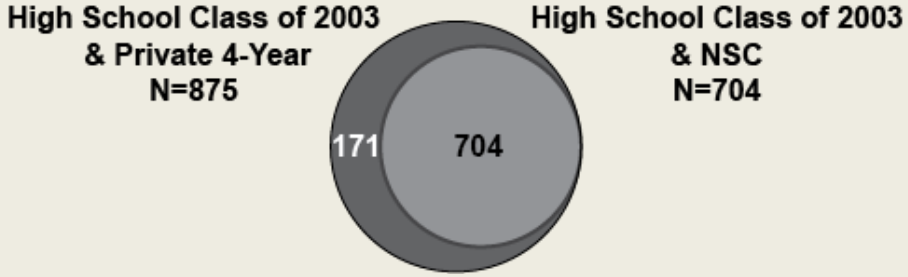


How well did NSC enrollment information match to the institutional data?

Direct Entrants



Transfer Students



NSC takes a conservative approach in their matching that virtually eliminates Type I error but introduces Type II error.

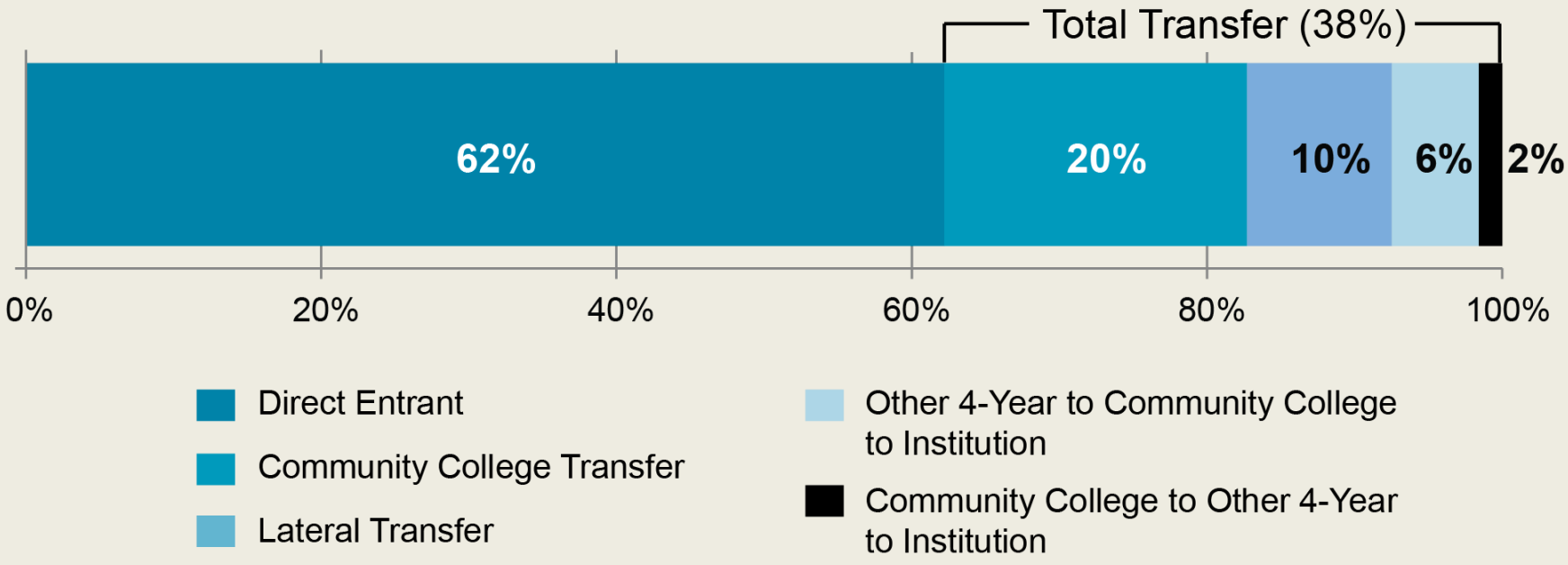
Research Questions

- What were the predominant enrollment patterns among the transfer students?
  - How did those patterns factor into bachelor's degree completion?
- What were the predominate enrollment patterns among the direct entrants?
  - How did those patterns factor into bachelor's degree completion?
- What were the differences between the direct entrants and transfer students in terms of bachelor's degree completion and earnings upon graduation?

Analyses

- Descriptive statistics
- Chi-Square Automatic Interaction Detection (CHAID)
  - Predicting and modeling technique similar to regression
  - Form of decision tree analysis
  - Produces graphical tree to visually depict the relationship (policy-maker friendly)
- Survival analysis
  - Life Tables (1-survival)

Transfer Status (n=3,972)

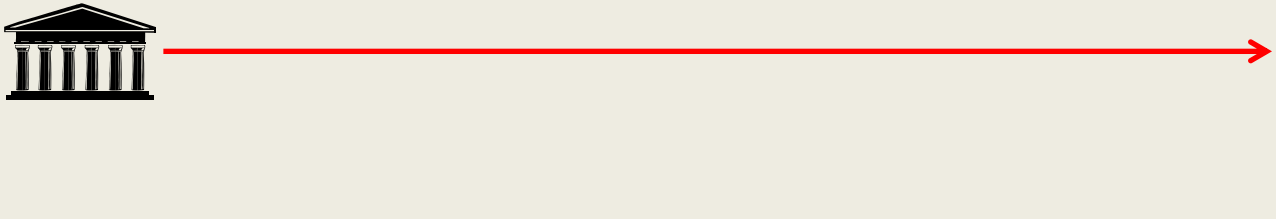


The Transfer Subgroups (n=1,501)

- Vertical Transfer (community college to institution)- 54%

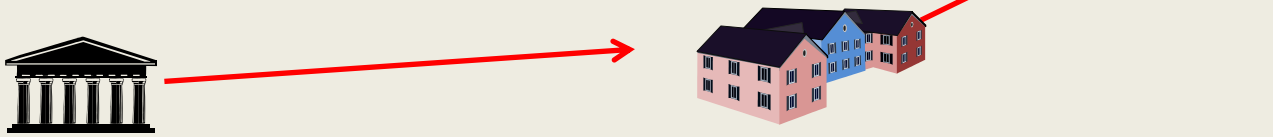
The Transfer Subgroups (n=1,501)

- Lateral Transfer (other four-year to institution)-26%



The Transfer Subgroups (n=1,501)

- Reverse to Vertical (other four-year to community college to institution)-16%



The Transfer Subgroups (n=1,501)

- Vertical to Lateral Transfer (community college to other four-year to institution)-4%

Demographics by Transfer Status

Transfer Status	Gender (Male)	White and Asian	Traditionally Underserved	Race Missing	Public HS
Direct Entrant	40%	73%	20%	7%	84%
Community College Transfer	46%	79%	12%	9%	92%
Lateral Transfer	42%	79%	14%	7%	84%
Other 4-Year to Community College to Institution	53%	76%	18%	5%	81%
Community College to other 4-Year to Institution	60%	75%	21%	5%	90%
Total	43%	75%	18%	7%	86%

- Significantly fewer males among the direct entrants and lateral transfer students.
- Community college transfer students were the least racially diverse.
- Direct entrants and vertical to lateral transfers were the most racially diverse.
- Higher proportions of those starting at community colleges graduated from public high schools.

ACT Scores by Transfer Status

Transfer Status	English	Math	Reading	Science	Composite Score
Direct Entrant	22.48	22.16	22.83	21.97	22.49
Community College Transfer	19.99	20.18	20.61	20.57	20.47
Lateral Transfer	23.43	23.11	23.91	22.77	23.46
Other 4-Year to Community College to Institution	22.51	22.66	22.95	22.68	22.84
Community College to other 4-Year to Institution	19.62	20.60	20.02	20.14	20.25
Total	22.02	21.85	22.44	21.78	22.16

- Lateral transfers had the strongest academic profile.
- Direct entrants fell somewhere in the middle.
- Those starting at community colleges had the weakest academic profile.

ACT Scores by Institution of Reference

Institution	Transfer Status	English	Math	Reading	Science	Composite Score
Public 4-Year	Direct Entrant	21.68	21.80	22.10	21.86	21.99
	Community College Transfer	19.97	20.07	20.64	20.72	20.49
	Lateral Transfer	23.28	23.08	23.66	23.13	23.45
	Other 4-Year to Community College to Institution	22.15	22.78	22.78	22.53	22.70
	Community College to other 4-Year to Institution	19.92	21.65	20.65	20.23	20.77
	Total	21.40	21.52	21.89	21.70	21.76
Private 4-Year	Direct Entrant	23.34	22.54	23.61	22.10	23.02
	Community College Transfer	20.04	20.39	20.54	20.24	20.43
	Lateral Transfer	23.60	23.15	24.19	22.35	23.46
	Other 4-Year to Community College to Institution	22.75	22.58	23.06	22.78	22.94
	Community College to other 4-Year to Institution	19.41	19.86	19.57	20.08	19.89
	Total	22.76	22.24	23.09	21.86	22.62

- The academic profiles of transfer students across the two institutions of reference were nearly identical.
- However, the academic profile of the direct entrants varied across the institutions, with direct entrants at the private four-year having higher ACT scores (more selective).

