

EXPLORING ACADEMIC OUTCOMES OF HOMESCHOOLED STUDENTS

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Agenda

- Purpose
- Home School
- Study Population
- Models
- Descriptive Analysis
- Multivariate Analysis
- Application
- Discussion

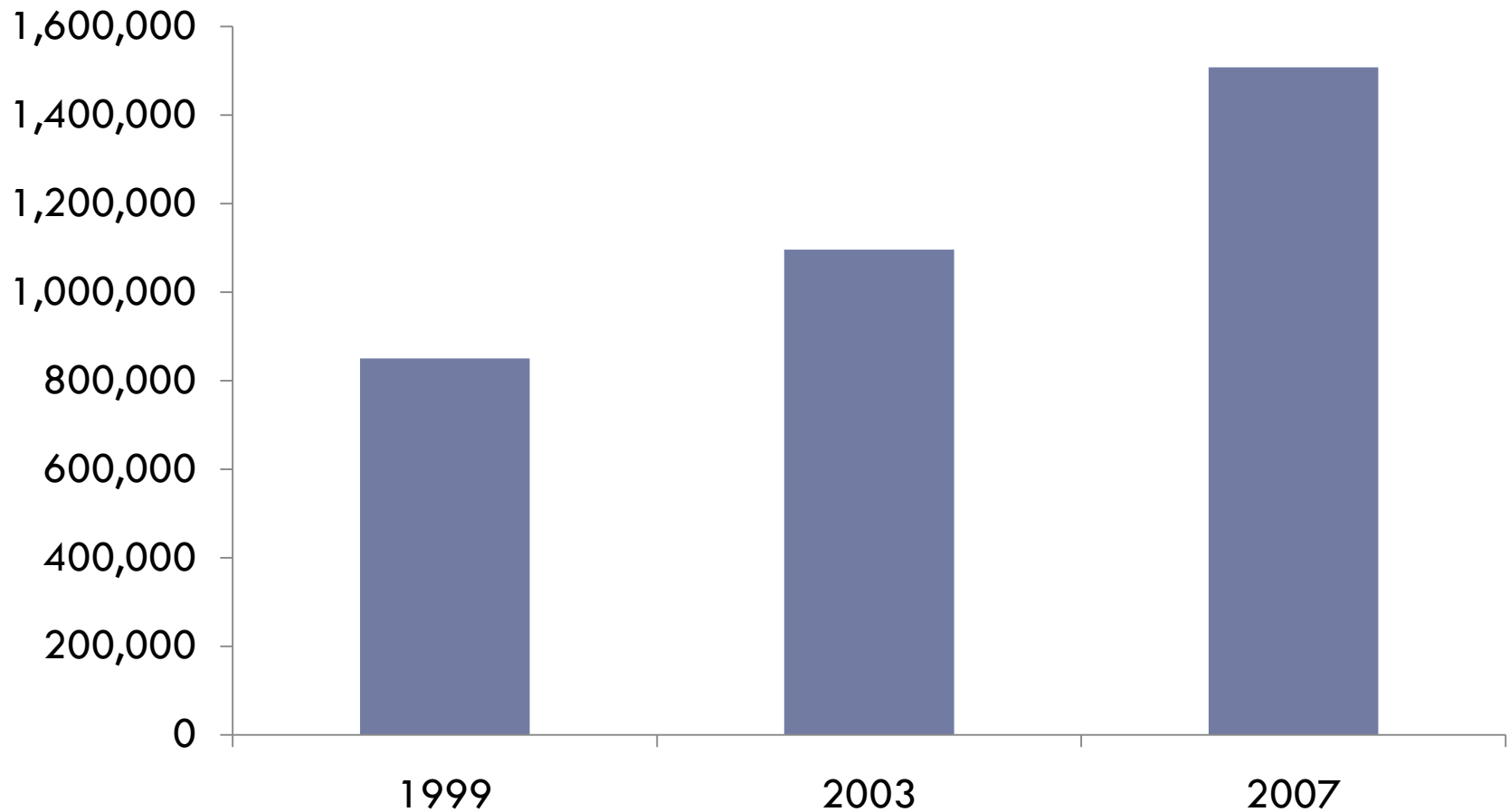
Purpose

- Explore academic outcomes of home school students attending a medium sized, doctoral institution located in the Midwest
- Identify similarities and differences by high school type
- Outcomes of interest include:
 - ▣ First-Year GPA
 - ▣ Fall-to-Fall Retention
 - ▣ Fourth-Year GPA
 - ▣ Four-Year Graduation

What is Home School?

- Lacking a clear definition
- K-12
- Child receives the majority of formal education in the home (82% receive all)
- Primary teacher is the parent or guardian (Mother)
- Curriculum may be structured or not (unlearning)
- Approximately 1.5 million home school children in the US (3%)

Growth of Home School (1999-2007)



Characteristics of Home School Families (NHES)

□ Demographics(2003)

- ▣ Same income levels
- ▣ Higher education levels
- ▣ More likely to reside in rural area
- ▣ More likely to have two parents in the home (one working)
- ▣ Bigger families

□ Reasons for home schooling (2007)

- ▣ A concern about school environment
- ▣ A desire to provide religious or moral instruction
- ▣ A dissatisfaction with instruction at other schools

Institution

- Private not-for-profit
- Roman Catholic (Diocesan)
- Carnegie Classification – Doctoral
- Fall 2009 Enrollment – 10,851
- Fall 2009 Freshman Class – 1,352
- Fall-to-Fall Retention Rate – 88%
- Four-Year Graduation Rate – 58%

Study Population

- First-Time, First Year Students (Freshman)
 - ▣ 2004-2009 (N=7,776)
 - Home School (N=76)
 - ▣ 2004-2008 (N=6,424)
 - Home School (N=70)
 - ▣ 2004-2005 (N=2,488)
 - Home School (N=27)

Models - DVs

- ☐ First-Year GPA
- ☐ Fourth-Year GPA
- ☐ Fall-to-Fall Retention
- ☐ Four-Year Graduation

Models - IVs

- Demographics (3)
- Engagement (4)
- Pre-Enrollment (3)
- First Term Academics (2)

Undergraduate Distribution by High School Type (2004-2009)



