Tuition Discount, Net Price, and Enrollment at Small, Private Colleges

Tricia Ryan, LaTricia Phillips, & Lesley Cremeans

Texas Tech University

Introduction

- In 1999, private, non-profit baccalaureate institutions received 37% of their revenue from net tuition and fees (GAO, 2012).
- By 2009, net tuition and fees accounted for 57% of the revenue reported at these institutions.
- Moody's Investor Services predicts 15 college closures annually by 2017 due to shrinking enrollments (Wong, 2015).
- The number of high school graduates in the United States began a modest decline in 2011 affecting the pool of prospective undergraduate students (Western Interstate Commission for Higher Education, 2012).
  - Next period of national growth not expected until the 2020-2021 academic year.
  - Different areas of the country affected differently. For example, the South and West are expected to continue to see growths in number of high school graduates while the Midwest and Northeast are expected to see fairly substantial declines.

Maintaining Viable Enrollments

- In 2014, 71% of private baccalaureate colleges reported being under-enrolled by the traditional May 1 national deposit deadline (Jaschik, 2014).
  - This was an increase of 12% from one year prior.
- The two major factors affecting enrollment identified by institutional administrators (primarily CFOs) from public and private institutions in the United States (KPMG, 2014, p. 7) are:
  - "Parent and/or students' inability to pay" (66% indicated this as a challenge)
  - "Competition from peer/competitor schools" (50% indicated this as a challenge)
- 85% of institutional administrators surveyed were concerned about hitting enrollment objectives (KPMG, 2014).
- Between 2010 – 2012, a quarter of private, four-year institutions in the United States experienced a 10% or greater freshman enrollment decrease (Belkin, 2013)

Tuition Discounting to Increase Enrollment

- Allows institutions to shape the characteristics of their entering class (Archibald & Feldman, 2012)
  - Example: If an institution wants to increase the overall academic portfolio, it may offer institutional grants to students in certain GPA categories beyond merit scholarships or even need to entice them to enroll.
- According to NACUBO (2015), the practice of tuition discounting has increased nearly 23% for all undergraduates and 27% for all first-year, full-time students from ten years prior.
  - At private institutions in the United States, the 2014 tuition discount rate for freshman was 48% - an all time high.
- Small, private institutions are discounting at higher rates than any other type of institution (Ruffalo Noel Levitz, 2015).
  - In 2014, small, private institutions reported a 52.4% discount off of the tuition and fees (a 40.3% overall discount rate off the entire sticker price including room and board).
  - Small, private institutions meet an average of 75% of need.
- Lasilla (2010) found that there was a correlation between tuition discount increases and enrollment increases.

Tuition Increases to Maintain Financial Stability

- As enrollments decline and federal/state investments in higher education change, institutions turn to tuition increases for financial stability.
  - 44% of the institutional administrators surveyed indicated tuition increases were being considered to meet revenue gaps (KPMG, 2014).
- There has been a steady increase in tuition and fees charged over the past decade.
  - According to the College Board (2015), over the past decade their has been a 2.4% increase in inflation-adjusted tuition and fees per year.
- Due to the economic downturn, however, the average net price paid by students which reached an all-time high in the 2007-2008 academic year dropped and has not completely rebounded (College Board, 2015) demonstrating that institutions may be meeting some of the gap created by the increased tuition.

Purpose of this study

- As small, private bachelor-degree granting institutions compete to enroll undergraduates and maintain enrollments in order to ensure financial stability, the practice of tuition discounting is increasing and overall discount rates are reaching an all-time high.
- This study explores the relationship between tuition discounting, net price, and enrollment at small, private bachelor-degree granting institutions in the United States to determine if utilizing tuition discounting and lowering net price will help institutions meet enrollment objectives.

Research Questions

1. In the wake of the recession, was there a significant change in the net price and tuition discount at small, private bachelor degree institutions in the United States?
2. Is there a relationship between net price and enrollment at small, private bachelor degree institutions in the United States?
3. Is there a relationship between tuition discount and enrollment at small, private bachelor degree institutions in the United States?
4. Is there a significant difference in net price based on income level?

Method

- Participants:
  - Identified using IPEDS data
  - Included institutions that were classified as private, non-profit four-year and above with enrollments of under 1,000 students, and were coded as bachelor degree institutions for the highest degree awarded.
  - A total of 256 institutions were identified.
- The following procedures were used for each research question:

1. Repeated measures ANOVA tests were conducted to determine the mean differences over time from the 2008-2009 academic year to the 2013-2014 academic year for both net price and tuition discount.
2. Pearson's correlation was used to determine the relationship between net price and enrollment.
3. Pearson's correlation was used to determine the relationship between tuition discount and enrollment.
4. A one-way ANOVA was conducted to determine the differences in net price at the five income levels established in IPEDS for reporting net price.

Results: Research Question 1
In the wake of the recession, was there a significant change in the net price and tuition discount at small, private bachelor degree institutions in the United States?

- The average net-price for students receiving grants or scholarships at small, private non-profits increased each year from the 2008-2009 academic year (M=14,114.65, SD = 6,444.80) to the 2013-2014 academic year (M=16569.95, SD= 6,997.720).
- The average net price was statistically significantly different over time in the wake of the recession, $F(3.889, 723.382) = 33.899$, $p<.001$, partial $\eta^2 = .154$.

- Despite the recent recession, the average net price for students at small, private non-profit bachelor-degree institutions continued to increase between the 2008-2009 and the 2013-2014 academic years.
- Tuition dependent institutions have raised their tuition to combat lost revenue due to declining enrollments in a post-recession higher education environment (Belkin, 2013; Lederman, 2015), possibly accounting for the increased net price.
- Looking at the year to year may be more telling.

