Outmigration and Human Capital: Homeward Bound or Gone for Good

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Illinois P20 Council Meeting

South Suburban Community College

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Motivation

- **Outmigration**
  - Illinois has historically ranked near the bottom in outmigration.
  - Compounding the problem is the fact that Illinois-based higher education institutions are unable to attract enough high school graduates from outside the state to make up for the loss.
  - In terms of net-migration, Illinois also ranks near the bottom.
  - Outmigrants are more likely to stay out-of-state upon graduation than their counterparts who enrolled in-state (Adelman, 2004).
  - This represents a significant loss of tax revenue for the state (Smith & Wall, 2006).

Outmigration

- Each year the state of Illinois experiences a net loss of roughly 11,000 students.
  - –Summit
  - –Plano
  - –Minooka
- Outmigrants tend to be among the best and brightest Illinois high school graduates (Manley et al., 2013; Smalley et al., 2010).
- This represents a significant loss of human capital.

Research Questions

- Given the present and historical problem of outmigration, we are left with the following questions:
  - Do outmigrants return home to work and find employment in Illinois?
  - And if so, what are their earnings?
  - Also, among the outmigrants who returns?
  - How do these Illinois-specific workforce outcomes compare with an observationally equivalent comparison group?

Creating the 'Treatment' and Comparison Groups

End of Study Status (seven years out) for the Illinois High School Class of 2003 (N=128,323)

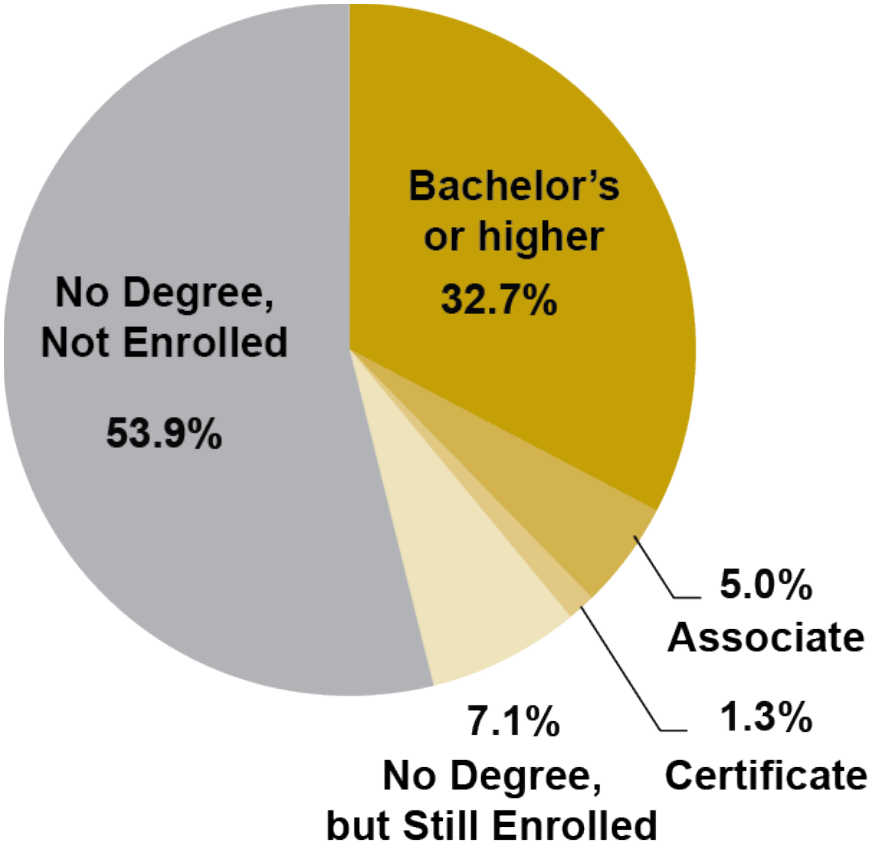
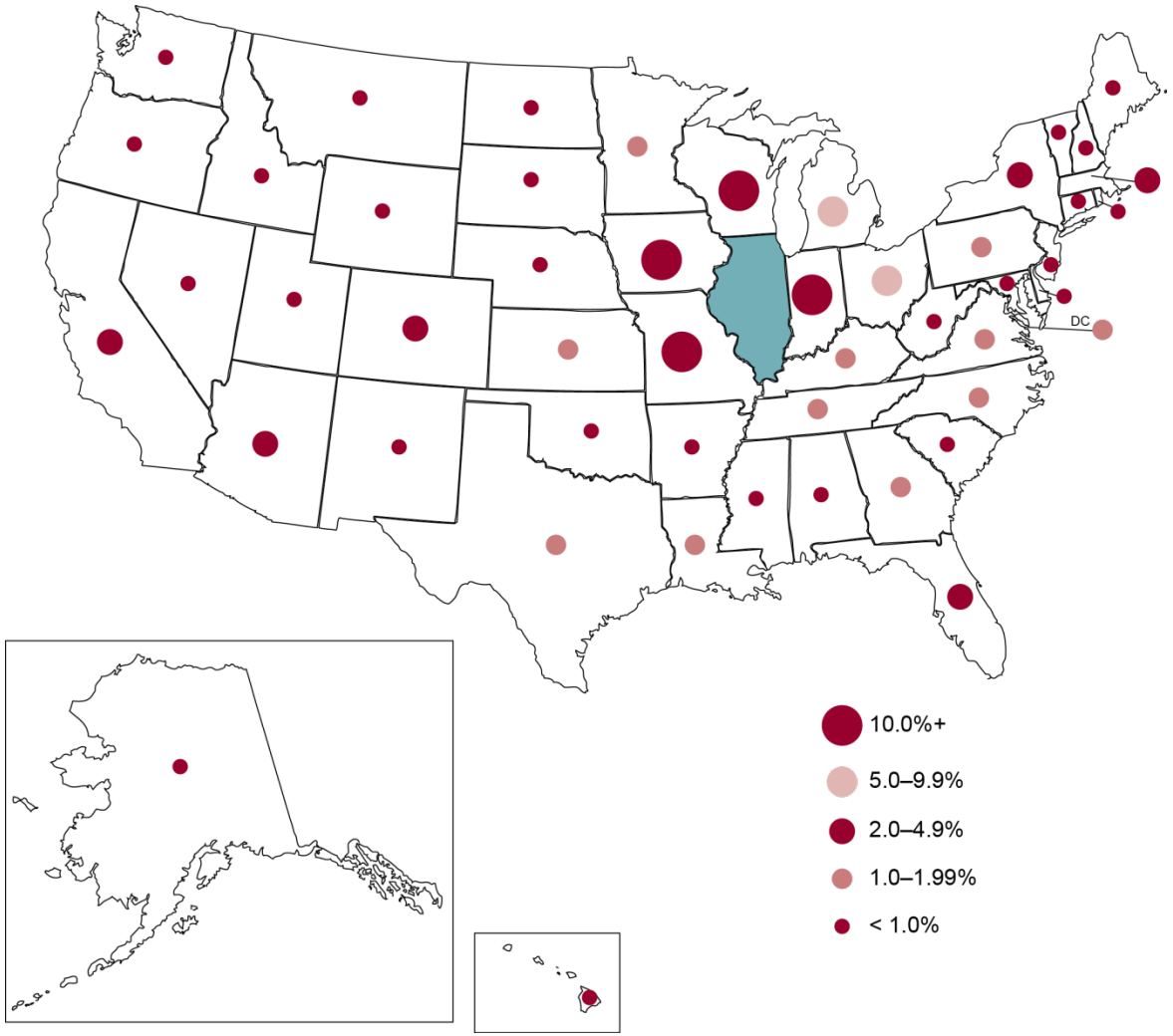
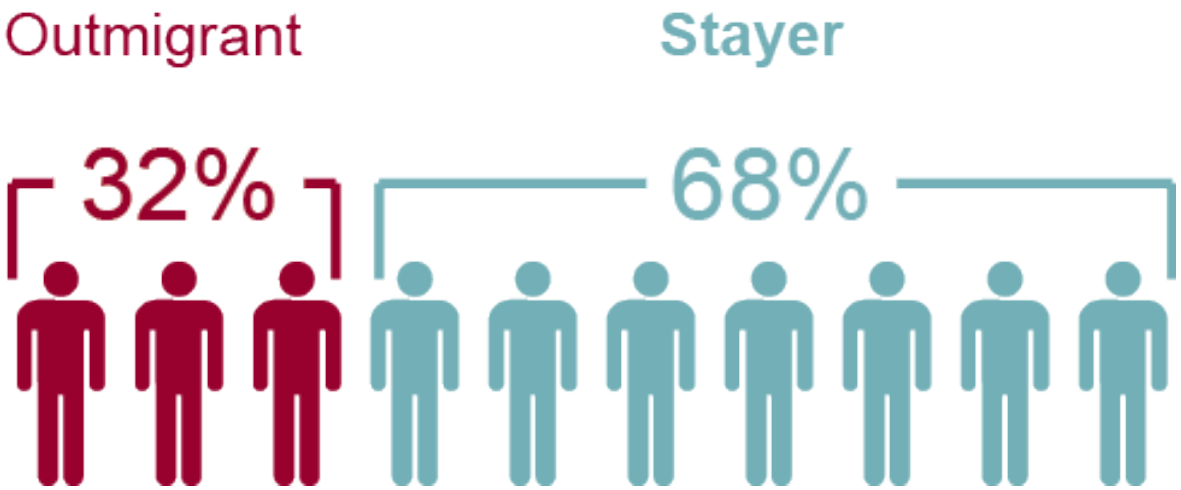