Demographic Factors by High School Type

	Public	Catholic	Private	Home	p^*	$\bar{x}$
Demographics						
Male	48.3%	55.8%	56.4%	71.1%	***	50.3%
Received Pell	14.8%	9.8%	8.8%	34.2%	***	13.8%
Underrepresented Minority	12.2%	10.4%	10.8%	6.8%	*	11.8%

*p-values: .01 (***), .05 (**), and .10 (*)

Engagement by High School Type

	Public	Catholic	Private	Home	p^*	$\bar{x}$
Engagement						
Catholic	47.0%	86.9%	48.9%	68.4%	***	54.9%
Live on Campus	92.9%	94.2%	86.6%	72.4%	***	92.7%
Percent PT Faculty	47.8%	46.7%	47.5%	46.7%		47.5%
Enrolled in J-term	17.3%	18.4%	20.6%	14.3%		17.6%

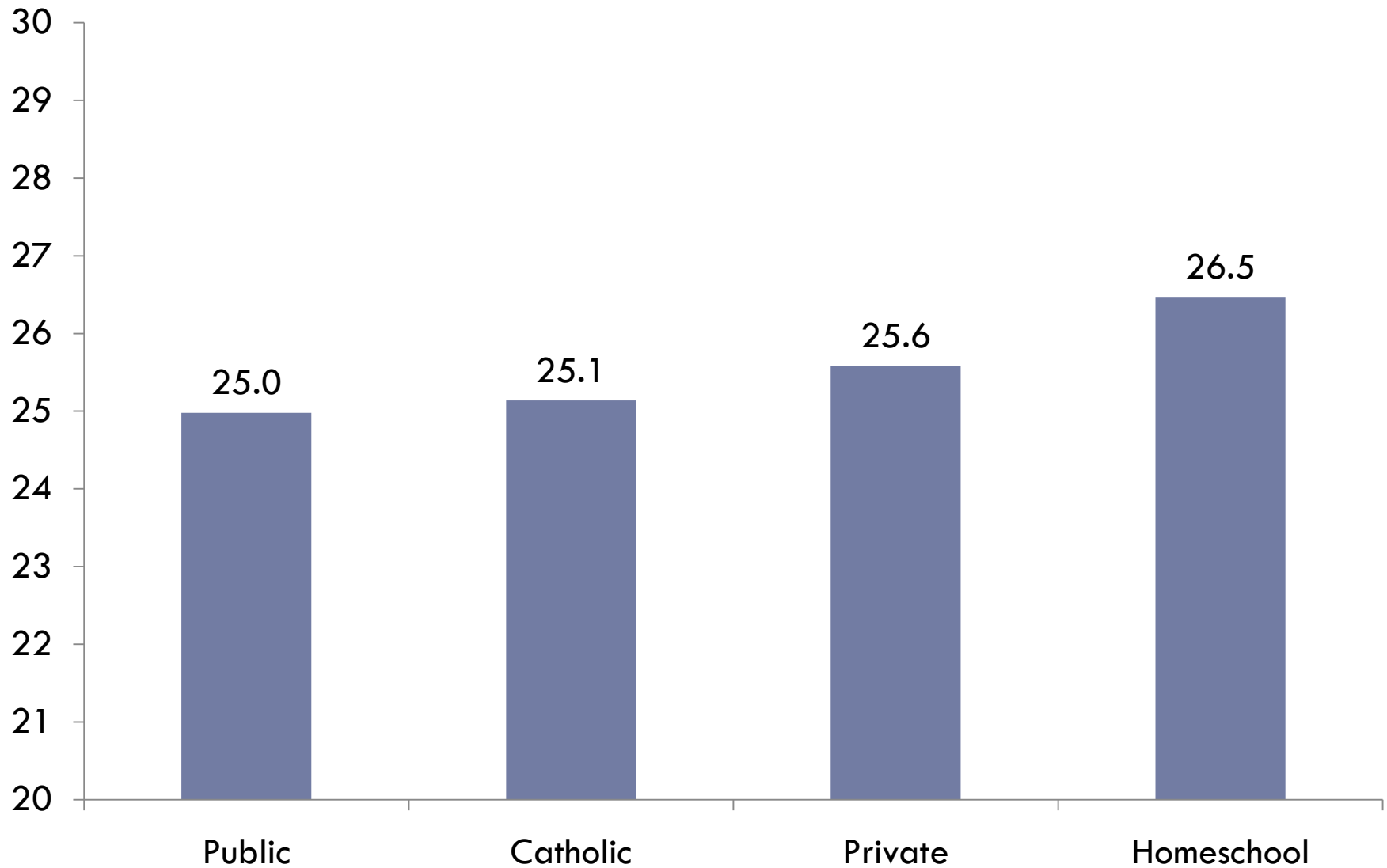
*p-values: .01 (***), .05 (**), and .10 (*)

