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August 14, 2019

The Honorable Makan Delrahim
Assistant Attorney General
United States Department of Justice Antitrust Division
950 Pennsylvania Avenue, NW
Washington, DC 20530

RE: Opposing the Merger Between Cengage and McGraw-Hill Education

Dear Assistant Attorney General Delrahim:

SPARC, the Scholarly Publishing and Academic Resources Coalition, urges the Department of Justice Antitrust Division to block the proposed merger between Cengage and McGraw-Hill Education.

SPARC is an alliance of more than 200 academic and research libraries working to make open the default in research and education. For over 20 years, we have advocated at the federal, state, and campus levels in order to make research results more publicly available and education more accessible. Throughout that time, we have also raised concerns about anticompetitive practices in the college publishing industry and the harm to student consumers and their families.

After extensive research and consultation with antitrust experts, we have concluded that the proposed merger between Cengage and McGraw-Hill will significantly decrease competition in a market already rife with anti-consumer behavior. We also have concerns that the growing amount of data gathered by textbook publishers could give rise to a new platform monopoly like Facebook or Google in the education sector. We are convinced that the merger should be blocked, and we write today to share our findings.

The Textbook Market is Broken

The college textbook market is a classic example of a “captive market.” In a normal free market, consumers shop around for the best product and companies must compete for their business. In the case of college textbooks, however, companies market course materials to professors—who do not always have full information about the price—and students are responsible for paying the bill. This effectively hands the three major companies who currently dominate the market a blank check to develop expensive materials without regarding the preferences, needs, or financial circumstances of students.

The textbook industry's current state of dysfunction results from years of consolidation, unsustainable practices, and lack of price competition. While used books and renting textbooks has offered some relief, publishers are pushing more students into digital subscriptions that will eliminate the secondary market.

Textbook prices have increased 184% over the last two decades—three times the rate of inflation. The merger would take the college textbook market from bad to worse and exacerbate the ongoing exploitation of financially vulnerable college students.

The Merger Creates a Duopoly, Far Exceeding Thresholds for Presumptive Illegality

This merger is a flagrant three-to-two merger that would create an effective duopoly in the textbook market. The most important market for merger analysis is the sale of new postsecondary course materials in the U.S., which the Association of American Publishers estimates at $3.38 billion in 2017.

Cengage and McGraw-Hill respectively hold 24 percent and 21 percent shares, and their combined 45 percent share vastly exceeds the threshold for violations of the Clayton Act established by *United States v. Philadelphia National Bank*, 374 U.S. 321 (1963). With Pearson's estimated 40-41.5 percent share, the market is already considered "highly concentrated" according to the commonly-used Herfindahl-Hirschman Index (HHI) for market concentration. This merger would result in an outrageous increase of the HHI above 1,000 points—at least five times the 200 point threshold needed for the merger to be presumed illegal.

This merger will also affect the relevant market for all-access subscriptions like Cengage Unlimited. All-access subscriptions offer full catalog access to a publisher's materials for a flat fee. While Cengage is currently the only publisher to offer such a product, McGraw-Hill and Pearson possess the assets to launch one of their own, which makes it a relevant market where competition must be preserved under antitrust law.

The Merger Increases Barriers to Entry and Limits Innovation

The textbook market has been dominated by the same three large firms for the last 30 years. Barriers to entry are already exceedingly high because of extraordinary overhead costs, and the merger would exacerbate these barriers especially for all-access subscriptions. If the merged entity combines its 44,000-title catalog under one all-access subscription, the only rival left, Pearson, would likely respond with a similar product, leaving the market effectively closed to any publisher that does not offer content through one of the two companies' options.

The merger would also perpetuate coordinated pricing, which has been the norm in the textbook industry for many decades. In the words of Cengage CEO Michael E. Hansen, "Over time, the industry just ratcheted up the prices — sometimes 10 percent, twice a year." Reducing the number of industry players from three to two will make this kind of coordinated behavior even easier—which will not only cause prices to rise all over again, but will also stifle innovation by reducing the need to compete on features that benefit student consumers.

