

ECO 156, Fall 2026, Required Assignment #1

Applications to Supply and Demand: Higher Education and Energy

Q1

Evidence from the College Board supports the claim that college tuition has risen faster than general inflation over the long run.

According to Trends in College Pricing and Student Aid 2025, after adjusting for inflation, average published tuition and fees at public four-year colleges increased from \$ 5940 in 1995–96 to \$ 11950 in 2025–26; $(11950 - 5940) / 5940$ is about a 101% increase.

At private nonprofit four-year colleges, inflation-adjusted published tuition and fees increased from \$25820 to \$45000 over the same period; $(45000 - 25820) / 25820$ is about a 74% increase.

Because these figures are already adjusted for inflation, the increases represent growth in tuition beyond the general rise in prices. However, these numbers refer to the listed price or so-called "sticker" price, not necessarily what students actually pay. After grants and scholarships, the increase in net tuition has been considerably smaller, and average inflation-adjusted net tuition has actually declined in recent years.

Citation: College Board. Trends in College Pricing and Student Aid 2025. New York: College Board, 2025.

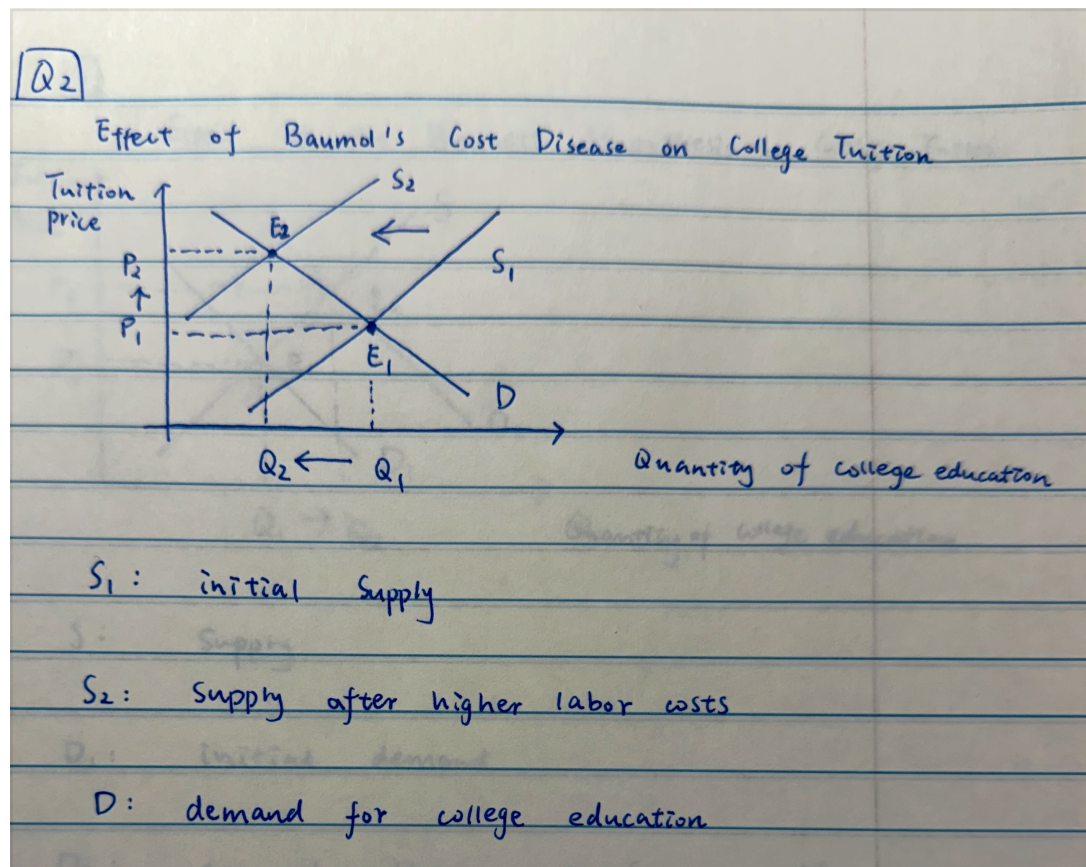
Q2

Baumol's cost disease happens when wages increase in labor-intensive industries even though worker productivity does not increase as much. When productivity rises in other industries, wages tend to rise as well. Industries like education then have to offer higher wages to attract and keep workers, even though it is difficult for them to increase productivity at the same rate. This causes the cost of providing education to increase over time.