High School GPA by Transfer Status

Transfer Status	HS GPA: 3.5+	HS GPA: 3.0-3.4	HS GPA: 2.5-2.9	HS GPA: <2.5	HS GPA Missing
Direct Entrant	28%	28%	13%	6%	25%
Community College Transfer	16%	26%	18%	14%	25%
Lateral Transfer	33%	27%	11%	5%	25%
Other 4-Year to Community College to Institution	28%	23%	20%	7%	22%
Community College to other 4-Year to Institution	22%	27%	13%	14%	24%
Total	26%	27%	14%	8%	25%

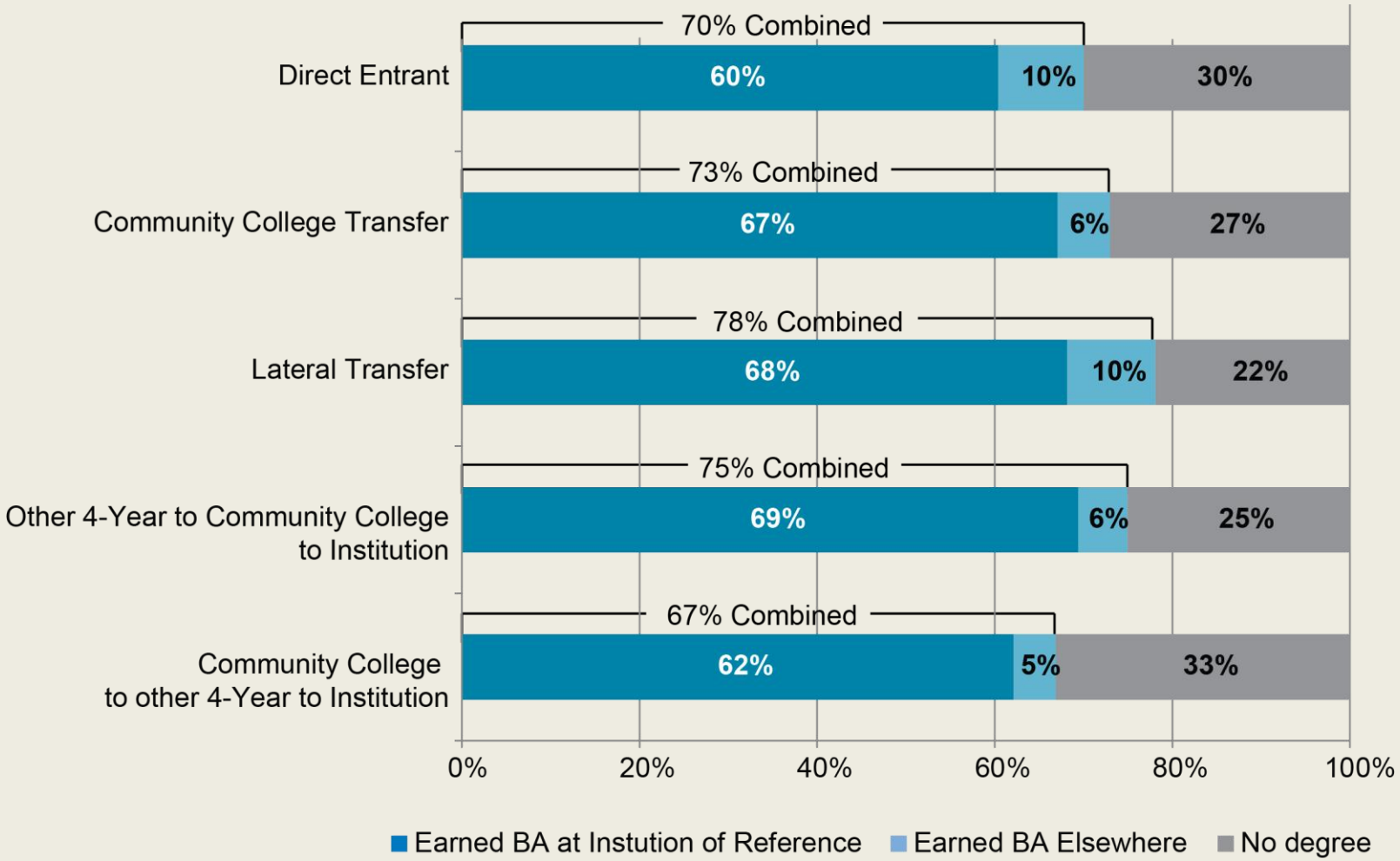
- Lateral transfers had the highest proportion within the 3.5+ HS GPA category.
- They were followed by direct entrants and reverse to vertical transfer students (28%).
- Community college transfers had the lowest proportion in the 3.5+ HS GPA category.

Transfer Hours Categories

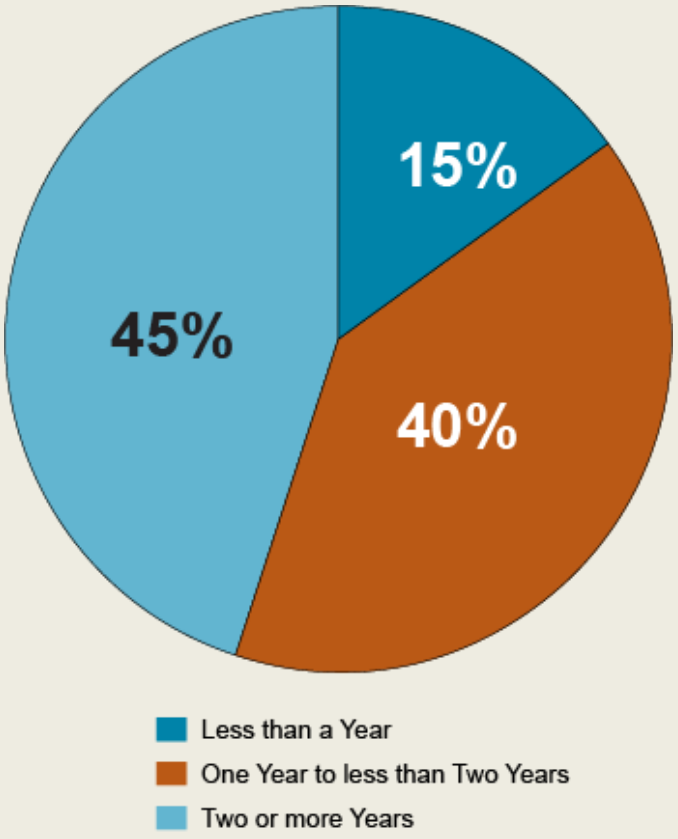
Transfer Status	Mean Number of Transfer Hours	Less than 1 Year	Between 1 and 2 Years	More than 2 Years
Community College Transfer	57	11%	38%	51%
Lateral Transfer	46	29%	44%	26%
Other 4-Year to Community College to Institution	61	8%	41%	51%
Community College to other 4-Year to Institution	67	3%	41%	56%

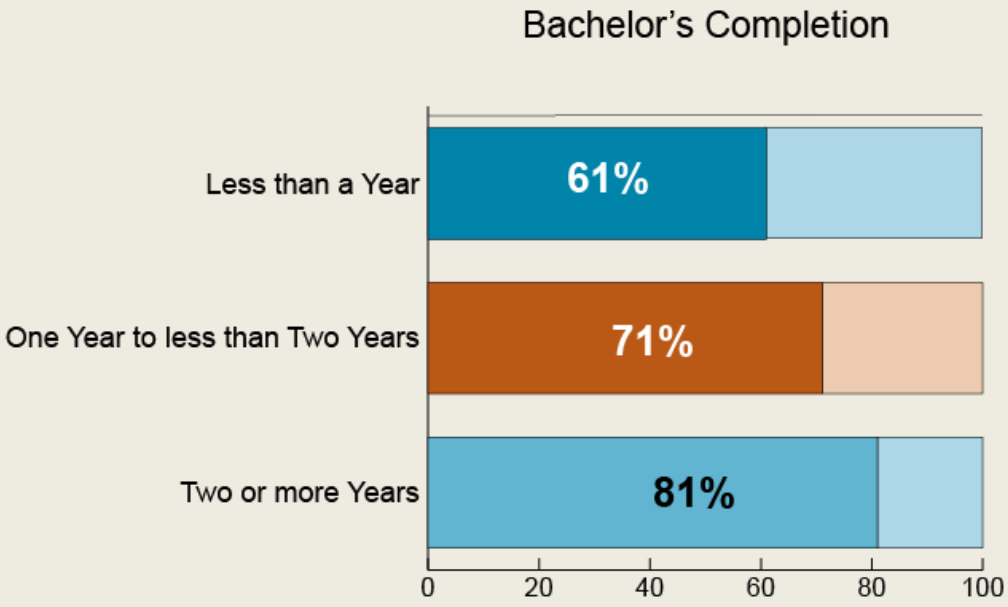
- Lateral transfers typically transferred in the fewest credit hours.
- While those who enrolled at more than one institution prior to transfer (particularly the vertical to lateral group) had the most.
- Community college transfers brought in just under 60 semester hours.