The Merger Is Likely to Give Rise to a "Facebook" in Education Data

Student data is also a relevant market for this merger. As textbooks and other course materials transition to digital, the amount of data publishers can collect about the students who use them will grow exponentially—often without students even knowing it. Just as students are already a "captive market" in terms of how much they pay for textbooks, they are also a captive market for their personal data.

This data can be fed into algorithms that can classify a student's learning style, assess whether they grasp core concepts, decide whether a student qualifies for extra help, or identify if a student is at risk of dropping out. While some of these uses might be helpful to students, the same data can also be used in ways that are harmful—from mischaracterizing an individual's abilities to potential data breaches, such as the breach affecting hundreds of thousands of students recently disclosed by Pearson.

As the Department considers antitrust issues related to Apple, Amazon, Facebook and Google, it must also consider that allowing Cengage and McGraw-Hill to merge gives the combined firm control of a potentially enormous data empire, which could be a step toward forming a new platform monopoly in education.

The Department of Justice Should Block the Merger

The merger between Cengage and McGraw-Hill would significantly reduce competition, increase barriers to entry, stifle innovation, and harm consumers in the relevant course material, all-access subscription, and student data markets.

The impact on competition is so significant that traditional remedies such as forcing the companies to divest overlapping titles will do nothing to decrease the anticompetitive effects in any relevant market. No remedy can overcome the irreparable harm this merger would do to competition, and as a result, student consumers. The merger must be blocked in its entirety.

We have attached a complete and thoroughly documented explanation of our reasons for opposing the merger. We thank you for the opportunity to express our concerns about how this merger could harm America's more than 20 million college students and their families.

Sincerely,

Nicole Allen
Director of Open Education
SPARC

Robert H. Lande
Pro Bono Counsel
Venable Professor of Law
University of Baltimore School of Law

Heather Joseph
Executive Director
SPARC

OPPOSING THE MERGER BETWEEN CENGAGE AND MCGRAW-HILL EDUCATION

August 14, 2019

1. BACKGROUND

On May 1, 2019, college textbook publishing firms Cengage and McGraw-Hill Education (McGraw-Hill) announced plans to merge. The all-stock "merger of equals" would create the largest publisher of college course materials in the United States, reducing the dominant players in the market from three to two. The college publishing industry has a long history of rising prices and anticompetitive practices, and the effects of the merger could substantially harm America's 20 million[1] college student consumers and their families.

1.1 The Textbook Affordability Crisis

Over the last three decades, the growth of the internet and technology has changed our economy to improve access to information, quality of life, and productivity in a wide range of areas. However, in the college publishing sector, the potential benefits of this shift have hardly been realized. Over the last two decades, the cost of textbooks has far outpaced inflation, home prices, medical care, wages, and—at times—even the cost of tuition and fees, rising 184 percent since 1998, three times the rate of inflation.[2] The trend is even more evident in the change in wholesale prices. According to the Bureau of Labor Statistics (BLS) Producer Price Index (PPI) for Textbook Publishing, producer prices for college

