

# **Institutional Economic Variables and Public Postsecondary Enrollment Affordability**

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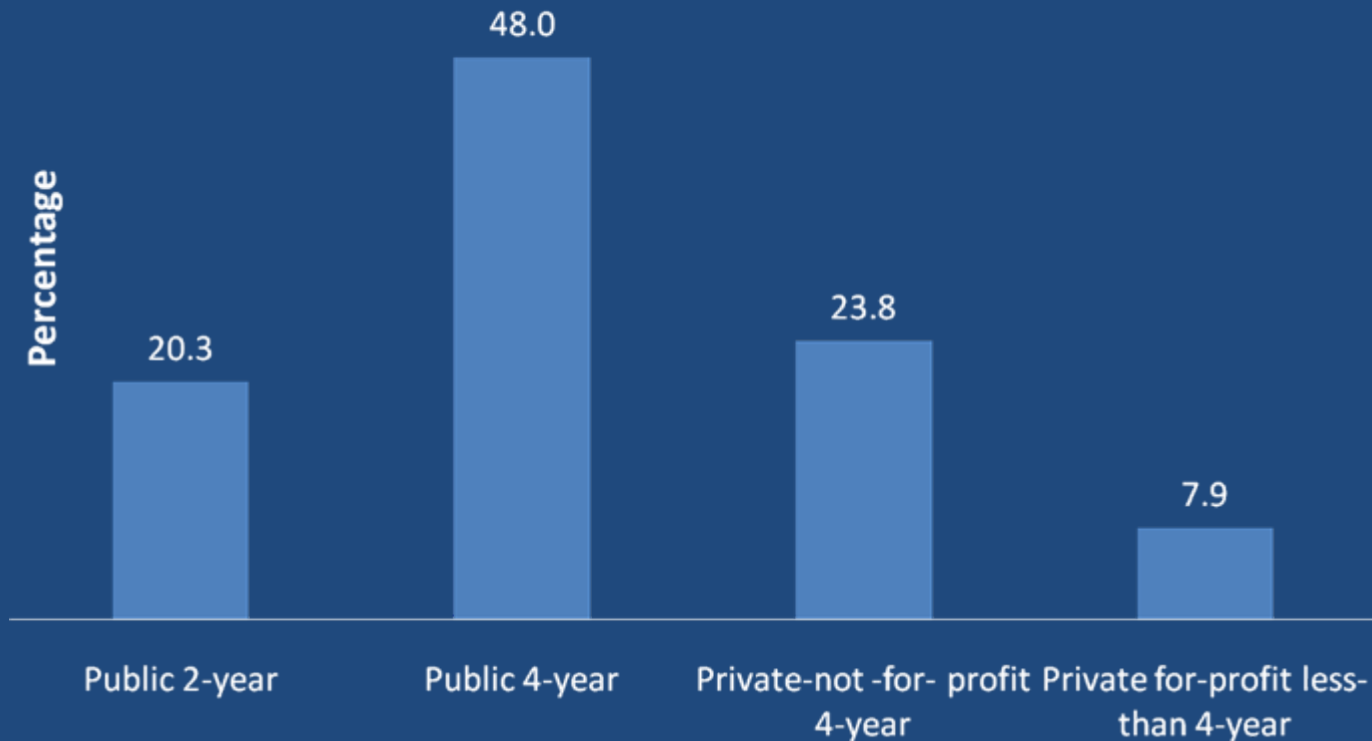
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# Is it Just Public Opinion?

“Many Americans, especially parents, are concerned about the price of higher education.

Although they know very little about the details, they feel that rising prices threaten to make higher education inaccessible to many people” (The National Center for National Policy and Higher Education, 2002).

# The Supply Side of the Market



Average Percentage Distribution of Full-time, Full-year Undergraduates by Institution Type between 1989 and 2000.

Source: NPSAS reports

# Trends in Costs

- Between 1995-96 and 2005-06, the cost of attendance for undergraduate students across all types of institutions rose by 30 percent in constant dollar terms.
- In the four- and two-year sectors, the total costs of tuition, room and board in 2005 were 72 percent and 53 percent higher than they were in 1995 respectively (U.S. Department of Education, 2007).

# Methods & Variables

- Analysis was just for two-year and four-year public sectors for each of the years 2003-04, 2004-05, and 2005-06)
- All data obtained from the NCES IPEDS
- Sample consisted of 129 similar four-year, and 275 similar two-year institutions nationwide
- Enrollment
  - Enrollment ratios (enrollment per 100,000 of college eligible population)
- Cost of attendance (inflation adjusted)
  - Average of three measures for four-year institutions
  - Average of two measures for two-year colleges
- Financial aid (inflation adjusted)
  - Federal need-based aid
  - Loan aid
  - State and local aid
  - Institutional grant aid

# Enrollment Over Time

- No significant change over time for both four-year and two-year public sectors.

# Changes in Economic Variables Over Time

## Four-Year

- In 2005-06, students in the four-year sector paid a lower real price of attendance than in both 2003-04 and 2004-05. The difference between the 2003-04 and 2005-06 prices approached statistical significance .05 alpha level.
- Federal aid declined significantly. The average amount of federal aid in 2005-06 was lower than it was in both preceding years.
- There were no significant changes in institutional aid, state and local government grant aid, and loan aid.

## Two-Year

- The price did not significantly change over the three year period.
- The average amount of federal aid in 2005-06 was significantly lower than it was in 2003-04.
- Institutional aid went up significantly between 2004-05 and 2005-06.
- There were no significant changes in-state and local government aid, and loan aid.

# Analysis for Whole Public Sector

- Multiple regression (for each of the three years 2003-04, 2004-05, and 2005-06)
- Price not a sizeable deterrent to enrollment (at least at this aggregated level) though it had expected negative sign
- Perhaps income is noteworthy - federal aid is significant (in 2005-06) ( $B=-.069$ ,  $p=.024$ , &  $\eta=-.84$ ). This is suggestive evidence which confirms previous studies' findings.
- Significant positive relationship between enrollment ratio and, state and local government grant aid in 2005-06 ( $B=.04$ ,  $p=.037$ , &  $\eta=.091$ ).
- Demand somewhat inelastic

# Analysis by Sector

## Two-year sector

- Price & institutional aid consistently have negative signs

## Four-year sector

- No significant predictor
- Coefficient sizes change erratically from year to year
- Federal aid & Institutional aid consistently have negative signs

# Limitations

- Measurement of demand
- No direct measure of income – federal aid a mixed bag
- The mix of need and merit in institutional aid can also be problematic. The way that this is implemented would tend to vary from institution to institution, let alone between states.
- The state to state variation in the way that tuition policies are implemented also introduces some variability.

# Conclusion

The conclusion is drawn from a landmark study of higher education demand by Campbell and Siegel in 1967.

“In the United States, there is probably an institution of higher education for virtually anyone who possesses a high school diploma and has the necessary financial resources.”