



How Do Student Characteristics and Environmental Factors Influence a Community College Student's Decision to Enroll In-District or Out-of-District?

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OVERVIEW

This study examines the student characteristics and environmental factors related to a community college student's decision to enroll either in-district or out-of-district. Student characteristics included: race, gender, high school class rank, college readiness, and family income. Environmental factors included: number of siblings, region, and the distance between a student's home area and the in-district community college. Results indicate that academic characteristics played a major role in this decision, as college ready students were significantly more likely to enroll in-district relative to their less ready peers. Results also indicate that as the distance between a student's home area and the in-district community college increases, students were less likely to enroll in-district. With regards to policy implications, these results may signify that community colleges need to consider opening satellite campuses in order to better serve its in-district students, or work collaboratively with near-by out-of-district community colleges in order to meet the needs of students.

LITERATURE REVIEW

This study seeks to establish why community college students decide to enroll in-district. Multiple studies have shown that select student characteristics related to demographics and academic preparation (i.e., age, gender, race, high school GPA, high school rank, etc.) impact college enrollment decisions (Rouse, 1995; Chapman, 1981; Long, 2004). Moreover, certain environmental factors (i.e., parents' income, friends' influences, family size, and distance between high school and post-secondary institution) have also been shown to influence college enrollment decisions (Rouse, 1995; Townsend, 2007; Chapman, 1981; Long, 2004). Therefore, both student characteristics as well as environmental factors have varying effects upon enrollment decisions for college-going students.

The literature is deficient in analyses of school choice for community college students, particularly as it relates to enrolling in-district or out-of-district. This report may be one of the first to consider enrollment decisions at the community college level, which could further future research or enhance public policies.

METHODS

The data include all Illinois public high graduates from the Class of 2003 (N=115,677). The data were obtained through an agreement between the Illinois Education Research Council and the Illinois Board of Higher Education and ACT. From the graduating class, only students who enrolled in a community college post-graduation were selected into the sample (n=26,513). Of these students, fewer than 5,000 students enrolled out-of-district.

The student characteristic variables were gleaned from the Student Interest Profiler of the ACT. Every Illinois junior is required to take the Prairie State Achievement Exam, of which the ACT is a component. Students who attended private high schools were not included in the analysis. College readiness is the interaction between a student's reported high school GPA and his or her composite ACT score.

