BY: SIYABONGA MABUZA

ADIVSOR: PROFESSOR ROB LARSON

RESEARCH FOCUS: THE CHALLENGES HIGHER EDUCATION IS FACING AND WHAT THIS MEANS FOR INSTITUTIONS

AUTHOR'S NOTE

This paper will specially mention results from a study focused on net price data from 10 cross application colleges and universities using the net price calculators on the schools' respective websites. Consistent assumptions for gender, income, family size, assets and other inputs were used to obtain these values. For each school, 12 scenarios were projected using four different academic profiles and three different family adjusted gross income levels. The four academic profiles consist of students with ACT and Grade Point Average (GPA) scores of 21/2.8, 24/3.4, 27/3.7, and 30/3.95, respectively. The three different family adjusted gross income levels consist of students with Expected Family Contributions (EFC) of $0, $25,000, and $300,000. The 10 schools used in this study are:

1. Luther College
2. Wartburg College
3. St. Olaf College
4. Drake University
5. Coe College
6. Gustavus Adolphus College
7. Concordia, Moorhead
8. Iowa State University
9. University of Iowa
10. Minnesota State, Mankato

These 10 institutions were selected because they compete in the same market and are therefore compete for the same students. Furthermore, they possess similar programs of study and levels of prestige. A large portion of students who enroll at each these 10 institutions have the other institutions as alternatives.

ABSTRACT

This senior project paper is a culmination of one year's research on enrollment, debt, and net price in higher education. Four papers on college pricing, college debt, enrollment patterns, and the distinction between sticker price and net price were synthesized with the ambition of examining the challenges higher education is facing and what this means for institutions.

The future of higher education looks bleak. The role of population and demographic dynamics, student debt, net price, and pricing strategies will be examined to discern how institutions will need to change to remain competitive and relevant.

TABLE OF CONTENTS

INTRODUCTION

Higher education is facing challenges emanating from a reduced number of traditional students enrolling into post-secondary institutions. The last increase in higher education enrollment in the United States was during the 2014-15 academic year. It has been on a slow, steady decline since then, even before the Covid-19 pandemic. New data from the National Student Clearinghouse Research Center provides a somber final tally of total college enrollment in the fall of 2021: Enrollment has dropped 2.7 percent from a year earlier, a decline of 476,100 students. [1] This persistent decrease in enrollment is perturbing and signals towards an impending collapse of higher education.

[1] June, Williams, Audrey. Fall's Final Enrollment Count Is In. Colleges Lost More Than 475,000 Students. The Chronicle for Higher Education, 2022.

MACRO POPULATION TRENDS INDICATE THAT ENROLLMENT STRUGGLES WILL CONTINUE

Higher education is enduring a demographic storm. Population and demographic trends are paramount largely because they determine the potential number of traditional students available in post-secondary enrollment pools as well as each student's propensity to attend a higher education institution. The United States birthrate is at an all-time low. This is a result of a "birth dearth" caused in large part by the 2008 Great Recession. A research study by Kenneth Johnson from the University of New Hampshire found that approximately over 6 million 'missing children' were not born from 2008 to 2018 as a result of this birth dearth. In 2026, when the front edge of this birth dearth reaches college campuses, the number of college-aged students will drop almost 15 percent. [2]

Within this overall birthrate decline are varying birthrates amongst racial/ethnic groups coupled with migration and immigration. These three factors will alter the college-aged population along the dimensions of geography and race/ethnicity. Non-Hispanic Blacks and Hispanics have the highest birthrates compared to Asian Americans and non-Hispanic whites.

This distinction becomes significant because the correlation between race/ethnicity and college attendance is strong. Asian Americans and non-Hispanic whites are substantially more likely than non-Hispanic blacks and Hispanics to acquire some form of college education. Therefore, race/ethnicity becomes significant when analyzing the propensity of a high school graduate to attend college. This correlation is impacted by the strong relationship between race/ethnicity and economic income.

