

**Application of Economic Principles – Case Scenarios**

Emily L. Lane

Department of Higher Education, The Penn State University

HIED 810: Planning and Resource Management

Dr. James Trainer

February 7, 2020

### Situation 1

The decision-makers should politely decline the donor's gift because the restrictions accompanying this gift will likely "increase the financial pressures of the institution (as) it does not fully cover the recurring costs of the new activities" (Cheslock, 2006, p. 38). Conditionally, the decision-makers should utilize a mission-oriented approach and determine if the marginal mission attainment is greater than the net financial loss. If so, the decision-makers should accept the gift.

First, utilizing the opportunity cost framework suggested by Brinkman (2006) allows decision-makers to evaluate what must be lost to accept the offered alumna funding intended to create a new ornithology center. The donor has provided enough funds to cover the initial start-up cost, so if the program is developed, the sunk cost will be funded. However, Penn State World Campus (n.d.) argues, "since it [sunk costs] cannot be recovered, it will not be influenced by what decision you make. It should be ignored in the decision-making process" (p. 4). Regional public universities are typically not-for-profit institutions, so rather than focusing on marginal cost versus marginal revenue, the key factor that must be evaluated in determining if a new ornithology center is a "pro-mission" investment. In other words determining if, "the marginal mission attainment is greater than the net financial loss" (Penn State World Campus, n.d., p. 7).

To estimate the net financial loss, decision-makers need to calculate the marginal cost that the university will assume by creating a new ornithology center. The alumnus will cover approximately 70% of the recurring operating costs of the program in combination with center revenues, so the university will be responsible for 30% of the recurring operating costs. Assuming no new funds are available to cover these recurring operating costs, money must be re-allocated from other initiatives likely increasing institutional financial pressures (Cheslock, 2006). Furthermore, ornithology center revenues will be re-invested into recurring operating costs, so university-wide variable revenue potential should be estimated. Questions such as the following should be considered: Will this center attract highly qualified

applicants that the university would previously not have attracted? Will the center increase the university's prestige in a way that could qualify for additional government subsidies? Will the center require hiring new, highly specialized faculty? None of these questions have definitive answers, so decision-makers must determine if the projected answers satisfy the advancement of the institutional mission.

### **Situation 2**

Yes, the institution should expand enrollment for financial reasons because the cost per student outweighs revenue per student. Brinkman (2006) defines the average total cost as the total cost divided by output and establishes the assumption "that marginal cost, average total cost, and average variable cost are second-degree curves that first decline and then increase as output is expanded" (p.46). So, generally speaking, if the institution expands enrollment then the average cost per student will decrease. However, the relationship between average and marginal costs should be taken into account. As the number of students increases, the marginal costs of this expansion also increase. Assuming the private institution's existing campus facilities and administrative structure is capable of supporting more students without expanding, the marginal cost increase will be a reflection of variable costs such as the need to hire more teaching faculty or provide additional funding to academic programs (Penn State World Campus, n.d.). Marginal costs will also vary based on student program of study as there is a "wide variation in average cost per student among disciplines" (Brinkman, 2006, p. 50). So, if the institution assumes the average total cost per student and marginal cost are the only variables, then yes, they should expand enrollment for financial reasons until the average total cost intersects the marginal cost on the Average and Marginal Cost Curve (Brinkman, 2006).

If the institution is residential and currently has no space in its dormitories, it should not expand enrollment but consider other avenues of cost-cutting or generating revenue. Alternatively, if the institutional grant aid required to attract additional students would be much higher than the aid

currently being offered, the institution should expand enrollment as long as "the lowest net price paid by any student is greater than the marginal cost of an additional student" (Cheslock, 2006, p. 36).

### **Situation 3**

The detractors are not correct because the initial promises of the program span a five-year timeline but the program is entering its second year. Therefore, the promises can not have been met because they have not had sufficient time to be evaluated. From a mission-oriented decision-making perspective, this is a mission neutral initiative, so the program's marginal revenues should exceed its marginal cost. As the program will cost \$200,000 per year and generate \$300,000 per year in revenue, the marginal revenues should indeed exceed its marginal cost making the program a wise investment.