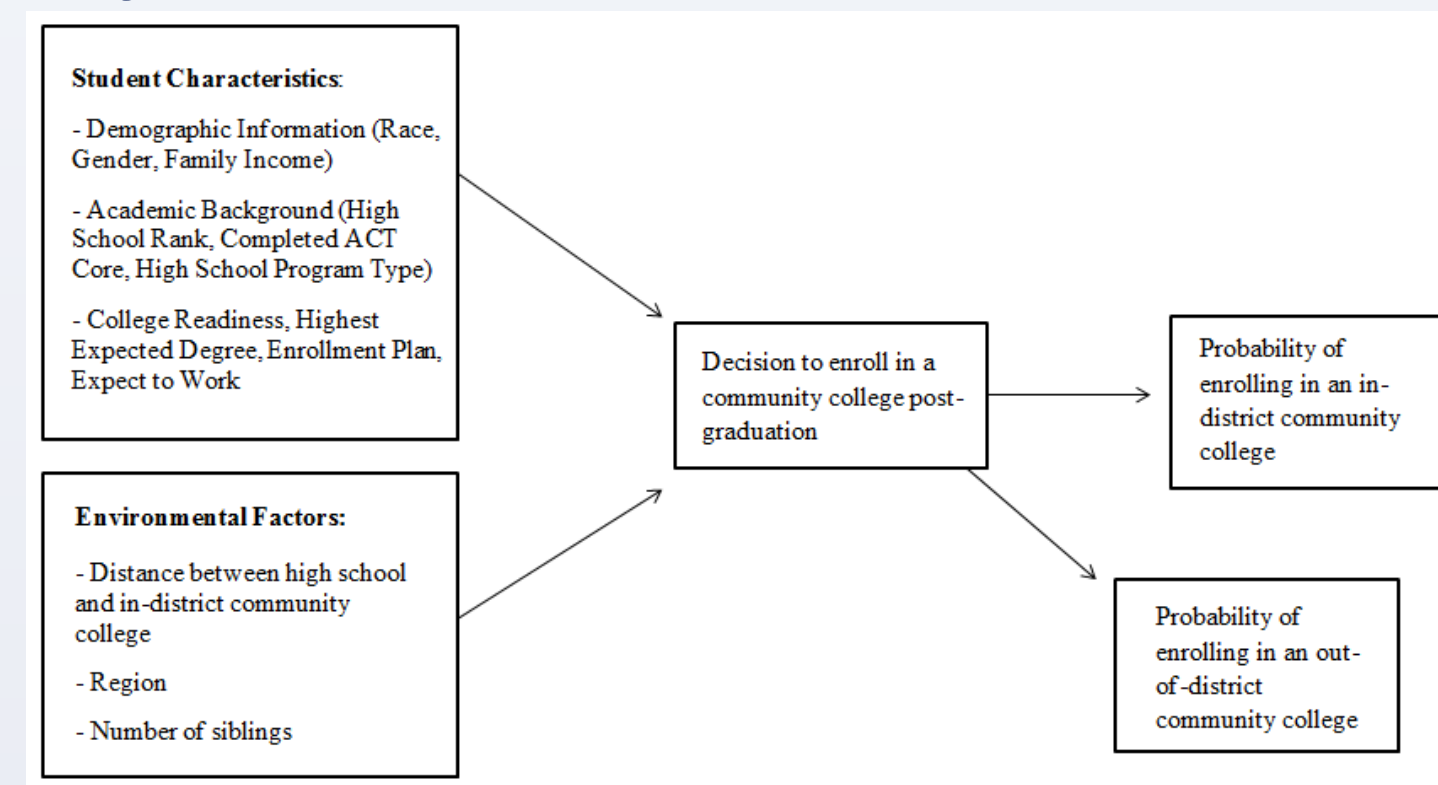
In order to calculate the distance between the student's high school and in-district community college, the latitude and longitude coordinates of the high school were compared to the same coordinates of the in-district community college.

Students predominantly enrolled in community colleges in Illinois. However, numerous students enrolled in community colleges along the border between Illinois and Iowa, Missouri, and Kentucky. Some of the community colleges outside Illinois represent post-secondary institutions that were in closer proximity than community colleges in Illinois. Note that community college students from Chicago high schools who enrolled in any of the City Colleges of Chicago were considered to have enrolled in-district.

A logit model was used in order to estimate the coefficients of the variables with SPSS.

FRAMEWORK

Figure 1: Determinants of enrolling at an in-district community college



Modeled after Wang (2009) and Chapman (1981).

Figure 1 illustrates the foundation for this report. It indicates how student characteristics and environmental factors can impact a student's decision to initially enroll in a community college. From there, it demonstrates the probability of either enrolling in-district or out-of-district.