Transfer Status & Degree Completion

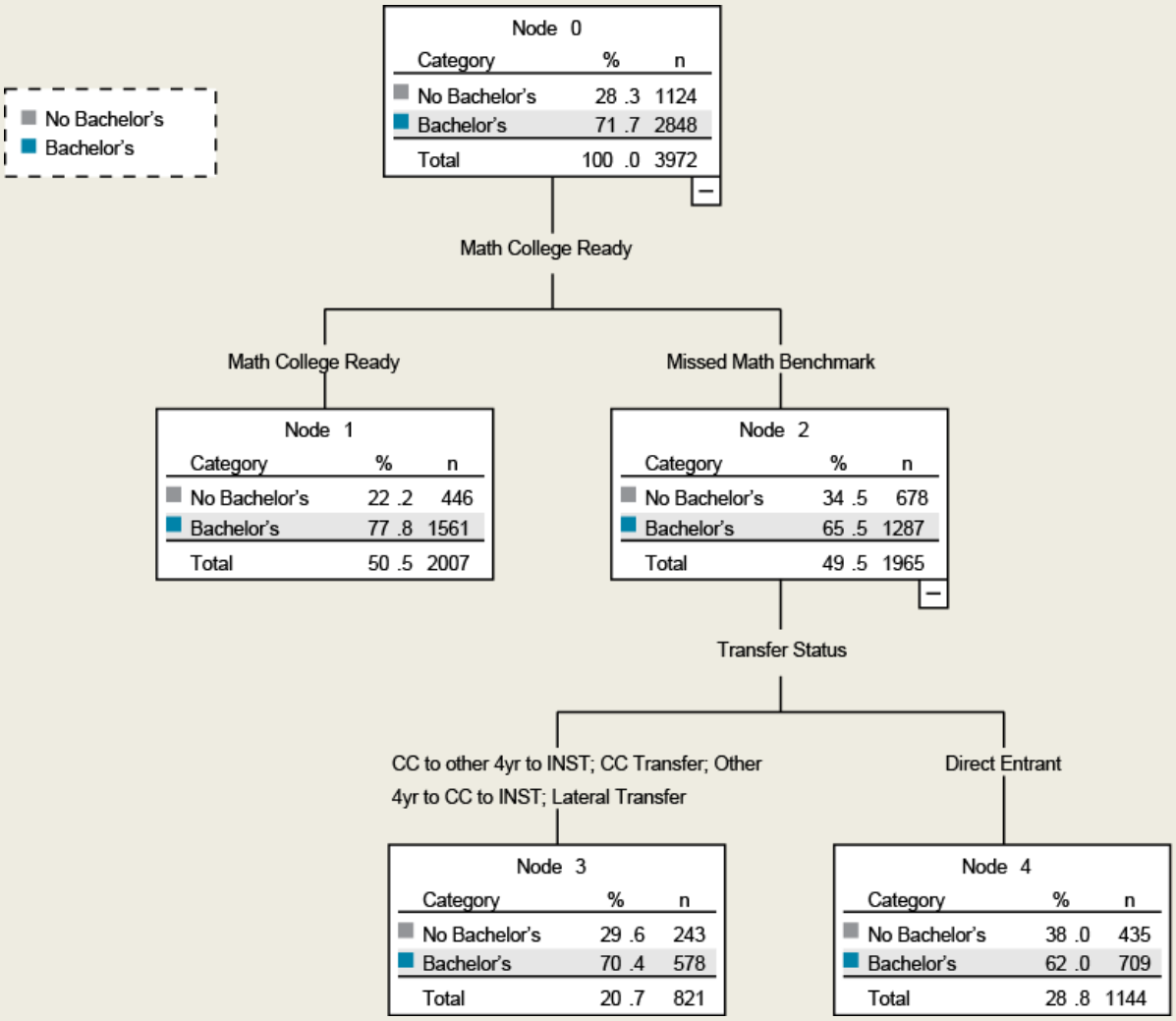


Transfer Hour Categories (n=1,501)

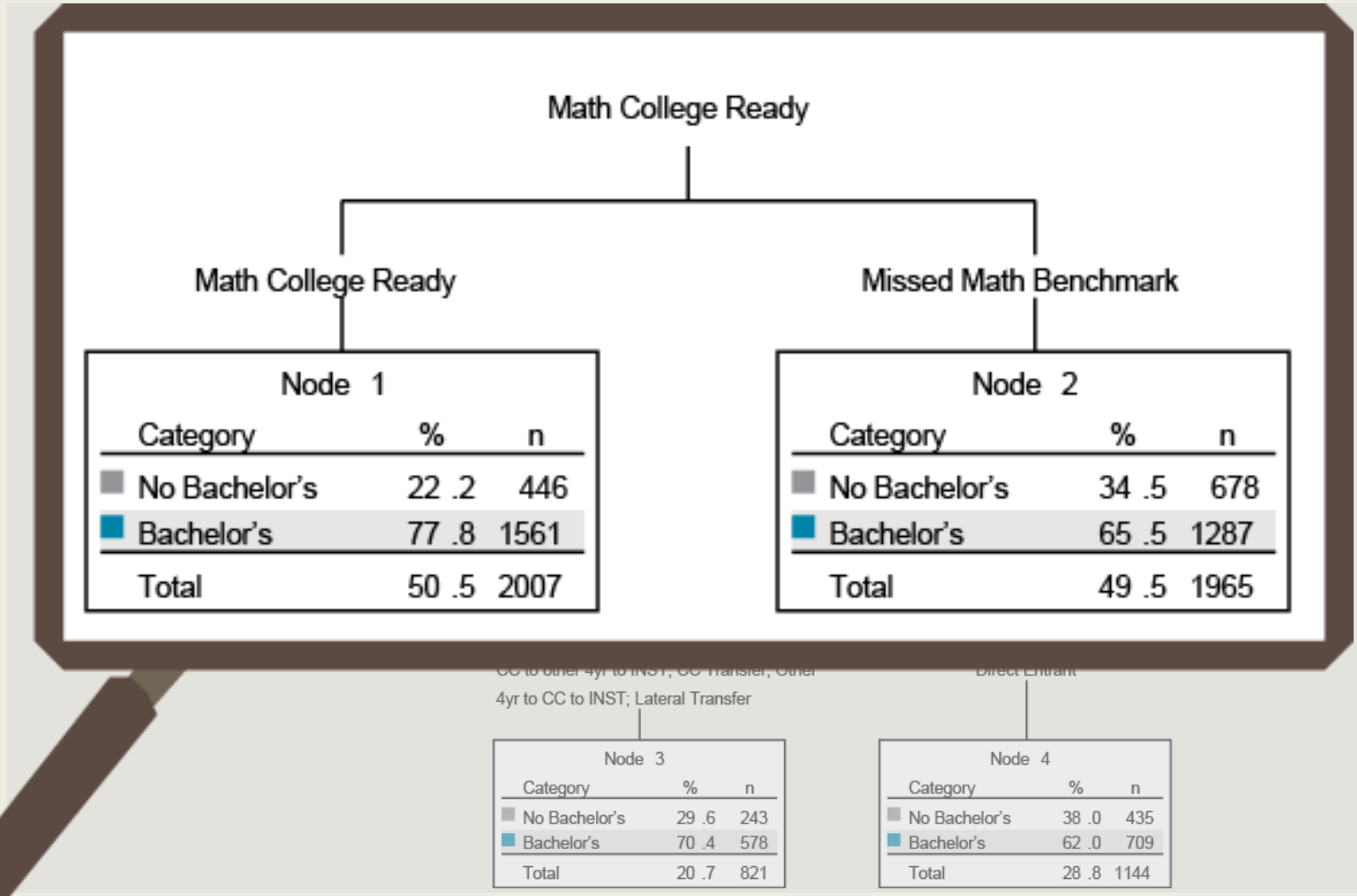




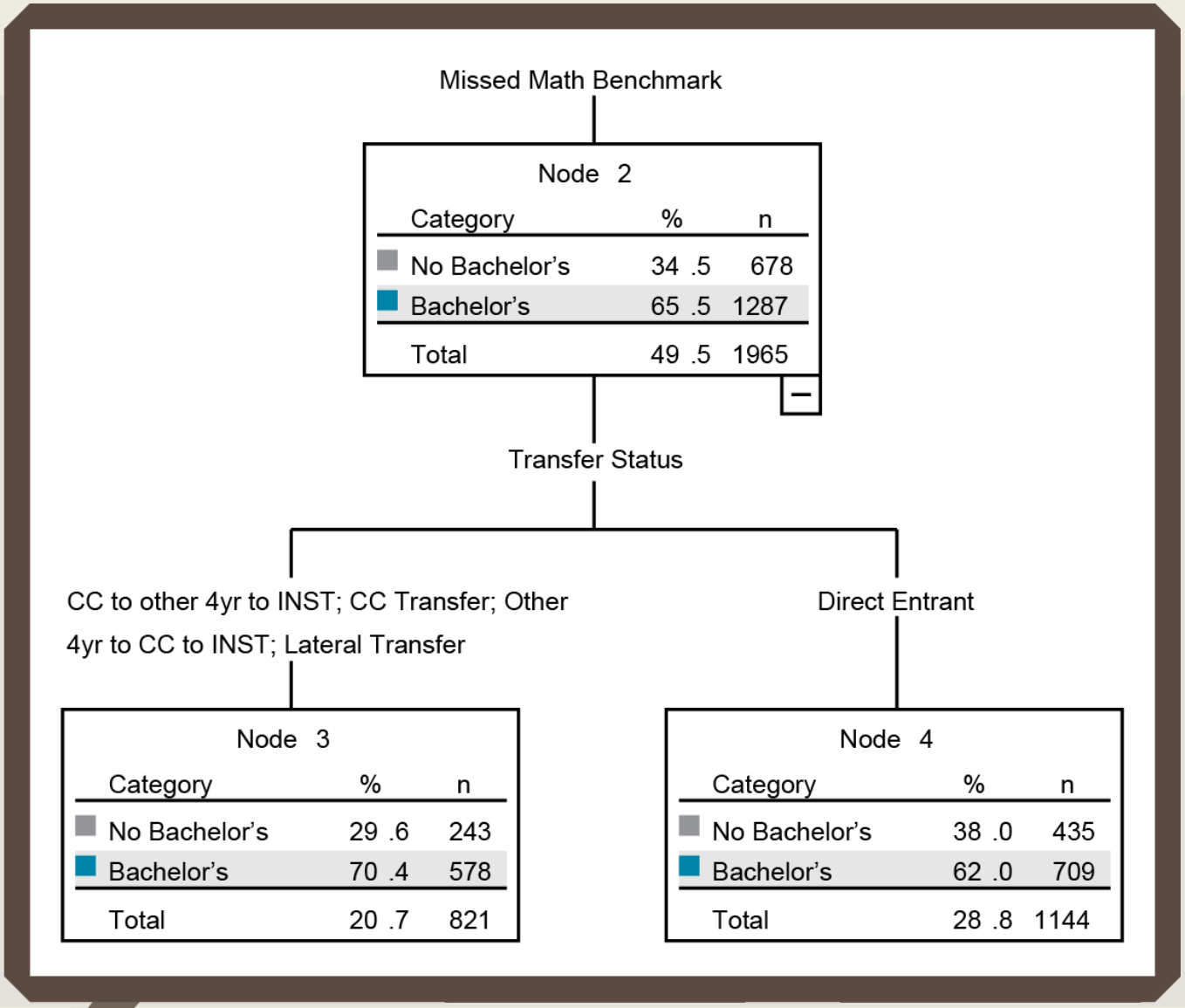
College Readiness in Mathematics and Bachelor's Degree Completion