Figure 3 - Outmigration

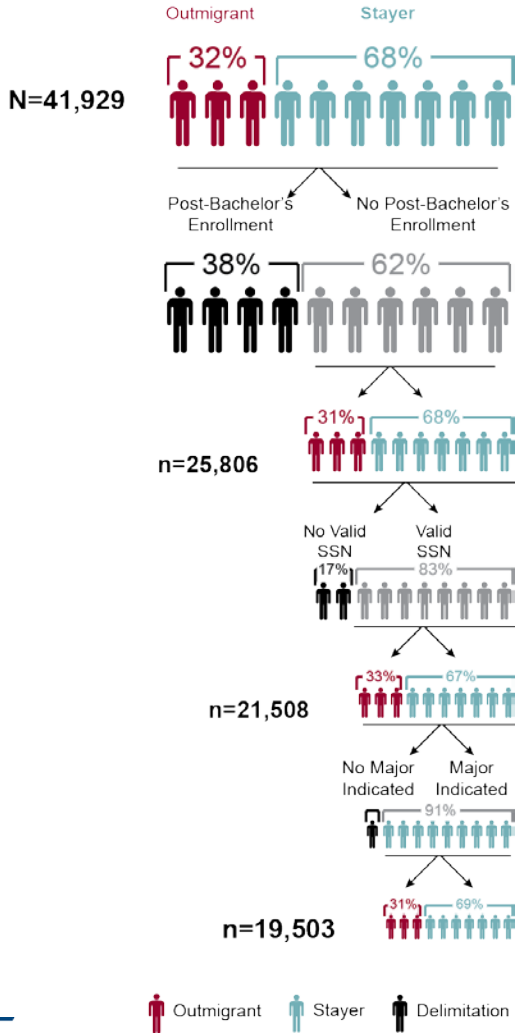


Outmigration Status

N=41,929



Study Group Composition Prior to Matching



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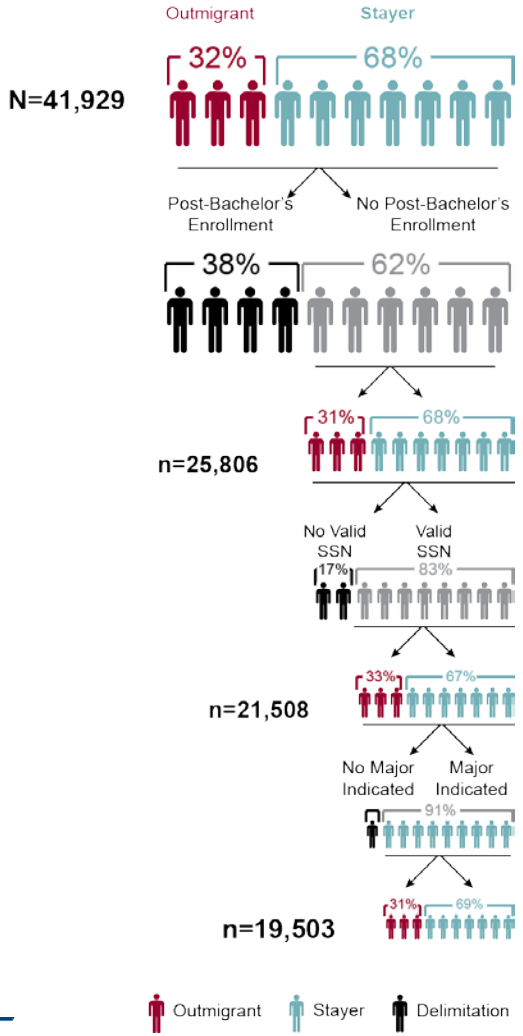

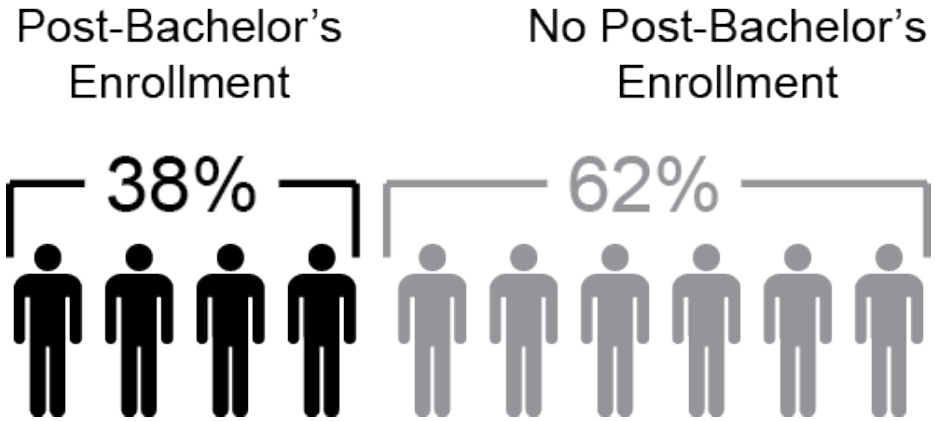

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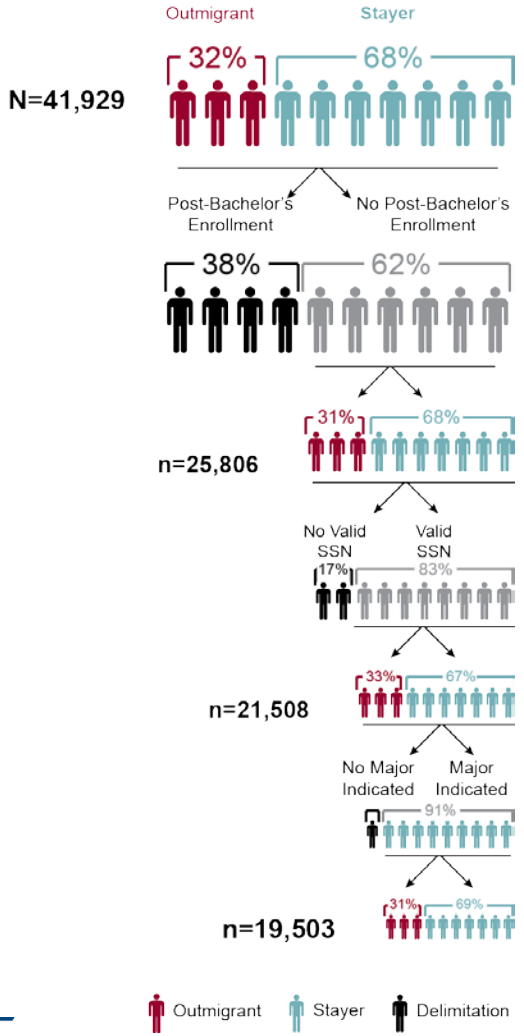
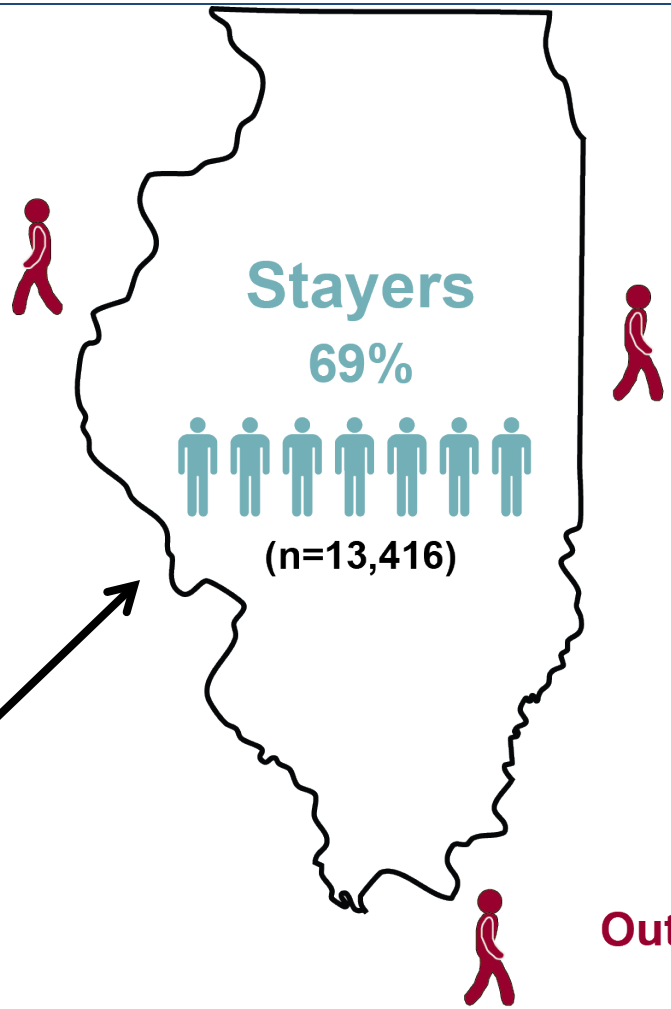
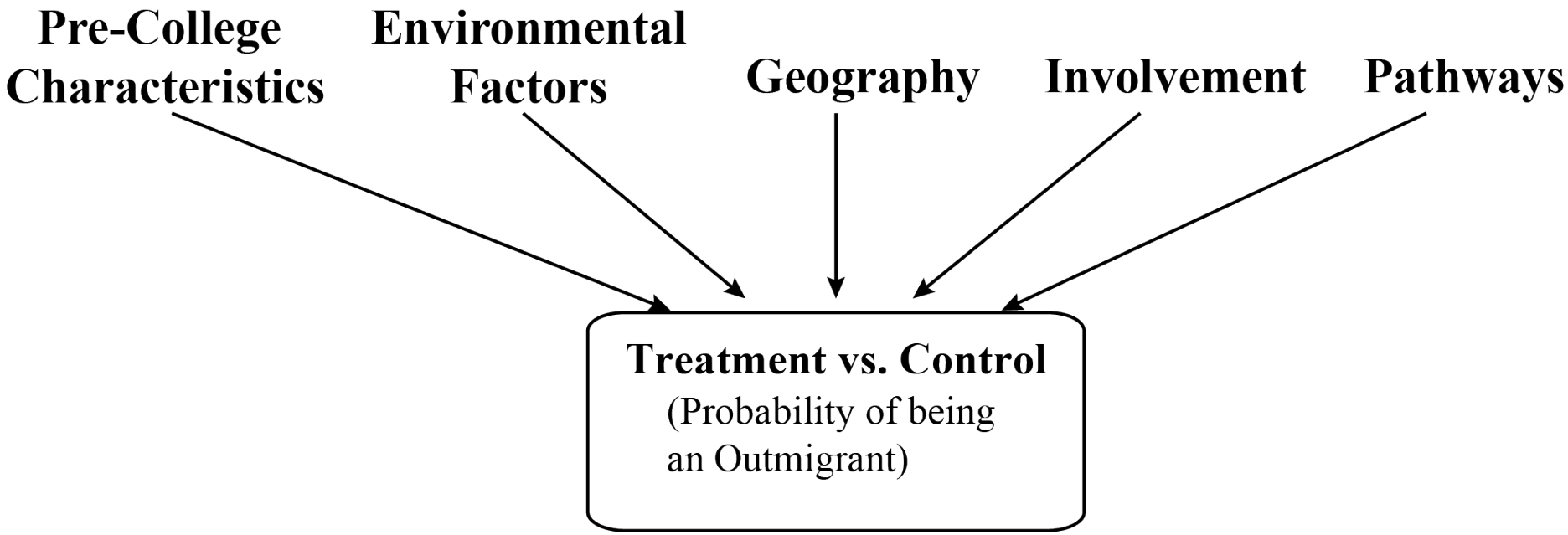