RESULTS

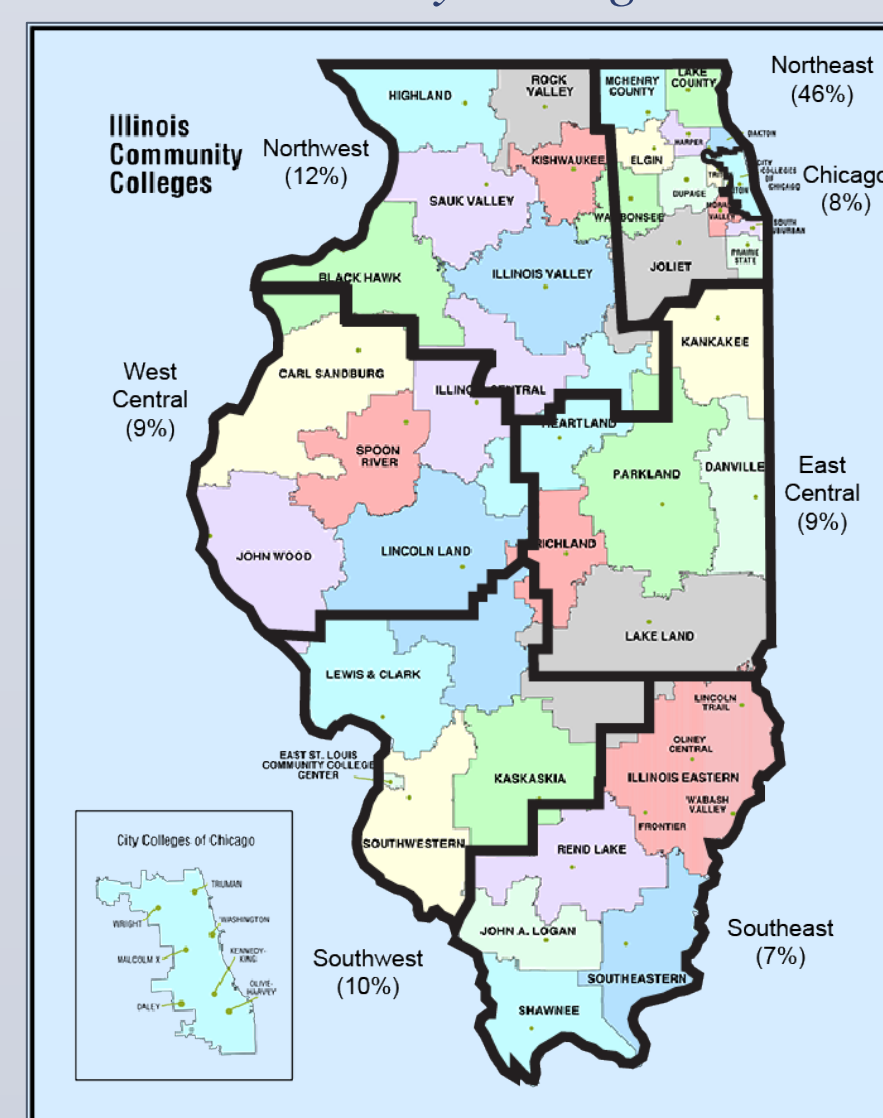
Table 1: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
HS to In-District CC-Distance	26,513	0.17	71.73	9.24	8.20
HS to Closest CC-Distance	26,513	0.17	51.11	8.53	7.37
HS to Actual CC-Distance	26,501	0.17	1,845.00	28.16	130.80
Gender	26,512	0.00	1.00	0.54	0.50
ACT Core	23,947	0.00	1.00	0.62	0.49
Enrollment Plan	21,721	0.00	1.00	0.20	0.40
Expect to Work?	21,010	0.00	1.00	0.23	0.42

Table 2: Frequencies for Categorical Variables

		Frequency	Percent
High School Rank	Top Quarter	4,270	16.1%
	Second Quarter	8,225	31.0%
	Third Quarter	6,442	24.3%
	Bottom Quarter	1,103	4.2%
Highest Expected Degree	Less than Bachelor's	4,251	16.0%
	Bachelor's	8,635	32.6%
	Highest than Bachelor's	8,246	31.1%
Program Type	College Prep	8,049	30.4%
	College and Technical Ed	4,192	15.8%
	General	7,590	28.6%
Parent's Income	High Quintile \$80K+	2,985	11.3%
	Mid-High \$50K-\$80K	4,791	18.1%
	Mid-Low \$30K-\$50K	5,937	22.4%
	Low < \$30K (or missing)	12,800	48.3%

