Differential Tuition in Higher Education

Joseph Ojanen, Economics
Diek Carlson, Department of Business and Economics

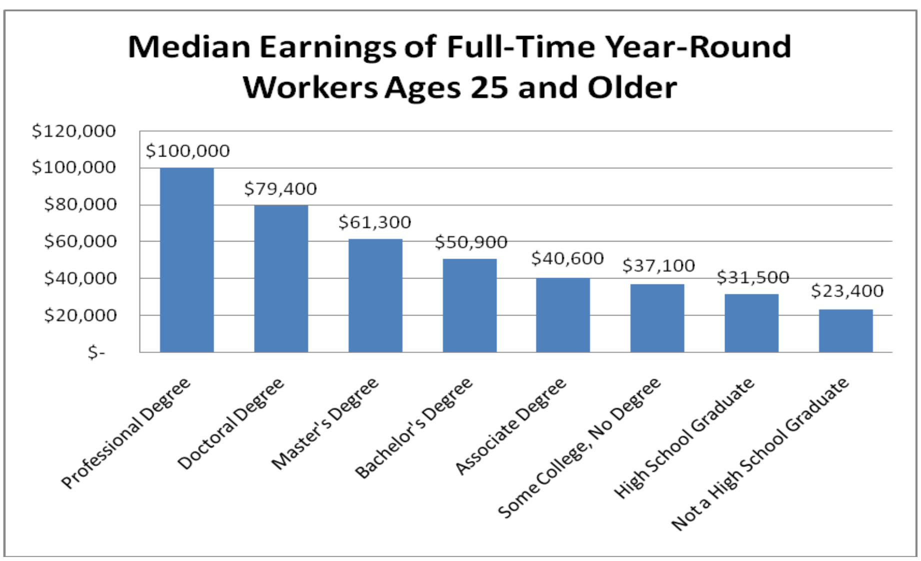
ABSTRACT

Due to the importance of higher education in today's society, the provision of higher education should be as efficient as possible in order to ensure as many people as possible receive an education. However, due to budget shortfalls, colleges are facing a dilemma. Colleges must find a tuition level that enables them to provide a top education while still making it affordable. One solution to this problem may be through differential pricing of tuition. The biggest rationale behind these practices is a difference in cost. It's unfair for a student in a low-cost major to subsidize the cost of someone in a major that costs the university much more to provide. To make sure lower income students aren't priced out of a major, colleges are using a portion of the revenue from differential tuition for financial aid. However, there is no one differential tuition plan that will work for everyone. Before a college chooses to implement a differential tuition plan, it must consider the effect the changes will have on revenues, enrollment, and financial aid. However, with the proper research, a differentiated tuition plan is something that could allow colleges to more efficiently provide an education to its students.

Introduction

In 2007 the College Board issued a report entitled Education Pays: The Benefits of Higher Education for Individuals and Society. Contained in this report were multiple studies that measured the effect of higher education on individuals, as well as society. One survey conducted determined the median earnings of full-time year-round workers ages 25 and older. These results were categorized by education levels and can be seen in Table 1 below. Based on these results it is clear that, on average, as an individual obtains more education, their earnings potential increases.

Table 1:



The benefits of more education are not just seen in someone's median salary. This report also reported that individuals with higher levels of education have a greater chance of being offered an employer-provided pension and have a greater chance of being covered by employer-provided health insurance.

The benefits of more education are not just received by the individual who obtained the education. According to the same report, when an individual earns a higher income because of their education, the government collects more tax revenue. This means more money for different government programs (i.e. more money for education). People with higher levels of education are also less likely to smoke, more likely to volunteer and donate blood. The results of this report stress the importance of making higher education accessible and affordable to as many individuals as possible because not only does the individual benefit from more education, but society does as well.

