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Urban vs. Rural Baccalaureate Colleges: A National Study of Student Financial Aid

Financial aid has long been viewed as providing equal access to higher education for lower- and middle-income students. Fitzgerald (2003) questions this broadly held perception by noting the growing gap in affordability created as tuition costs outstrip financial resources available to low and middle income students. Fitzgerald emphasizes how current financial aid policies prevent hundreds of thousands of these students from enrolling in higher education. Baum (2007) echoes this opinion by pointing out that the patchwork of available financial aid has failed to close the gap in college participation between lower-income and middle- to high-income students. John, Paulsen, and Carter (2005) demonstrate differences between African-American and white students in persistence to degree completion based on the cost of higher education. They indicate that African-American students evidence greater vulnerability to reductions in federal grant aid. Undoubtedly, the long-held American belief that the availability of financial aid adequately levels the higher education playing field is deserving of serious challenge.

This study examines baccalaureate colleges of arts and sciences in light of institutional degree of urbanization to determine the percentage of students drawing financial aid. The study further examines aid award amounts from federal, state/local, institutional, and student loans. The indicated demographics are then analyzed for differences between and among the city, suburban, town, and rural institutions.

Background

According to Baum (2007) approximately \$135 billion in financial aid was distributed to students in 2005-06 by federal and state governments, colleges and universities, employers, and other private sources. Without these resources many of the nation's 17 million consumers of higher education would have been unable to continue their educations. Others would have been forced to modify their educational goals. Baum also asserts that the Pell grant program has failed to keep up with inflation since 2002 though the program awarded an average of \$2,400 to over 5.3 million students in 2005-06. The bureaucracy and complexity of the program continues to pose problems for colleges and students. Additionally, Pell grants provide no assistance to students whose incomes exceed established thresholds.

Fitzgerald (2003) notes the shifting focus of aid towards tax credits which function on a reimbursement basis and do little to cover the immediate costs of educational services. Serious questions arise as to the fairness of these programs since they do little to assist lower-income families with limited or no tax liability. Additionally, many lower- and middle-income families are affected by three disturbing trends related to state policy. First, states have often limited higher education funding giving rise to spiraling tuition costs that have far outstripped growths in family income. Second, state grants have significantly declined in purchasing power. The third, and perhaps most alarming, trend is that rising tuition costs have occurred during a time when families are facing increased financial hardship due to the rising cost of energy and other living expenses. Fitzgerald also points out that the long held view of working

one's way through college constitutes a "cruel hoax" since outside income can raise a student's income beyond the threshold for receiving federal grant aid further limited already limited resources.

The utilization of student aid as a means of attracting high performing students rather than leveling the playing field for lower-income students further complicates access and dilutes resources for older students. Hart (2003) points out that the older, non-traditional student often enters higher education with greater financial responsibility than his or her younger counterpart. Older students are more likely to obtain employment resulting in limited access to federal grant aid. When local aid is diverted to the attraction of high-performing students, access to educational services becomes more limited for older, non-traditional students.

Correction of perceived inequities in financial aid will prove costly but holds many benefits. Fitzgerald points out that employment demand will produce a shortfall of six million college-educated workers by the next decade if projections of the Employment Policy Foundation hold true. Carnevale (2002) states that the country could greatly benefit by equalizing college level attainment among all classes. Carnevale estimates that the equalization of college-level attainment would increase the nation's wealth by \$230 billion per year and generate an additional \$80 billion in tax revenue. Equalization of access to educational services will assist in meeting projected employment needs and increase the nation's wealth.

Purpose

This study examined financial aid percentages and awards for first-time, full-time students attending baccalaureate colleges of arts and sciences by the four major degree of urbanization classifications of city, suburban, town, and rural. The following four research questions were explored.

1. What percentage of students receive any financial aid at baccalaureate colleges of arts and sciences by the four major degree of urbanization classifications of city, suburban, town, and rural?
2. What is the average amount of federal grant aid, state/local aid, institutional aid, and loan aid received by students attending baccalaureate colleges of arts and sciences by the four major degree of urbanization classifications of city, suburban, town, and rural?
3. What differences in percentage of students receiving any financial aid exist between and among baccalaureate colleges of arts and sciences by the four major degree of urbanization classifications of city, suburban, town, and rural?
4. What differences in student federal grant aid, state/local aid, institutional aid, and loan aid exist between and among baccalaureate colleges of arts and sciences by the four major degree of urbanization classifications of city, suburban, town, and rural?