Figure 2: Illinois Community College Districts*



*Regional rate of in-district enrollment in parentheses

Table 3: Logit Model: Enrolling In-District

Factor	Odds Ratio
Gender: Male to Female	0.809***
Race: African-American to White	0.442***
Race: Latino to White	1.104
Race: Asian to White	0.993
Race: Other to White	0.871
Completed ACT Core	1.032
College Readiness: Not/Least to Most	0.698***
College Readiness: Minimally to Most	0.768**
College Readiness: Somewhat to Most	0.757***
College Readiness: More to Most	0.738***
HS Class Rank: 2nd Quarter to Top	1.099
HS Class Rank: 3rd Quarter to Top	1.065
HS Class Rank: Bottom to Top	1.104
HS Program: CTE to College Prep	1.036
HS Program: General to College Prep	1.151**
Highest Expected Deg.: Less than BA to BA+	0.889
Highest Expected Deg.: BA to BA+	1.029
Enrollment Plan: Part-time	1.127*
Siblings	0.992
Family Income: High to Low	0.950
Family Income: Mid-High to Low	0.963
Family Income: Mid-Low to Low	0.876*
Expect to Work During College	1.085
Region: Chicago to Northeast	0.317***
Region: Northwest to Northeast	1.347***
Region: West Central to Northeast	2.408***
Region: East Central to Northeast	1.347***
Region: Southwest to Northeast	2.193***
Region: Southeast to Northeast	0.828*
Distance to In-Region CC	0.935***

* p<0.05 ** p<0.01 *** p<0.001

Figure 3: College Readiness

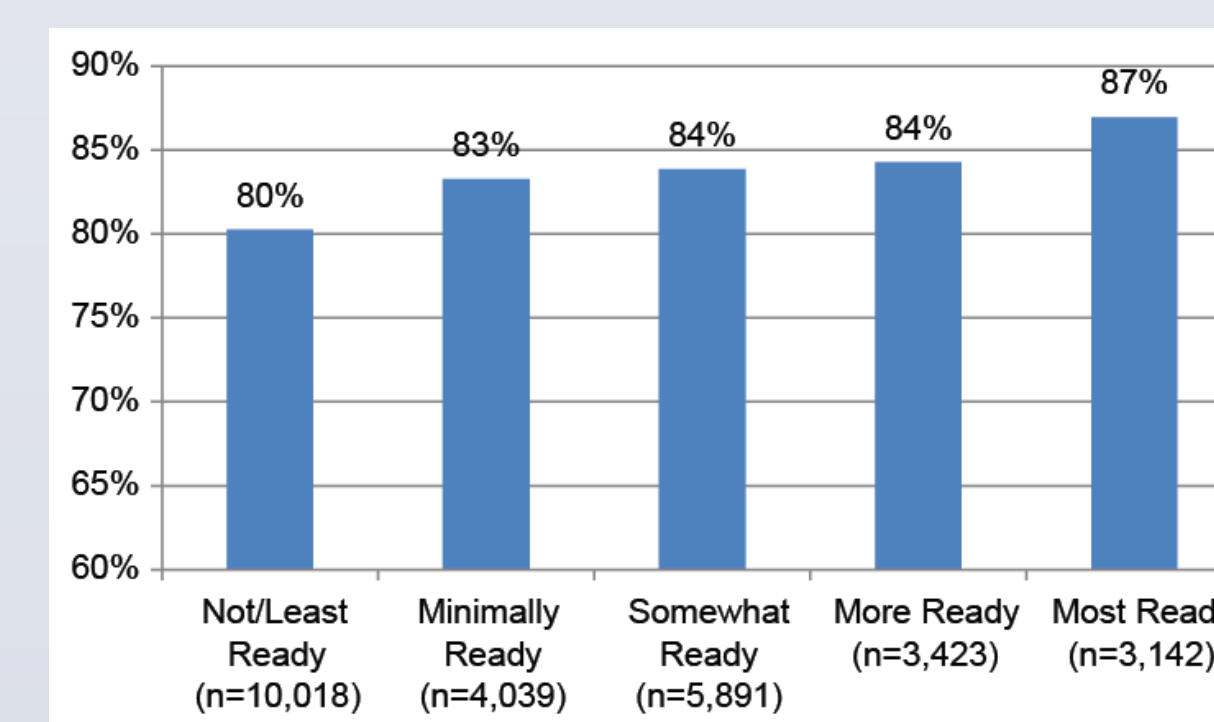


Figure 3 illustrates the relationship between college readiness and in-district enrollment. As college readiness increases, the rate of in-district enrollment increases.