The current problem is that instead of becoming more affordable, higher education is becoming less affordable. In a separate report entitled Trends in College Pricing, the College Board listed the average tuition and fees paid by students in private four-year, public four-year, and public two-year colleges for the previous five years. This list can be found in Table 2 below.

Table 2: Average Tuition and Fees (numbers adjusted for inflation)

Year	Private Four-Year	Annual % Change	Public Four-Year	Annual % Change	Public Two-Year	Annual % Change
2003-04	$ 21,342		$ 5,231		$ 2,150	
2004-05	$ 21,991	3.0%	$ 5,624	7.5%	$ 2,281	6.1%
2005-06	$ 22,208	1.0%	$ 5,814	3.4%	$ 2,310	1.3%
2006-07	$ 22,746	2.4%	$ 5,918	1.8%	$ 2,310	0.0%
2007-08	$ 23,712	4.2%	$ 6,185	4.5%	$ 2,361	2.2%

This study clearly shows that average tuition prices are rising. As a result, current students are being required to pay for more of their education than previous students. This is demonstrated in the College Board's report entitled Trends in Student Aid, which show how the effects of grants have been decreasing. In 1986-87, the maximum Pell Grant covered 52% of the average tuition, fees, room and board at a four-year public university. However, by 2006-07 the maximum Pell Grant covered only 32%. In 1991-92 all grants made up 63% of total aid, while loans consisted of only 35%. However, by 2006-07 grants made up 46% of total aid, while loans were 49%.

The issues of increasing tuition and decreasing aid create a problem for colleges when it comes to setting tuition levels. If tuition is too high, potential students who are otherwise qualified may not be able to attend. However, a school with too low of a tuition rate may not have the revenue stream necessary to provide their students with a top of the line education. This means that schools have to find the tuition level that allows them to provide a top education, while still making it affordable for as many people as possible. The problem is that there may not be a single tuition rate that allows a school to accomplish this. One possible solution to this problem may be through differential pricing of tuition.

Differential Pricing of Tuition

Tuition rates vary from school to school across the country. Even within the same school, students with the same tuition rate will pay different amounts for their education because of financial aid. In order to allow access to as many students as possible, varying amounts of financial aid is given out in the form of scholarships, work-study programs and loans. Because of this, the amount someone actually has to pay for their education varies on a student-by-student basis.

Currently, most colleges already price discriminate when it comes to tuition. They do this through resident and non-resident tuition rates. Students are charged more simply because they are not a resident of the state that the school is located in. However, universities are now starting to explore other ways of varying tuition. Some common practices that colleges use include: charging different rates for different majors, charging different rates for different classes, offering quantity discounts based on credit load, giving discounts for taking classes during unpopular times, such as evening and summer, and charging tuition based on the students year of college.

This report will explore these differential tuition practices, including examples from different schools. It will also look at how common some of these practices are and the benefits of such a system. This report will show that a properly administered differential tuition strategy can increase the efficient provision of higher education.

Policies at Individual Schools

Kansas University

The following information comes from Kealing's article entitled "Some Call Tuition Disparity Unfair." At Kansas University (KU), tuition for in-state freshman is $213 per credit hour. However, this cost can increase depending on what classes someone takes. This is because KU has started charging additional fees for its classes. These additional fees range from $13.80 per credit hour in the School of Journalism to as much as $156.80 per credit hour for master's degree classes offered in the School of Business. KU Provost Richard Lariviere is not too happy about this practice. He states "I don't know any university presidents or provosts who are happy with differential tuition. In some ways, it's an indictment of the political process we go through in setting tuition." He states that he would like nothing better than to be able to get rid of differential tuition across the board. "It sends the message that some degrees are worth more than others, which isn't right." Lariviere is worried that the large tuition increases for some degrees may be pricing some students out of that major. For example, a lower-income student may pursue a less expensive major like Spanish or English instead of an engineering degree.