Methodology

The analysis utilized national data extracted from the Integrated Post-Secondary Education Data System (IPEDS). The data include the limitations traditionally associated with institutional self-reporting and estimation of award amounts. The most current information available at the time of the study was for the 2004-05 academic year. The study was delimited to the primary degrees of urbanization

provided through the IPEDS data cutting tool. Sub-degrees were combined into the primary urbanization degrees of city, suburban, town, and rural. City was defined as within an urbanized area and a principal city. Suburban was within an urbanized area but outside a principal city. Town was outside an urbanized area but containing an urbanized cluster. Rural was defined by default as outside an urbanized area without an urbanized cluster. Extracted data correspond to the Carnegie 2005 classification of baccalaureate colleges of arts and sciences and report percentage of students receiving any financial aid for first-time, full-time students received during the 2004-05 academic year. Average amounts of financial grant aid, state/local grant aid, institutional grant aid, and loan aid were also extracted and included in the data set.

Statistical Packages for the Social Sciences (SPSS) was utilized to obtain descriptive statistics and to conduct multiple-factor analysis of variance (ANOVA) to examine differences between and among the several variables. The statistical testing utilized a significance level of 0.05. Post hoc analysis was conducted where required to address the fourth research question. The post hoc analysis utilized the Dunnett T3 and did not assume homogeneity of variances.

Findings

The study examined 278 baccalaureate colleges of arts and sciences across the nation with 89 classified as city, 75 as suburban, 82 as town, and 32 as rural. Findings for research question one are provided in Table 1. The average percentage of students receiving any financial aid was 83.7%. Average percentages for city, suburban, town, and rural colleges was 84.8%, 78.6%, 86.4%, and 85.6%, respectively.

Table 1

Percentage of First-Time, Full-Time Students Receiving Any Financial Aid at Baccalaureate Colleges of Arts and Sciences by Degree of Urbanization

Classification	N	Mean	Std. Deviation
City	89	84.8%	19.0%
Suburban	75	78.6%	22.6%
Town	82	86.4%	19.3%
Rural	32	85.6%	17.3%
Total	278	83.7%	20.1%

Information relative to research question two is provided in Tables 2 through Table 5. Table 2 indicates that the average federal grant aid received was \$3,454. Awards ranged from a high of \$3,518 at

colleges located in towns and a low of \$3,257 at colleges located in areas classified as rural. City and suburban institutions posted averages of \$3,488 and \$3,429, respectively.

Table 2

Average Federal Grant Aid Received by First-Time, Full-Time Students at Baccalaureate Colleges of Arts and Sciences by Degree of Urbanization

Classification	N	Mean	Std. Deviation
City	89	\$3,488	\$ 885
Suburban	75	3,429	1,161
Town	82	3,518	982
Rural	32	\$3,257	\$1,253
Total	278	\$3,454	\$1,036

The average state/local grant aid amounts are provided in Table 3. The global average was \$2,787. Suburban colleges posted the highest average award of \$2,988. Rural colleges indicated the lowest average award of \$2,178. City and town institutions were \$2,893 and \$2,725, respectively.

Table 3

Average First-Time, Full-Time Student State/Local Grant Aid Received at Baccalaureate Colleges of Arts and Sciences by Degree of Urbanization

Classification	N	Mean	Std. Deviation
City	89	\$2,893	\$1,445
Suburban	75	2,988	1,843
Town	82	2,725	1,351
Rural	32	\$2,178	\$1,533

Total	278	\$2,787	\$1,558
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Descriptive statistics for institutional grant aid are provided in Table 4. The global average was \$9,753. Suburban colleges were highest at \$10,467 while rural colleges were lowest at \$8,108. City and town institutions were \$9,228 and \$10,310, respectively.

Table 4

Average First-Time, Full-Time Student Institutional Grant Aid Received at Baccalaureate Colleges of Arts and Sciences by Degree of Urbanization

Classification	N	Mean	Std. Deviation
City	89	\$ 9,228	\$5,980
Suburban	75	10,467	6,383
Town	82	10,310	5,581
Rural	32	\$ 8,108	\$5,412
Total	278	\$ 9,753	\$5,938

Descriptives for student loan aid are provided in Table 5. The global average aid award was \$4,253. City colleges were highest at \$4,667, and suburban colleges were lowest at \$4,024. Town colleges were only slightly higher at \$4,035. Rural colleges fell into the lower mid-range with an average loan aid award of \$4,194.