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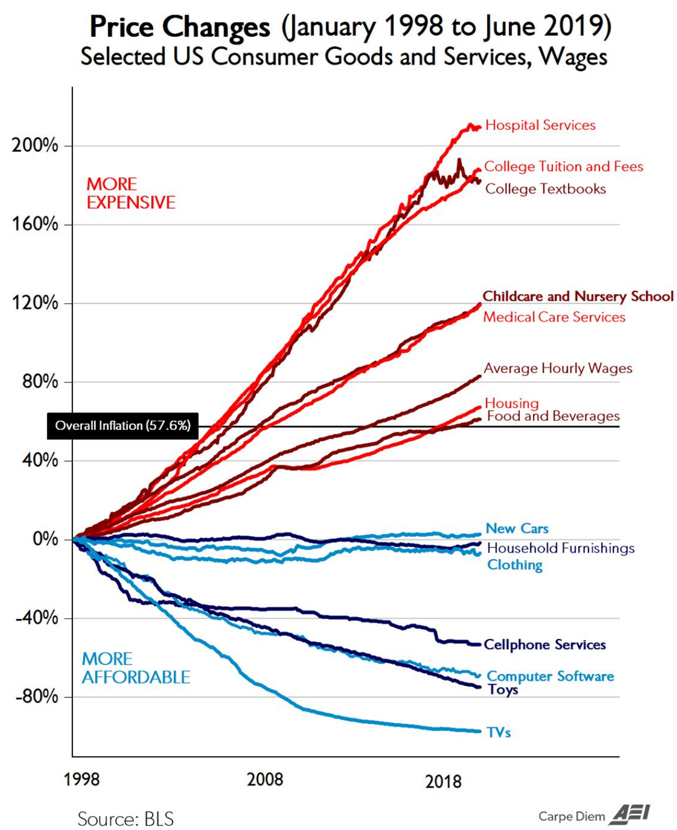
[1] National Center for Education Statistics*, Enrollment in elementary, secondary, and degree-granting postsecondary institutions, by level and control of institution,* Digest of Education Statistics, https://nces.ed.gov/programs/digest/d17/tables/dt17_105.30.asp.
[2] Mark J. Perry, *Chart of the day…. or century?,* American Enterprise Institute (January 11, 2019), http://www.aei.org/publication/chart-of-the-day-or-century/.

textbooks have increased 742% since 1980, almost six times the rate of inflation for all commodities.[3]



The textbook affordability crisis first emerged into public discourse in 2004, when student activists raised awareness that the rapidly increasing cost of textbooks was the result of a "broken market" controlled by three major companies engaged in unsustainable pricing practices.[4] A report released by the consumer group U.S. PIRG stated that "textbook publishers artificially inflate the price of textbooks by adding bells and whistles to the current texts, and forcing cheaper used books off the market by producing expensive new editions of textbooks that are barely different from the previous edition."

In response to the public outcry, Congress ordered an investigation into the college textbook industry by the Government Accountability Office (GAO). Its 2005 report concluded that during the 2003-2004 academic year, students at public 4-year institutions spent an average of $898 per year on textbooks, which was 26 percent of the amount they spent on tuition and fees. Students at public 2-year institutions spent an average of $886 per year on textbooks, which was 72 percent of what they spent on tuition and fees.[5]

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[3] The annual average PPI for College Textbook Publishing (Series ID PCU511130511130F21) was 106 in 1980 and 892 in 2018, a 742 percent increase. The annual average PPI for All Commodities (Series ID WPU00000000) was 90 in 1980 and 202 in 2018, a 125 percent increase. This upward trend is backed up by the Consumer Price Index (CPI) which goes as far back as 2002. The annual average CPI for College Textbooks (Series ID CUUR0000SSEA011) was 104 in 2002 and 242 in 2018, a 124 percent increase. The annual average CPI for All Items (Series ID CUUS0000SA0) was 177 in 2002 and 251 in 2018, a 42 percent increase.

[4] Merriah Fairchild, *Ripoff 101: How the Current Practices of the Textbook Industry Drive Up the Cost of College Textbooks*, CALPIRG (Jan. 2014), https://oerknowledgecloud.org/sites/oerknowledgecloud.org/files/textbookripoff.pdf.

[5] U.S. Government Accountability Office, Report to Congressional Requesters, *GAO-05-806, College Textbooks: Enhanced Offerings Appear to Drive Recent Price Increases* (2005), *available at* https://www.gao.gov/new.items/d05806.pdf.