Figure 4: Race

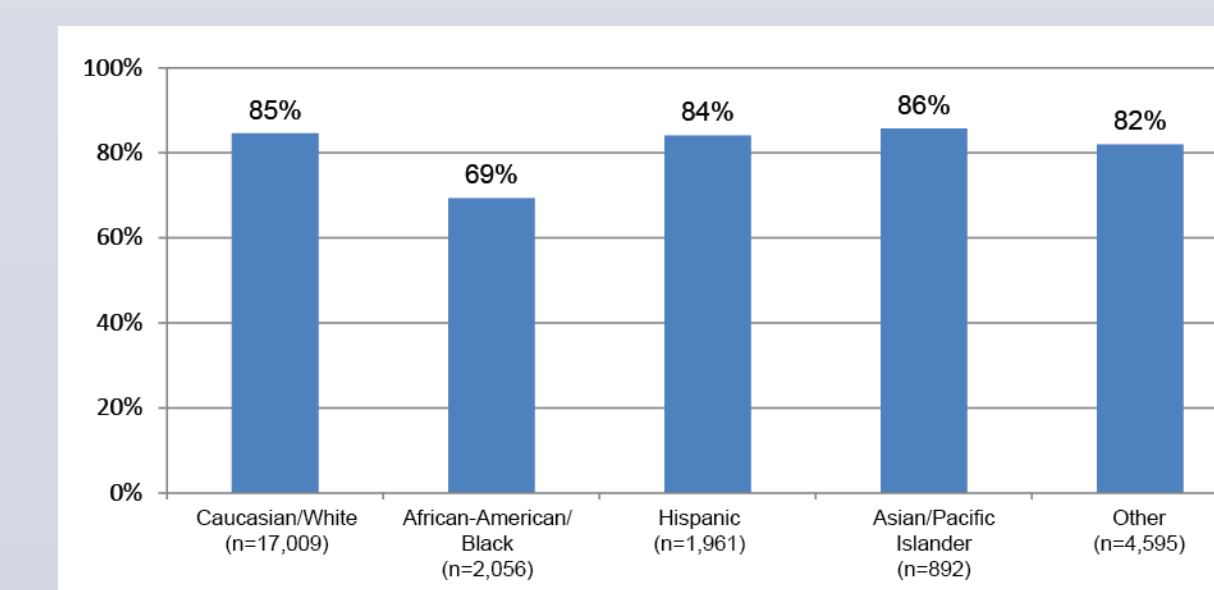


Figure 4 shows the relationship between race/ethnicity and in-district enrollment. African American students had lower rates of in-district enrollment relative to all other groups.

CONCLUSIONS

Even though 83% of the sample enrolled in-district, understanding factors related to in-district enrollment, as opposed to out-of-district enrollment, could have important practical implications. Students' decision to not enroll at their in-district community college could reveal deficiencies in the program offerings, academics, or services that are provided locally. In contrast, students might have chosen to enroll out-of-district based upon certain external influences (suggestions from friends, or the proximity to the community college). Whatever the reason, an analysis of enrollment trends is necessary in order to help better serve Illinois community college students.

Based upon the results, the greater the distance between a student's high school and his or her in-district community college, the less likely it was that s/he enrolled in-district. While this outcome makes sense from a convenience point of view, more analysis is needed to determine why students would elect to enroll out-of-district when tuition rates are generally higher for out-of-district students. Is this decision indicative of rational choice, or does it illustrate that other factors weigh more heavily in students' college enrollment plans?

Race and gender were also important factors in this decision, as African American students and male students were significantly less likely to enroll in-district. Also, a student's college readiness level appeared to be an important factor in this decision – the less college ready the student, the less likely he or she was to have enrolled in-district. What are the implications of this result – did less prepared students feel that they would benefit more from an out-of-district community college?

With regards to improvements of the model, it would be advisable for future research to focus upon the impact of institutional characteristics of the community colleges, such as services provided, programmatic offerings, availability of bachelor's programs, and tuition. For example, Townsend (2007) argues that both honors programs and baccalaureate programs have been on the rise in recent years at community colleges. Do such academic offerings influence some students to not enroll locally?

In terms of policy, these results suggest that community colleges might need to explore opening more satellite campuses or work in conjunction so that students have more options.

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