Conceptual Model Predicting Outmigration



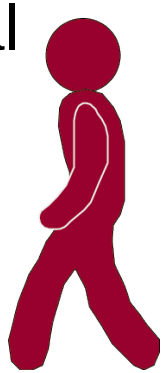
Matched Pairs:

- Were from the same region and locale
- Had a similar likelihood of being an outmigrant
- Graduated from a four-year college with the same Barron's competitiveness rating
- Had the exact same major associated with their bachelor's degree
- The only observable difference between each member of the matched pairs was exposure to the 'treatment'

Example of a Matched Pair

Outmigrant

- Aurora
- 62% likelihood of being an outmigrant
- Graduated from Ohio State
- Majored in Chemical Engineering



Stayer

- Aurora
- 62% likelihood of being an outmigrant
- Graduated from the University of Illinois at Urbana-Champaign
- Majored in Chemical Engineering

Diagnostics – Environment

Control	Prior to Matching			After Matching		
	Outmigrants (n=6,087)	Stayers (n=13,416)	Standardized Difference	Outmigrants (n=4,400)	Stayers (n=4,400)	Standardized Difference
High School Level						
HS Mean Composite ACT	22.31	21.10	51.86	22.41	22.28	5.50
HS Percentage Low Income	0.16	0.21	-38.40	0.15	0.15	-3.45
HS Type: Public	0.79	0.84	-12.30	0.79	0.78	2.08
HS Type: Non-Public	0.21	0.16	13.83	0.21	0.22	-2.08
Student Level						
Expected Financial Aid: Yes	0.58	0.67	-16.46	0.58	0.59	-2.01
Expected Financial Aid: No	0.23	0.14	24.29	0.21	0.22	-1.72
Expected Financial Aid: Missing	0.19	0.20	-1.77	0.21	0.19	4.20
Planned Work Hours: 0	0.23	0.14	23.65	0.22	0.22	-0.69
Planned Work Hours: 1-10	0.26	0.23	6.60	0.26	0.25	1.62
Planned Work Hours: 11-20	0.24	0.32	-17.56	0.24	0.24	0.33
Planned Work Hours: 21-30	0.05	0.09	-15.41	0.05	0.06	-7.21
Planned Work Hours: 31 or more	0.01	0.01	-5.15	0.01	0.01	-5.49
Planned Work Hours: Missing	0.22	0.21	2.44	0.23	0.22	3.35

Cells are shaded according to their difference from zero

Difference favoring Stayers

Difference favoring Outmigrants

Diagnostics – Environment

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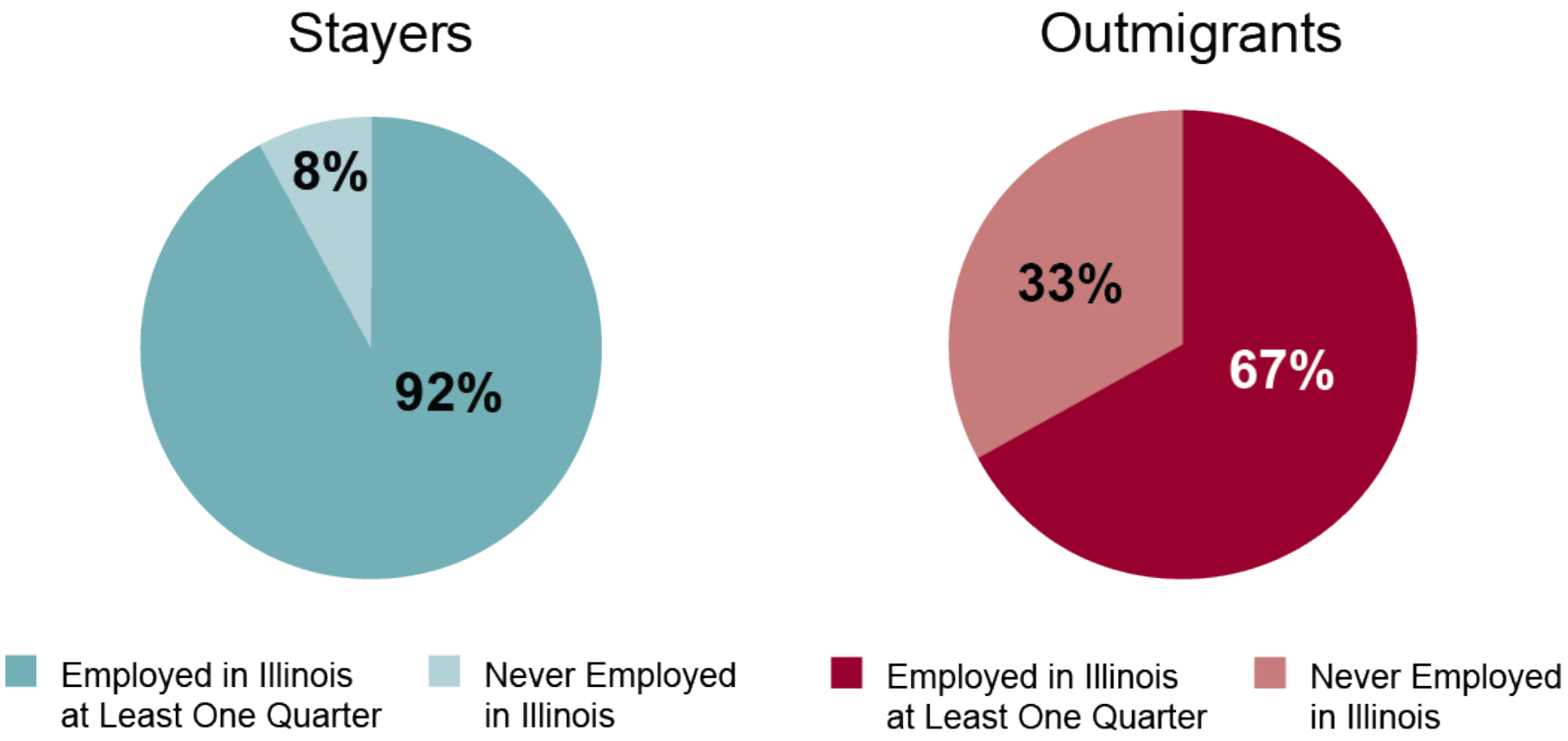
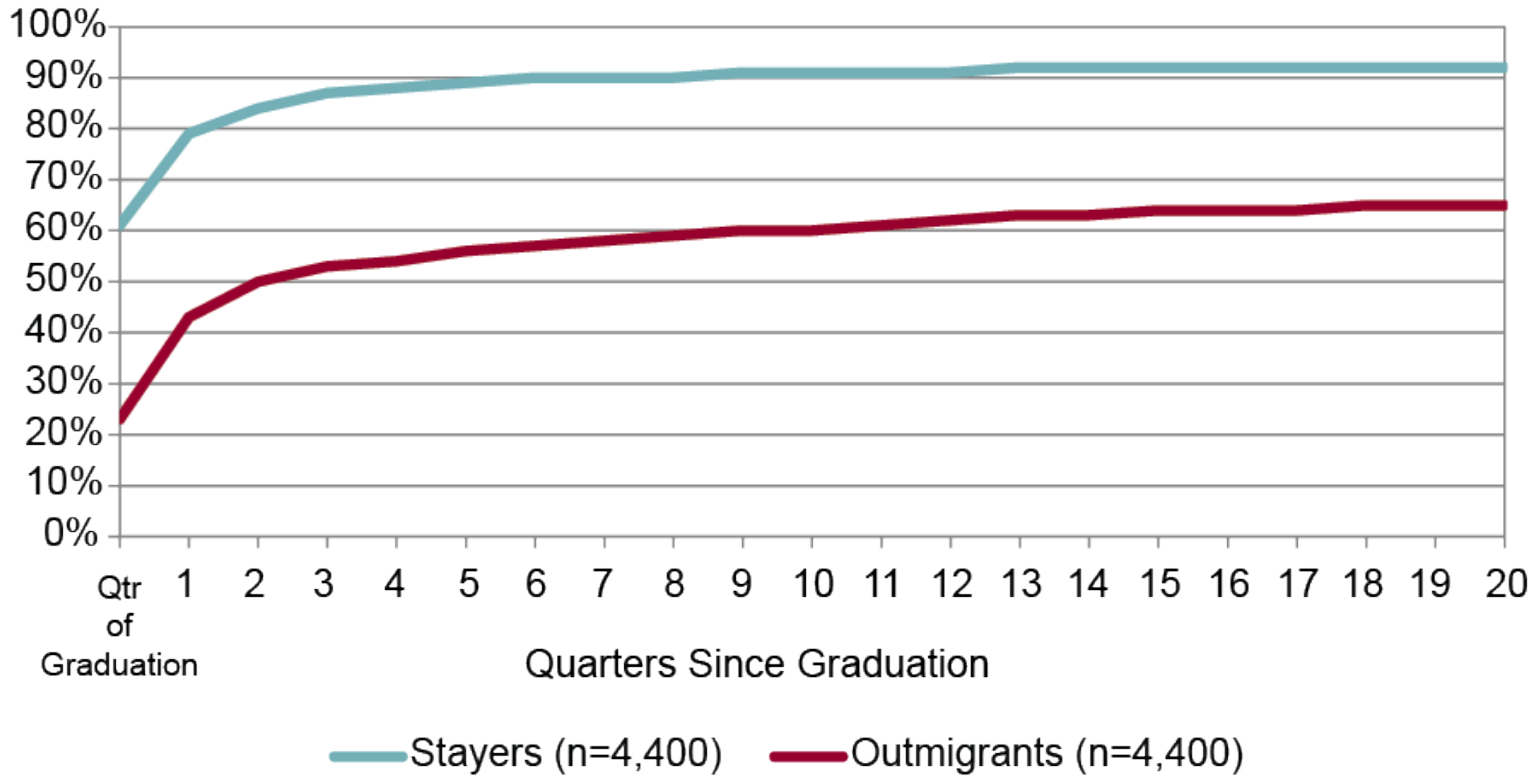
Difference favoring Stayers — Difference favoring Outmigrants