Fueled by their frustration with high textbook costs, policy makers, student groups, institutional leaders, and faculty have advanced efforts to reduce the cost of course materials. These initiatives range from textbook rental programs to guaranteed used book buybacks to library-run reserves that help students get temporary access to their books. Additionally, some faculty are starting to seek out lower-cost or free options, while many libraries are launching programs to help curate these materials. According to one survey, more than two-thirds of college campuses consider textbook affordability a major concern, [6] and 80 percent of teaching faculty agree that the cost of course materials is a serious concern for their students.[7] More than half of all states and the U.S. Congress have now passed legislation relating to textbook affordability.

Over time, these efforts have helped many students to save money. An annual study funded by the college bookstore industry has found that average student spending is generally trending downward.[8] However, the combination of underlying dynamics in the market and emerging trends threaten to undo some of this progress, as publisher sticker prices have continued to climb. As we will discuss in future sections, the merger will only exacerbate these problems.

1.2 Students Are a Captive Market

The rising cost of textbooks did not occur by accident. As opposed to a free market, where the consumer has the opportunity to shop around and encourage competition, the college textbook market is a classic example of a “captive market,” where students—the end consumer—are required to purchase the materials they have been assigned regardless of the cost. This creates a highly exploitable market for publishers, who can design materials that appeal to professors without regard to the preferences, needs, or financial distress of their student customers.

The textbook market is uniquely prone to anticompetitive activity toward end consumers because of the principal-agent problem. Professors (the agent) are in charge of selecting textbooks, but students (the principal) are the ones who need to purchase them. Over time, publishers discovered that it was far more profitable to compete with each other on the basis of enhanced offerings that appealed to professors, while financing these efforts with unrestrained increases in price for students. As Cengage CEO Michael E. Hansen said in a

[6] Library Journal, *Textbook Affordability Survey Report*, Taylor & Francis Group (2019), https://s3.amazonaws.com/WebVault/research/Textbook%20Affordability%20Survey%20Report-final.pdf.

[7] Julia E. Seaman & Jeff Seaman, *Freeing the Textbook: Educational Resources in U.S. Higher Education, 2018*, Babson Survey Research Group, at 19, https://www.onlinelearningsurvey.com/reports/freeingthetextbook2018.pdf.

[8] Dian Schaffhauser, *Textbook Costs on the Decline*, Campus Technology (Aug. 2018), https://campustechnology.com/articles/2018/08/17/textbook-costs-on-the-decline.aspx.

recent interview, "This industry relied for too long on the notion that, 'if I can convince the professor, I don't need to worry about the student, and I can charge whatever I want.'"[9]

Moreover, it is in the interest of companies to deemphasize price information, at times making it difficult for even well-intentioned professors to consider the financial impact of their decisions on students. Textbooks carry no official list price, allowing for price changes at any time, including even after the professor has made the adoption decision but before the student has purchased the material. In the words of economist Mark J. Perry, who has written extensively on this topic for the American Enterprise Institute, "Professors never know how expensive the textbooks they are getting are. It's like when doctors prescribe drugs, though most people have insurance to cover pharmaceutical costs. Students don't have insurance to cover textbooks."[10]

While some changes in campus, state and federal policy have sought to increase the transparency of textbook pricing, publishers still have the upper hand over student consumers.

1.3 Unsustainable Publisher Practices

The history of textbook prices has shown what can happen when an oligopoly controls a captive market: rapidly rising prices and a crisis where too many students do not have access to the materials they need to complete their education. Decades of annual price increases have also led to a crisis within the industry itself, as the lack of competition has allowed multi-billion dollar firms to get away with unsustainable practices for longer than a truly free market would allow.

For many years, publishers have grappled with a growing secondary market, where students buy, sell, and rent used copies of textbooks both online and on campus. One survey found that 96 percent of students engage in at least one strategy for reducing textbook costs.[11] Publisher revenues are derived from the "new" material market—or the first time a textbook or supplement is sold—and the secondary market diminishes new sales over time. According to the Association of American Publishers (AAP), nearly three quarters of publisher revenues are derived from materials within two years of the edition's

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[9] Henry Kronk, *Pushback against Cengage and McGraw-Hill Merger: What is at Stake and What Comes Next?,* eLearningInside (July 31, 2019), https://news.elearninginside.com/pushback-against-cengage-and-mcgraw-hill-merger-what-is-at-stake-and-what-comes-next/.