Pre-College Academics by High School Type

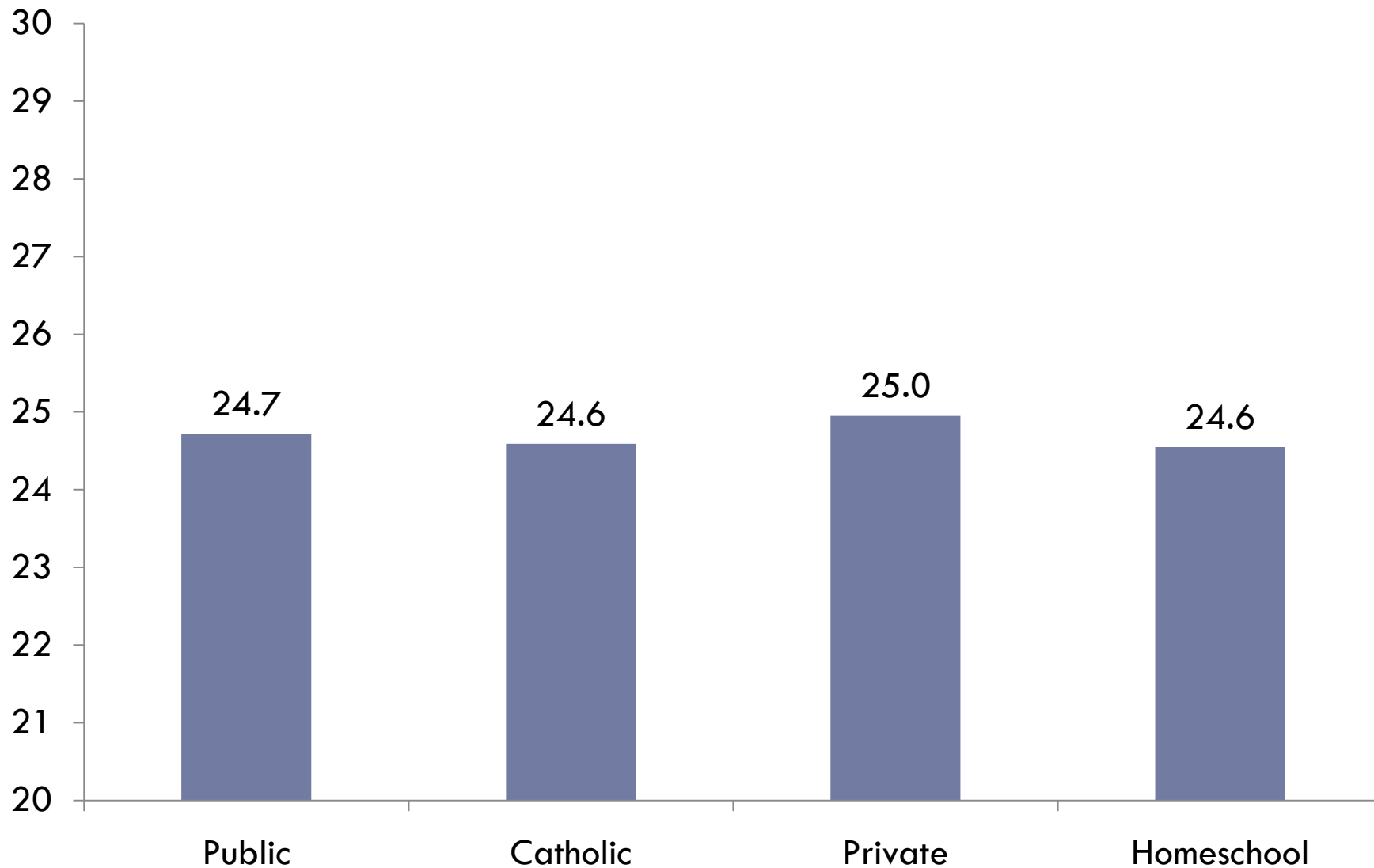
	Public	Catholic	Private	Home	p^*	$\bar{x}$
Pre-College Academics						
ACT Composite	25.0	25.1	25.6	26.5	***	25.0
Transfer Credits	6.6	3.6	2.9	14.7	***	6.0
HS GPA	3.56	3.49	3.43	3.74	***	3.54
Transfer GPA	3.43	3.46	3.42	3.65	***	3.44

*p-values: .01 (***), .05 (**), and .10 (*)

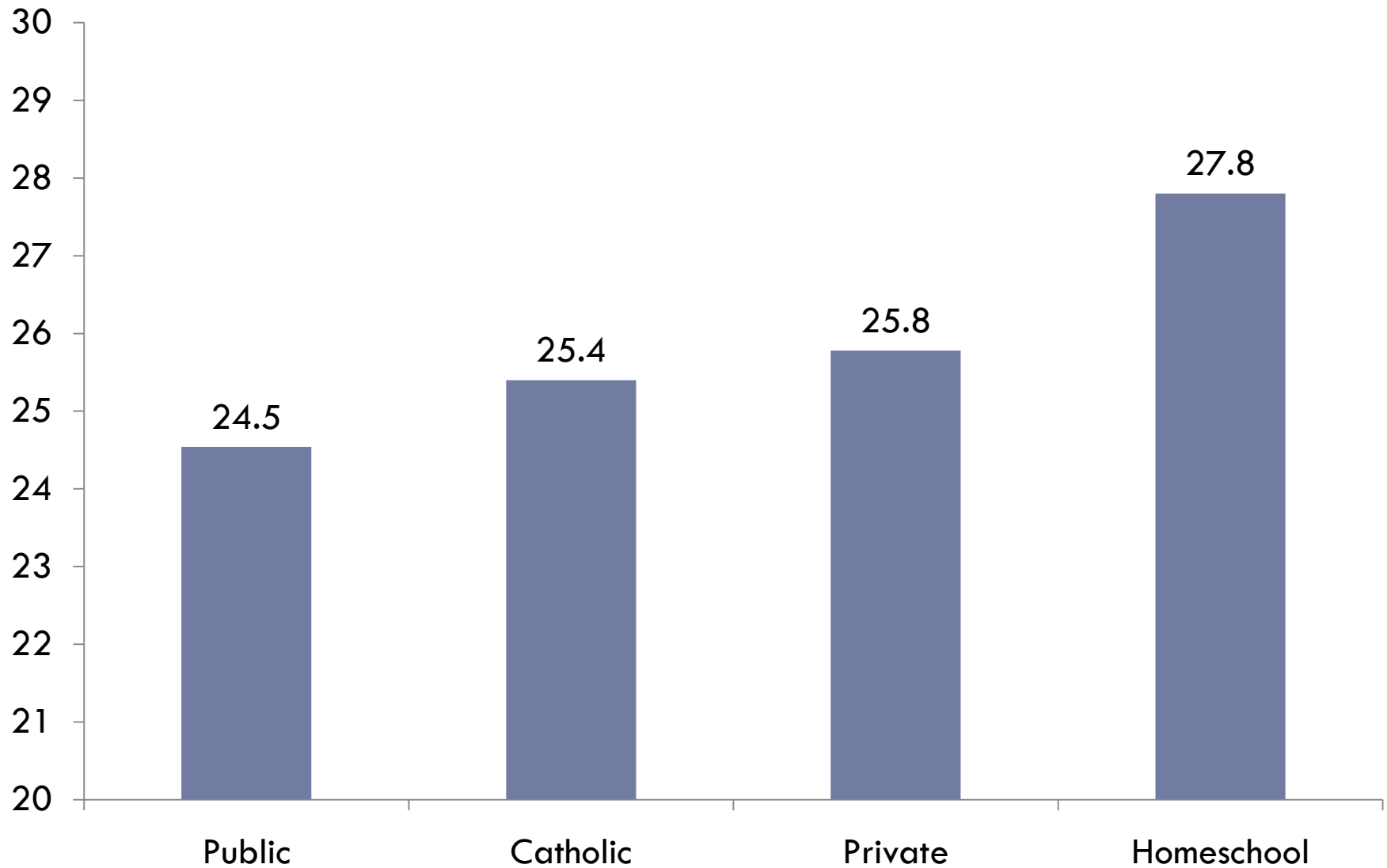
ACT Composite by School Type (2004-2009)



