There is no doubt we are in one of the most turbulent and challenging times in American, and world, history. The coronavirus is dramatically changing everything: Our personal lives, economic markets, and, of course, higher-education institutions are being transformed before our eyes. While this crisis is disruptive, I know that our country will not only survive but also thrive in the long run.

This moment represents an opportunity for our colleges and universities, long viewed as global leaders, to make significant changes to their economic and academic models to handle the new financial realities. We will have no choice but to make serious changes,
given the potential impact to the more than 5,000 colleges and universities across the country. For example, how would universities adjust their budgets if they were to lose 25 to 50 percent of their revenue in 2021 and still deliver high-quality education?

The coronavirus crisis has the potential to change higher education more than any recession in the past, including the Great Recession, which dealt a tremendous blow to our economy and to higher education. The stock market lost approximately 50 percent of its value, unemployment rose from 4.9 percent to more than 10 percent, and American households lost an estimated $16 trillion in net worth. One quarter of households lost at least 75 percent of their net worth, and more than half lost at least 25 percent. Current scenarios suggest that the impact of this crisis could be closer to the impact of the Great Depression, when the real gross domestic product sank more than 30 percent and unemployment rose to up to 25 percent.

There are many ways that such macroeconomic trends affect resources for higher education, but the most important are decreases in state-government appropriations, philanthropy, and endowment returns.

Shown below is a summary of the impact of such changes to higher education as a whole and to the University of North Carolina at Chapel Hill (UNC), where I have been a faculty member since 2008.
How Economic Trends Strike Close to Home
All figures are for compound annual growth rate.

<table>
<thead>
<tr>
<th>Higher-Education Responses</th>
<th>Current Environment Considerations</th>
<th>Impact at the University of North Carolina at Chapel Hill</th>
</tr>
</thead>
</table>
| State government support   | State support likely to decline with decreases in tax revenue | 2005-8: 10.14%  
2008-9: -4.60%  
2009-12: -2.09% |
| Contributions from philanthropy | Potential for even greater declines due to loss in market value and new tax laws for athletic contributions | 2005-8: -16.07%  
2008-9: -9.88%  
2009-12: -1.25% |
| Endowment returns          | Likely to be significant based upon market turbulence                      | 2005-8: 16.68%  
2008-9: -19.60%  
2009-12: 7.93% |

Source: The University of North Carolina at Chapel Hill • Get the data • Created with Datawrapper

State support for higher education will be expected to drop as the change in economic conditions significantly lowers tax revenues while the need for special funding of health care and social assistance will increase. State support for public institutions, for example, decreased from $82.2 billion in 2007-8 to $78.5 billion in 2008-9, a decrease of 4.5 percent.

Philanthropy, especially annual campaigns, will decrease as individuals lose jobs and personal net worth. Overall giving in 2008 dropped 11.7 percent from the previous year, and donations to education also experienced similar double-digit drops. Endowment returns will decrease in correlation to stock-market performance; in the year following the Great Recession, endowment returns dropped on average by 23 percent, according to a survey of more than 400 universities.

Even Harvard University saw a loss of 30 percent of its endowment, which traditionally contributed 35 percent of the university’s operating budget.

University leaders should start developing models and anticipate what levels of revenue drops may occur on their campus, as substantial variances are likely based upon the type of university, relationship with state legislature, and historical financial models. For small private colleges, for example, such as my alma mater, Saint Francis University, where I
served as a trustee, decreases in state support will have less impact than philanthropy and endowment returns. Many of these institutions will need even more significant spending shifts given that more than 30 percent were already operating in a deficient position, a factor in Moody’s recent shift in outlook for higher education from stable to negative.

UNC took a hit in state support, but other states decreased appropriations even more, and a decade after the Great Recession, most states are still below 2007 student-support levels. Philanthropy dropped significantly at UNC prior to, during, and after the recession.

To give you a sense of the magnitude, in 2009 UNC experienced a drop of $25 million in state support, $30 million in philanthropy, and $297 million in endowment returns for a total hit to revenue of $352 million, or 25 percent of the prior year’s operating revenue of $1.4 billion.

How did higher education make up for the loss in resources after the Great Recession? The primary tool was to increase tuition. Most universities continued to raise tuition every year after the recession, averaging 4 percent annually for the next decade; public colleges increased tuition more than 37 percent from 2009 to 2019. Even UNC, which prides itself on low tuition and high return on investment for students, increased tuition and fees by 11 percent from 2010-14 (and still has one of the lowest tuition levels in the country, especially for in-state students).

Increasing tuition will no longer be an option for higher education in dealing with the current economic meltdown — primarily because families cannot afford to handle the burden. Tuition for all institutions jumped nearly 30 percent between 2007-8 and 2014-15, while real median income fell roughly 6.5 percent over the same time period. In 2020, student debt increased to more than $1.6 trillion, and as shown below, the increases in college costs and tuition have far outgrown corresponding increases in family incomes.
It should be noted that some universities have led significant efforts to keep tuition flat and affordable, notably Purdue and Ohio State Universities, or even decreasing on an annual basis, but this is certainly not the norm. At UNC, tuition increases were held to only 1 percent during the recession but rose 9.1 percent annually during the three years after the recession.