Both the initial investment and the \$500,000 spent in developing the curriculum and marketing the program are costs that have "already been committed and cannot be recovered" and are, therefore "sunk costs" (Penn State World Campus, n.d., p. 6). Although these costs are substantial, they cannot be recovered so they "should be ignored in the decision-making process" (Penn State World Campus, n.d., p. 6). It is not reasonable to eliminate the program based on sunk costs as these should have been evaluated as opportunity costs before the program was established. The detractors should now consider how much they would benefit from eliminating the program and the functionality associated with eliminating it (Penn State World Campus, n.d.). The initial promises cannot be fairly evaluated until the program has been operating for five years.

### **Situation 4**

Yes, the plan to establish a varsity hockey team and play in an existing local area does meet the criteria stated by the president because the gift from alumni would cover initial start-up costs and cover the recurring costs not covered by program revenue. Although the gifts are restricted to being used to support the varsity hockey team, the endowment to cover all recurring costs not covered by the program revenue should alleviate the institution's commitment to financially support the new program.

So, the institution would not need to reallocate funds from existing activities or detract from the future economic well-being of the institution (Cheslock, 2006).

### **Situation 5**

If the State shifts most financing from direct appropriations to institutions to having the same amount of funds available to students in the form of financial aid, issues of access to information regarding how to receive financial aid should be considered. Furthermore, financially underprivileged students may be discouraged from pursuing higher education at the university for fear of the sticker price. Zemsky et al. (2005) explain that universities "bid for students with both merit-based and need-based scholarships. Newly admitted students have learned to negotiate their aid packages before they agree to matriculate" (p. 61). This practice attracts students by lowering the sticker price on their education before they formally apply for financial aid. Additionally, if the same amounts are only provided to students in the form of financial aid, the university would need to find a way to provide funding for merit-based scholarships.

The university has been steadily raising tuition at a rate of 7-10 percent per year for the past five years and is hoping to keep the current tuition rate for the coming year if the State maintains current direct appropriation and increases support by 10 percent. In 2000/01, the State Government supplied 35 percent of general revenue to public schools while tuition and fees supply only 18.1% (Cheslock, 2006, p.31). Increasing State support by 10 percent would allow the university to recruit more students at a lower tuition rate and generate more revenue. Additionally, direct state appropriations would provide a fixed revenue that all students benefit from. If the institution loses direct appropriations, unprofitable programs will likely be negatively affected. "All programs can receive a subsidy when fixed revenue exceeds fixed costs", so removing direct appropriation will also remove fixed revenue from our institution (Zemsky et al., 2005, p. 66).

My current view of economics supports the Governor's concerns surrounding unemployment or underemployment rate of recent college graduates and student's debt and reliance on loans. The ballooning of tuition is a financial crisis that has been a result of many factors, many of which surround market requirements as Zemsky et al. (2005) suggest. However, the unemployment of recent graduates is not a direct reflection on the education the students have received, and many assessment initiatives are underway to verify the quality of education that students receive. So, I also support the President's position because decreasing fixed revenue will negatively impact academic programs and ultimately the quality of education the students receive. Supporting data would be updated revenue statistics for my specific institution, data reflecting the use of direct appropriation, and data reflecting local high school students' access to counselors and information to aid in accessing financial aid.

### References

- Brinkman, P. (2006). Using Economic Concepts in Institutional Research on Higher Education Costs. *New Directions for Institutional Research*, 132, 43-58.
- Cheslock, J. (2006). Applying Economics to Institutional Research on Higher Education Revenues. *New Directions for Institutional Research*, 132, 25-41.
- Penn State World Campus. (n.d.). Lesson 3: Key Economic Concepts. In HIED 810 Canvas: Spring 2021.  
<https://psu.instructure.com/courses/2110323/modules/items/30823475>
- Zemsky, R., Wegner, G. and Massy, W. (2005). Chapter 4: "On Being Mission-Centered and Market Smart" in *Remaking the University: Market-Smart and Mission-Centered*. New Brunswick, NJ: Rutgers University Press.