

The Higher Education Sector – What Comes After COVID-19?

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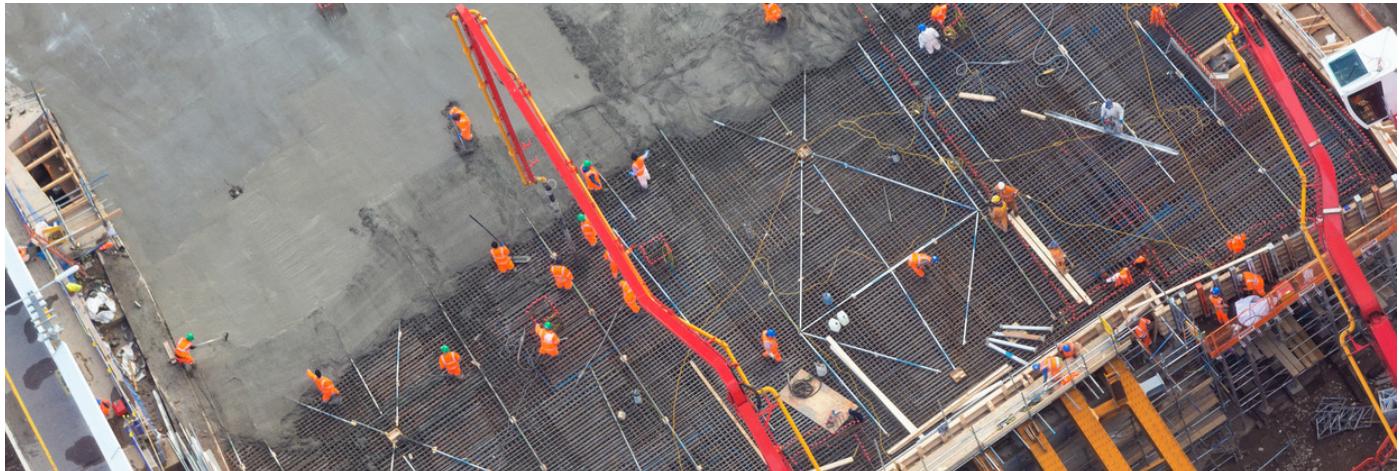


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Abstract

In this paper, Daniel Pomfrett looks closely at the impact of COVID-19 on the higher education market and outlines many of the challenges and changes that we can expect to see in that sector going forward.



Introduction

As a cornerstone of the American economy and culture, the higher education sector is one that impacts every citizen of the country. As with every sector, the COVID-19 pandemic has exacerbated existing challenges while introducing new ones. As we survey possible solutions to these challenges — which span learning techniques, technological developments, funding, enrollment numbers, and more — it is important to focus on those that can address current issues while remaining effective over time.

The Effect of COVID-19 on the Higher Education Sector

Long-term effects are proving challenging to predict, with differing views as to when or how long these effects will be felt. However, there continues to be broad consensus among economists that the economic consequences of the pandemic will not be as dramatic as the recession of 2008, when funding sources dried up, job opportunities plummeted, and the recovery was long and slow. The current downturn, on the other hand, while severe, is not quite as drastic as that of 2008, nor is it expected to be as long-lived.

To better understand the extent to which the higher education sector has been impacted by the pandemic, let's begin by taking a broad look at the market as of January 2020, before the emergence of COVID-19 in the United States:

- Prior to the pandemic, the education sector was seeing steady growth in construction volume, with even stronger growth projected over the coming years:
 - 2016: 7.0%
 - 2017: 1.2%
 - 2018: 3.3%
 - 2019: 5.5%
 - 2020: 6.3%
 - 2021: 6.8%
 - 2022: 6.5%
- Total construction volume for 2019 was \$98 billion.
- New York State had the largest construction market in 2019, with total construction volume at \$23 billion. California was second at \$17.6 billion.
- Public education accounted for 79% of total construction volume nationwide in 2019, with that trend expected to hold relatively steady moving forward.
- 2019 projections estimated a growth in higher education construction of between 5% and 7% in the coming years.
- The National Center for Education Statistics says there are between 130,000 and 140,000 educational institutions within the United States, of which just under 6% are higher education.
- Total combined enrollment figures for full- and part-time students nationwide are as follows:
 - 2016: 19,846,904
 - 2017: 19,765,598
 - 2018: 19,828,000
 - 2019: 19,904,000 (estimated)
 - 2020: 19,956,000 (predicted pre-COVID)
 - 2021: 19,956,000 (predicted pre-COVID)
 - 2022: 19,991,000 (predicted pre-COVID)
- Full-time students make up approximately 60% of enrollments, on average.
- Key commodities and materials had already experienced a significant drop, with oil and steel products bearing the brunt.