The Northeast and Midwest, traditional higher education strongholds, are projected to lose five percent of their college-age populations by the mid-2020s. The largest decline in graduating class sizes compared to other regions. The number of non-Hispanic whites from these regions who possess the highest propensity to attend college will also fall significantly.[3]

[2] Grawe, Nathan D. Demographics and the Demand for Higher Education. Johns Hopkins University Press, 2018. Page 16-20.
[33] ibid

MARKET VARIABLES IMPACTING THE DECREASE IN ENROLLMENT

There are significant variables that impact the decrease in enrollment and the differences in how individual institutions' actual enrollment data trend over a period.[4] These variables include:

A. PROXIMITY

Most students buy what they know, and what they know best (or believe they know best) typically is close to home. [5] In "Breakpoint", Jon McGee discusses how a large portion of new entering students who enroll at four-year colleges and universities travel fewer than 500 miles to attend school, and more than half travel less than 100 miles from bedroom to dorm room. Proximity is a key factor to where a student decides to enroll at.

B. PROGRAMS OF STUDY

Higher education institutions offer different majors, concentrations, and pre-professional programs. Institutions with the ability to effectively respond to market demand potentially differentiate themselves by offering programs of study in demand and thus, positively affecting enrollment.

C. COST/AFFORDABILTY

Price is probably one of the most significant factors to where a student decides to enroll at. First and foremost, students consider if post-secondary education even is a viable option based upon their perceptions of the cost and benefits of a post-secondary education. This is impacted by a student's economic resources, willingness to pay or attain debt. Pricing strategies amongst institutions differ. Private colleges and universities, in particular, publish "sticker" prices. Financial Aid in the form of grants/scholarships is offered to students which lowers this "sticker" price representing the true net cost of attendance. The implementation of financial aid varies across institutions. This results in students having variable options at a different range of prices. Institutions who are effective in offering net prices that students are willing and able to pay can attain a competitive edge against competitors.

Furthermore, net price impacts the amount of debt students will have to take to finance their post-secondary education. A higher net price means a student will possibly have to incur more debt which can result in them opting for an alternative.

D. REPUTATION/PRESTIGE

The reputation of an institution or prestige attained to enrolling at an institution impacts consumer preferences as well as their willingness to pay a higher price or borrow more debt.

E. ECONOMIC

The presence and growth of online education represents a game-changing cheaper alternative for consumers. Furthermore, Covid 19 has impacted most families financially resulting in them being less willing to opt for post-secondary education.

---

[4] Larson, K, Rob. An Analysis of The Higher Education Enrollment Pattern In Iowa From 2006-2017. 2020.

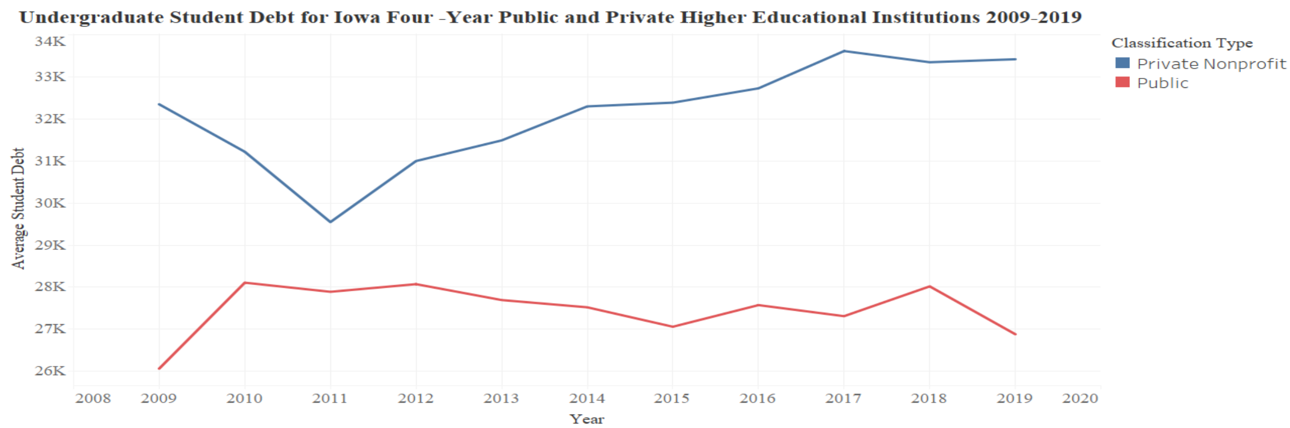
[5] McGee, Jon. Breakpoint: The Changing Marketplace for Higher Education. Johns Hopkins University Press, 2015. Page 30.