Baumol used education as one example of an industry that can be affected by this problem.

The number of students taught per professor stays about the same, while faculty and staff wages and other costs are increasing. This can help explain why college tuition has increased. Colleges have to pay professors and other employees more, but a professor cannot necessarily teach more students just because their salary increases. Therefore, the cost of educating each student increases.

Citation: Baumol, William J. The Cost Disease: Why Computers Get Cheaper and Health Care Doesn't. New Haven, CT: Yale University Press, 2012



Q3

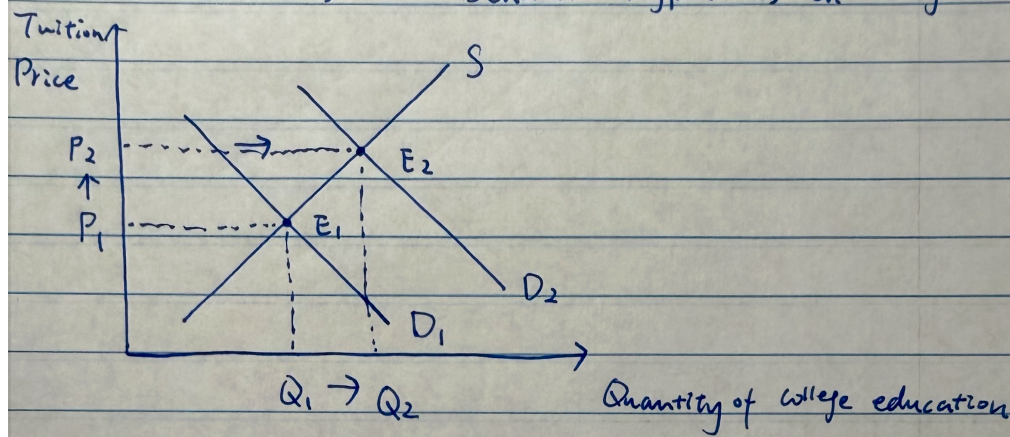
The Bennett Hypothesis means that increases in federal financial aid can contribute to higher college tuition. When students have access to more financial aid or student loans, they can afford more expensive tuition. This can increase the demand for college education and give colleges more room to raise their prices.

In a supply and demand model, an increase in financial aid shifts the demand curve for college education to the right from D_1 to D_2 . If the supply of college education stays the same, the equilibrium price increases from P_1 to P_2 . Therefore, greater access to financial aid could lead to higher tuition.

Grey Gordon and Aaron Hedlund, "Do Student Loans Drive Up College Tuition?" Federal Reserve Bank of Richmond Economic Brief, no. 22-32 (2022)

Q3

Effect of the Bennett Hypothesis on College Tuition



S : Supply

D_1 : initial demand

D_2 : demand after more financial aid.

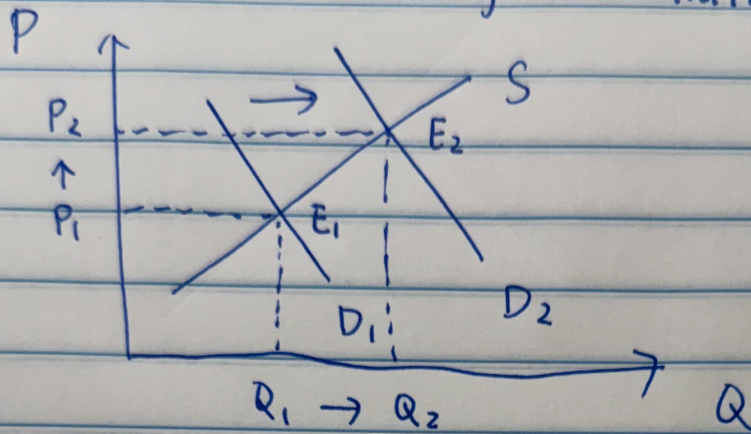
Q4

A higher financial return to college makes a college degree more valuable because graduates can expect greater financial benefits. As a result, more students are willing to attend college at a given tuition, increasing the demand for college education. This shifts the demand curve to the right from D_1 to D_2 . If supply stays the same, the equilibrium tuition rises from P_1 to P_2 .