However, Lariviere's worries might not hold true. KU spokeswoman Lynn Bretz states that the university has started to do research on minority enrollments. She has noted that early indicators show there has been a slight increase in the number of minority students in certain programs like engineering. This may be due to the fact that, according to Laviviere, "A significant portion of tuition is set aside for scholarship money." For example, in the School of Law, Dean Gail Agrawal states that approximately "one-fourth of all differential tuition money goes to student scholarships."

Dean William Fuerst of the School of Business explains the rationale behind the new pricing strategies. He states that students came to him requesting differential tuition. They were getting paid less because they did not have specialized degrees, like finance or supply chain management, that their competitors at other schools have. An undergraduate business student pays an extra $86 per business credit hour. This extra money has allowed the School of Business to add four new majors, about ten new faculty positions and about $500,000 per year in new scholarships and salaries. Fuerst said that "This was a highly student-led process. Students saw this as an opportunity to invest in their careers. We're just executing the plan the students developed." Meanwhile, School of Journalism Dean Ann Brill says that "We're only using differential tuition money for things students can use." The school has invested the money in computers, software and student salaries.

University of Wisconsin-Madison

Starting in the fall of 2007, students in the University of Wisconsin-Madison's School of Business began paying $500 more each semester. Like the proposal at Kansas University, the proposal for differential tuition at Madison also generated student support because they believed it would support things like a top-notch facility. Student Jesse C. Siegelman said "It's important to all the students in the business school to sustain our reputation" (Glater). According to the proposal, "state support does not provide the resources needed to maintain the quality of the undergraduate business program relative to competing institutions, particularly in recruiting and retaining top faculty. By charging a higher tuition for the undergraduate major, the School of Business can maintain faculty quality, enhance academic and career preparation and offer business education to more student" (Benish).

Like KU, Madison was also worried that lower income students might be priced out of a major. This is why 25% of the revenues from the differential tuition fee are for financial aid to students enrolled in the program (Benish). However, not everyone is a fan of the increased rates. University of Wisconsin-Madison Provost Patrick V. Farrell said that "this is not the preferred way to do this. If we were able to raise resources uniformly across the campus, that would be a preferred move. But with our current situation, it doesn't seem to us that that's possible" (Glater).

Utah State University

The following information comes from Damast's article entitled "Tuition: Earn More, Pay More?" Eric DeFries, a senior business major at Utah State University in Logan, has seen his tuition slowly increase each year since he arrived. However, those increases were nothing compared to the increase he received last spring. That was when he received an e-mail from the business school informing him that because he was a business major, his tuition would be an additional $455 per semester on top of his $2150 base tuition and mandatory fees. For the first time, students at Utah State's John M. Huntsman School of Business who register for upper-division business classes are being charged an additional $35 per credit hour. On average these new fees will increase tuition by $735 for the year.

Despite some students concern about the additional financial burden, there are supporters of the system. Schools defend the practice saying that it helps them maintain their programs and compete with private colleges for expensive professors and programs. Business school deans maintain that the tuition hikes are necessary so that business schools at public universities don't fall behind their peer schools and potentially risk losing accreditation. "It's a move that is better for students in the long run," according to Douglas Anderson, Dean of Utah State University's Business School, where differential tuition fees will raise an additional $1 million for the school this year. "It goes to the question of the brand value of your degree. Do you recruit top talent or do you fail to keep pace with the new talent that is out there?" Students at Utah State are already receiving the benefits of the new policies, with seven new professors and new programs, such as a trip to Europe this fall where junior business majors learned about global marketing.

<u>How Common Are These Policies?</u>

The Western Interstate Commission for Higher Education (WICHE) is a public, interstate agency established to promote and facilitate resource sharing, collaboration, and cooperative planning among western states and their colleges and universities. Member states include: Alaska, Idaho, Oregon, Arizona, Montana, South Dakota, California, Nevada, Utah, Colorado, New Mexico, Washington, Hawaii, North Dakota, and Wyoming.