THE PERSISTENT INCREASE IN COLLEGE DEBT IS MAKING IT MORE DIFFICULT FOR STUDENTS TO FINANCE THEIR COLLEGE EDUCATION

Annual student borrowing has increased consistently over the last decade, essentially doubling in total in real terms since the 2001-02 academic year. For example, the average student debt of all institutions in Iowa increased from $28,883 in 2008-09 to $30,259 in 2018-19, representing a 4.76% increase. However, the average student debt of public institutions during this period is $27,473 compared to $32,124 at private, nonprofit institutions.

In 2008-09, the average debt of students who graduated with debt at public and private institutions was $26,006 and $32,345, respectively. Through 2018-19, the gap slightly increased with average student debt increasing to $26,883 and $33,415, respectively. This represents a 3.37% debt increase for public institution graduates and a 3.31% debt increase for private institution graduates. Meaning in the last decade students have generally incurred more debt at private institutions compared to public institutions.

Below is a graph showing the comparison of total undergraduate student debt for Iowa public and private higher education institutions from 2009-2019.



Average debt of graduates who graduate with Federal reported debt as reported by The Institute for College Access and Success.

The broad result is that in Iowa the public universities generally have less student debt than private nonprofit institutions. This represents a competitive advantage for students who do not want to incur a significant amount of debt to attend college.

Nonetheless, if college debt continues to increase particularly in an environment of decreasing enrollment pools. Higher Education institutions’ enrollment struggles may continue to worsen.

A LOWER COMPARATIVE STICKER PRICE BETWEEN COLLEGES DOES NOT NECESARILY SUGGEST STUDENTS WILL PAY A LOWER NET PRICE, COLLEGES NEED TO COMMUNICATE THIS BETTER

For many high school seniors, the process of choosing a college comes down to its price. However, within this process lies several misconceptions about the true cost of college. A common misconception is that the sticker price or cost of attendance of a college is the total cost a student will have to pay to attend it. This misconception often deters prospective students from considering colleges with relatively higher sticker prices, which may cost less than colleges with more affordable sticker prices. Most families often ask how much it costs to attend college, which means they are asking for the sticker price. However, the question should be "What will this college cost my child to attend?" This number is not the sticker price listed on a college's website but the net price.

Sticker price or net cost of attendance is the total published cost of tuition, required fees, and room and board at a higher education institution. Net price, which represents the true net cost of attendance, is the published sticker price minus financial aid in the form of institutional grants, scholarships, and loans.[6] A significant portion of students who apply to postsecondary institutions receive financial aid of some form. The percentage of first-time, full-time degree/certificate-seeking undergraduate students who were awarded financial aid in academic year 2018–19 at private nonprofit institutions and private for-profit institutions is 90 and 88 percent, respectively and 84 percent at public institutions. [7]

Upon examining the data gathered on net price and sticker there emerged an evident dramatic difference in sticker price between private and public institutions. The study does suggest to an extent that public institutions' sticker price reflects net price more accurately than private institutions' sticker price. Apart from lower socio-economic class profiles, there is not a drastic decrease in price between sticker price and net price amongst the three public institutions instantiating public institutions are clearer and more transparent in their pricing. This pricing strategy possibly results in less prospective students being deterred by their sticker prices.