[10] MarketWatch, *How Financial Aid is Driving Up College Textbook Prices* (Aug. 6, 2015), https://www.marketwatch.com/story/400-for-a-book-why-college-textbooks-are-going-the-way-of-the-dinosaur-2015-08-05.

[11] Florida Virtual Campus: Office of Distance Learning & Student Services, *2018 Student Textbook and Course Materials Survey: Results and Findings*, at 13 (Mar. 8, 2019), https://dlss.flvc.org/documents/210036/1314923/2018+Student+Textbook+and+Course+Materials+Survey+Report+--+FINAL+VERSION+--+20190308.pdf/07478d85-89c2-3742-209a-9cc5df8cd7ea.

copyright year, with only about a quarter arising from older materials with robust secondary markets.[12]

Over time, as rising prices have driven more students to seek out cheaper used books, publishers have ratcheted up prices to offset lost sales. As Mr. Hansen of Cengage told *Wired*, “The volumes of textbooks publishers were selling declined rapidly for years. However, they always had this magical price lever. They could always just increase the prices, so their revenue looked relatively stable.”[13] The industry has also engaged in practices to suppress the secondary market, including releasing new editions on a regular cycle to drive material sales and creating shrink-wrapped textbook “bundles” that could be resold.[14] As McGraw-Hill CEO Nana Banerjee, Ph.D., told investors when the merger was announced in May: “[T]here’s a massive secondary market that has really disrupted [the] traditional publisher's ability to price in the way it used to.”[15]

Meanwhile, the idea of open educational resources (OER) emerged, which are materials free for people everywhere to use and repurpose. Over the past decade and a half, the academic community has begun to create and use OER with support from philanthropic and—to a lesser extent—government grants. Notable OER efforts include OpenStax, a non-profit publishing initiative out of Rice University, Open New York State, which has received state funding, and the OER Degree Initiative, a grant funded pilot for developing degree pathways that use OER at community colleges. Professors, libraries, and institutions also create OER individually. While there are still barriers to the availability and adoption of OER, the emergence of a free alternative in some courses has contributed downward pressure on prices.

In 2016, the publishing industry was finally forced to confront the inevitable unsustainability of its practices, when an across-the-board drop in revenue served as a wakeup call. McGraw-Hill’s revenue declined by 9 percent, Pearson’s by 10 percent, and Cengage’s by 15 percent.[16] While management cited cyclical factors such as changes in student enrollment, analysts point to increased pushback from faculty fueled by the burgeoning textbook affordability movement, students fleeing to the secondary market, and increased use of open educational resources in some of the industry’s most profitable

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[12] Derived from *Higher Education Books & Materials Annual Report 2017* by the Association of American Publishers (Table 3.a. Revenue by Copyright Year). In 2017 the sum of revenue from Early Release, New and Revised, Year 1 Backlist and Year 2 Backlist was $2,476,510,470, which is 73 percent or almost three quarters of the grand total industry revenue of $3,381,299,832.
[13] Brian Barrett, *The Radical Transformation of the Textbook*, Wired (Aug. 4, 2019), https://www.wired.com/story/digital-textbooks-radical-transformation/amp.
[14] Fairchild, *Ripoff 101*.
[15] Call Transcript, Cengage Learning Holdings II’s CEO Michael E. Hansen on Cengage and McGraw-Hill to Merge (May 2, 2019), https://seekingalpha.com/article/4258880-cengage-learning-holdings-iis-cngo-ceo-michael-hansen-cengage-mcgraw-hill-merge-call?part=single (last visited Aug. 8, 2019).
[16] Claudio Aspesi, et. al., *Landscape Analysis: The Changing Academic Publishing Industry - Implications for Academic Institutions*, SPARC, at 34 (Mar. 28, 2019), https://osf.io/preprints/lissa/58yhb/download.

courses. It is not a coincidence that in 2016, after three decades of straight price increases, the Consumer Price Index for college textbooks began to fluctuate, as evidenced by the graph in Section 1.1.