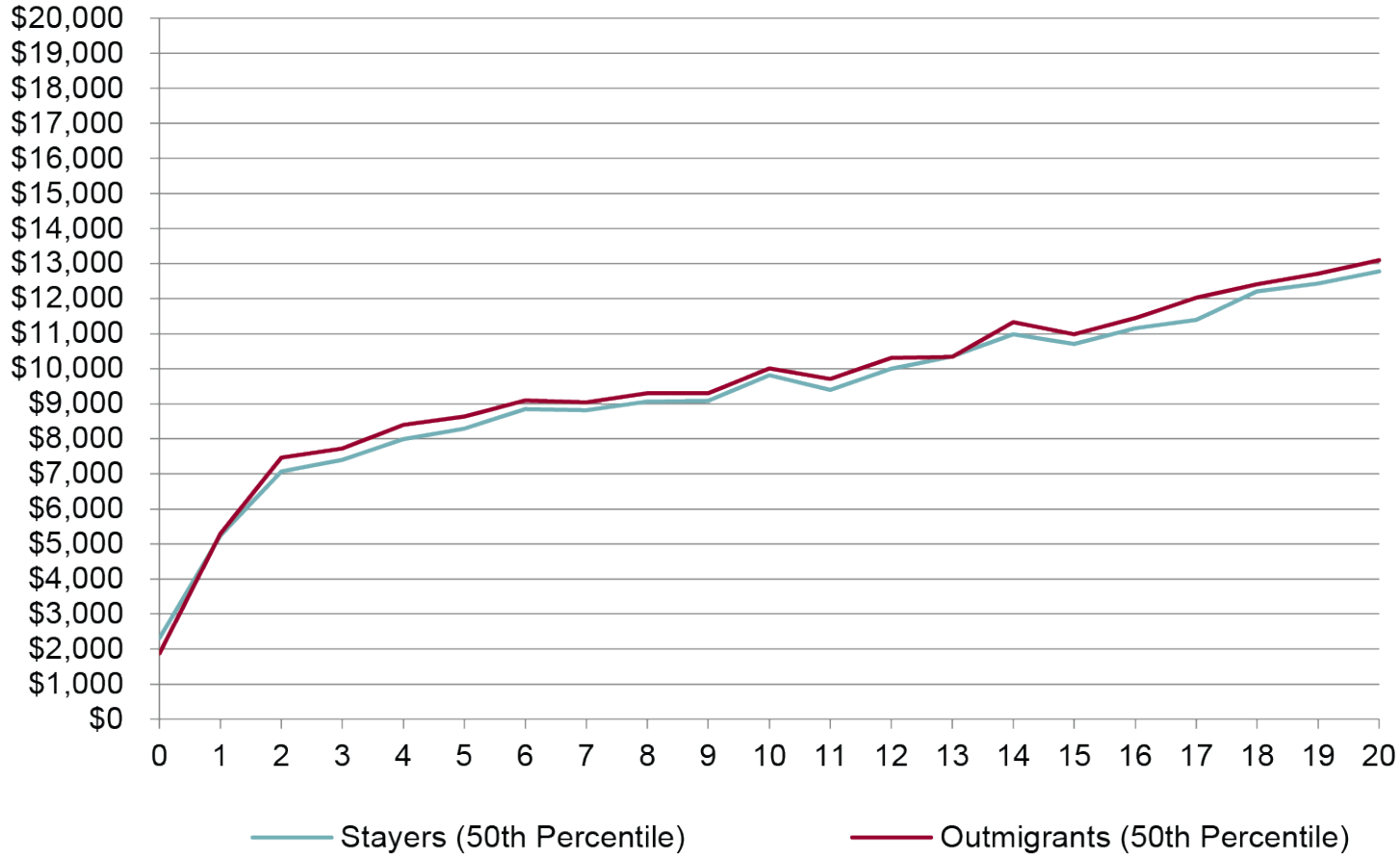
Overall Rate of Post-Bachelor's Illinois Employment