As part of their November 2007 report entitled <u>Tuition and Fees in Public Higher Education in the West</u>, they conducted a survey about tuition policies among their member schools. Part of this survey involved two questions about differential tuition practices. Colleges were first asked if their institution charges its students a different amount based on their year of college or the number of credits they have accumulated. Of the 107 four-year public colleges in this area, only six schools, four of which are located in Montana, employ this type of differential tuition, which is 5.6% of the schools in the area.

In the second question, colleges were asked if the institution charges its students a different amount based on the student's program of study. 27 out of the 107 four-year public colleges in this area employ this type of differential tuition, which is about 25% of the schools in the area. However, most of the schools in this area that practice this type of differential tuition are located in just three states: California (with 10 schools), Colorado (6), and Arizona (5). The other twelve states have just six schools that use this type of differential tuition.

<u>Who Can Price Discriminate?</u>

In his article entitled "Is Higher Education Becoming a Commodity?" Doti developed a statistical model over the period of 1992 to 2002 to determine what schools are better or less able to effectively price discriminate. He makes the blanket statement that "private colleges and universities are price discriminators." He explained this by stating that "there is no question that if a college has the ability to price discriminate effectively such discrimination will increase its bottom-line revenue."

However, according to the article, many experts in the economics of higher education argue that colleges and universities are losing their ability to effectively price discriminate. Doti tested this hypothesis by comparing tuition, financial aid, and enrollment data from 1992 and 2002 for 107 different colleges and universities. He divided these schools into three groups based on their median scores on the Scholastic Aptitude Test (SAT), which shows how selective a school is. Overall, he concluded that the ability for colleges and universities to effectively price discriminate is declining. However, he found that this ability varies depending on the selectivity of the school. He concluded that more selective schools have a greater ability to price discriminate, while the less selective schools lack this ability.

Reasons for Differential Pricing

In their article entitled "Differential Pricing of Undergraduate Education," Yanikoski and Wilson sought to explain the rationale behind why differential pricing is gaining popularity in undergraduate education and what types of institutions should use these practices. They also give their own plan for differential tuition.

A university with a flat tuition rate for all students faces a dilemma when it is faced with declining revenues. If they decide to raise those rates for everyone, then students in low-demand fields may change majors, transfer to another school, or decide to leave higher education altogether because the costs now outweigh the benefits. However, if a university tries to keep tuition low, they run the risk of not being able to maintain quality programs in the majors that are expensive to operate.

A flat-rate is also unfair to the students. When a school has uniform tuition rates, it forces the students in the low-cost areas to subsidize the education of the students in the higher cost areas. Yanikoski and Wilson state "that students preparing to be school teachers should pay less for their undergraduate instruction than engineering students because the latter are both more expensive to instruct and more likely to earn a substantial income after graduation."

There is already a long history of differential pricing when it comes to graduate programs. Graduate students are charged more than undergraduate students in general and the rates vary depending on the cost and future earnings. This model is now being expanded to include undergraduates. Schools are using different ideas about how to differentiate their tuition rate. These ideas include: having tuition prices scaled in proportion to the costs of the program, higher prices for upper-division instruction because they are more specialized and costly to operate, higher prices as an indicator of an outstanding program, and setting prices according to return-on-investment estimates for that field of study.

Based on their research, Yanikoski and Wilson determined that because of the differences between individual colleges and the numerous approaches to differential pricing, there is no one method that is the best. However, they do give a generalized plan for universities. Their three-part plan is as follows: "1) most, if not all, lower-division instruction should carry a uniform tuition rate in order to prolong the choice process for entering students and to encourage enrollment in liberal studies courses; 2) tuition charges for selected upper-division specializations should vary according to essential and significant differences in academic costs, but as service institutions, colleges and universities should neither seek to recover the full cost of programs nor rigidly apply cost formulae when determining tuition prices and 3) at least during a transition period, approximately one-fifth of any increased revenues accrued by differential pricing should be reserved to aid needy students whose selection of certain fields of study otherwise might be restricted. This proportion should be modified by institutional experience."