Jaison R. Abel and Richard Deitz, "Do the Benefits of College Still Outweigh the Costs?" *Current Issues in Economics and Finance* 20, no. 3 (2014): 1–12.

Q4

Effect of a Higher financial Return to college on Tuition



Q5

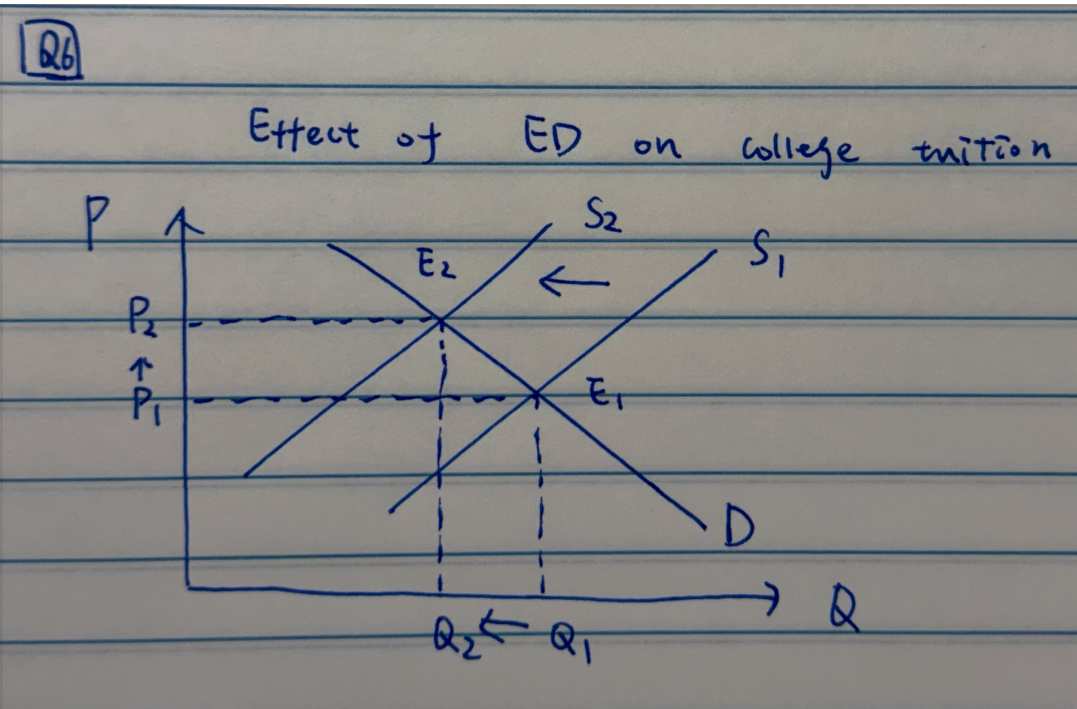
I would look at college enrollment in addition to tuition. If the increase in tuition is supply-based, tuition would rise while enrollment falls. If it is demand-based, both tuition and enrollment would rise. So, changes in enrollment can help tell which explanation better fits the data.

Q6

The lawsuit argues that ED reduces competition between colleges because students who are accepted through ED are expected to attend that school and can't compare competing offers.

In a supply and demand model, this can be viewed as reducing the number of college options available to these students. This shifts the effective supply to the left, which can lead to a higher equilibrium tuition.

Campbell Treschuk, "Bowdoin among Schools Sued for Alleged Price Fixing in Early Decision Admissions," The Bowdoin Orient, September 5, 2025. Bowdoin Orient



Q7

I used the WTI crude oil price and adjusted it for inflation using CPI-U. In 2025 dollars, the price increased from about \$49 per barrel in 2020 to a peak of about \$104 in 2022. It then decreased to about \$65 per barrel in 2025. Overall, real oil prices rose sharply from 2020 to 2022 and declined afterward.