Several private institutions are more effective in adjusting their net price to economic need than others. For example, St Olaf College, which has the highest sticker price amongst the 10 institutions is one of the least expensive options for profiles with the higher propensities to price and more expensive for profiles with lower propensities to price. Compared to other private institutions which do not make the appropriate adjustments.

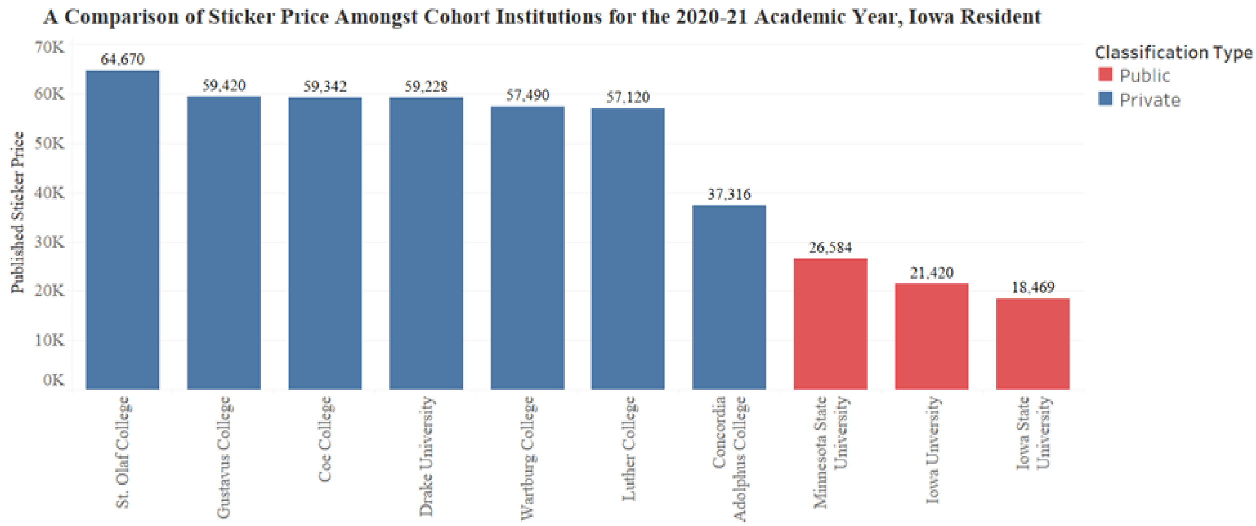
Nonetheless, sticker price is not what a student will have to pay to attend a particular college. This cost is the net price. Higher education institutions need to ascertain prospective students and parents understand this distinction between sticker price and net price. If this misconception persists it may continue to deter prospective students from their institutions or higher education in general.

---

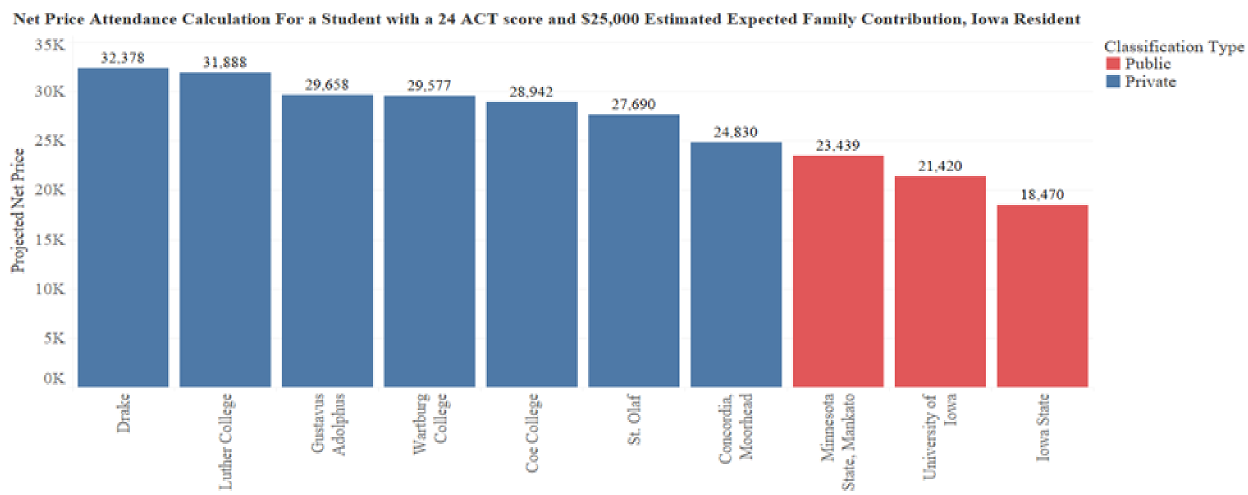
[6] Estimated books &supplies, transportation, and educational and personal expenses are also included in higher education institutions' cost estimations on their respective websites. *They were not used to calculate sticker price in this study*