They go on to state that the drawbacks to such a system may be very minimal. "Research-to-date does not indicate that significant numbers of students will alter their enrollment preferences in response to modest price differentials." "Since upper-division students tend to have a high degree of institutional loyalty, they are not likely to alter established enrollment patterns simply because of price differences."

While their plan is for a wide-range of colleges and universities, the authors warn that not every institution is suited to their plan. Small colleges will not have sufficient program diversity to implement this plan. The costs for specific programs can be difficult to access because of the cross-over between departments. Also, it may not be beneficial for top institutions whose tuition rates are already high.

So which institutions can implement differential pricing at the undergraduate level? "The most eligible institutions seem to be large and well respected but not elite, with considerable diversity in their undergraduate curricula – including a mix of technical and professional programs – and with a fairly strong recruitment position in their preferred market."

The authors give advice to those looking to implement differential pricing: "Experimentation with differential prices can begin selectively and cautiously, in proportion to the confidence that decision makers have in their general understanding of relative cost differentials."

Student Response by Major

In their article entitled "Student Response to Tuition Increase by Academic Majors: Empirical Grounds for a Cost-Related Tuition Policy", authors Shin and Milton explored the affect that an increase in tuition will have on different majors. According to Shin and Milton, this is important because more colleges and universities are facing budget shortfalls. One way to increase tuition revenue is to charge different tuition rates for different academic majors based on differences in actual expenditures. It is important to know how students will respond to these different tuition rates. They state "that the primary goal of cost-related tuition is to increase tuition revenues without losing students."

They had the same opinion of Yanikoski and Wilson that one tuition rate for every student is unfair. "From a purely economic point of view, students in disciplines that cost colleges less, who pay the same amount as other students are treated unfairly by the state tuition policy." They collected data on 470 public 4-year colleges and universities. They wanted to see what affect tuition increases had on six different categories of majors: Education, Engineering, Physics, Mathematics, Biology, and Business. Their results determined that students have different tuition elasticity depending on their academic major. Tuition elasticity is defined "as the change in student enrollment causes by the change in tuition." Engineering students seemed to be unaffected to tuition increases. The authors hypothesized that this may be due to the "rate of return" of the major. Engineering students are expecting to earn more after college so they are less sensitive to tuition increases. They found that students in the other academic majors were more sensitive to tuition increases.

The authors' suggestion is "that colleges apply diverse tuition rates for academic majors by considering rates of return and costs of the disciplines if tuition increase is inevitable in a given situation." They feel this is a better solution than raising tuition for every student. By using students' tuition elasticity to set different tuition rates for different majors, schools might expect increased tuition revenues without a loss of students.

Conclusion

Setting an appropriate tuition rate for its students can be a difficult task for colleges and universities. Unfortunately, there may not be one tuition rate that allows them to maintain an adequate revenue stream while still keeping the price affordable for as many students as possible. Differential tuition may be a way to solve this problem.

Charging a flat rate for everyone is unfair to students in lower cost fields. However, if a school goes to a differential tuition policy based on the cost of the major, these students are no longer asked to subsidize the education of their peers in the higher cost fields. Also, the students who are being asked to pay more will benefit from the top-notch facilities and faculty that the college will now be able to provide, which will help them in their career after college.

The biggest potential drawback to this type of system is a decrease in enrollment, especially students from lower income families. However, this may not be a problem because schools are using some of the additional revenue from these policies for financial aid.

A school should not blindly implement a differential tuition policy just because a similar plan has worked in other schools. Due to differences in the make-up of different colleges, these policies may not be effective at every school. A school must take the proper time to do research on the potential effects a policy might have on revenues, enrollments, and financial aid. However, with the proper research, a differentiated tuition plan is something that could allow colleges to more efficiently provide an education to its students.

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