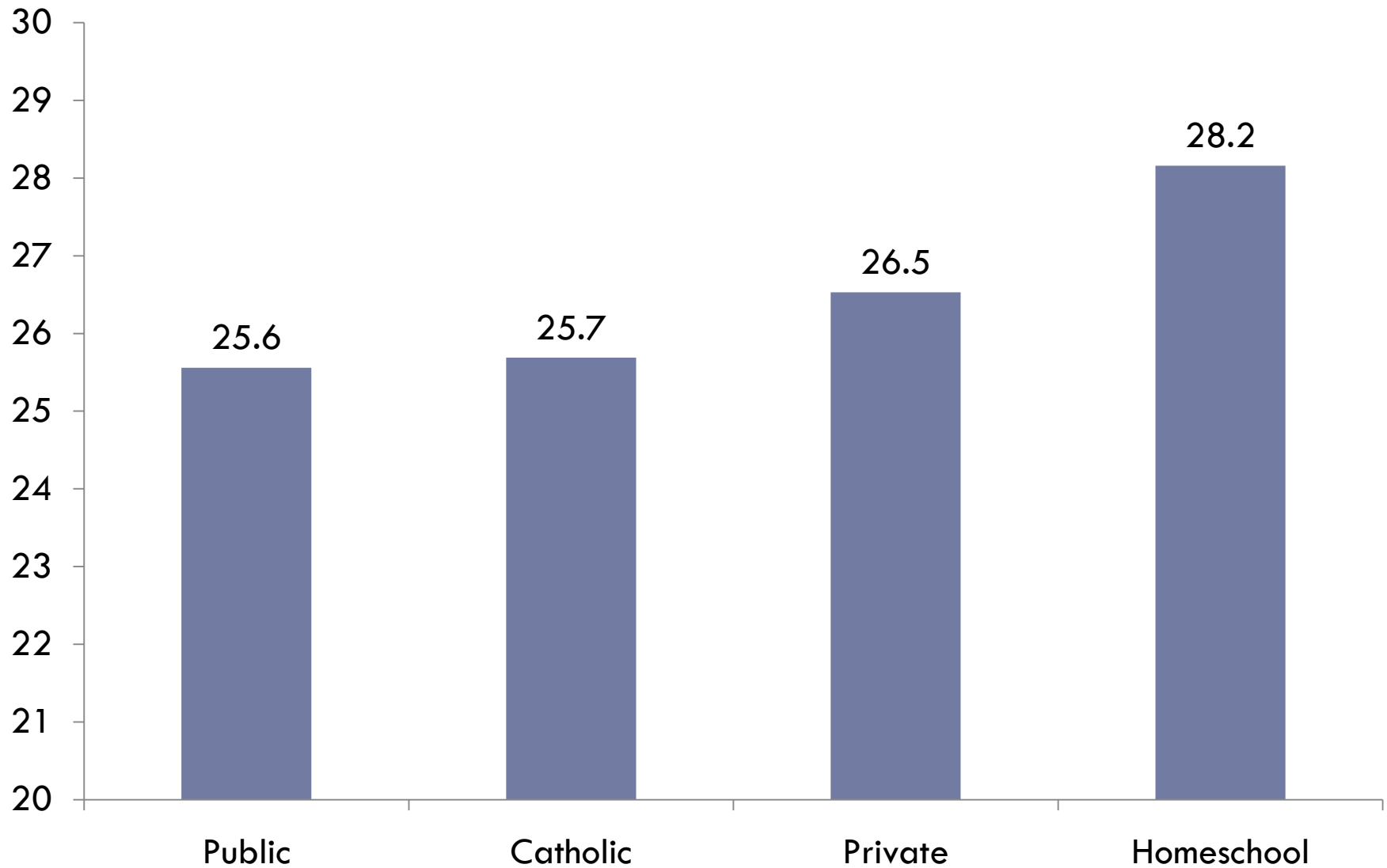
ACT Math by School Type (2004-2009)