Cumulative Rate of Illinois Employment by Outmigration Status



Quarterly Wages



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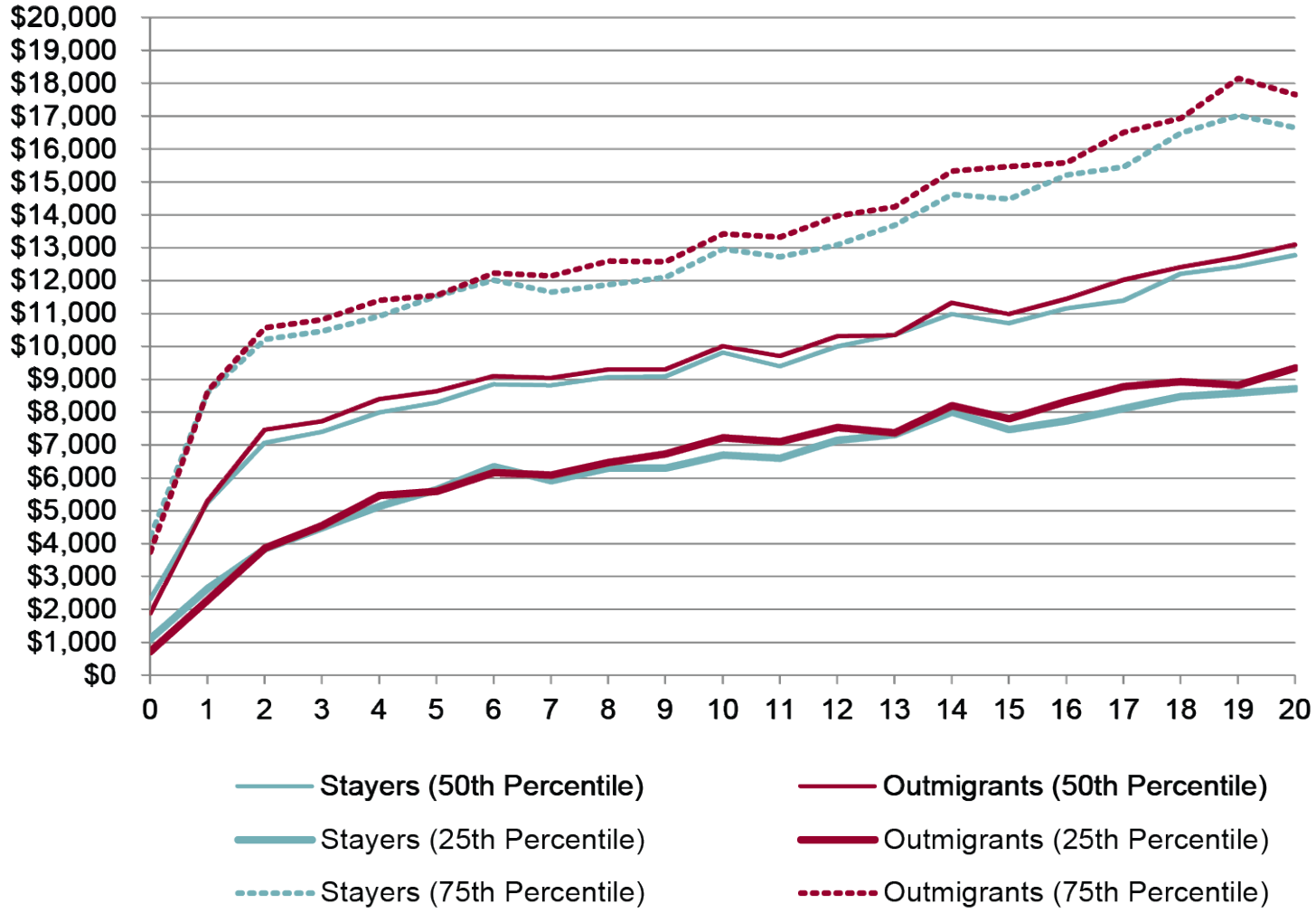
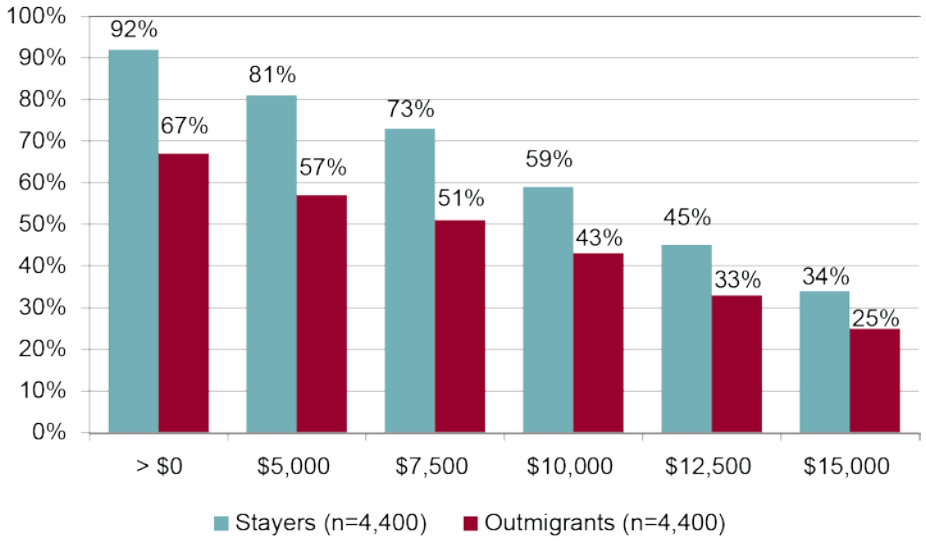
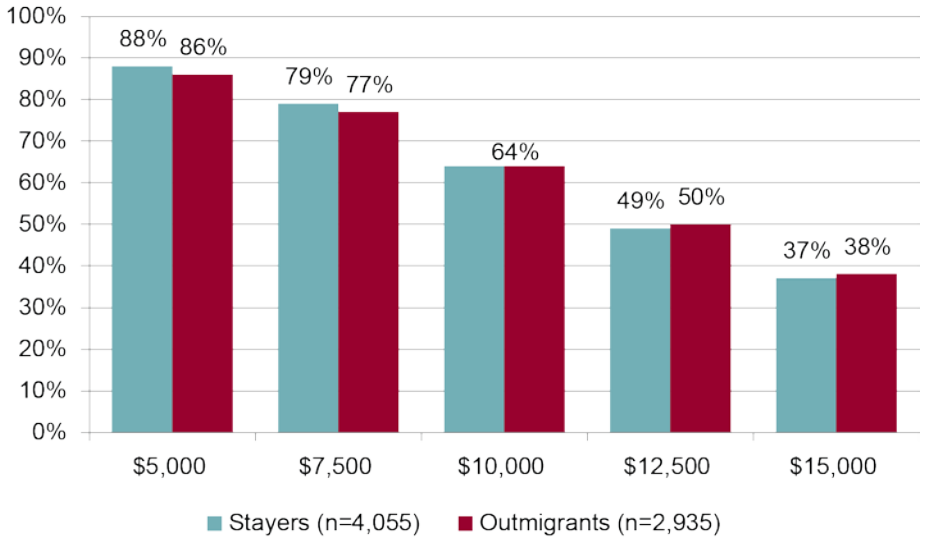


