



Financial Determinants of Yield Rates for United States Bachelor of Arts and Sciences Colleges

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I. Abstract

This paper investigates the effects of financial factors on the yield rates of Bachelor of Arts and Sciences colleges. We define the yield rate as the percentage of students accepted who choose to enroll. Our data is drawn from the Integrated Postsecondary Education Data System (IPEDS) and consists of 99 Bachelor of Arts and Sciences colleges during the period from 2010 to 2016. Controlling for institutional factors, we find that the responses of the yield rate to increases in net cost of attendance and increases in federal student loans are negative and inelastic.

II. Empirical Model and Variables

$$YIELD_{it} = f(\text{NETCOST}_{it}, \text{AVGFEDLOANS}_{it}, \text{GRADRATE}_{it}, \text{DIV}_{it}, \text{ACCEPTANCE}_{it})$$

- $YIELD_{it}$ - The log of the yield rate at the i th college in the t th year. Yield rate is the percentage of individuals admitted who choose to enroll
 - NETCOST_{it} - The log of the net cost of the i th college in the t th year. Net cost is defined as tuition and fees plus room and board less the average institutional grant aid per student awarded.
 - AVGFEDLOANS_{it} - The log of the average federal loans per student at the i th college in the t th year.
 - GRADRATE_{it} - The graduation rate of the i th college in the t th year. Graduation rate is the percentage of a school's first-time, first-year undergraduate students who complete their program within 150% of the published time for the program.
 - DIV_{it} - The percentage of the student body that come from diverse backgrounds at the i th college in the t th year.
 - ACCEPTANCE_{it} - The acceptance rate of the i th college in the t th year. Acceptance rate is the ratio of number of applicants admitted to the total number of applicants.

III. Theory and Hypotheses

- NETCOST_{it} is hypothesized to have an inverse relationship with $YIELD_{it}$ as indicated by the law of demand.
- AVGFEDLOANS_{it} is hypothesized to have an inverse relationship with $YIELD_{it}$ because we expect heavier debt burdens to depress yield rates.
- GRADRATE_{it} is hypothesized to have a positive relationship with $YIELD_{it}$ because we expect individuals to prefer a college with a better record of graduating students on time.
- DIV_{it} is hypothesized to have a positive relationship with $YIELD_{it}$ because we expect individuals to prefer colleges that are more diverse.
- ACCEPTANCE_{it} is hypothesized to have an inverse relationship with $YIELD_{it}$ because we expect when colleges have higher acceptance rates, they are reaching deeper into applicant pools and accepting individuals who are less suited for their institutions.

IV. Data

- Collected from Integrated Post-Secondary Data System (IPEDS)
- 99 colleges included in sample
 - Bachelor of Arts and Sciences Colleges
 - Highest degree granted: Bachelor's
 - Not-for-profit
- Sample period from 2010 to 2016

V. Empirical Results

Variables	Coefficient (t-stat)
Constant	10.02* (10.31)
NETCOST_{it}	-0.36* (-4.53)
AVGFEDLOANS_{it}	-0.32* (-4.23)
GRADRATE_{it}	0.001 (1.01)
DIV_{it}	-0.005* (-3.70)
ACCEPTANCE_{it}	-0.005* (-5.53)
	Adjusted R ² : 0.11

*Indicates statistical significance at the 5% level

VI. Conclusion

- Our results indicate that the responses of the yield rates to increases in net cost of attendance and the average amount of federal loans per student are negative and inelastic. This suggests that colleges wishing to raise their yield rate may profitably focus on reducing the increases in their net costs and the monitoring of student indebtedness.