College Readiness in Mathematics and Bachelor's Degree Completion



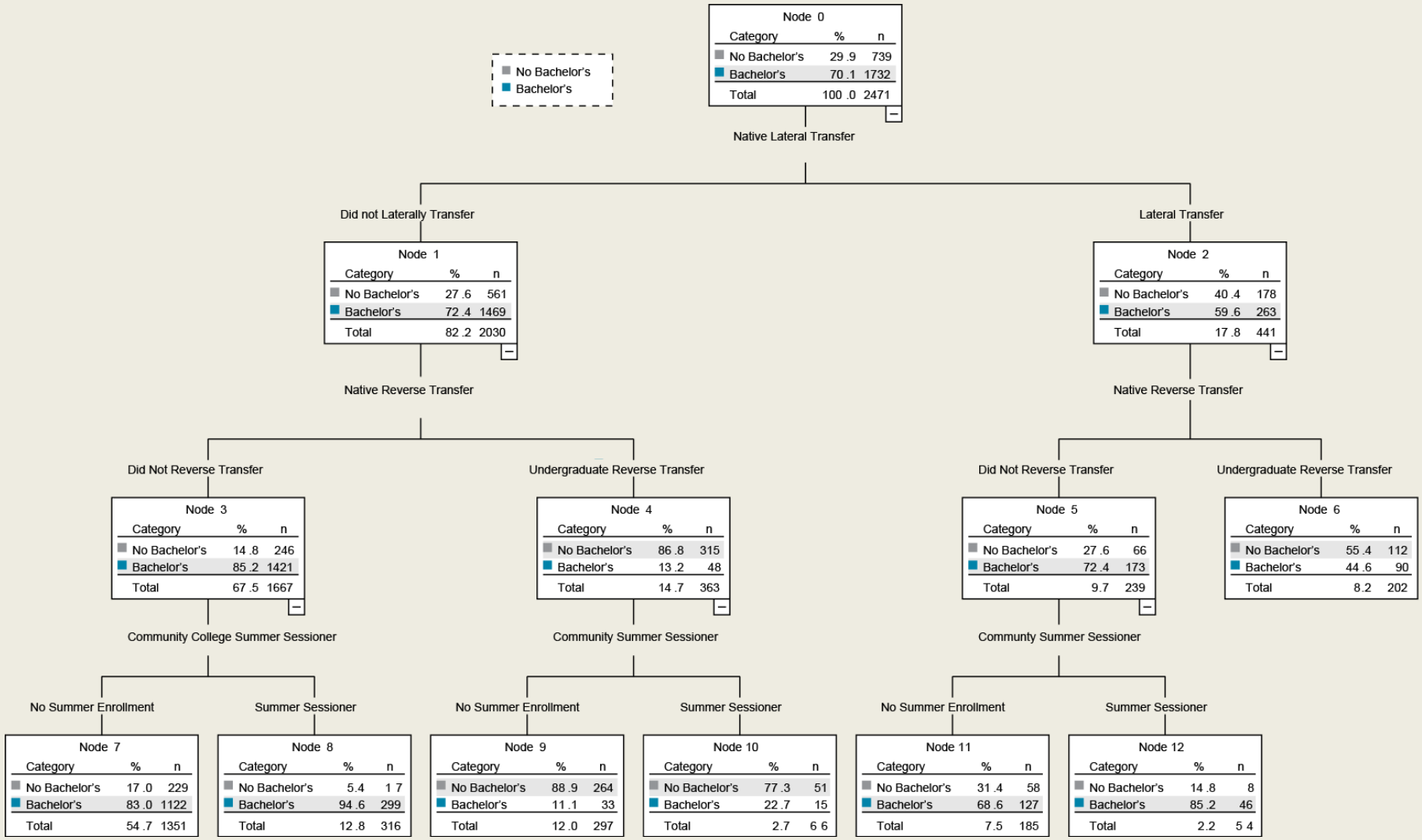
College Readiness in Mathematics and



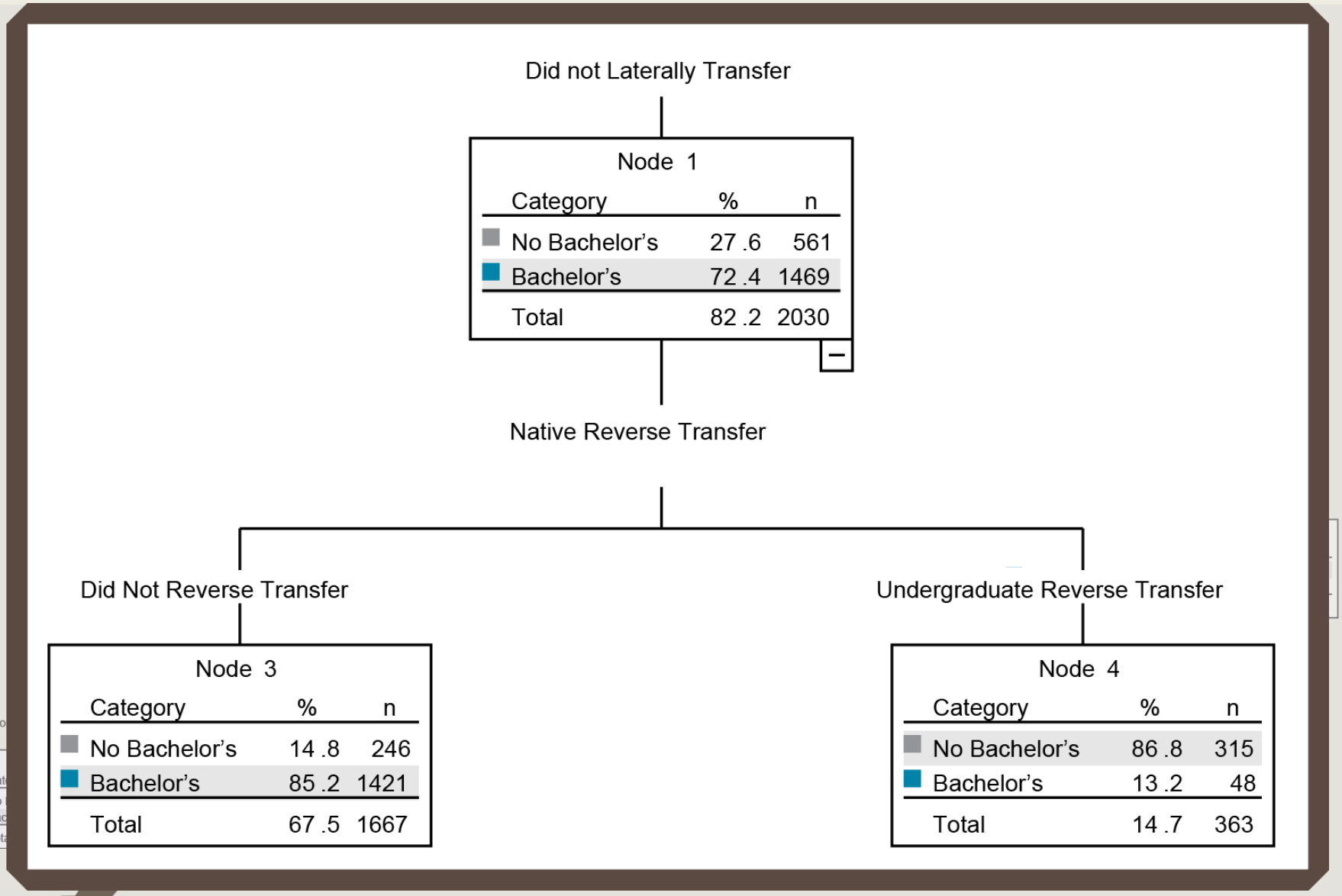
Churn among the Direct Entrants

- Undergraduate reverse transfer-23%
- Summer sessioners-20%
- Concurrent enrollment-6%
- Lateral transfers (prior to BA completion)-18%
- Post-Bachelor's reverse transfers-6%