Results: Research Question 1
In the wake of the recession, was there a significant change in the net price and tuition discount at small, private bachelor degree institutions in the United States?

- For the purposes of this study, tuition discount was calculated using the following formula:
  - Institutionally funded grant expenditures on student aid/Gross Tuition and Fee Revenue (Duggan and Mathews, 2007)
- Average tuition discount was statistically significantly different over time from 2008-2009 to 2013-2014, $F(3.347, 602.448) = 6.417$, $p<.001$.

- Average tuition discount only decreases between 2009-2010 and 2010-2011 academic years – non-significant change may have occurred as a response to institutional financial struggles post-recession (more conservative with how institutional aid is distributed)
- Significant differences in tuition discount between each of the first three years (2008-2009, 2009-2010, 2010-2011) and the last year (2013-2014), but not year to year – may demonstrate that as the reality of declining enrollments hit institutions, they turned toward greater financial aid leveraging to attempt to reverse the declines (Hossler, 2000)

RQ2: Is there a relationship between net price and enrollment at small, private bachelor degree institutions in the United States?

- A Pearson's correlation was conducted to determine the relationship between change in net price and change in enrollment at small, private bachelor degree institutions in the United States.
- There was a small, positive (weak) correlation between net price and enrollment at the small (under 1,000 students), non-profit, private bachelor degree institutions, r (213) = .139, $p < .05$. Net price statistically explained 1.9% of the variability in full-time undergraduate enrollment.

- When students are selecting small, private colleges, changes in cost have minimal impact on their decisions
- May be influenced by the greater call for transparency in higher education beginning with the net price calculator (NPC) mandate in 2011 (NCES, 2016)

RQ3: Is there a relationship between tuition discount and enrollment at small, private bachelor degree institutions in the United States?

- A Pearson's correlation was conducted to determine the relationship between change in tuition discount and change in enrollment at small, private bachelor degree institutions in the United States.
- Data for this analysis included the derived tuition discount variable and full-time enrollment variable for the 2012-2013 and 2013-2014 academic years.
- The relationship between tuition discount and enrollment at the small (under 1,000 students), non-profit, private bachelor degree institutions was non-significant, r (176) = -.103, p =.174.

- Coupled together with the relationship between net price and enrollment, these are possibly the most important findings for institutional leaders and enrollment managers to consider as tuition discounting is often used to attempt to fill seats and manage revenue (Pullaro, 2010).
- Since no relationship exists between the change in tuition discounting and change in enrollment, it may mean that changes in tuition discount were not drastic enough (one way or the other) to have an impact on overall enrollment.

RQ4: Is there a significant difference in net price based on income level?

- Income was broken down into five brackets in IPEDS:
  - Lowest income (Income 1): $0 – 30,000
  - Second lowest income (Income 2): $30,001 – 48,000
  - Middle income (Income 3): $48,001 – 75,000
  - Second highest income (Income 4): $75,001 – 110,000
  - Highest income (Income 5): $110,001+
- The average net price was statistically significantly different at the different income quintiles in the 2013-2014 academic year at small, private, non-profit bachelor degree institution, $F(4, 812) = 41.530$, $p < .001$.

Statistically significant differences existed between average net price for the following groups:

Lowest Income	Middle Income, Second Highest Income, Highest Income
Second Lowest Income	Second Highest Income, Highest Income
Middle Income	Lowest Income, Second Highest Income, Highest Income
Second Highest Income	Lowest Income, Second Lowest Income, Middle Income
Highest Income	Lowest Income, Second Lowest Income, Middle Income

The differences between the average net price for the following groups were not significant:

Lowest Income	Second Lowest Income
Second Lowest Income	Lowest Income, Middle Income
Middle Income	Second lowest income
Second Highest Income	Highest Income
Highest Income	Second Highest Income

Changing the pricing structure at small, private colleges?

- The lack of a strong relationship between either net price or tuition discount and enrollment may mean that transitioning to a low cost, low aid pricing model is a viable pricing structure.
- Transitioning to such pricing models may have an impact on small, private college enrollments in that they will shift back to a traditional needs-based financial aid model and open access to lower-income students who might not otherwise be able to attend.
- The challenge lies in the fact that unless peer institutions also switch to such a pricing model, institutions may lose the perceived competitive advantage that they gain by offering a low need student a scholarship (McPherson & Schapiro, 1998).

Conclusion & Recommendations

- Although the practice of tuition discounting to reduce net price, leverage financial aid, and encourage enrollments has become the norm for private higher education (Archibald & Feldman, 2012; Geiger, 2000; NACUBO, 2015a; Ruffalo Noel Levitz, 2015), it may not be the best practice for small, private bachelor-degree institutions in the United States.
- With a heavy reliance on tuition revenue for institutional sustainability (GAO, 2012) and the expectations that college closings will triple in number beginning as early as next year (Wong, 2015), small, private colleges need to reexamine traditional enrollment techniques and ask if current practices are really helping them to thrive or just keeping them in a declining status quo.
- Perhaps one of the reasons why there was little to no relationship between net price/tuition discounts and enrollment is because small, private institutions do not exist in a bubble.
- Limited by the data provided in IPEDS.
- Additional research suggested that focuses on grouping institutions by mission and collecting more institutional data (e.g. analyze financial aid leveraging models to determine if differences exist based on mission) or additional institutional sizes.

Questions?