[7] Sources of Financial Aid, National Center for Educational Statistics

Below are graph comparisons illustrating the dramatic differences between sticker prices and net prices for an Iowa resident with a 27 ACT and Expected Family Contributions of $25,000.



Source: Net price calculation using each institution's Net Price Calculator for enrolling class in Fall 2021.

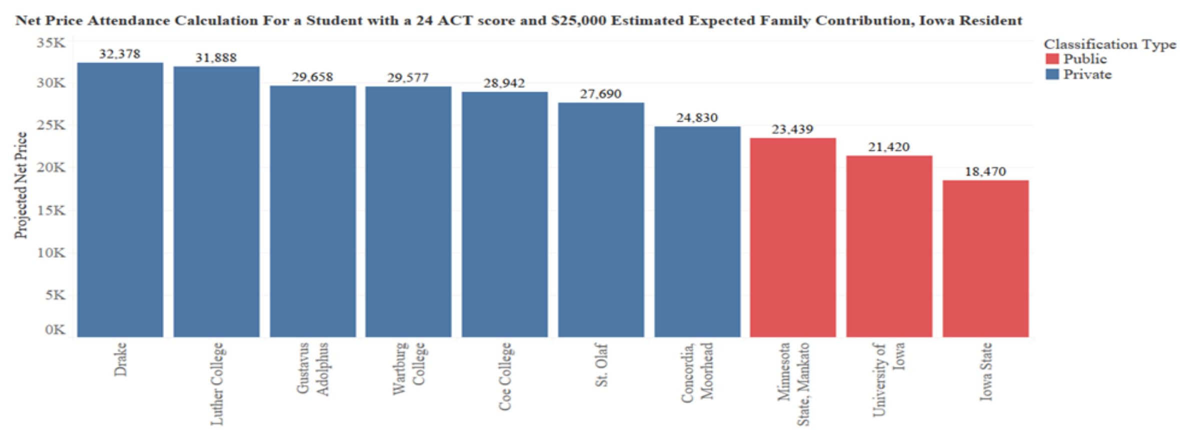


Source: Net Price Calculation using each Institution's Net Price Calculation for enrolling class in Fall 2021

COLLEGE PRICING IS CONFUSING AND INCONSISTENT DUE TO DIFFERENT IMPLEMENTATIONS OF FINANCIAL AID ACROSS INSTITUTIONS

In evaluating the data gathered on the net price of students with similar academic and economic profiles there emerged a pattern of dramatic differences and inconsistencies in price comparability. These dramatic differences in net price between institutions results in students having a vast range of prices to choose from when applying to higher education institutions.

Public institutions, for most profiles in the study are generally less expensive than private institutions. Below is a graphic comparison for an Iowa resident with an ACT and GPA of 24 and 3.4, respectively and an Estimated Family Contribution of $25,000 illustrating the price difference between public and private institutions.



Source: Net Price Calculation using each Institution's Net Price Calculation for enrolling class in Fall 2021

Furthermore, the competitiveness of institutions varies depending on the academic and economic profiles of the student. Institutions are more competitive for some profiles, however, less competitive for others. It is pertinent institutions ascertain they are more competitive for profiles they want to attract to their institutions.