1.4 A Shift to "Digital First"

The industry has begun to adapt to the novelty of downward price pressure by doubling down on its transition to digital. Pearson CEO John Fallon recently reflected, "Up until now the product development cycle and the revision cycle were still driven by essentially the way the world has been the last 40 years."[17] Where traditional revenues were driven by annual price increases and revision cycles for print textbooks, the industry is now shifting to a "digital first" model based on recurring digital subscriptions and, at least for now, print rentals. This model will eventually limit the overhead associated with printing and distribution, but perhaps more importantly, it will eliminate sales that feed the secondary market. Moreover, major publishers are beginning to emphasize "affordability" and price competition in their communications. Cengage, for example, acknowledges in its Fiscal Year 2018 annual report that the company competes at least to some extent on the basis of price.[18]

Of course, digital materials have been available for well over a decade in the form of e-textbooks. However, digital revenue has only begun to outpace print materials in the last few years, primarily attributable to the increased sale of digital courseware bundled with textbooks.[19] These materials are often referred to "access codes," which are single-use accounts that students activate at the beginning of the course and typically expire by the end.[20] Courseware activated by access codes may include e-textbooks, but also includes homework software that students must purchase in order to complete part of their grade.

Publishers credit the growth of digital courseware with successes in taking shares back from the secondary market. Cengage lays out the reasoning behind this shift in their Fiscal Year 2019 Annual Report:

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[17] Barrett, *supra*.
[18] Cengage, *Cengage Learning Holdings II, Inc.: Annual Report for Fiscal Year Ended March 31, 2019*, https://assets.cengage.com/pdf/Annual-Report-Fiscal-Year-Ended-March31-2018.pdf. "We compete primarily on the basis of the quality of our content and author reputation, the effectiveness of our digital solutions, customers' familiarity with our products and, to a lesser extent, price." *Id.* at 10.
[19] According to 2018 AAP figures, $1.91 billion or 60 percent of the $3.20 billion net revenue arose from non-print (digital) formats. The vast majority of these revenues arose from digital courseware, as opposed to a small fraction that arose from e-textbooks, which suggests that students still largely prefer the secondary market for accessing their textbooks but do purchase digital courseware when necessary.
[20] Ethan Senack, et al., *Access Denied: the New Face of the Textbook Monopoly*, Student PIRGs, at 3 (2016), https://studentpirgs.org/2016/09/21/access-denied/.

The growth in our digital business gives us access to a greater number of students in any given classroom and generates new sources of revenue from our existing adoption customers. In contrast to print publications, our digital products cannot be resold or transferred. We therefore realize revenue from every end user.[21]

Major publishing firms have also been expanding the use of digital materials by imposing "inclusive access" fees, a model by which students are automatically subscribed to digital course materials when they enroll in the course. This model typically involves an arrangement with an institution or third party vendor where students are directly billed for the cost of their materials through their student account. This may occur in the form of a per-course or flat fee, or the cost may be built into tuition. Department of Education regulations set certain conditions for how federal financial aid can be used for inclusive access fees.[22]

Questions are being raised over the benefits of inclusive access fees, since this model effectively eliminates a free market and does not always work out as a better deal for students. For example, McGraw-Hill's *Economics, 21st edition* can be purchased on the publisher's website in print for $262 or as a 180-day e-textbook for $55.00.[23] The e-textbook is what students typically receive through an inclusive access fee, and it is priced at a 79 percent discount versus print. McGraw-Hill advertises that inclusive access fees save students "50 to 80 percent off the cost of traditional textbooks,"[24] which means that the student may actually be paying *more* through an inclusive access fee than they would for the same e-textbook directly from the publisher, and at best they would pay only 1 percent less. On the free market, a student could buy the same book on Amazon.com as a one-semester print rental for $26.16 or a used copy for as little as $28.01[25]—a more than 90 percent savings. Thus, while the inclusive access fee may save money for those who

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[21] Cengage, *Cengage Learning Holdings II, Inc.: Annual Report for Fiscal Year Ended March 31, 2019*, at 6.