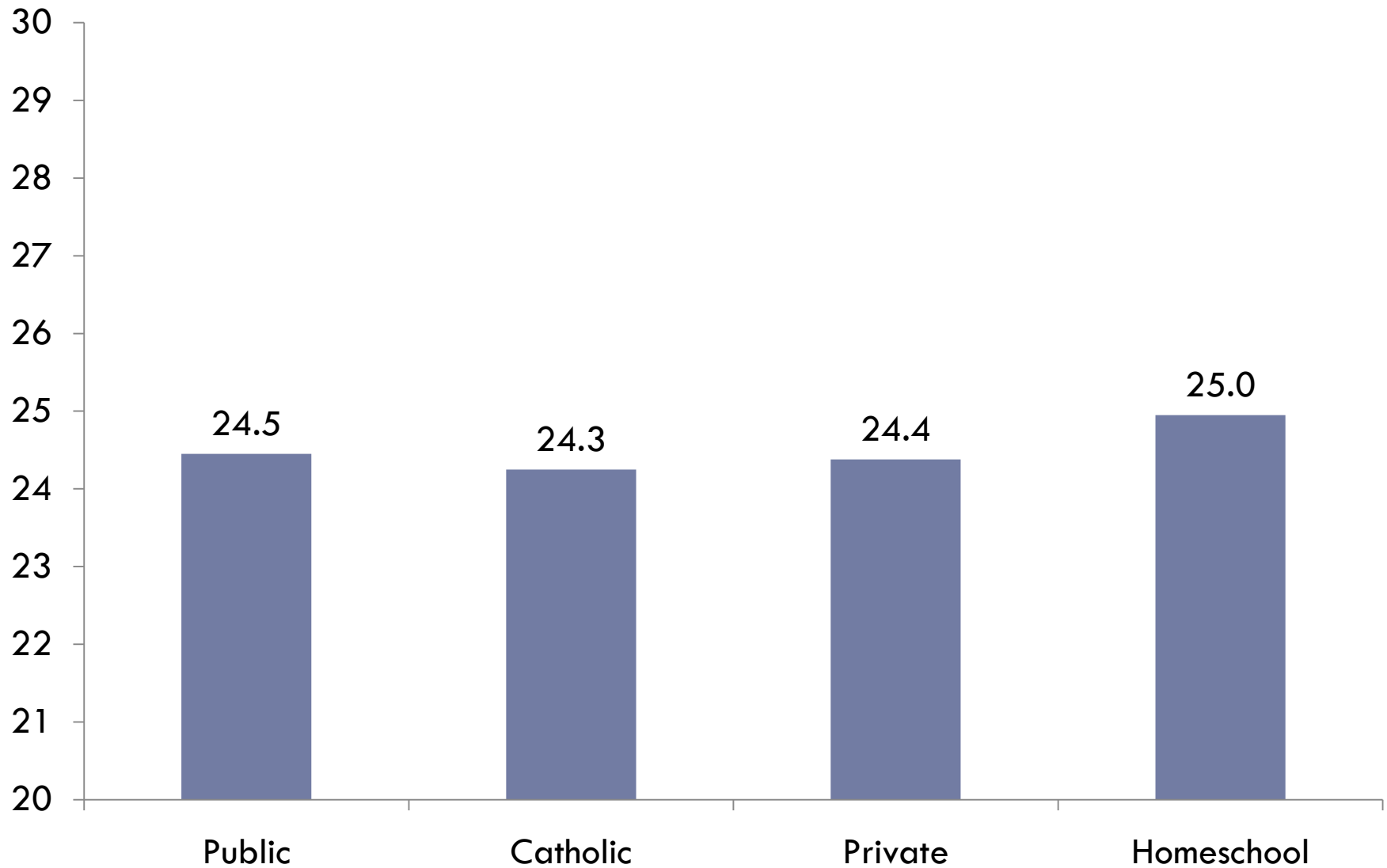
ACT English by School Type (2004-2009)



ACT Reading by School Type (2004-2009)



ACT Science by School Type (2004-2009)



N=7,425

First Fall Academics by High School Type

	Public	Catholic	Private	Home	p^*	$\bar{x}$
First Fall Academics						
Completed Schedule	87.7%	88.9%	85.6%	91.4%		87.9%
Part-Time Status (<13)	7.8%	6.9%	10.7%	9.2%		7.8%
Fall GPA	3.07	3.09	3.11	3.37	***	3.08

*p-values: .01 (***), .05 (**), and .10 (*)

Persistence by High School Type

	Public	Catholic	Private	Home	p^*	$\bar{x}$
Persistence						
Fall-to-Fall Retention	87.5%	87.6%	89.5%	88.6%		87.6%
First-Year GPA	3.12	3.12	3.13	3.41	***	3.12
Fourth-Year GPA	3.16	3.13	3.18	3.46	*	3.16
Four-Year Graduation	58.6%	54.2%	51.5%	66.7%		57.5%

*p-values: .01 (***), .05 (**), and .10 (*)

Multiple Regression Coefficients for First-Year and Fourth-Year Cumulative GPA

	Model 1 First-Year GPA			Model 2 Four-Year GPA		
	B	Std Error	p	B	Std Error	p
Demographics						
Male	-.161	.015	***	-.204	.026	*
Received Pell	-.028	.023		-.038	.038	
Underrepresented Minority	-.061	.025	**	-.085	.040	**
Engagement						
Catholic	.042	.015	***	.029	.026	
Live on Campus	.090	.031	***	.027	.004	
Percent PT Faculty	.001	.000	***	.000	.001	
Enrolled in J-term	.069	.020	***	.036	.032	
Pre-College Academics						
ACT Composite	.053	.003	***	.056	.004	***
Transfer Credits	.005	.001	***	.005	.002	***
Home School	.188	.081	**	.218	.133	*
First Fall Academics						
Completed Schedule	.899	.023	***	.922	.036	***
Part-Time Status (<13)	.211	.031	***	.220	.048	***
Constant	.605	.077	***	.611	.122	***

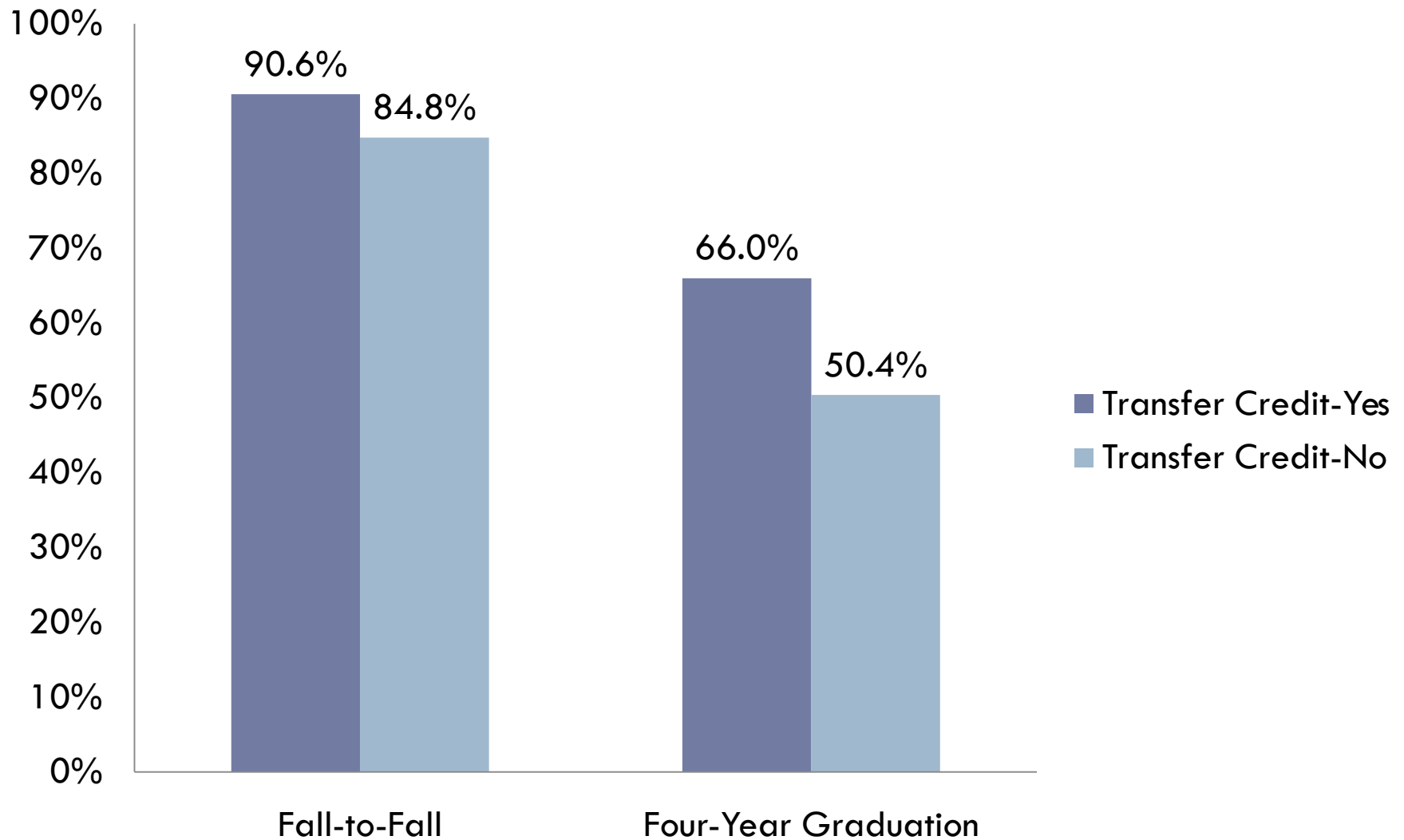
Logistic Regression Coefficients for Fall-to-Fall Retention and Four-Year Graduation