There seems to be a disproportionate rate on how institutions respond to economic need. The difference between net price and economic need decreases as the students' estimated family contribution increases. As a result, students with lower Estimated Family Contributions on average pay more than they are financially able to pay compared to students with higher Estimated Family Contributions, meaning they must take out more student loans to finance their college education.

Below is a table illustrating the range of prices at Coe College contingent on academic ability and economic need.

COE COLLEGE	**ACT/GPA**			
EFC	**21/2.8**	**24/3.4**	**27/3.75**	**30/3.95**
$0.00	$15,247	$10,847	$8,947	$10,717
$25,000.00	$30,482	$28,492	$25,142	$24,842
$300,000.00	$57,342	$29,842	$26,842	$24,842

Generally, Coe is relatively responsive to academic ability and economic need. However, lower socio-economic class students generally pay more than their Estimated Family Contributions.

A student with an estimated family contribution of $0 applying to Coe must pay a rage of $8,947-$15,247 depending on their academic ability. This is on average $11,440 more than they are financially able to pay. This student would most likely have to take out a student loan to pay this cost.

In contrast, a student with an estimated family contribution of $25,000 applying to the institution must pay a rage of $24,842-30,482 depending on their academic ability. This is on average $2,240 more than their family is financial able to pay.

Lastly, a student with an estimated family contribution of $300,000 applying to the institution must pay a rage of $26,842-$57,342 depending on their academic ability. This is on average $265,283 less than they are financial able to pay.

Thus, students with the highest economic needs generally must take out more loans than students with lower economic needs.

THE FUTURE OF HIGHER EDUCATION

The future of higher education looks bleak. Traditional universities are approaching crossroads: Do they transform into new kinds of entities? Optimize existing operations to enhance efficiencies and capabilities? Do nothing in the hope that if no rescue appears, they will have time to decide what to do later? Or do nothing due to the belief that they are invulnerable? One thing remains possible, institutions that do not react to this imminent demographic change appropriately risk being left behind.

The Golden Age of higher education in the developed world is passing and life is becoming tougher. Rising costs are no longer matched by a willingness of students to pay for them. And yet the traditional operating model of an institution cannot produce sufficient productivity gains to cover the gap.[8]

Soaring costs and chronic funding challenges are nothing new. But today's institutions are being buffeted by game-changing technology, disruptive competition from bold new online players and evolving demographics. A perceived decreasing return on education is coinciding with rising tuition fees and spiraling student debt. In many jurisdictions, tuition fees have risen well above the rate of inflation. [9] University administration has been relatively inefficient, driving up costs. The 'age of the customer' has arrived, and students have higher expectations about the higher education experience and what it will lead to.[10] Thus, cost is becoming more significant in their enrollment choices.

Student debt in the US has essentially doubled in real terms since the 2001-02 academic year and has begun to undermine the equality of opportunity argument. Poorer students cannot pay fees up front, nor can they get on in the world because they are repaying their tuition debt.

The nature of birthrates indicates that there will be smaller diverse prospective student pools with larger proportions of price sensitive blacks and Hispanics who have lower propensities to attend college. This amalgamation will intensify competition and drastically increase the need for institutions to become cost competitive. Institutions that do not become cost effective risk continually experiencing enrollment declines.

Naturally, this enrollment storm will impact some institutions more than others. In "Demographics and the Demand for Higher Education", Professor Grawe explains how there seems to be an increasing return to prestige on the enrollment choices students are making. Thus, top 100 institutions, particularly the top 50 will have an easier path moving forward and will not experience dramatic declines in enrollment in the next 10 years.

Furthermore, due to the significance of proximity in students decision-making processes, regions like the Southwest with higher rates of population density, migration, and immigration will also experience relatively smaller declines in college-aged populations compared to the Midwest and Northeast regions. Making the path relatively easier for them moving forward.