Quarterly Wage Thresholds: Overall and Conditional Upon Illinois Employment

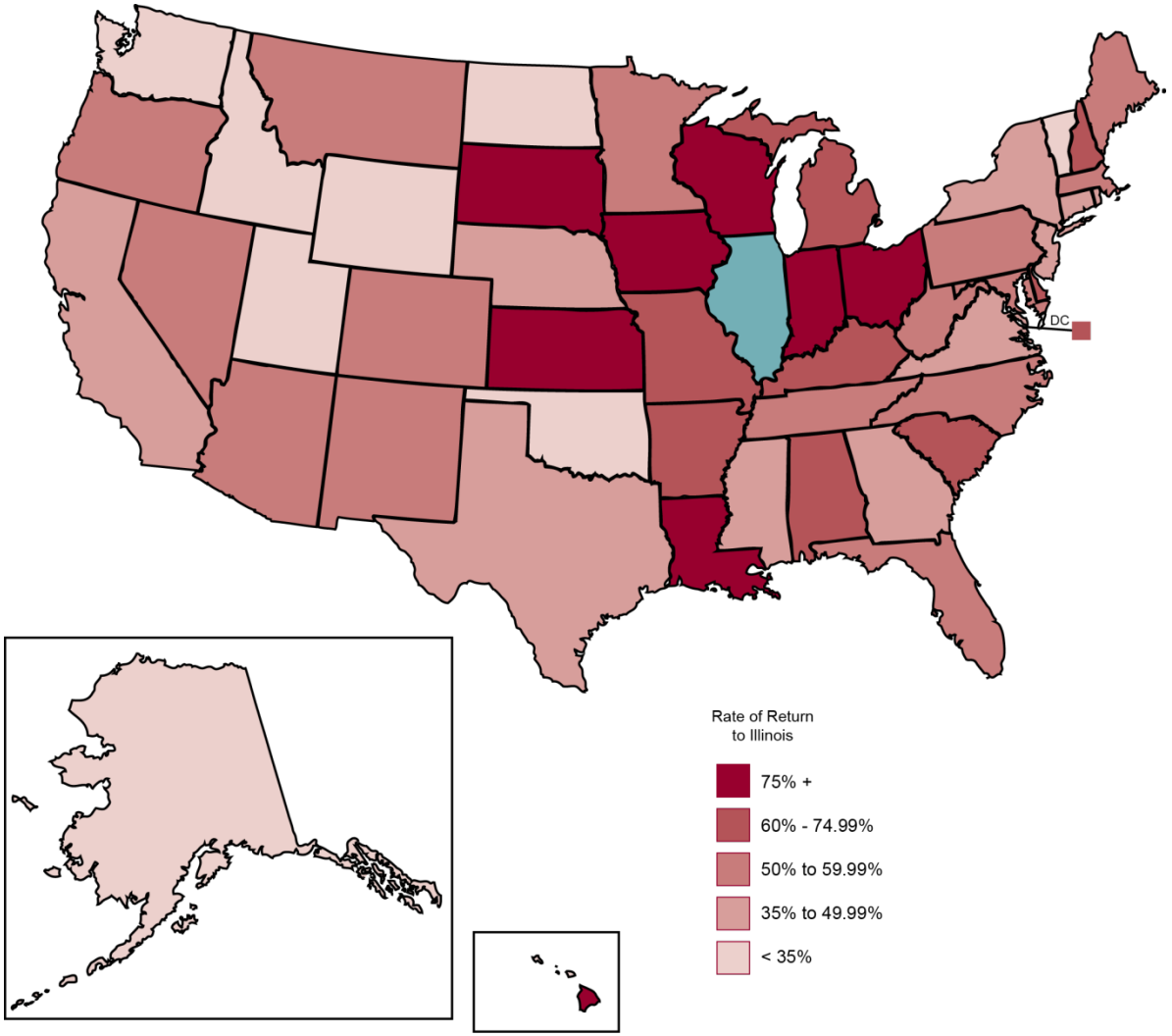
Overall



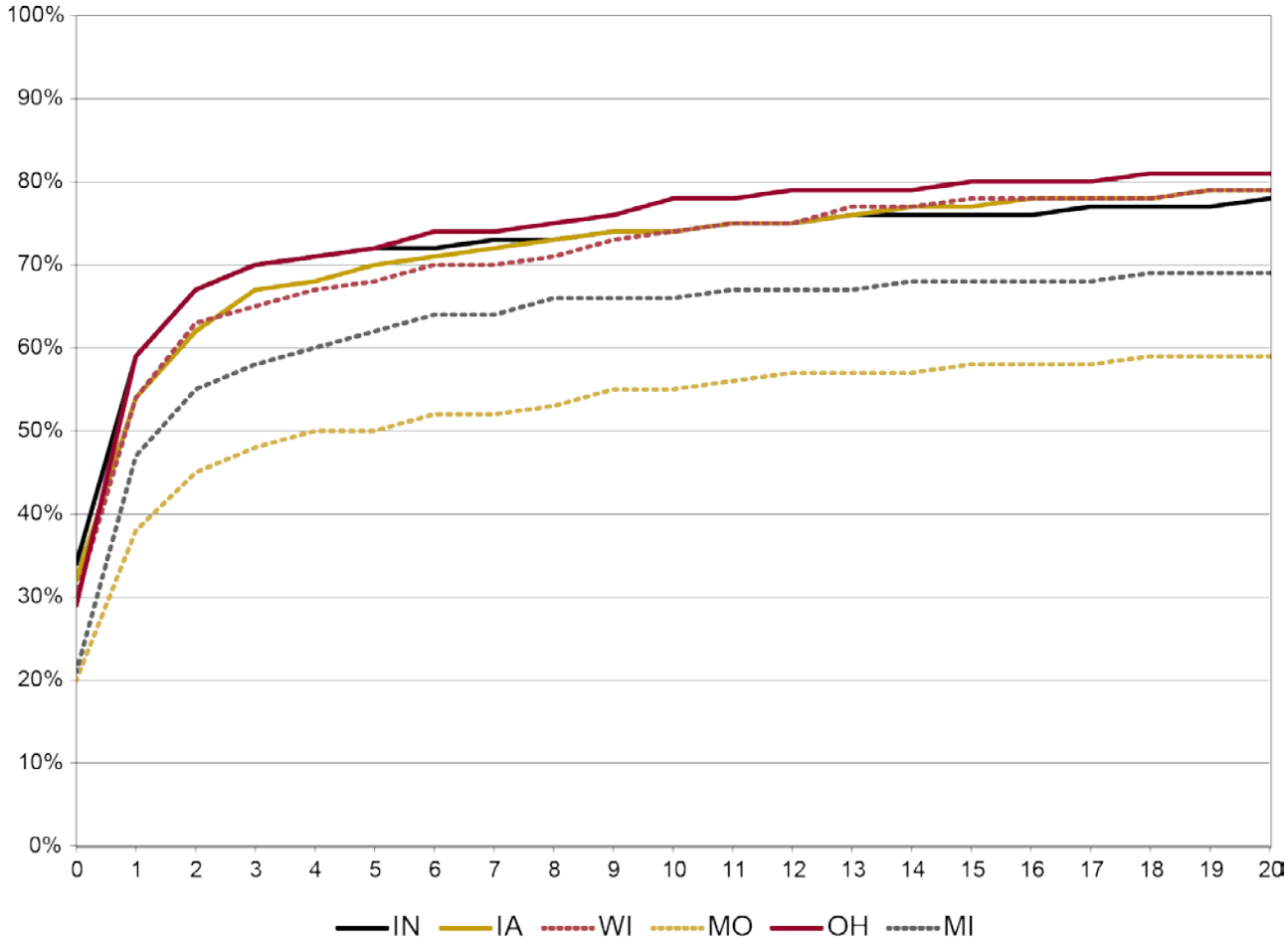
Conditional Upon Illinois Employment



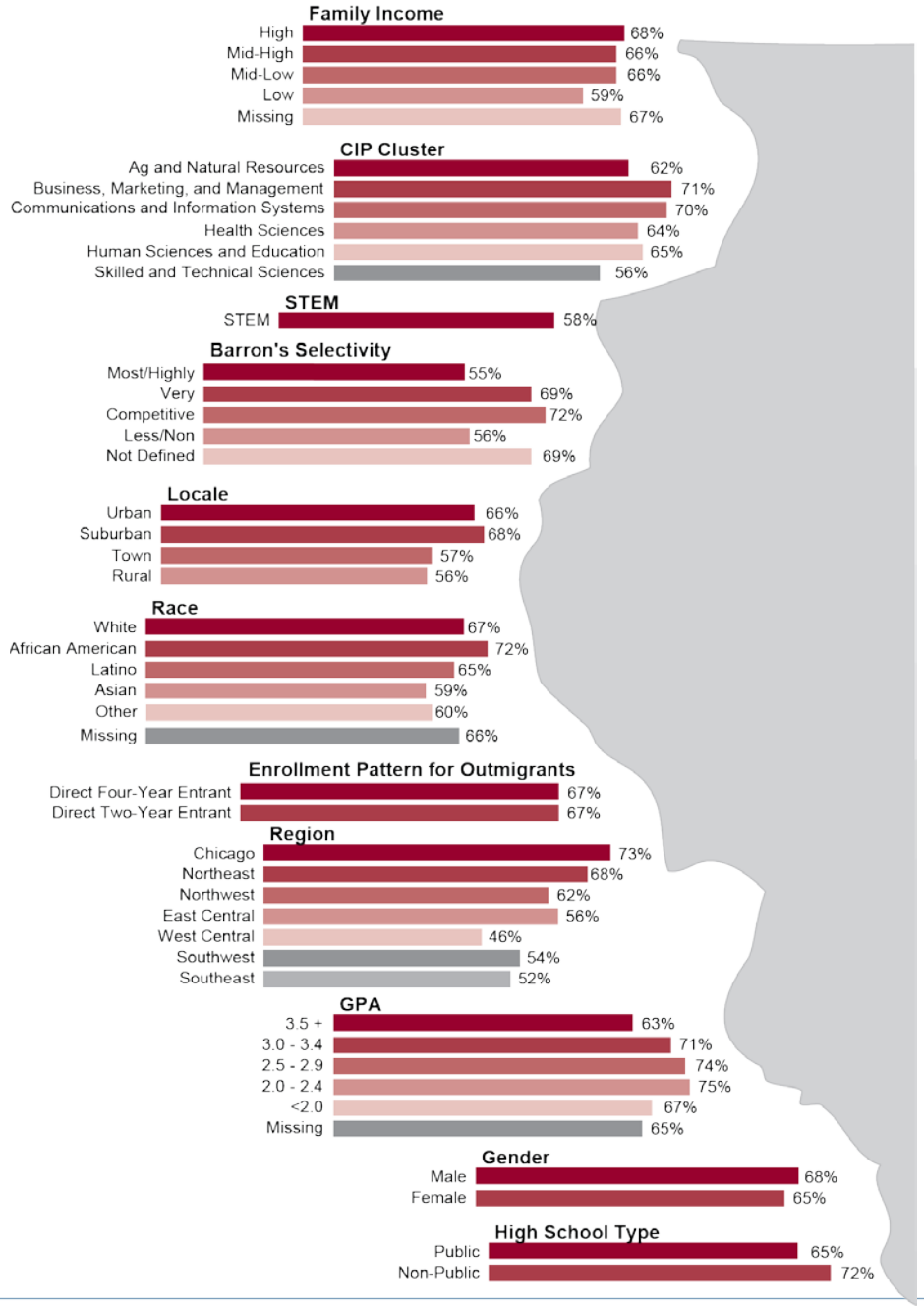
Rate of Illinois Employment by Graduation State for Matched Study Group Members



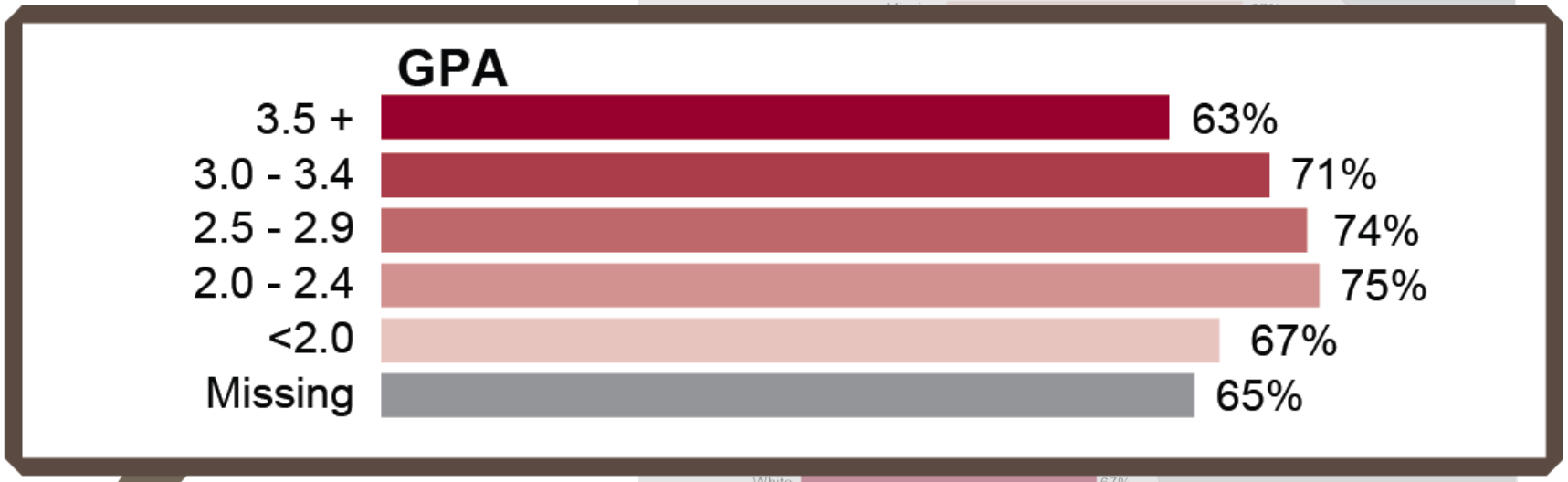
Cumulative Rate of Return among High Yield States



Who Returns?


Family Income
High 68%
Mid-High 66%
Mid-Low 66%
Low 59%
Missing 67%
CIP Cluster
Ag and Natural Resources 62%
Business, Marketing, and Management 71%
Communications and Information Systems 70%
Health Sciences 64%
Human Sciences and Education 65%
Skilled and Technical Sciences 56%
STEM
STEM 58%
Barron's Selectivity
Most/Highly 55%
Very 69%
Competitive 72%
Less/Non 56%
Not Defined 69%
Locale
Urban 66%
Suburban 68%
Town 57%
Rural 56%
Race
White 67%
African American 72%
Latino 65%
Asian 59%
Other 60%
Missing 66%
Enrollment Pattern for Outmigrants
Direct Four-Year Entrant 67%
Direct Two-Year Entrant 67%
Region
Chicago 73%
Northeast 68%
Northwest 62%
East Central 56%
West Central 46%
Southwest 54%
Southeast 52%
GPA
3.5 + 63%
3.0 - 3.4 71%
2.5 - 2.9 74%
2.0 - 2.4 75%
<2.0 67%
Missing 65%
Gender
Male 68%
Female 65%
High School Type
Public 65%
Non-Public 72%

Who Returns?