	Model 3 Fall-to-Fall			Model 4 Four-Year		
	B	Std Error	p	B	Std Error	p
Demographics						
Male	.294	.087	***	-.272	.151	*
Received Pell	-.096	.130		-.069	.209	
Underrepresented Minority	-.341	.143	***	-.024	.221	
Engagement						
Catholic	.162	.086	*	.237	.149	
Live on Campus	.521	.145	***	.563	.231	**
Percent PT Faculty	-.004	.002	**	-.006	.004	
Enrolled in J-term	.948	.147	***	1.038	.261	***
Pre-College Academics						
ACT Composite	-.005	.015		-.015	.025	
Transfer Credits	.022	.006	***	-.028	.011	**
Home School	.137	.498		.164	.695	
Fall Academics						
Completed Schedule	1.501	.099	***	1.719	.157	***
Part-Time Status (<13)	.494	.151	***	.512	.245	**
Constant	3.259	.662	***	3.466	1.019	***

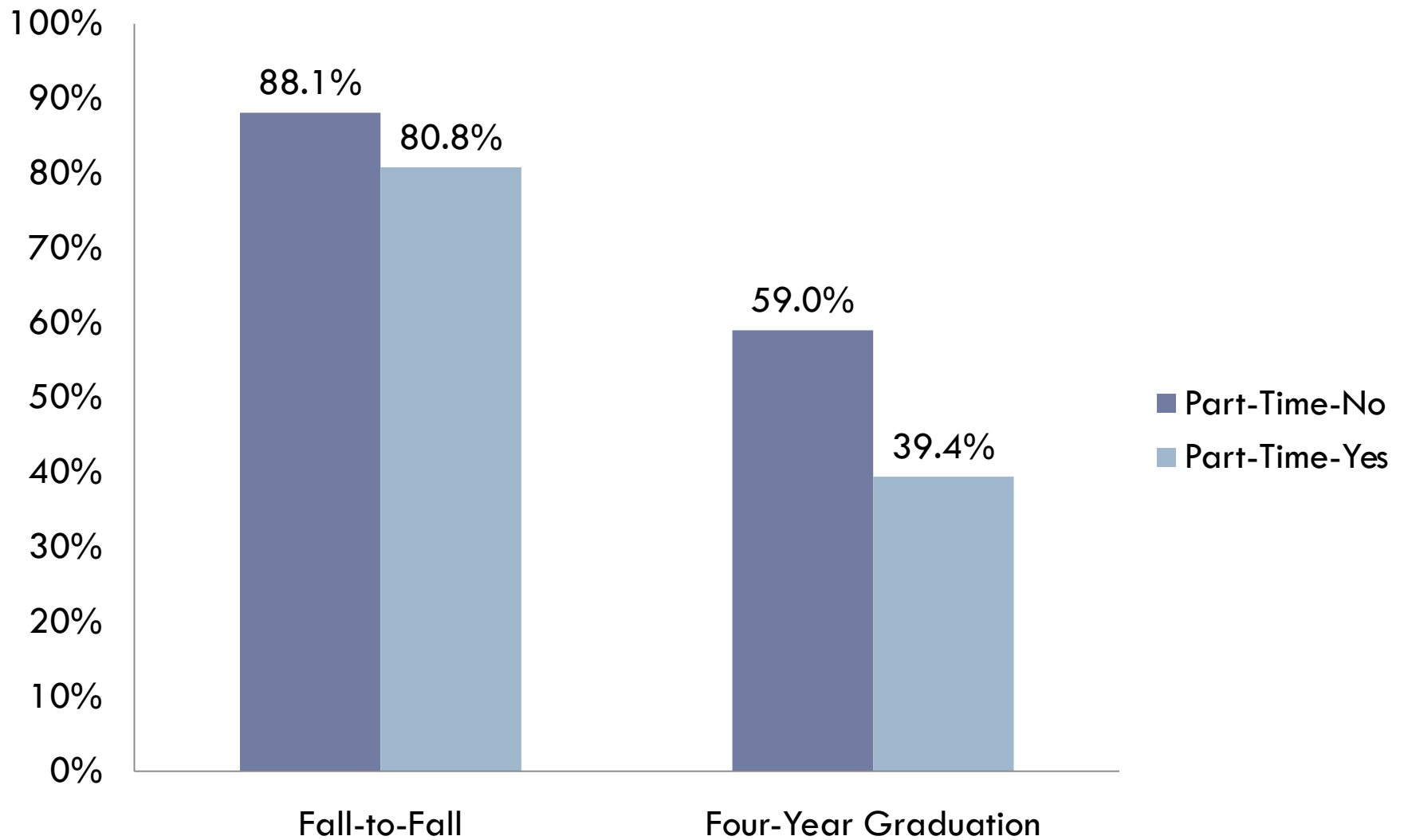
Application

- ☐ Transfer Credit
- ☐ Part-Time Status
- ☐ Living on Campus
- ☐ Completing Schedule
- ☐ Home School