Table 5

Average First-Time, Full-Time Student Loan Aid Received at Baccalaureate Colleges of Arts and Sciences by Degree of Urbanization

Classification	N	Mean	Std. Deviation
City	89	\$4,667	\$1,807
Suburban	75	4,024	1,504

Town	82	4,035	1,390
Rural	32	\$4,194	\$1,810
Total	278	\$4,253	\$1,630

Analysis relevant to research questions three and four is provided in Table 6. Differences were not identified in percentage of students receiving any financial aid by degree of urbanization. Likewise, differences were not identified in federal grant aid awards, state/local grant aid awards, or institutional grant aid awards. As indicated in Table 6, percentage of students receiving financial aid and awards of state/local aid were only marginally above the established significance level of 0.05. Differences were identified in student loan aid awards by degree of urbanization.

Table 6

ANOVA for Percentage of First-Time, Full-Time Students Receiving Financial Aid and Average Federal Grant Aid, State/Local Grant Aid, Institutional Grant Aid, and Student Loan Aid for Baccalaureate Colleges of Arts and Sciences by Degree of Urbanization

Group	Classification	Sum of Squares	df	Mean Squares	F	Sig.
Percent Aid	Between Groups	.277	3	.092	2.322	0.075
	Within Groups	10.900	274	.040		
	Total	11.177	277			
Federal Aid	Between Groups	1,723,939	3	574,646	.533	0.660
	Within Groups	300,000,000	274	1,078,253		
	Total	300,000,000	277			
State/Local Aid	Between Groups	16,226,004	3	5,408,668	2.259	0.082
	Within Groups	660,000,000	274	2,393,890		

	Total	670,000,000	277			
Institutional Aid	Between Groups	170,000,000	3	58,303,942	1.665	0.175
	Within Groups	9,600,000,000	274	35,007,501		
	Total	9,800,000,000	277			
Loan Aid	Between Groups	23,206,961	3	7,735,654	2.975	0.032
	Within Groups	710,000,000	274	2,600,591		
	Total	740,000,000	277			

Post hoc analysis was conducted to determine where differences existed in loan aid awards by degree of urbanization. Results are provided in Table 7. City colleges differ from suburban and town colleges at a significance of 0.080 and 0.063, respectively.

Table 7

Post Hoc Analysis for Average First-Time, Full-Time Student Loan Aid for Baccalaureate Colleges of Arts and Sciences by Degree of Urbanization

Classification	Classification	Mean Difference	Std. Error	Significance
City	Suburban	643.4	258.5	0.080
	Town	632.0	245.4	0.063
	Rural	473.1	372.9	0.746
Suburban	City	-643.4	258.5	0.080
	Town	- 11.4	231.8	1.000
	Rural	-170.3	364.0	0.998

Town	City	-632.0	245.4	0.063
	Suburban	11.4	231.8	1.000
	Rural	-158.9	354.9	0.998
Rural	City	-473.1	372.9	0.746
	Suburban	170.3	364.0	0.998
	Town	158.9	354.9	0.998

Comparison of the descriptive information provided in Table 5 with the findings in Table 6 and Table 7 indicates that student loan aid awards at city baccalaureate colleges of arts and sciences are higher than for their suburban and town counterparts.

Conclusions and Recommendations for Further Research

Students residing in city areas and attending four-year baccalaureate colleges are incurring more student loan debt in order to pursue their educational dreams. This finding brings the equity of the current financial aid system into doubt. The percentage of students receiving financial aid and the average federal and state/local awards are deserving of continued examination since they are only slightly above the established threshold for statistical significance.

Questions arise as to why students residing in city areas are incurring more debt. Perhaps they face increased living costs while attending school. Perhaps greater employment opportunity in urban areas produces higher wages which in turn limits the availability of grant aid. The trend is very alarming since city colleges serve such large number of students.

The current financial aid system does not provide equal access across colleges based on their respective degrees of urbanization. System inequities perpetuate the status quo and often require the students to incur substantial debt to pursue their dreams. Equal access should not be contingent upon where an institution is located. Every academically qualified student is deserving of the opportunity to pursue his or her personal dream. The nation can ill afford anything less.

Additional research is obviously required. Longitudinal examination should be conducted to ascertain changes in percentages of students obtaining financial aid and describe patterns affecting average award sizes. Further research could well examine percentages of students receiving financial aid along with award sizes based on differing institutional types such as private, public not-for-profit, and public for-profit colleges. What differences, if any, exist in student financial aid within these institutions? Finally, the identification and dissemination of best practices in student financial aid services should remain a high priority.

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