Churn and Bachelor's Degree Completion



Churn and Bachelor's Degree Completion



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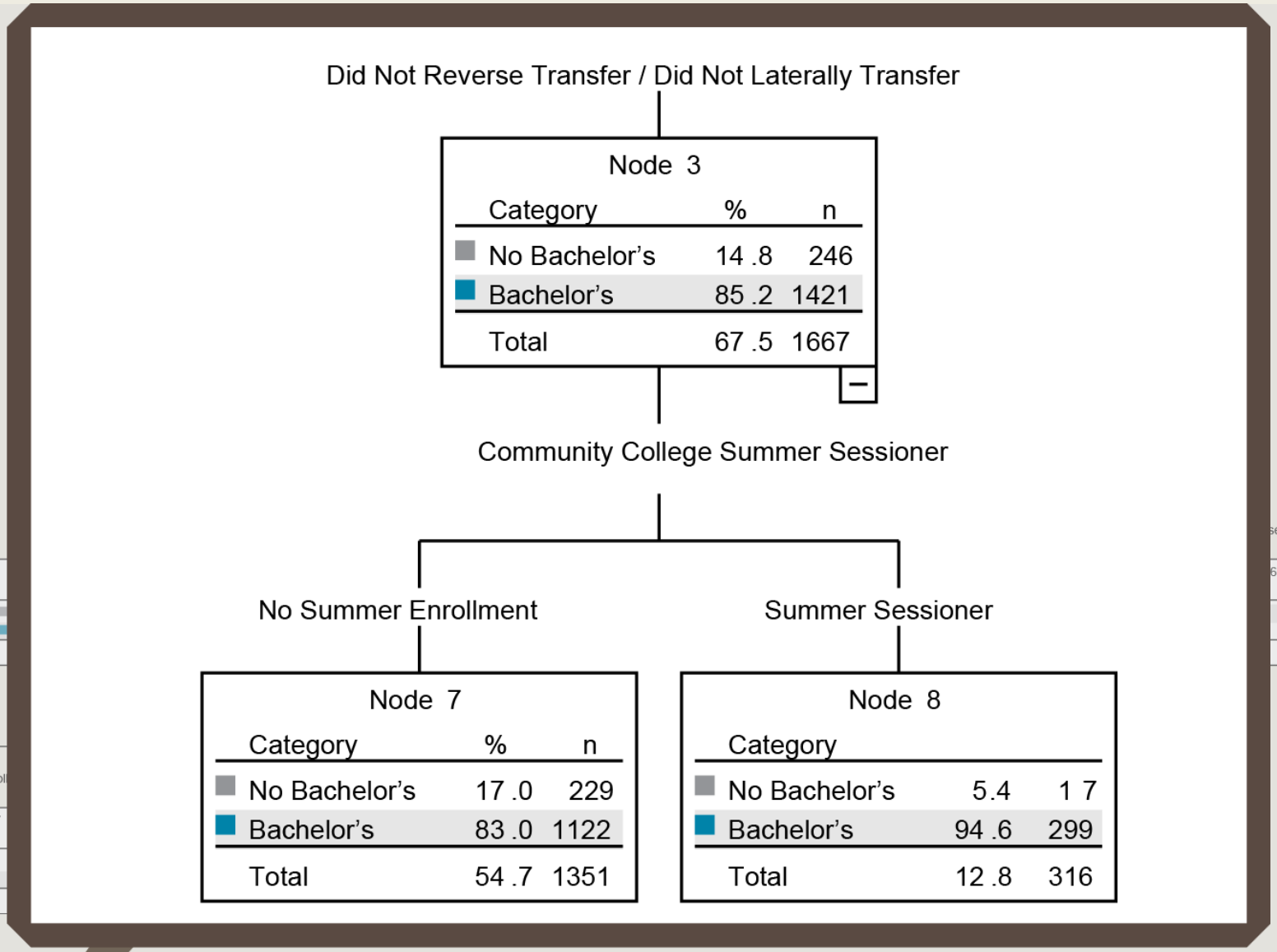

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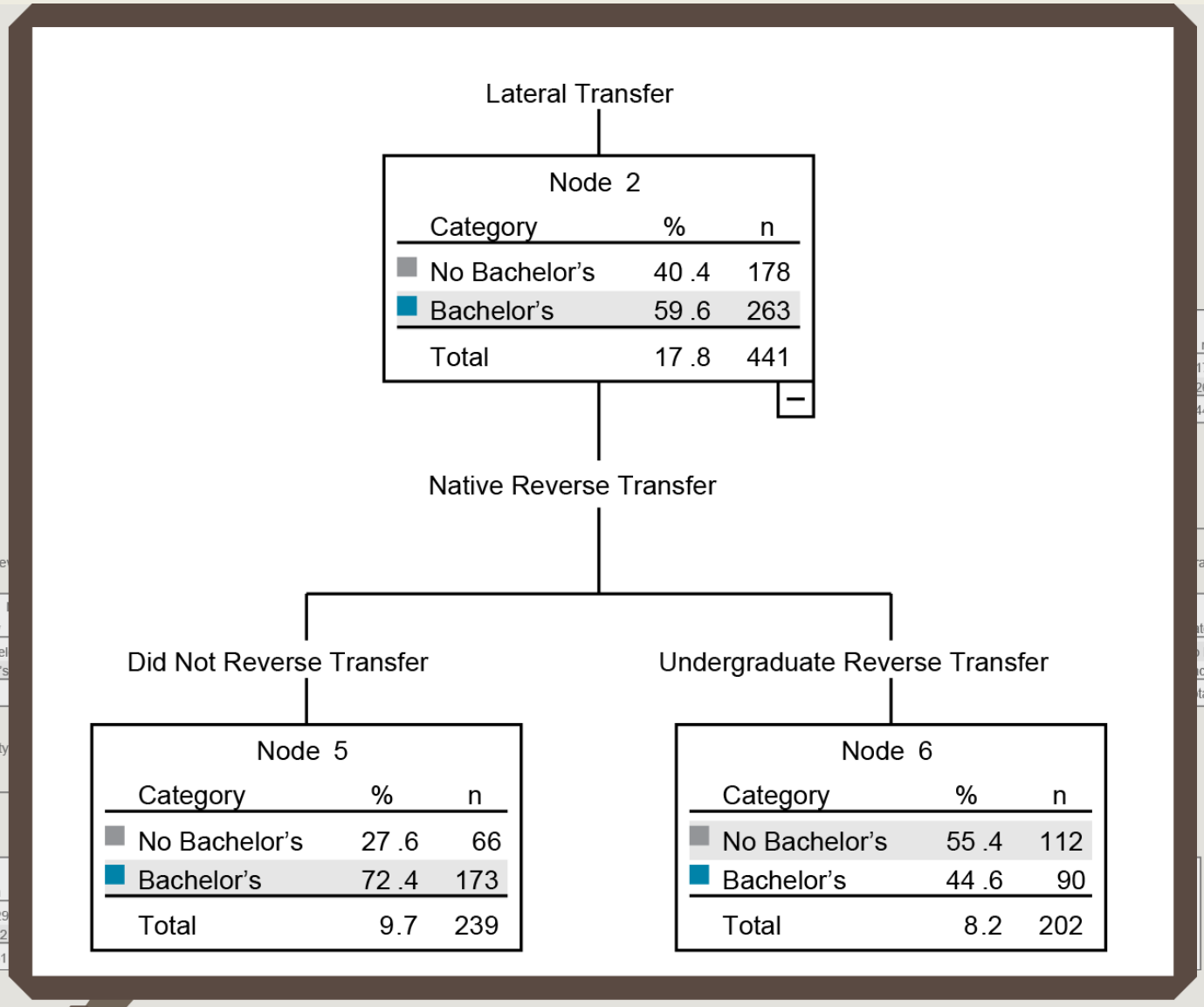

