A Longitudinal Analysis of Student Fees: The Roles of States and Institutions

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Why study student fees?

- Most attention about the cost of college focuses on tuition
- But required student fees are substantial and growing
- Ex: UC-Santa Cruz has over 30 fees totaling over $2,000, including “seismic safety” and “community and resource empowerment”
- Median real fees increased by 117% at community colleges, 81% at four-year public colleges, and 61% at four-year private colleges since 1999
- Fees now add 20% to the cost of tuition at the average public university
One factor behind increased fees may be institutional behaviors.

Many colleges are engaged in an “arms race” for the best facilities (Armstrong & Hamilton, 2013).

This spending can help attract high-income, lower-achieving students (Jacob, McCall, & Stange, 2013).

Athletics can be a major driver of fees (Weisbrod, Ballou, & Asch, 2008).

Fees can also be used to directly fund instruction or libraries.
Another contributing factor behind increased fees at public colleges may be state behaviors. Grant programs in some states (such as MA and GA) do not cover fees (Goodman & Cohodes, forthcoming; Sielke, 2011). Organizational structure of public higher education can matter (e.g., Lowry, 2001; Tandberg, 2013). State-level political control affects appropriations, which could affect fees (e.g., Archibald & Feldman, 2006; Tandberg, 2010).
Figure 1a: Average Fees by State, 4-Year Publics

Average Fees, 2012-13
- 2000 - 8281
- 1500 - 2000
- 1000 - 1500
- 500 - 1000
- 0 - 500

Source: IPEDS
Figure 1b: Average Fees by State, 2-Year Publics

Source: IPEDS
Research questions

1. What are the trends in inflation-adjusted student fees since 1999? How do they vary by institutional control and sector?

2. Are changes in student fees at public institutions affected by state-level factors including:
   - The size and scope of state merit- and need-based grants?
   - The authority of the institution, state coordinating/governing boards, and elected officials to control tuition and/or fees?
   - State-level partisan political control?

3. Are changes in student fees affected by institutional-level factors, including the magnitude of the athletics program and selectivity?
Data

- IPEDS: Tuition and fees from 1999-2000 through 2012-13, selectivity, athletics participation, state appropriations
- Annual NASSGAP surveys on state need- and merit-based aid programs through 2011-12
- Combine with Census Bureau data to get state aid per 18-24 year old
- All measures adjusted for inflation into 2012$
- Partisan political balance by year from Carl Klarner at Indiana State
Data

- SHEEO surveys on state-level tuition policies
  - Most recent year of data used, some states missed a wave
  - Typically only one response per state from a system

- Key questions:
  - Whether governor/legislature, coordinating board, or campus has primary authority over tuition
  - Whether tuition and/or fee cap has been implemented in past three years
  - Whether governor/legislature, coordinating board, or governing board has any authority over fees
Sample selection

- Started with Title IV-participating nonprofit colleges with tuition and fee data available from 2010-12
- Excluded for-profit institutions and two-year privates
- Analytic concern: 170 colleges “reset” fees by dropping fees $500+ while raising tuition $500+
- Dropped years prior to fee reset, but also had to drop Cal State system and others (n=63)
- Final sample: 2,415 colleges enrolling about 15 million undergrads in 2011-12
- Primary analyses exclude Massachusetts as an outlier
Methods

- Descriptive analyses of trends in fees over time
- Mixed effects panel regressions from 1999-2000 through 2011-12
- Model for public institution $j$ in year (2-yr and 4-yr separate):

$$\text{Fee}_{jt} = \beta_{0jt} + \beta_{1jt} \text{Carn}_{jt} + \beta_{2jt} \text{TFPol}_{jt} + \beta_{3jt} \text{Grant}_{jt} + \beta_{4jt} \text{Party}_{jt} + \beta_{5jt} \text{Ath}_{jt} + \text{State} + u_j + e_{jt}$$ (1)

- 2-year model does not control for athletics
Also estimated a model looking solely at institutional characteristics for four-year public and private colleges:

\[ Fee_{jt} = \alpha_{0jt} + \alpha_{1jt}Carn_{jt} + \alpha_{2jt}Select_{jt} + \alpha_{3jt}Ath_{jt} + u_{j} + e_{jt} \] (2)

Selectivity measure available 2001 and 2003-11, so 10 years of data instead of 13

Future work: Include a measure of regional competition
Limitations

- Key measures aggregated to state level and not available each year
- IPEDS limited—variable for being part of a system first available in 2006 and is of poor quality
- Variables such as percent Pell are not available for the full panel
- Some colleges “reset” fees
Trends in fees by sector and year

Figure 2b: Inflation-Adjusted Fees by Year

Source: IPEDS, average change within sector
Trends in fees by sector and year

Figure 3b: Annual Inflation-Adjusted Change in Fees

Source: IPEDS, average change within sector
Key factors associated with fees (4-yr public)

- Tuition cap in last 3 years ($45, p<.01)
- Fee cap in last 3 years (-$47, p<.01)
- Fee authority: Coordinating board ($56, p<.01)
- State aid/resident age 18-24 ($1.90, p<.01)
- Pct aid based on need ($6.15, p<.01)
- GOP governor and Senate (-$128 and -$102, p<.01)
- NCAA FBS and FCS athletics ($256 and $184, p<.01)
Key factors associated with fees (2-yr public)

- Fee cap in last 3 years ($10, p<.05)
- Fee authority: Gov/leg ($16, p<.01)
- Fee authority: Coordinating board ($38, p<.01)
- State aid/resident age 18-24 ($0.39, p<.01)
- Pct aid based on need ($1.93, p<.01)
- GOP governor and Senate (-$28 and -$18, p<.01)
Results of 4-yr institutional-level regressions

- NCAA Division I athletics not significantly associated with fees (compared to D-III)
- ACT composite matters for publics ($30 per point, p<.01, but not privates)
- 1 pct drop in acceptance rate raises fees by $4.49 at publics and $3.27 at privates (p<.01)
- 1 pct drop in yield rate raises fees by $8.95 at publics and $3.66 at privates (p<.01)
- I view these results as very preliminary
State-level and institutional-level characteristics affect student fees
Fee caps appear to be somewhat effective, but colleges tend to raise tuition
Giving legislature fee-setting authority results in more fees
State grant funding related to higher fees
GOP political control associated with lower fees
Athletics may be driving some fee increases in models with state characteristics
Future work

- Add in measure of state and local appropriations from IPEDS
- Create a measure of whether a public college is part of a system
- Estimate institutional competition based on the number of selective colleges nearby
- Any other suggestions?