If colleges are unable to manage the loss in resources through tuition increases, campus leaders must find other ways to deal with the decrease in available revenue. To a certain extent, higher education has been living in a bubble that exempts it from the typical industry dynamics of systematic cost reductions through operational efficiencies.

Absent profitability as a driver for efficiency or governmental intervention (such as individual-procedure cost controls in health care), it is difficult for universities to overcome inertia toward increased annual spending and numbers of employees. Even
the last recession did not shift spending in any material way; in fact, annual higher-education spending continued to rise every year after the recession.

**Spending in Higher Education**

31 percent growth over the past six years. (Amounts are in billions of dollars.)

<table>
<thead>
<tr>
<th>Year</th>
<th>Spending (in billions)</th>
</tr>
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<tbody>
<tr>
<td>2009-10</td>
<td>446.5</td>
</tr>
<tr>
<td>2010-11</td>
<td>472</td>
</tr>
<tr>
<td>2011-12</td>
<td>488.1</td>
</tr>
<tr>
<td>2012-13</td>
<td>498.9</td>
</tr>
<tr>
<td>2013-14</td>
<td>517.1</td>
</tr>
<tr>
<td>2014-15</td>
<td>535.5</td>
</tr>
<tr>
<td>2015-16</td>
<td>559.5</td>
</tr>
<tr>
<td>2016-17</td>
<td>583.6</td>
</tr>
</tbody>
</table>

Source: National Center for Education Statistics • Get the data • Created with Datawrapper

Two obvious areas exist for cutting costs in universities — administrative and academic. Up to 70 percent of the costs in higher education are labor, and universities are some of the largest employers in many regions. A recession can give a much-needed impetus to make changes to administrative and even academic personnel structures that many believe have become bloated over time. Additional options for cost control include re-engineering administrative processes and structures, outsourcing, creating public-private partnerships in facilities or utilities, consolidation of vendors, and decreasing energy usage.

At UNC, the university began cutting administrative costs during the recession, but since most of those reductions involved personnel changes that generally require over a year to realize due to severance and benefits, growth was flat over the next three years. UNC
made it a priority to grow new faculty hires in 2009, fulfilling previous offers and lines, but maintained a lower growth rate following the recession.

Another strategic shift post-recession was the growth of faculty who are part time and non-tenure track, with the percentage of total tenure-track faculty decreasing by almost 10 percent per year for the next three years. These trends are widespread in other universities across the country.

**Key Actions for Dealing with Recession**

All figures are for compound annual growth rate.

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<tr>
<td>Layoff/furlough administrative staff</td>
<td>Certainly an avenue; although many universities have already streamlined operations</td>
<td>2005-8: 6.86% 2008-9: 5.69% 2009-12: 0.02%</td>
</tr>
<tr>
<td>Change in part-time and non-tenure-track faculty</td>
<td>Expect this to continue to increase due to lower cost and increased load capacity for teaching</td>
<td>2005-8: -1.81% 2008-9: 18.00% 2009-12: -9.59%</td>
</tr>
<tr>
<td>Changes in faculty hires</td>
<td>Could become an important lever as universities prioritize certain academic programs and rationalize offerings</td>
<td>2005-8: 1.25% 2008-9: 4.70% 2009-12: 1.28%</td>
</tr>
</tbody>
</table>

*UNC data refers to expenditures on non-faculty staff, tenured faculty, and all faculty in descending vertical order.*

Source: The University of North Carolina at Chapel Hill • Get the data • Created with Datawrapper

The final area that will be significantly different post-coronavirus is the way higher education is delivered. The first and most obvious difference will be the use of online education.

More universities have been increasing their online offerings, focusing on serving additional and nontraditional adult-student populations. Others have also been increasing options for traditional residential students. The coronavirus has forced an amazing and immediate transition as most educational institutions have shifted to online
education for this semester and possibly longer. That has the potential to dramatically change our normal paradigm of educational pedagogy and, if done properly, can lead to positive outcomes and flexibility for students and faculty alike.

Two other potential shifts in academic programs involve the specialization of the faculty and the potential contraction in the number of institutions providing higher education. Over the past few years, many universities have increasingly tackled the topic of academic-program rationalization — making long-overdue changes to adjust courses, majors, and even entire programs and schools based on market demands. As fixed-term and part-time teaching faculty numbers increase, the traditional paradigm of “all research faculty also teach” could change as they could spend more time doing research on an efficient basis.

More colleges are also considering closing, merging, and sharing resources, activity which will likely increase as many small colleges are heavily tuition dependent. While enrollments often increase during recession periods, the number of traditional-age students is projected to drop over the next decade, and recently many full-tuition-paying international students are passing on American higher education. Also, recessions put pressure on particular student populations that were barely able to afford staying in school in the first place.

History is being made before our eyes. There will be significant challenges for our entire society. It is clear that the resources will decline significantly over the next few years, although higher education may benefit from a federal stimulus package or increased Pell Grant funding, as occurred during the Great Recession. However, this is no time to be incremental or reactionary.

Many colleges and universities will face a challenge greater than ever before. At UNC, for example, the 25-percent drop in annual revenue experienced during the last recession would equate to a loss in 2020 of $575 million, out of a total of $2.3 billion operating revenue in 2019.
At the same time, this is the opportunity of a lifetime for enacting positive change in higher education. We should take a critical look at our investments in our universities and strive to make every higher-educational institution more efficient and effective. Let's make higher education better together.

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