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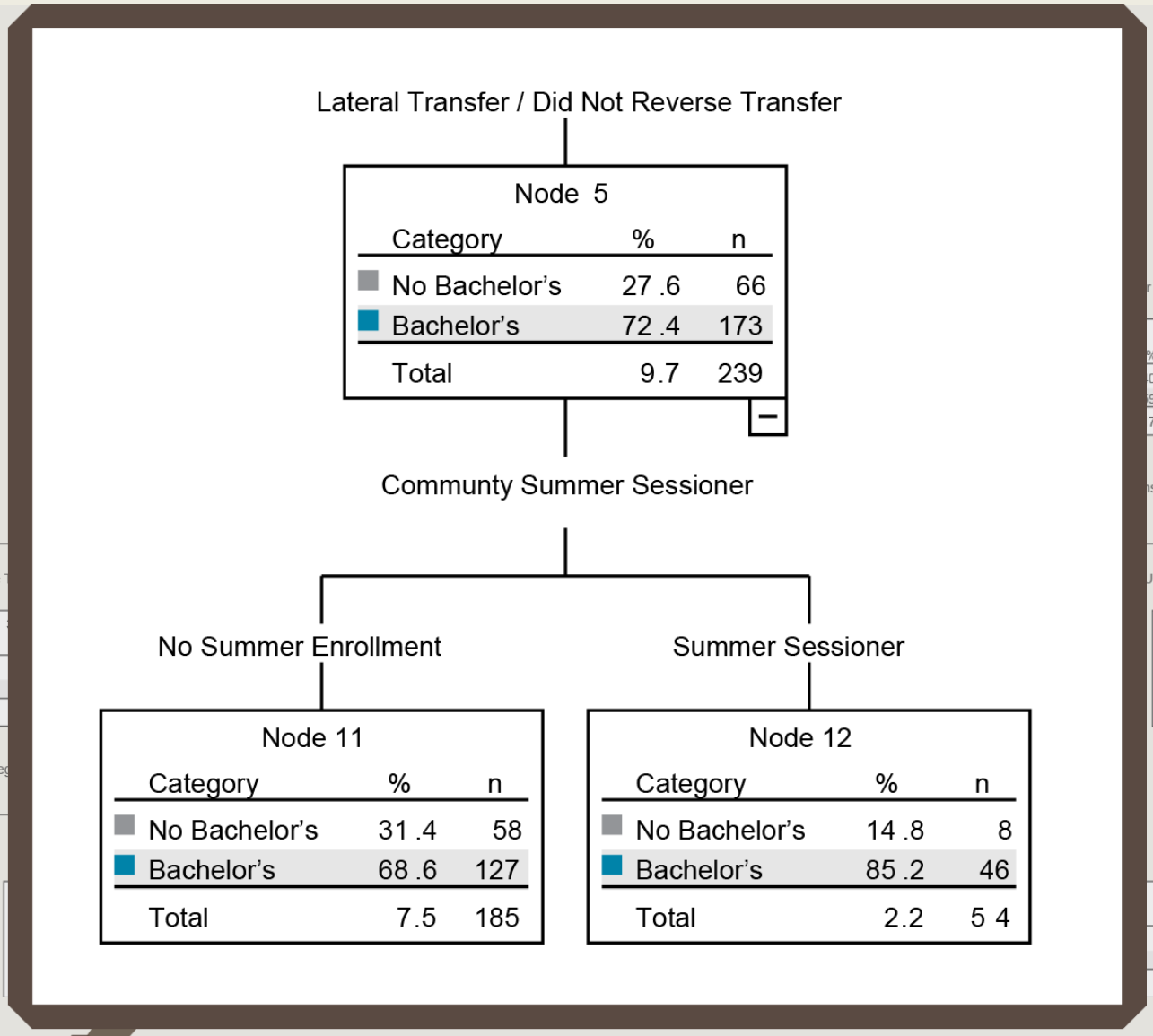
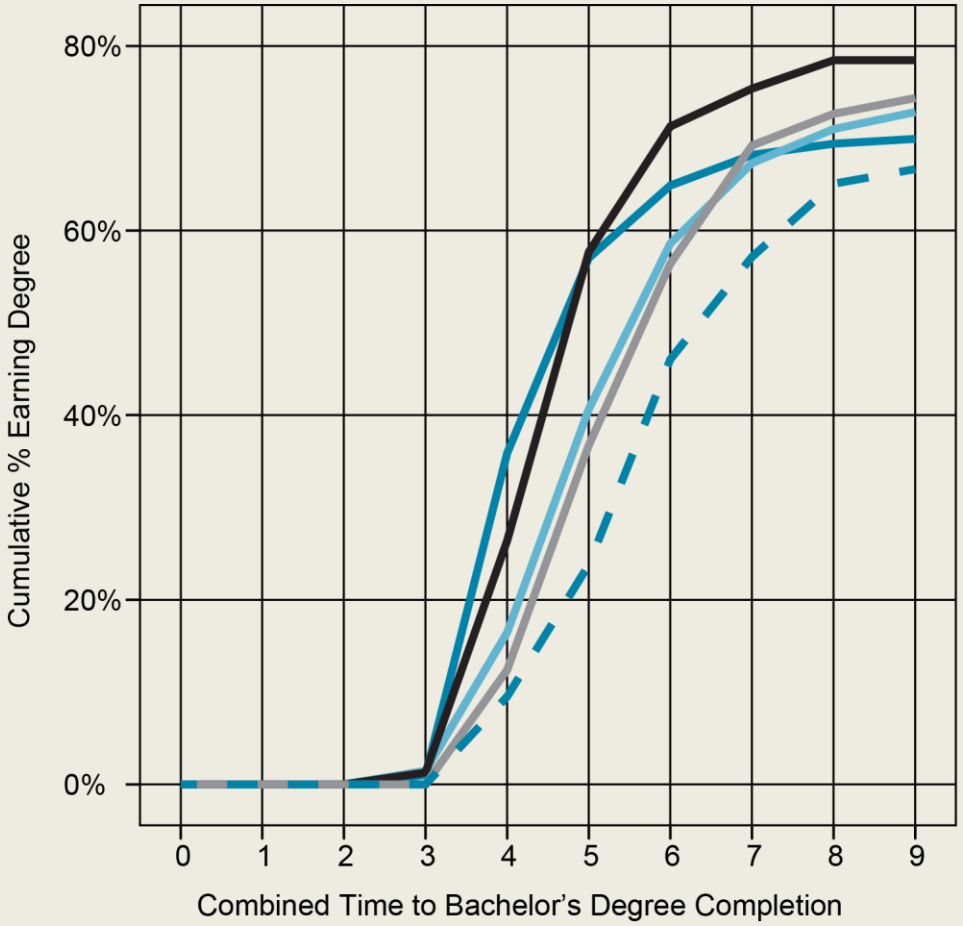


Time to Degree Completion



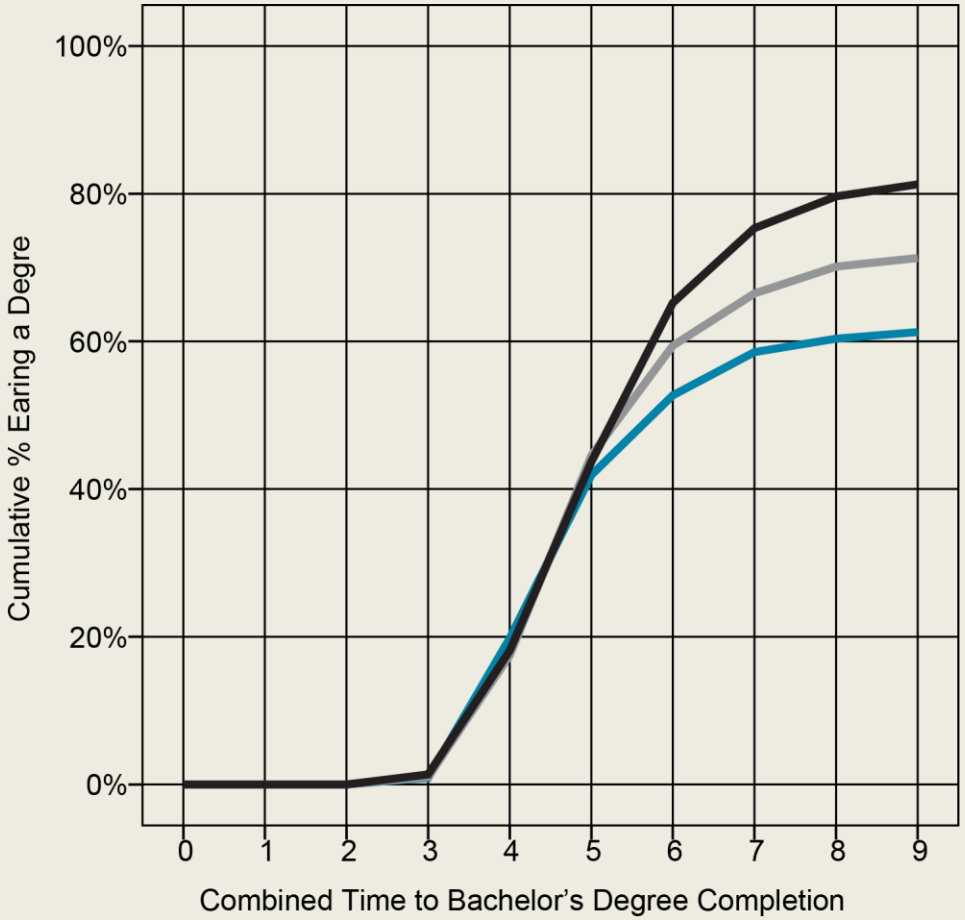
Transfer Status

- Direct Entrant
- CC Transfer
- Lateral Transfer
- Other 4-Year to Community College to Institute
- Community College to other 4-Year to Institute

Mean Years to Bachelor's Degree Completion	
Direct Entrant	4.42
Community College Transfer	5.11
Lateral Transfer	4.69
Other 4-Year to Community College to Institution	5.36
Community College to other 4-Year to Institution	5.62