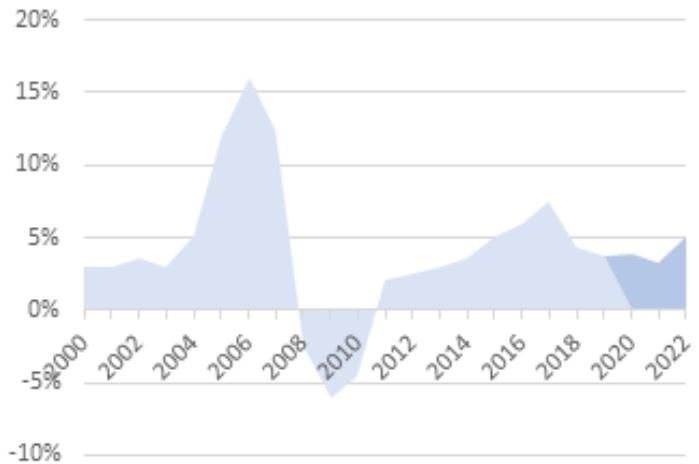
What Challenges Lie Ahead?

As with any market, there are challenges in both the short- and long-terms:

- Construction volume projections have reduced in the near term:

Projections Pre-COVID	Current Projections
- 2020: 6.3%	- 2020: 4.0%
- 2021: 6.8%	- 2021: 6.2%
- 2022: 6.5%	- 2022: 13.3%

- With commodity and stock markets slowly climbing, there is a sense of optimism in the markets.
- Expert consensus is that most materials have hit their lowest price point and will plateau for the remainder of the year. A rebound in pricing, albeit slow and steady, is expected to begin in early 2021.
- Drawing from our own market research, we expect cost escalation to reduce by 0.5% to 1% over the short-term, as an average across regions and sectors.
- Short-term expectations are that prices will drop between 5% and 10% over the next 30-60 days before increasing thereafter.
- Projects currently in the masterplanning / concept stage may not come to market for a number of years as they work through the design process — it is expected that this timing will work in favor of these projects, as they will likely be able to wait out the effects of COVID-19. Many projects closer to construction, on the other hand, are being delayed due to concerns about available capital and the subsequent impact on funding.
- Life science and engineering buildings are expected to be the key project types for institutions moving forward.
- Pre-COVID, public funding levels had still not recovered from the 2008 recession; it is expected that further cuts in funding will be seen as we move forward.



Escalation

- As noted above, and drawing from our [own market research](#), we expect cost escalation to reduce slightly over the short-term, between 0.5% and 1% on average.
- We are not expecting to see negative escalation as was seen in 2008. The primary reasons are that labor markets remain tight and, unlike the 2008 recession, migration has been minimal; this leaves unemployment and retirement as the two key factors driving availability.
- Despite the ongoing issues, wages are expected to rise by a nominal figure owing to demand and pre-agreed increases. This trend is expected to continue into 2021 with projections showing a 3% increase over the next year.
- With the introduction of new working means and methods, social distancing regulations, loss of time for health checks, and difficulty in moving around sites (for example, restrictions on the number of people allowed in elevators at one time), it is currently estimated that productivity in the workforce will drop between 10% and 20%.



Key Challenges for the Education Sector

Funding

- **Federal Support** — Expectations are that funding will follow a similar route to the 2008 recession and public funding will be reduced.
- **Donors** — While some projects remain active, donor activity and appetite to fund have decreased; this has left some funding sources stretched and projects on hold.
- **Enrollments** — Student enrollments have already dropped significantly during the summer. This trend is expected to continue into the fall semester and perhaps beyond.
- **Revenue Decline** — Students remain away from school facilities and events. The resulting loss of revenue is placing further burden on resources.

Social/Cultural

- **Online Learning** — Courses are being restructured to allow for online learning; this often requires a rewrite of practices and procedures, particularly for group learning, discussion, and other educational activities that are more productive in person.
- **Travel** — Concerns around travel remain, particularly for international students looking to relocate.
- **Visas** — With the recent pause on immigration, international students have to carefully consider their choice of institution.