[22] Program Integrity and Improvement, 80 Fed. Reg. 67125, 67139 (Oct. 30, 2015) (final regulations for 34 C.F.R. § 668), *available at* https://www.govinfo.gov/content/pkg/FR-2015-10-30/pdf/2015-27145.pdf. Changes adopted in 2015 permitted institutions to include course materials as a direct cost for federal financial aid purposes if they enter into an arrangement with a publisher to make materials available below market rates, and students are given the means to opt out. Notably, in adopting these changes, the Department explicitly noted concerns that "students who would otherwise seek lower cost alternatives will settle, out of sheer convenience, for the price of the books and supplies negotiated by the institution." *Id.*

[23] McGraw-Hill, Higher Ed, *Economics: 21st Edition*, https://www.mheducation.com/highered/product/economics-mcconnell-brue/M9781259723223.html#textbookCollapse (last visited Aug. 7, 2019).

[24] McGraw-Hill, *McGraw-Hill's New and Expanding Affordability Initiatives Help College Students Save More than $55 Million in 2018* (Mar. 12, 2019), https://www.mheducation.com/news-media/press-releases/mcgraw-hill-supports-students-through-affordability-options.html.

[25] Amazon, *Economics: 21st Edition*, https://www.amazon.com/Economics-Irwin-Campbell-R-McConnell/dp/1259723224/ref=sr_1_1?keywords=9781259723223&qid=1562161594&s=books&sr=1-1 (retrieved July 3, 2019 at 10:00am).

would have otherwise purchased a new print book, it does so at the expense of savvy students who would otherwise have shopped around for a better deal.

A lawsuit was filed in early 2019 in federal court in South Carolina[26] that questions the benefits of inclusive access fees for students. The complaint was filed by a used book retailer against Trident Technical College (TTC), alleging that TTC misled students to believe that course materials provided through inclusive access were free, and that students who tried to opt out of paying the fee were discouraged or prevented from purchasing courseware on the free market. The complaint also calls business practices into question, citing a contract signed between TTC and the publisher Pearson, which sets a quota for enrollment in inclusive access fees in order to secure a discounted price. This type of quota appears to be typical of inclusive access contracts, and has the effect of aligning the financial interests of the institution and the publisher against the free market and freedom of choice for students and faculty.

A new frontier in the “digital first” transition is the “all-access” subscription model. All-access subscriptions offer full catalog access to comprehensive set of materials at a single price—a concept similar to that of Netflix or Spotify. Cengage was the first major publisher to launch an all-access product through Cengage Unlimited, which is priced at $120 per four-month semester. Unlimited can be purchased individually by students, or students may be automatically subscribed through an inclusive access fee. For example, the University of Missouri automatically subscribes any of its 40,000 students who enroll in a Cengage course to Unlimited at a steeply discounted fee of $50 per semester.[27] However, the introductory rate is only guaranteed for three years.[28]

We will further explore digital subscriptions and all-access products in the context of the merger throughout the document.

1.5 Limitations of Policy Interventions

More than a decade of state and federal policy activity has targeted the issue of rising textbook costs. While many of these efforts have been successful in expanding the availability of information or alternatives, the potential role of policy to influence the market is inherently limited.

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[26] Complaint, Virginia Pirate Corporation v. Trident Technical College (D.S.C. 2019) (No. 2:19-cv-00276-DCN), *available at* https://upload-assets.vice.com/files/2019/05/22/1558530226textbooklawsuit.pdf.

[27] Cengage, *University of Missouri System Chooses Cengage Unlimited Subscriptions to Save Students Money on Course Materials* (Nov. 16, 2018), https://news.cengage.com/higher-education/university-of-missouri-system-chooses-cengage-unlimited-subscriptions-to-save-students-money-on-course-materials/.