---

[8]Parker, Stephen. The Future of Higher Education in A Disruptive World. KPMG. 2020
Levine, Arthur & Van Pelt, Scott. The Future of Higher Ed Is Occurring at the Margins. Inside Higher Ed. 2021
[9] Larson, K, Rob. An Analysis of The Higher Education Enrollment Pattern in Iowa from 2006-2017. 2020
[10] Parker, Stephen. The Future of Higher Education in A Disruptive World. KPMG. 2020

CONCLUSIONS

For most institutions, changes in curriculums, operation models, marketing strategies, and pricing will be necessary moving forward. Institutions need to accept and understand that enrollment challenges will persist. Collective efforts from all members of institutions including staff, faculty, coaches, etc., will be necessary to not only attract students but also retent them. This responsibility should not only fall to the admissions departments. Everyone contributes in some form towards maintaining the culture and mission of an institution.

Operational costs will need to be reduced. This is difficult due to the economic structure of institutions as colleges and universities typically have very high fixed costs as a portion of overall expenses. However, there will be a need for some colleges to downsize. This will include reducing the number of buildings, courses and majors offered, as well as faculty and staff size. This will allow institutions to not only become more cost competitive but permit them to increase the resources they can apply to other facilities to enhance the overall experience of students.

Faculty may need to adapt and change the nature and content of their courses. More diverse student populations, new sentiments towards the value of education, and increased significance towards practicality in professional domains makes this necessary.

Lasty, college pricing needs to become clearer, more consistent and cheaper. Institutions universities cannot assume that their increasing costs can addressed by students and their families simply taking on greater amounts of debt.

BIBLIOGRAPHY

McGee, Jon. *Breakpoint: The Changing Marketplace for Higher Education*. Johns Hopkins University Press, 2015.

June, Audrey Williams. *Spring Enrollment's Final Count Is In. Colleges Lost 600,000 Students.* The Chronicle for Higher Education. https://www.chronicle.com/article/spring-enrollments-final-count-is-in-colleges-lost-600-000-students 2021.

Zahneis, Megan. *A Historic Decline in U.S. Births Signals More Enrollment Troubles.* The Chronicle for Higher Education. https://www.chronicle.com/article/a-historic-decline-in-u-s-births-signals-more-enrollment-troubles

LeClair, Mark S. *For College Finances, There's No 'Return to Normal' The critical problems facing higher education won't end with the pandemic.* The Chronicle for Higher Education. https://www.chronicle.com/article/for-college-finances-theres-no-return-to-normal

Grawe, Nathan D. *Demographics and the Demand for Higher Education*. Johns Hopkins University Press, 2018.

Selingo, Jeffrey J. *College Unbound: The Future of Higher Education and What It Means for Students*. New Harvest, 2014.

Grawe, Nathan D. *The Agile College: How Institutions Successfully Navigate Demographic Changes.* Johns Hopkins University Press, 2021.

Parker, Stephen. *The Future of Higher Education in A Disruptive World*. KPMG. 2020. https://home.kpmg/xx/en/home/industries/government-public-sector/education/the-future-of-higher-education-in-a-disruptive-world.html

Levine, Arthur & Van Pelt, Scott. *The Future of Higher Ed Is Occurring at the Margins. Inside Higher Ed.* 2021 https://www.insidehighered.com/views/2021/10/04/higher-education-should-prepare-five-new-realities-opinion

Larson, K, Rob. *An Analysis of The Higher Education Enrollment Pattern in Iowa From 2006-2017*. 2020

June, Williams, Audrey. *Fall's Final Enrollment Count Is In. Colleges Lost More Than 475,000 Students.* The Chronicle for Higher Education, 2022. https://www.chronicle.com/article/falls-final-enrollment-count-is-in-colleges-lost-more-than-475-000-students

SOURCES FOR DATA

1. Data on higher education enrollment is provided by the National Center for Education Statistics.

2. Data on student debt is from The Institute for College Access and Success. Most college-level data are taken directly from U.S. Department of Education sources and the Common Data Set (CDS).