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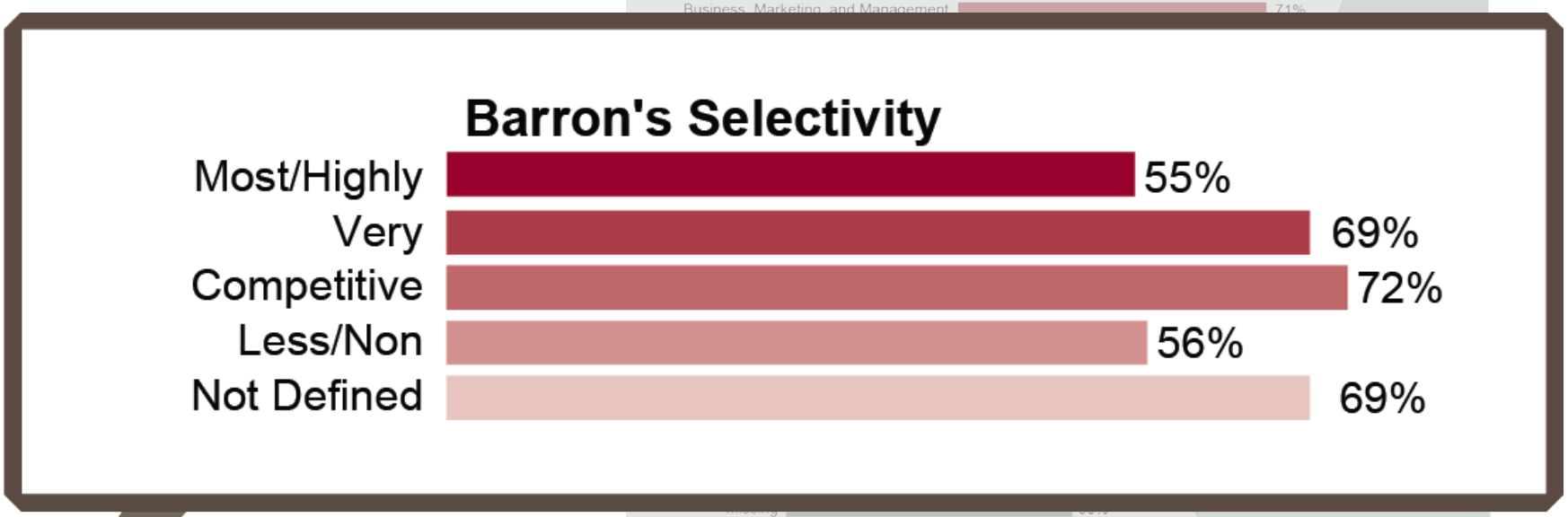
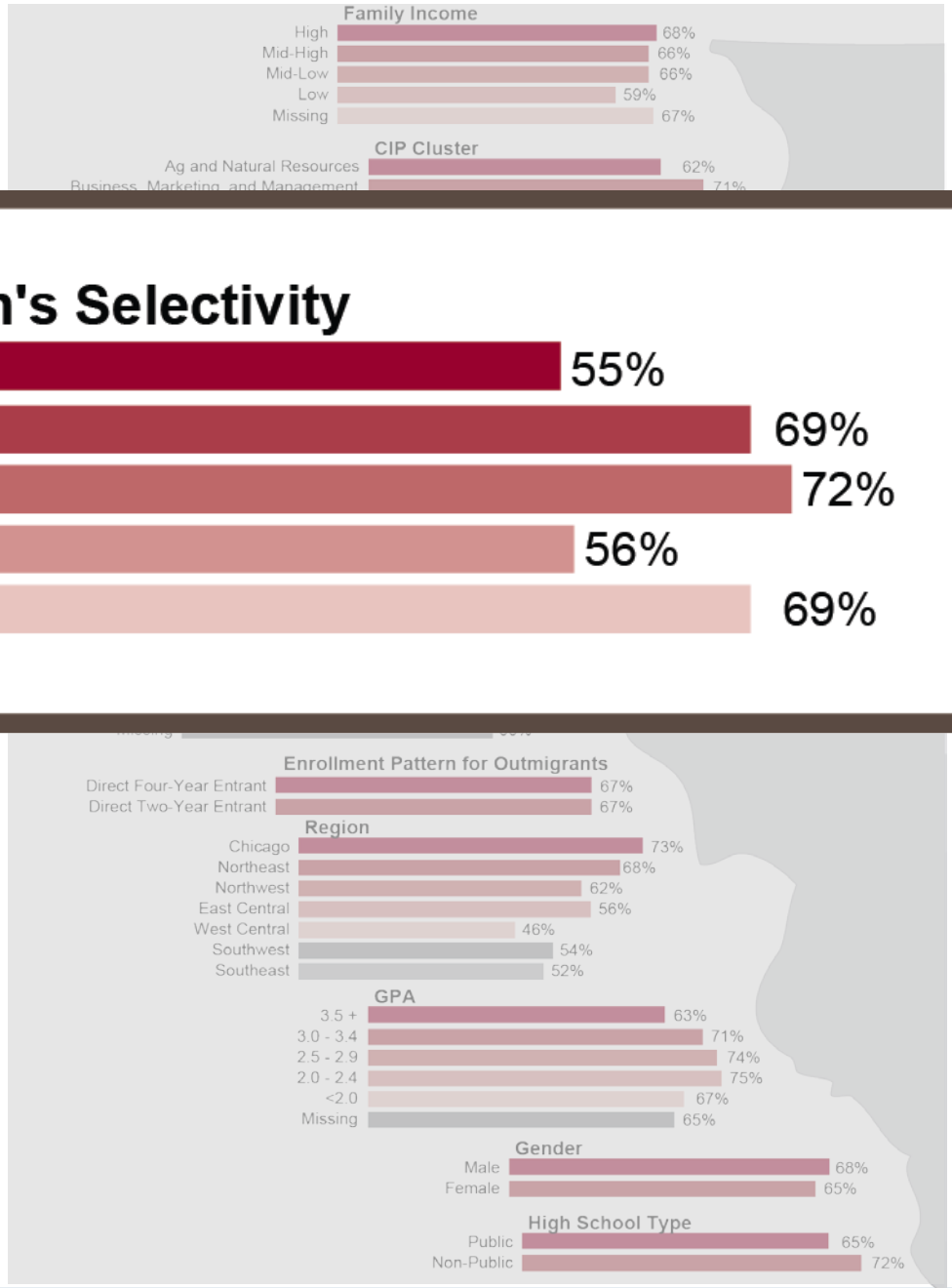

Barron's Selectivity
Most/Highly
55%
Very
69%
Competitive
72%
Less/Non
56%
Not Defined
69%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Chicago 73%
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West Central 46%
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3.5 + 63%
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High School Type
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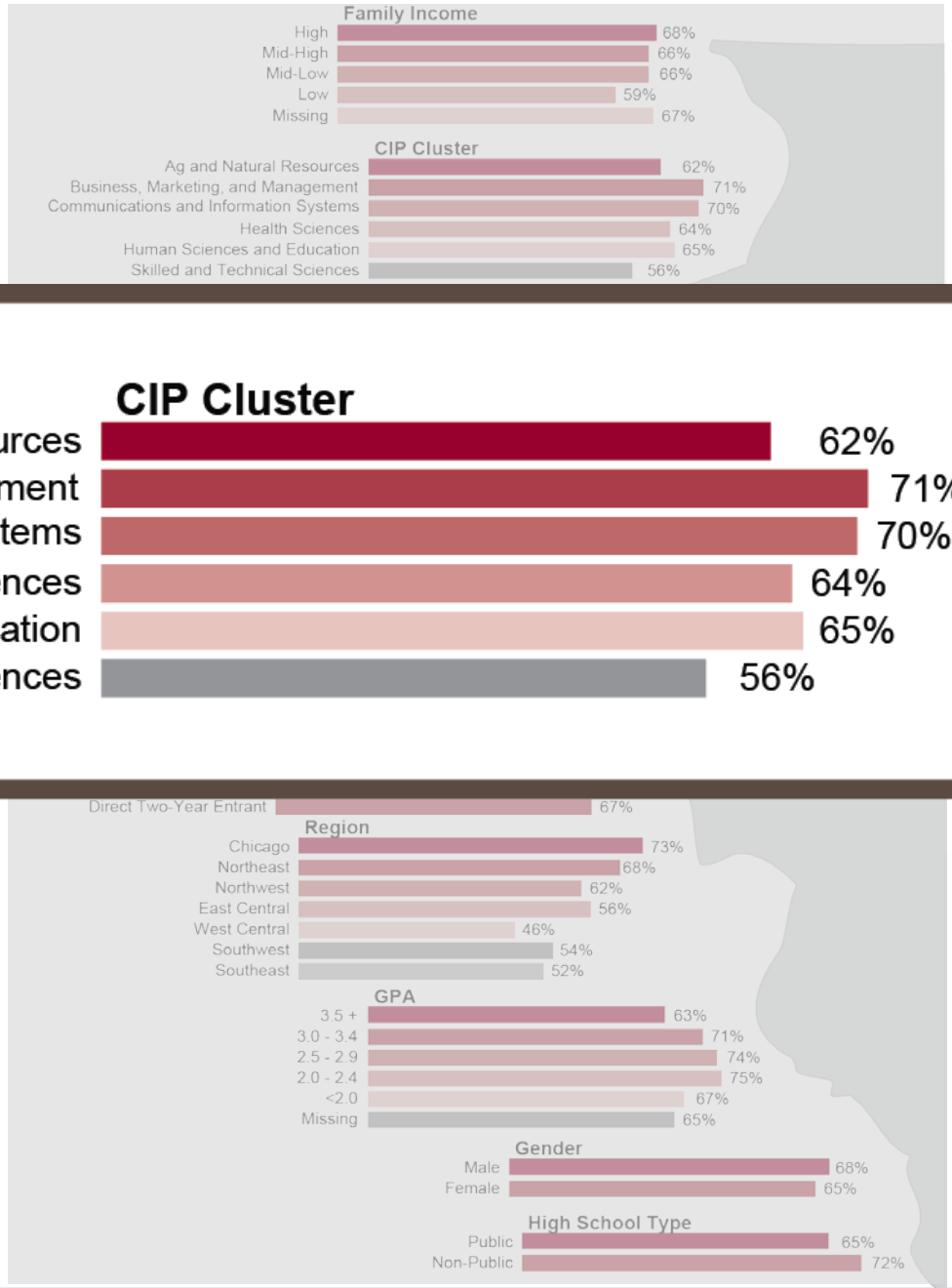
Who Returns?