Formula:

Real Price (2025 dollars) = Nominal Price $\times$ (2025 CPI-U / CPI-U in that year)

Year	Nominal WTI (\$/barrel)	CPI-U	Real WTI (2025 \$/barrel)
2020	\$39.16	111.098	\$48.74
2021	\$68.13	116.318	\$81.00
2022	\$94.90	125.626	\$104.47
2023	\$77.58	130.797	\$82.02
2024	\$75.79	134.655	\$77.84
2025	\$65.39	138.289	\$65.39

Product by Area	Graph	Clear	2020	2021	2022	2023	2024	2025	History
Crude Oil									
WTI - Cushing, Oklahoma		☒	39.16	68.13	94.90	77.58	76.63	65.39	1986-2025

Year-over-Year Inflation Rate: All Items CPI-U, All Items C-CPI-U and FCSUti: 2002–2025 (2013=100)

Annual Average	CPI-U Published	C-CPI-U Published	FCSUti
2002	77.214	79.055	77.980
2003	78.967	80.658	79.757
2004	81.081	82.668	81.695
2005	83.832	85.112	83.964
2006	86.536	87.583	86.716
2007	89.004	89.794	89.442
2008	92.422	93.144	92.876
2009	92.093	92.708	93.967
2010	93.603	94.029	94.312
2011	96.558	96.902	96.168
2012	98.556	98.791	98.093
2013	100.000	100.000	100.000
2014	101.622	101.447	102.465
2015	101.743	101.326	104.269
2016	103.027	102.271	106.180
2017	105.221	104.075	108.378
2018	107.791	106.176	110.888
2019	109.745	107.719	113.452
2020	111.098	108.876	116.160
2021	116.318	113.742	119.842
2022	125.626	122.475	128.478
2023	130.797	127.219	136.408
2024	134.655	130.526	141.831
2025	138.289	–	146.712

Note: Dash indicates final annual 2025 C-CPI-U has not been published.
Source: U.S. Bureau of Labor Statistics.

https://www.bls.gov/pir/spm/spm_chart_2025data.htm

https://www.eia.gov/dnav/pet/PET_PRI_SPT_S1_A.htm

Q8

Oil prices fell sharply in spring 2020 mainly because demand dropped. During COVID-19, people traveled much less and economic activity slowed down, so less oil was needed. This shifted the demand curve to the left, lowering both the equilibrium price and quantity of oil. So, the drop in demand was the main reason for the lower prices.

Q9

Oil prices rose sharply in early 2026 mainly because supply decreased. Conflict and wars in the Middle East area disrupted oil shipments through the Strait of Hormuz and caused some oil production to be cut. This shifted the supply curve to the left, leading to a higher equilibrium price. So, the decrease in supply was the main driver of higher oil prices.

Q10

Gasoline prices rose in early-mid 2026 mainly because crude oil became more expensive. Since crude oil is a major input used to produce gasoline, higher oil prices increased the cost of producing gasoline.

This shifted the supply curve for gasoline to the left, causing the equilibrium price of gasoline to rise and the quantity to fall.

Q11

In 1973, oil prices rose sharply after Arab oil producers placed an embargo on the US and cut oil production.

In 1979, the Iranian Revolution disrupted Iranian oil production and created fears of further shortages.

Both events reduced the supply of oil and pushed prices higher.

Higher energy costs increased inflation and slowed economic growth in the US, thereby contributing to the stagflation of the 1970s.

Q12

Higher crude oil prices raise gasoline and other energy costs. This increases the cost of living for consumers and can also slow economic growth in the whole country. When people are unhappy with high prices and the economy, they may blame the party in power, even if the increase in oil prices was not entirely caused by the government's actions.

Q13

I feel like the crude oil market fits the assumptions of the supply and demand model better. Crude oil is a relatively standardized product with a clear market price, and price information is easy to find online, so buyers can easily compare prices. Higher education is much more differentiated because colleges vary in quality, location, programs, majors, reputation, financial aid policies, etc. People also have different concerns and needs when choosing a college, which makes the market more complicated and harder to measure just by price. Therefore, the crude oil market is closer to the competitive market we assumed in class.