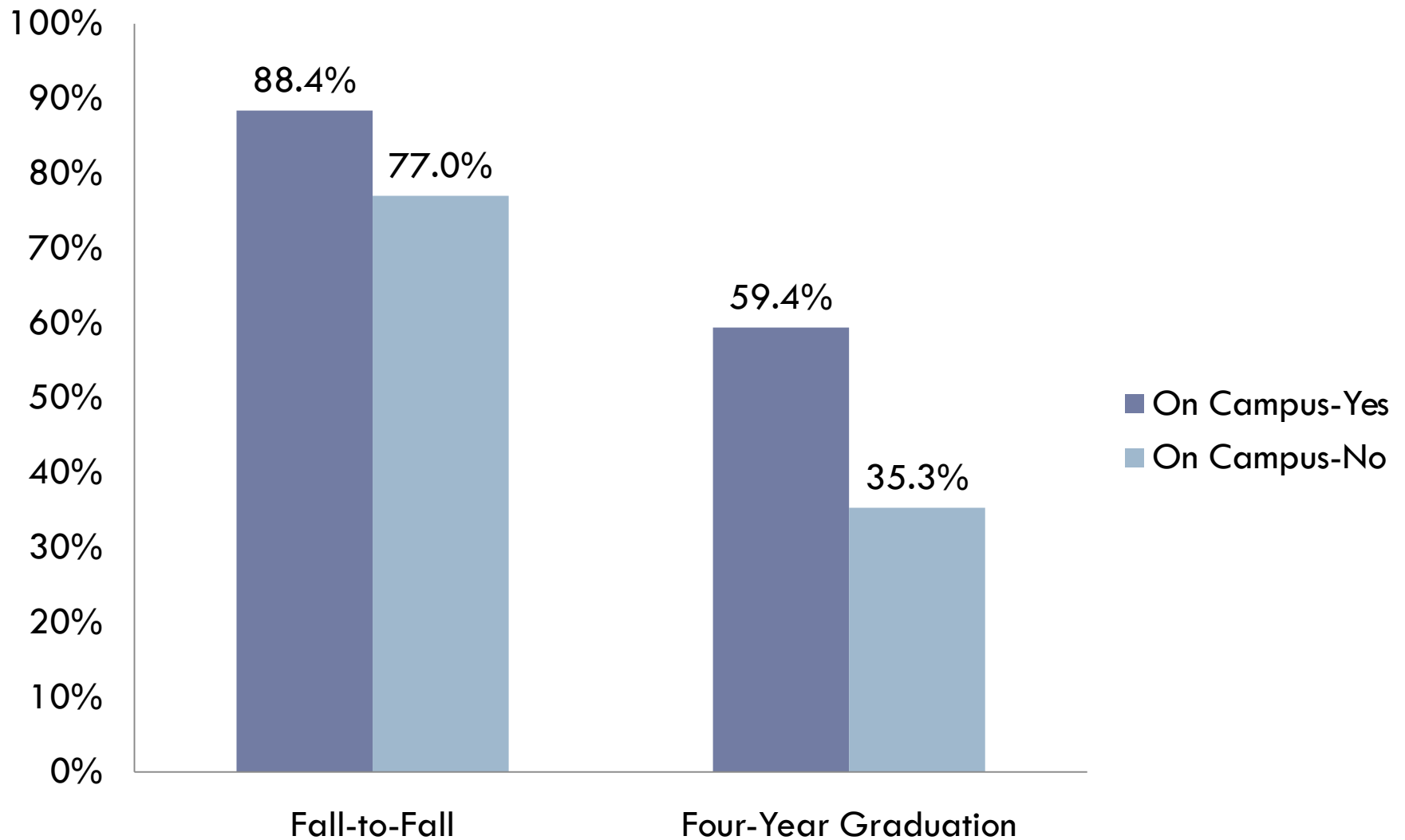
Fall-to-Fall Retention and Four Year Graduation Rates by the Presence of Transfer Credit