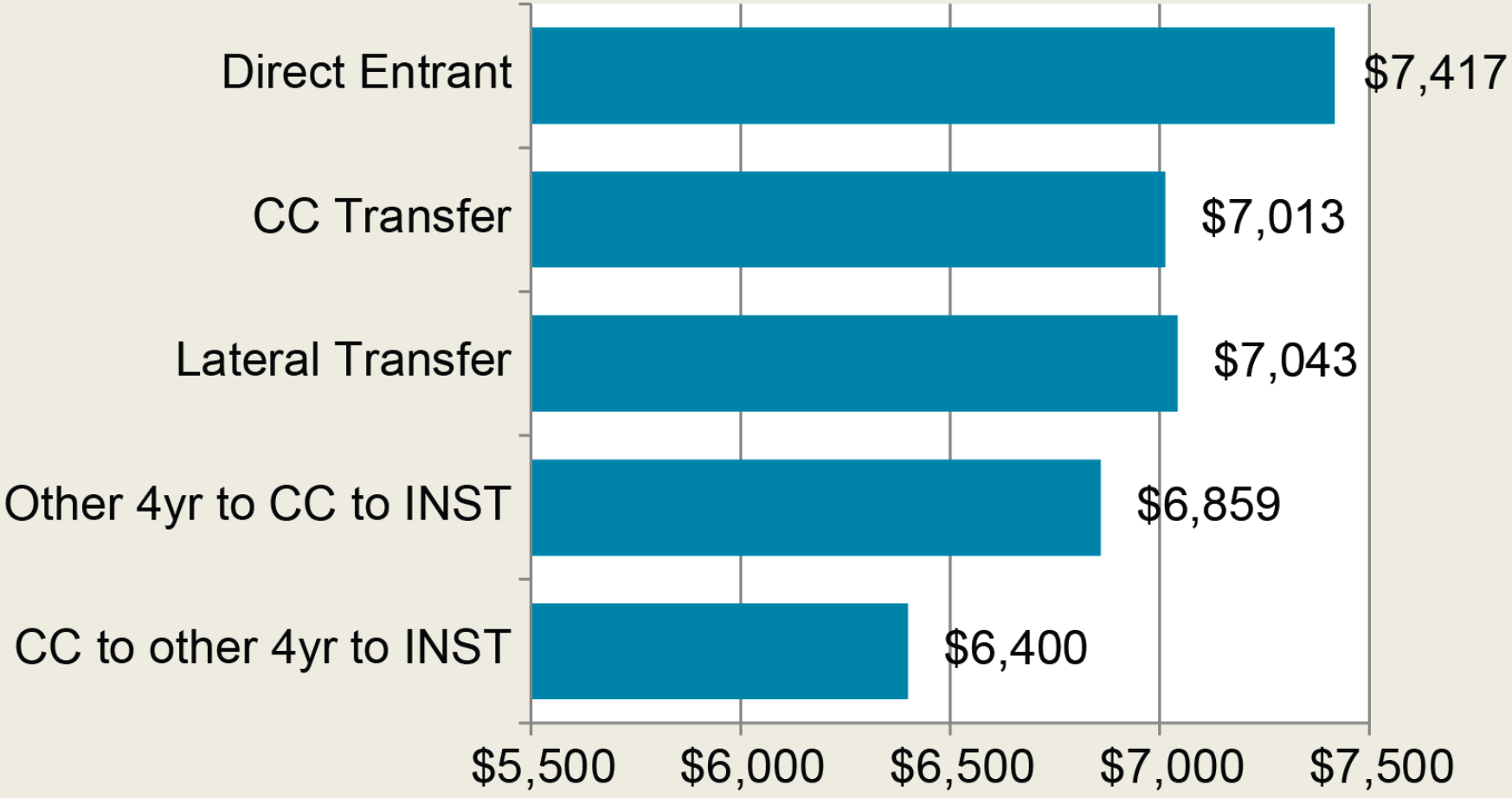
Time to Degree Completion

Transfer Students Only

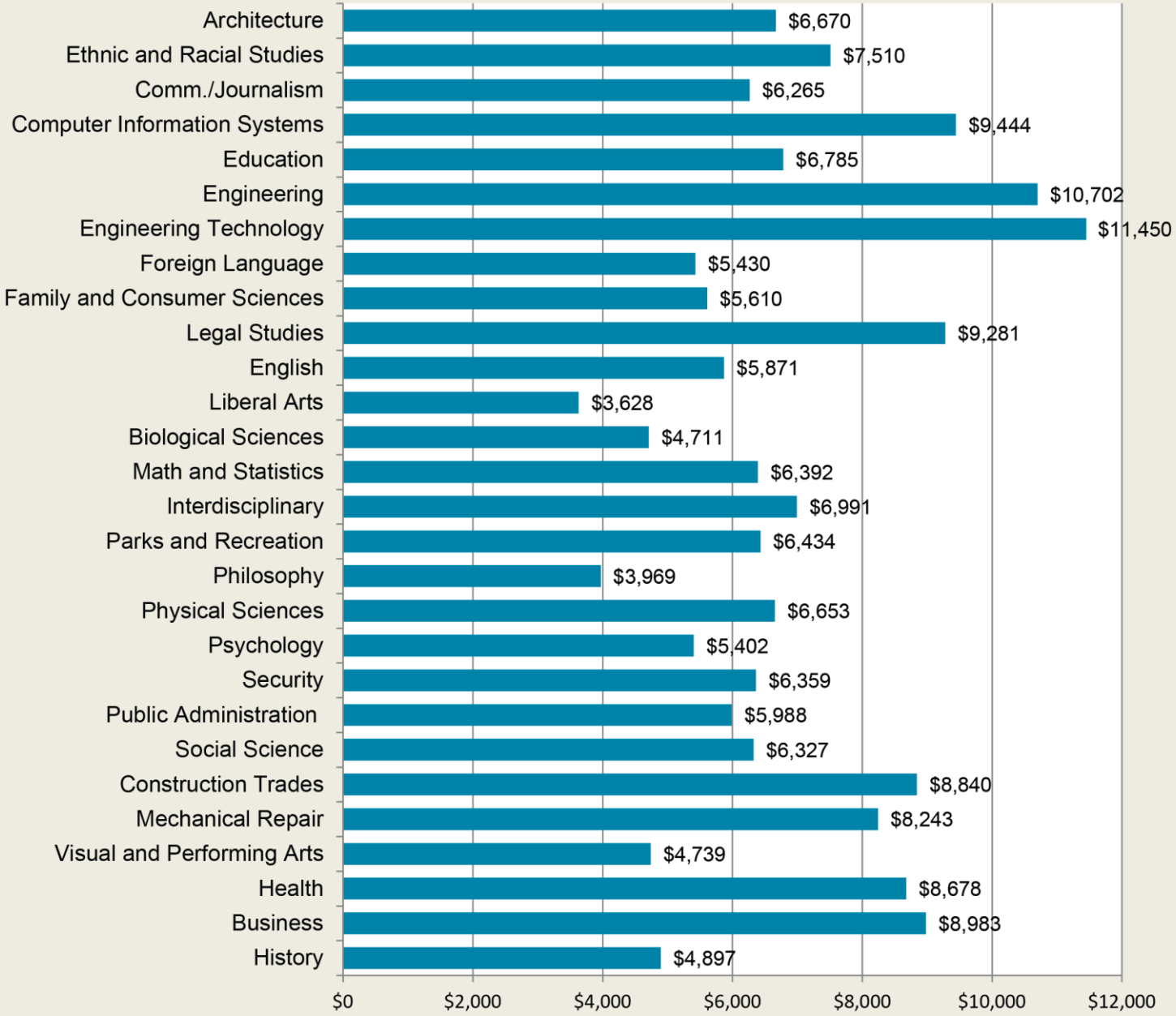


Mean Years to Bachelor's Degree Completion	
Less than 1 year	4.81
One to 2 years	5.00
More than 2 years	5.16

Earnings among Bachelor's Completers



Mean Second Quarter Wages



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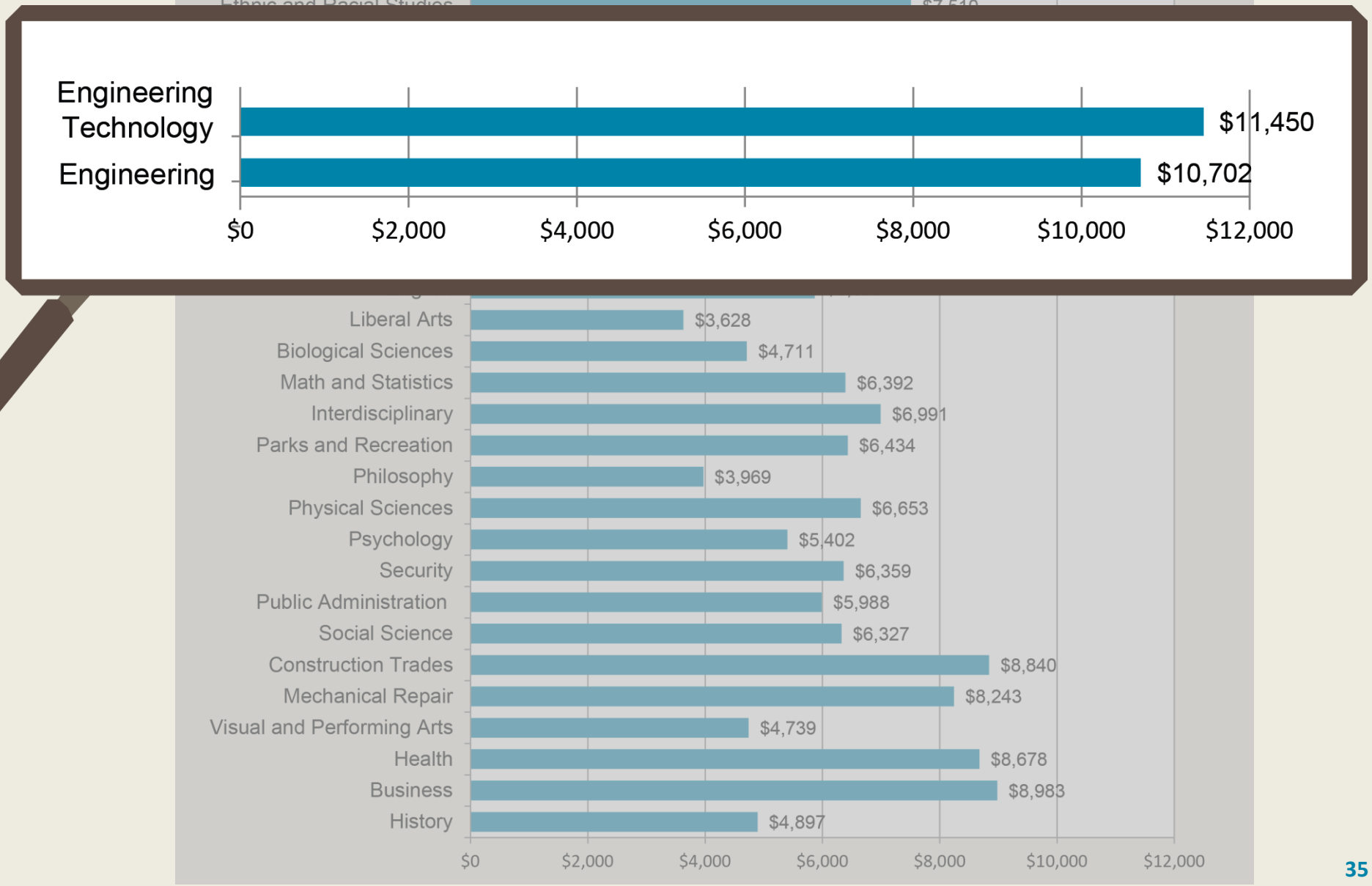