Facilities and Construction

- **Maintenance** — Facilities still need to be maintained. This upkeep comes with significant cost.
- **Student Debt** — Long-term debt has long been a concern for students; this, combined with uncertainty related to COVID-19, will lead some students to rethink their attendance in the near future, thereby exacerbating the reduction in enrollments.
- **WiFi Networks** — In response to new social distancing norms and requirements, WiFi networks may require upgrades to handle increased traffic. Costs to carry out necessary system modifications are could run between \$1 and \$1.5 per square foot, with the higher end of that range applying to buildings where new infrastructure routes will be required.
- **Infrastructure Upgrades** — Additional infrastructure modifications may be needed, such as an increase

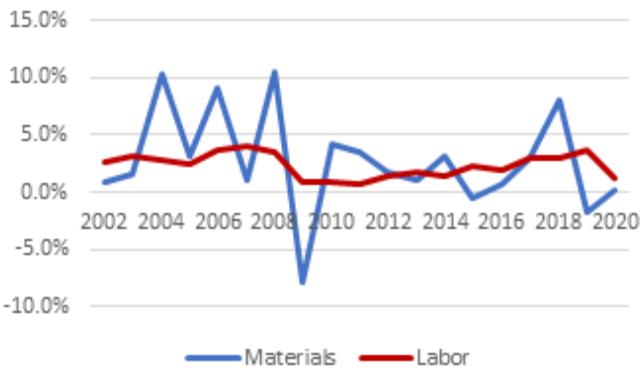
in the number of available power outlets on campus. This will help meet higher potential demand from students, who could require constant charging opportunities so that their learning (especially when done remotely) is not interrupted.

- **Building Lifespan Changes** — Typical building lifetimes vary depending on the use. For example, classroom buildings typically have a 20- to 25-year lifespan, whereas a performing arts venue may have a lifespan of 30 years. However, if building requirements are changed in response to new infrastructure needs or social distancing regulations, then the building lifespans may be affected as well. In some cases, with less usage, buildings lifespans may increase, while in other cases, when being used or altered in ways they were not originally designed for, their lifespans may decrease.



How Will These Challenges Affect your Project?

- Further general condition price increases could be seen with the introduction of additional on-campus nursing stations, an increase in toilet provisions, more personal protective equipment, and other health and hygiene measures.
- Construction protocols may need complete reevaluation to ensure optimal planning and budgeting, and to ensure that all potential facility needs and uses are being considered.
- Commodity and energy market reactions will be key, as this will ultimately drive funding availability for capital plans.
- Material prices will be cyclical, and consideration must be given as to when to purchase materials. For reference, see the following material Price Index Graph, which shows the historical trends of materials and labor since 2002:



- Current anecdotes from the contracting community suggest that some labor skillsets are receiving higher and steadier payments through unemployment benefits; if this is true, then bringing these workers back into the industry will be a challenge.
- Insurance payments have already risen, with some reports noting an increase in annual prices of almost 1%.
- Social distancing regulations will affect the ability to move manpower and materials around sites. This, in turn, will ultimately affect labor utilization. Current projections have this reduction at between 10% and 20%, depending on the type and size of the project.
- Restricted site locations, such as in tight urban areas, will see cost increases due to additional general requirement issues (such as the need for additional hoists and restrictions on the number of people in elevators), extended schedules, and the added expense of implementing any new standards.

Typical Rates

- Construction costs will continue to vary across not only location and time, but also across program area, as shown in the chart below, which reflects the rates we are seeing in our in-house data. These rates capture construction costs only, are based upon current-day prices, and are average across the U.S. — they may vary dependent upon location.

Program	Renovation		New	
	Low	High	Low	High
Wet Lab	\$125	\$175	\$400	\$500
Dry Lab	\$100	\$150	\$350	\$400
Performing Arts	\$200	\$250	\$350	\$500
Residence	\$75	\$115	\$150	\$225
Computer Science	\$75	\$125	\$225	\$275
Classroom	\$50	\$100	\$200	\$250
Lecture Theater	\$150	\$200	\$250	\$300
Academic Space	\$175	\$200	\$275	\$300
Administrative Space	\$50	\$75	\$115	\$50



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Dan is a Vice President at Cumming, as well as our National Director of Forecasting and Analytics. He holds a B.S. degree in quantity surveying, is a certified Member of the Royal Institution of Chartered Surveyors, and has more than 23 years of industry experience.

He also researches and writes Cumming Insights, the company's quarterly report that breaks down economic trends and projections for regional construction markets across the country. In addition to his work in economics, Dan has provided cost-related services for numerous high-profile clients, including international architectural firms, museums, government institutions, private developers and education providers.