CIP Cluster
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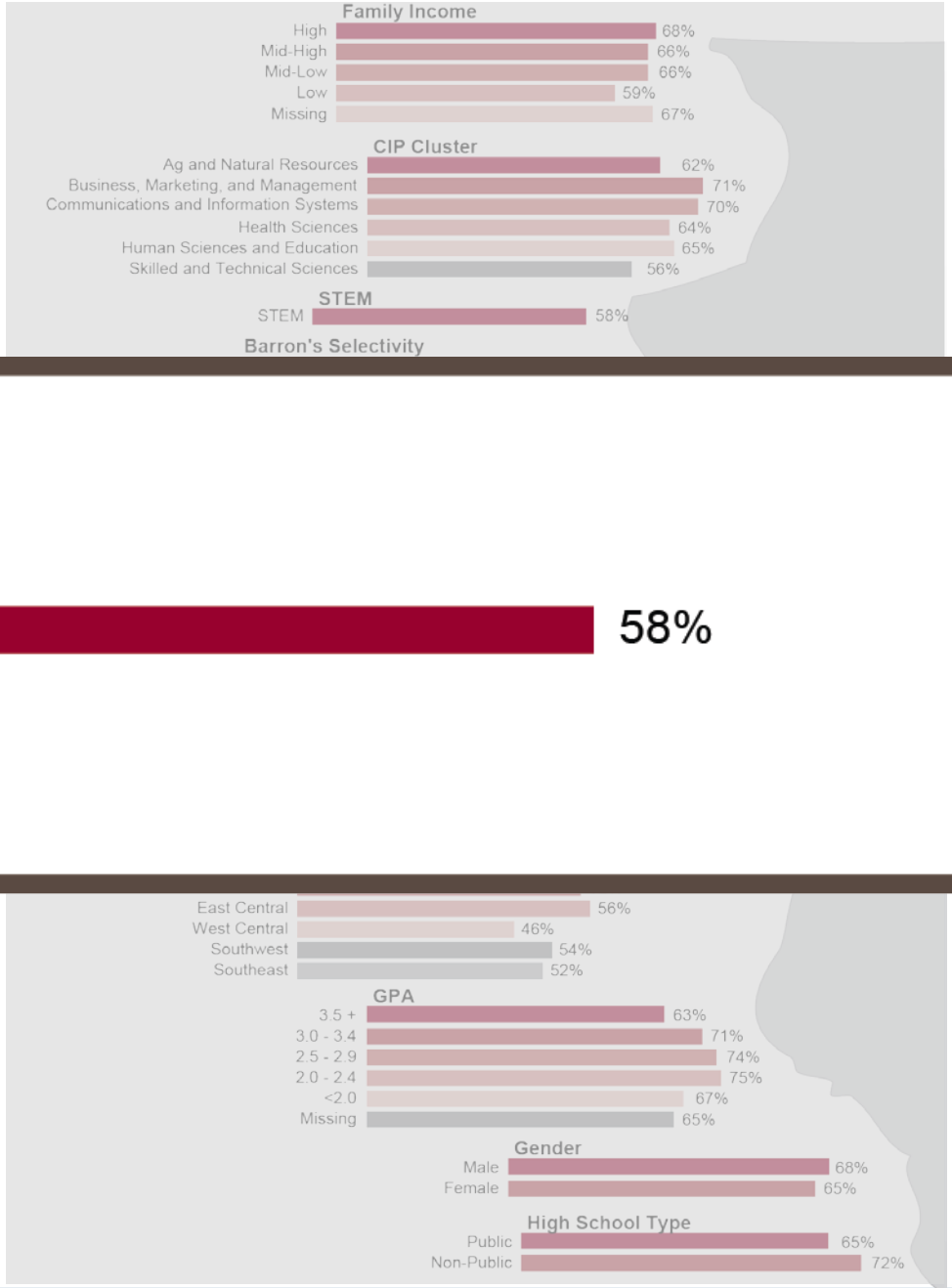
Business, Marketing, and Management 71%
Communications and Information Systems 70%
Health Sciences 64%
Human Sciences and Education 65%
Skilled and Technical Sciences 56%

Who Returns?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Human Sciences and Education 65%
Skilled and Technical Sciences 56%
STEM
STEM 58%
Barron's Selectivity
East Central 56%
West Central 46%
Southwest 54%
Southeast 52%
GPA
3.5 + 63%
3.0 - 3.4 71%
2.5 - 2.9 74%
2.0 - 2.4 75%
<2.0 67%
Missing 65%
Gender
Male 68%
Female 65%
High School Type
Public 65%
Non-Public 72%

STEM
STEM
58%

Predicting Illinois Employment by Outmigration Status

	Outmigrants Odds Ratio (n=4,400)	Outmigrants Odds Ratio (n=4,400)	Stayers Odds Ratio (n=4,400)	Stayers Odds Ratio (n=4,400)
	Model 1	Model 2	Model 1	Model 2
Major Grouping				
Ag and Natural Resource to Skilled and Technical Sciences	1.404		1.750	
Business and Marketing to Skilled and Technical Sciences	1.774***		1.503*	
Communications and Information to Skilled and Technical Sciences	1.698***		1.592*	
Health to Skilled and Technical Sciences	1.455		2.968*	
Human Sciences and Education to Skilled and Technical Sciences	1.368*		1.756**	
STEM to Non-Stem		0.701***		0.769

*p<.05, **p<.01, ***p<.001

Predicting Illinois Employment by Outmigration Status

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	Model 1	Model 2	Model 1	Model 2
STEM to Non-Stem		0.701***		0.769

*p<.05, **p<.01, ***p<.001

Major Findings

- Outmigrants were significantly less likely to gain employment in Illinois relative to stayers.
- Among the outmigrants, those with stronger academic profiles were less likely to obtain Illinois employment.
- Further, the outmigrants with the degrees deemed most important for the Illinois economy were even less likely to return to Illinois for employment.

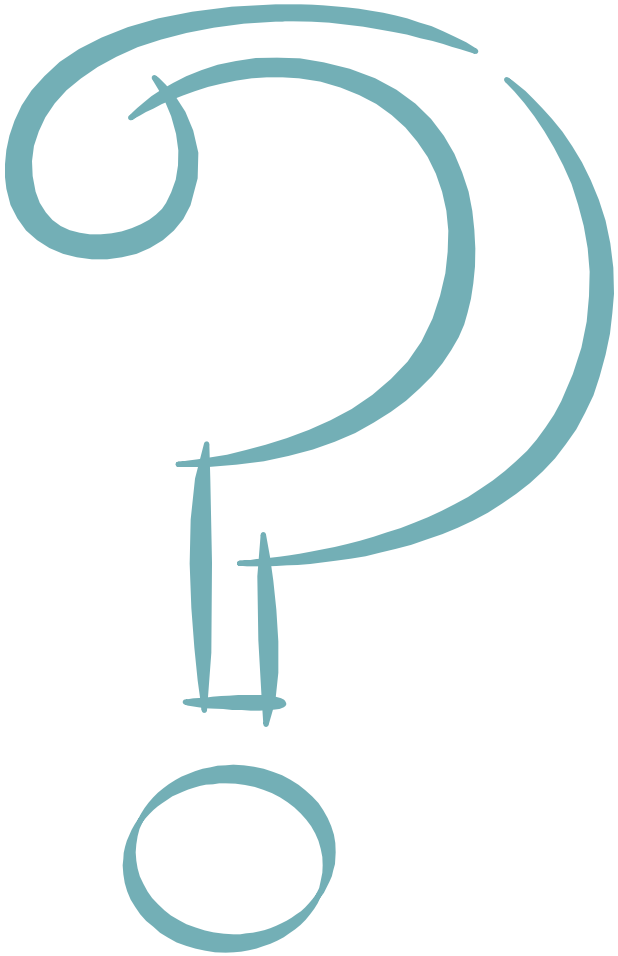
Consequences of Outmigration

- Outmigrants experienced significantly lower rates of Illinois-specific employment relative to the stayers resulting in substantially lower aggregate Illinois wages among the outmigrant group.
- Relatedly, substantially fewer outmigrants reached the various Illinois-specific earnings thresholds.
- This in turn, represents some of the negative economic impact that outmigration has on the state of Illinois.

Policy Recommendations

- Data specific recommendations:
  - Entering into data sharing agreements with neighboring states.
  - Graduates of private high schools and the ILDS.
- Education policy specific recommendations:
  - Increasing affordable postsecondary options for Illinois students.
  - Actively recruiting outmigrants to return to Illinois for work.

Questions



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