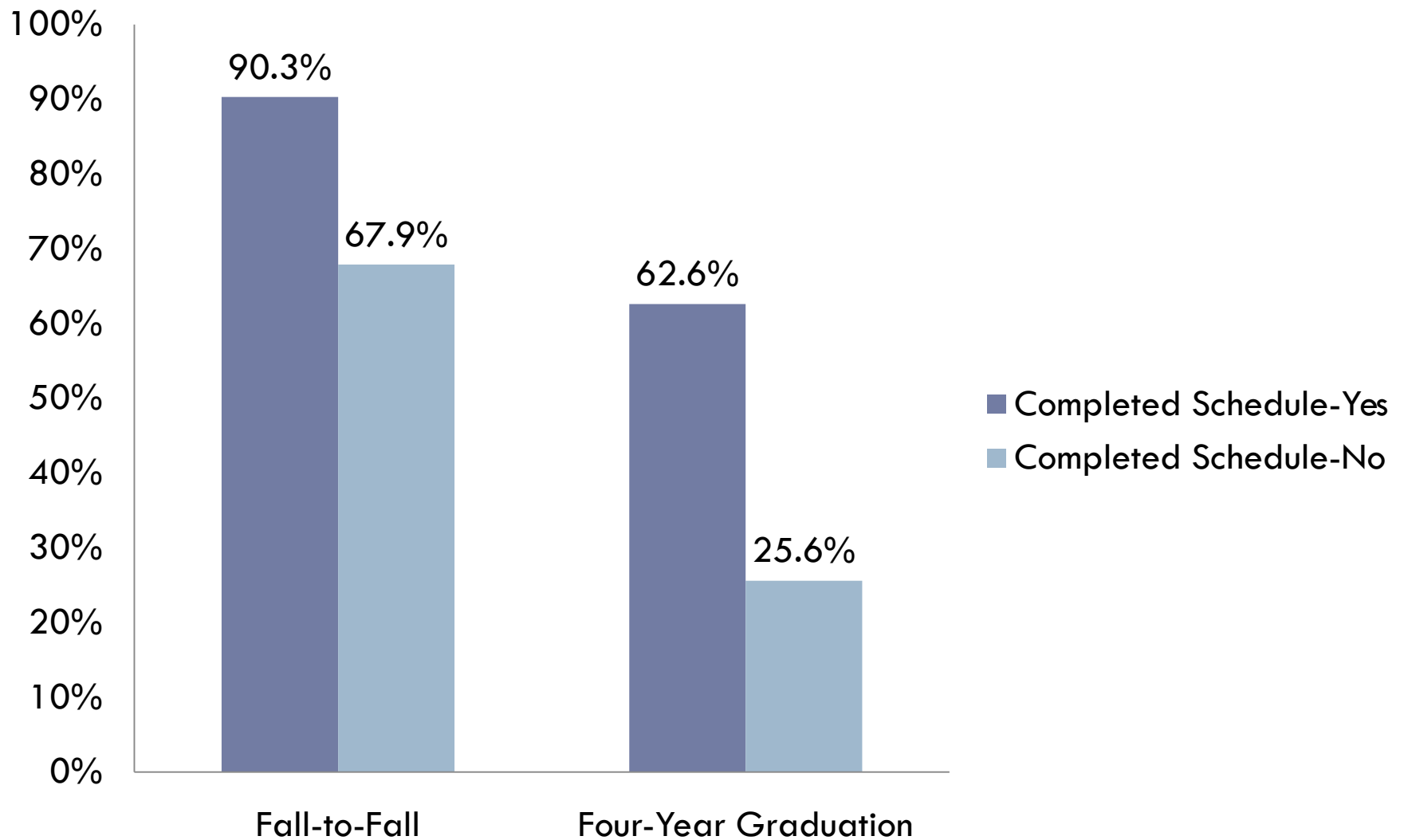
Fall-to-Fall Retention and Four Year Graduation Rates by Part-Time Status



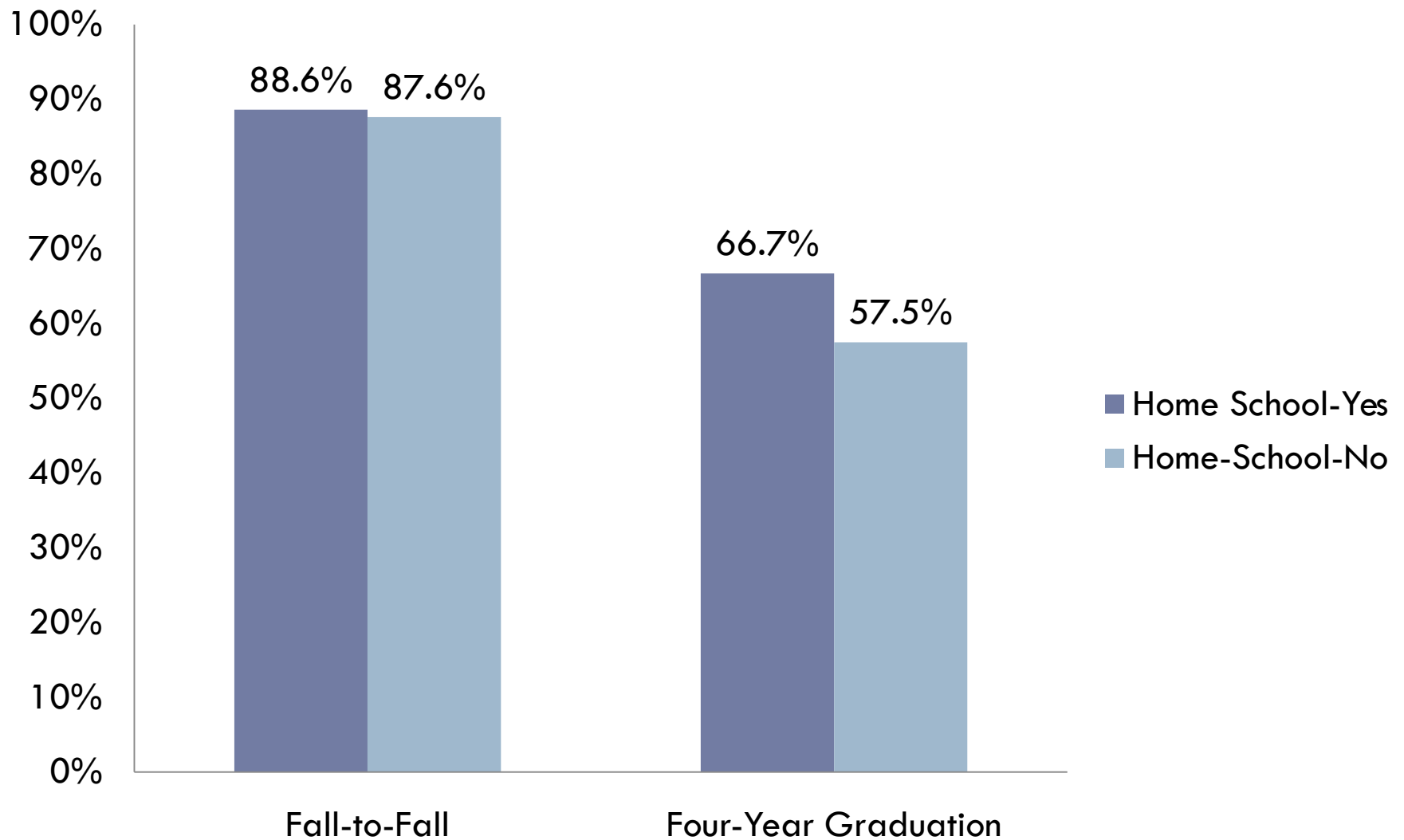
Fall-to-Fall Retention and Four Year Graduation Rates by Living on Campus First Year



Fall-to-Fall Retention and Four Year Graduation Rates by Completed Schedule



Fall-to-Fall Retention and Four Year Graduation Rates by Home School



Discussion