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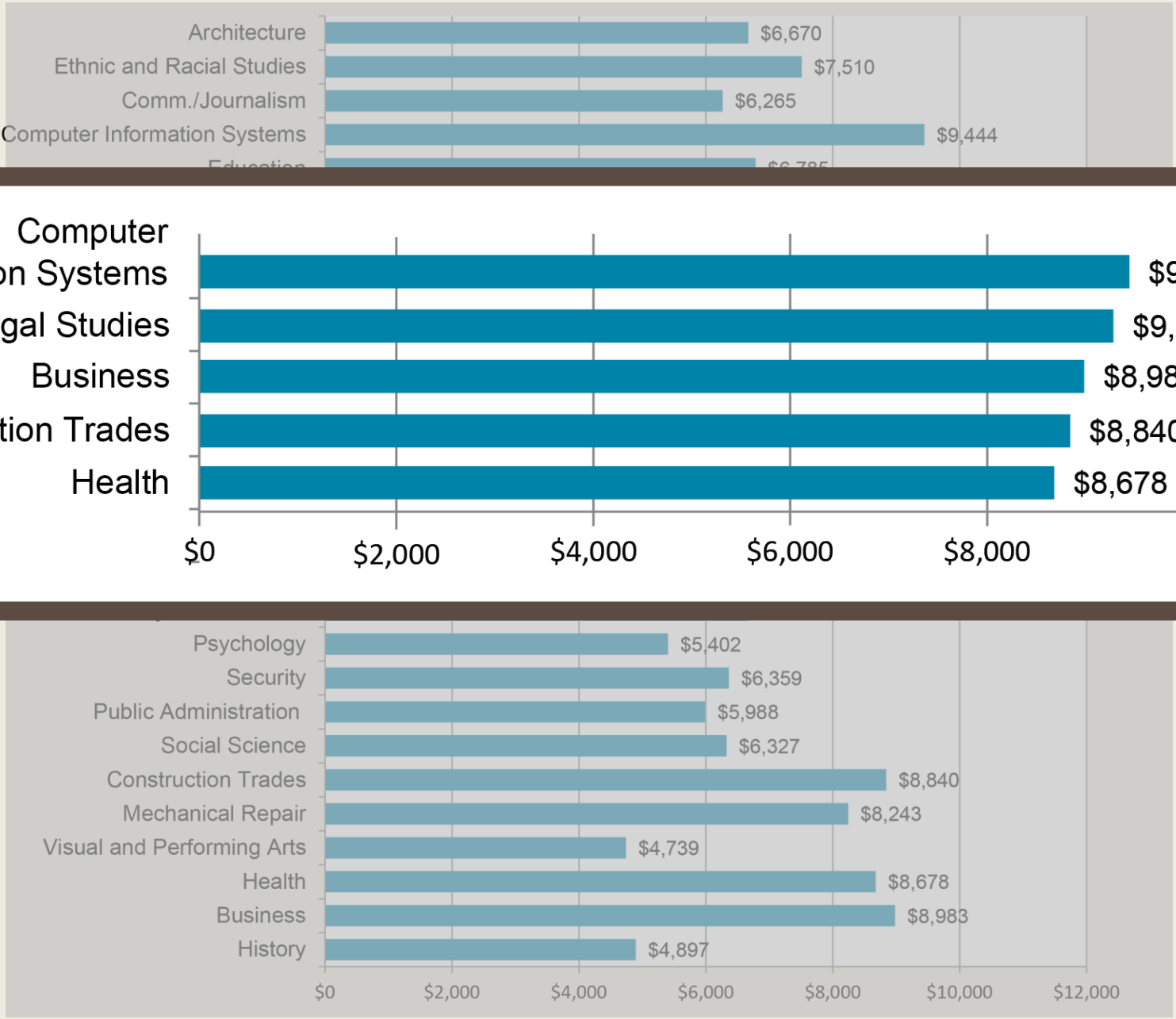

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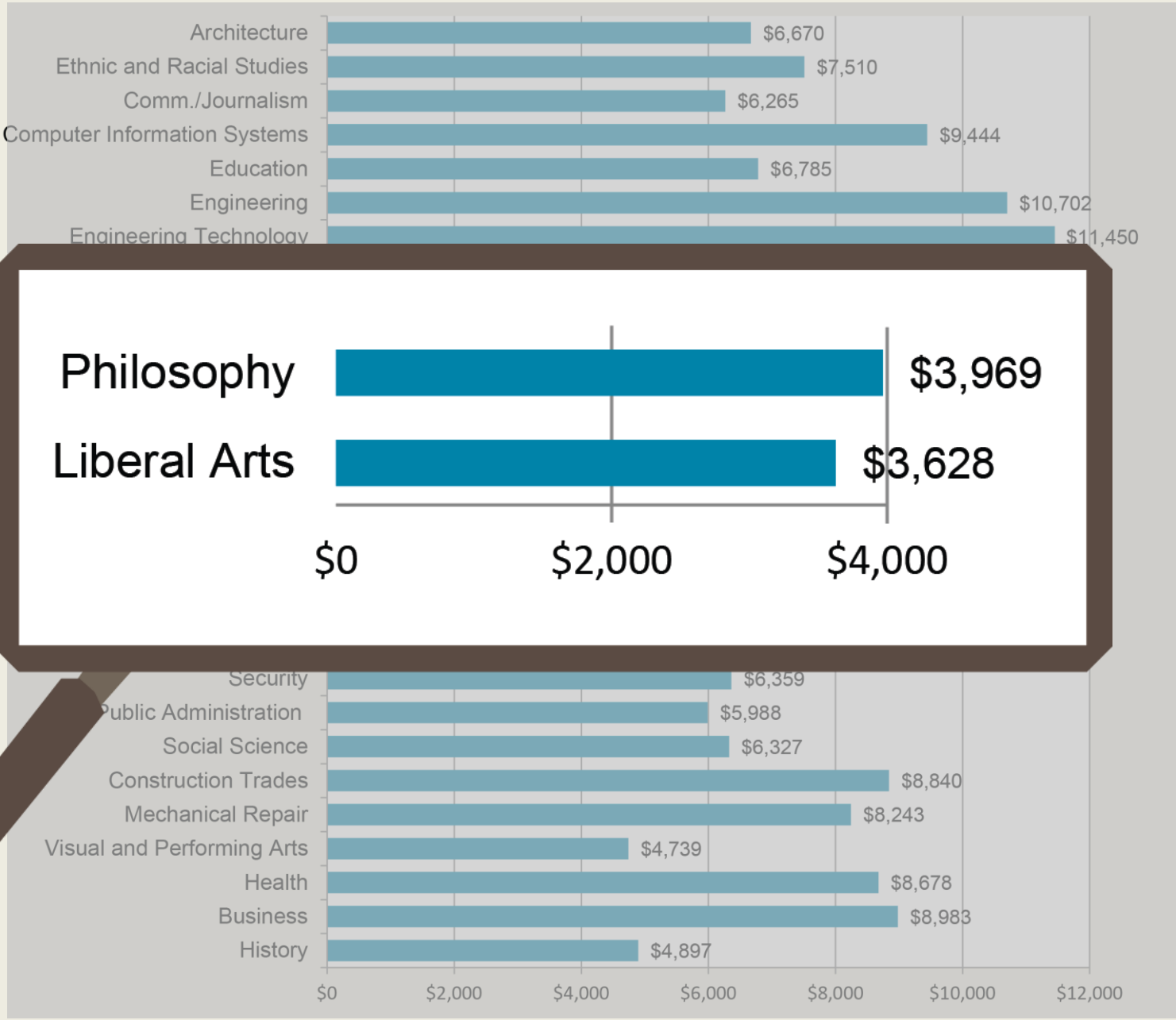

Majors among Bachelor's Degree Earners: General Patterns

- The greatest number of degrees were awarded in Business (31%)
- Education was next (9%), followed by Social Science (9%), Psychology (8%), and Communications/Journalism (7%).
- Those five instructional areas covered roughly two-thirds of the bachelor's degrees.
- 13% earned STEM-related degrees

Majors among Bachelor's Degree Earners: Direct Entrants

- There were more Direct Entrants with Degrees in:
  - Biological science
  - Social science
  - Visual and performing arts
  - Business

Majors among Bachelor's Degree Earners: Transfer Students

- There were more Transfer Students with Degrees in:
  - Communication/Journalism
  - Engineering
  - English
  - History

Lessons Learned

- Planning
- Securely Transferring the Data
- Issues with Merging
- National Student Clearinghouse
- Wage Records
- Bachelor's Completion at Other Colleges
- Extending the Traditional Length of Time to Degree Completion

Future Work

- Further explore employment outcomes (IDES)
  - Relationship between industry code and CIP code
- Utilize more recent institutional cohorts
  - High school course-taking patterns
  - More detailed financial aid information

Questions

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