[28] *Id.*

The first major federal law relating to textbook costs was passed by Congress in 2008 as part of the Higher Education Opportunity Act (P.L. 110-315), which amended the Higher Education Act of 1965 (20 U.S.C. § 1001 et seq.) with Section 133 on Textbook Information (20 U.S.C. § 1015b). Effective since July 1, 2010, the law requires publishers to disclose information to professors concerning the price and revision cycle of textbooks and to offer all supplemental materials for separate sale. Institutions are also required to inform students about the price and international standard book number (ISBN) information about their assigned materials during registration and are encouraged to promote textbook affordability programs on campus.

The GAO's 2013 study of Section 133's implementation found that students had greater access to textbook information, which enabled them to shop around for lower-cost access to materials.[29] While both institutions and publishers were found to be largely in compliance with the letter of the law, GAO did not find that there was an impact on the overall price of textbooks, despite better choices for students. The report concludes:

> *Greater transparency of information alone, however, does not make textbooks less expensive, as the affordability of course materials results from the complex market forces that drive prices. Moreover, the textbook market is different from other commodity markets; although students are the end consumers, faculty are responsible for selecting which textbooks students will need, thereby limiting students' ability to allay costs.*[30]

States have also taken action to address textbook costs. More than half of states that charge sales tax have passed an exemption for textbooks,[31] and most states have considered some form of textbook affordability legislation in the past ten years.[32] States including Connecticut, Florida, and Virginia, have directed institutions to develop policies related to textbook affordability, including encouraging faculty to adopt lower-cost materials. Some have also convened task forces or studies to make more targeted policy recommendations.

More recently, states have begun adopting requirements to make it easier for students to search for courses based on textbook costs, including course catalog filters for low-cost or no-cost textbooks. This allows students to plan ahead financially and, in some cases, vote with their feet on which courses they take. A study in Oregon, the first state to adopt such a

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[29] U.S. Government Accountability Office, Report to Congressional Committees, *GAO-13-368, College Textbooks: Students Have Greater Access to Textbook Information* (2013), *available at* https://www.gao.gov/assets/660/655066.pdf.
[30] *Id.* at 22.
[31] National Association of College Stores, Sales and Use Taxes Charged on College and University Textbooks, https://www.nacs.org/govrelationsadvocacy/publicpolicy/taxes.aspx) (last visited Aug. 8, 2019).
[32] Maria Millard, *Textbook Affordability: Open Source Textbooks*, Education Commission of the States (Sept. 2014), http://www.ecs.org/clearinghouse/01/14/37/11437.pdf.

policy, found that the practice had likely had a measurable, even if incremental, impact on the cost of materials at 2-year institutions.[33]

Another policy strategy has been investment in programs that support open educational resources (OER) that are free to students. For example, North Dakota invested $110,000 in an OER program in 2015, and a study by the State Auditor in 2018 found that the program had saved students ten to twenty times the amount invested by the legislature.[34] Several other states have invested funding in programs to support OER, the largest being New York at $8 million two years in a row.[35] At the federal level, Congress provided a $5 million appropriation in both the Fiscal Year 2018 and 2019 spending bills for a Department of Education pilot grant program to expand the use of open textbooks.[36]

Overall, state and federal legislation has increased the choices and savings for some students, but policy alone has not had a systemic impact on the cost of textbooks. The power of policy to correct or influence the textbook market is ultimately limited, since professors will always select materials based on their own prerogative. This makes preserving competition in this marketplace of paramount importance to ensuring that free market forces function to the greatest extent possible.

1.6 Negative Impact On Student Consumers

As a final piece of background, this merger must be viewed in light of the consumers who will be harmed by it: America's 20 million college students and their families. The textbook market has not served students well historically, and they are a population already under significant financial pressure.

Although each student makes a choice to pursue higher education, it is an increasingly necessary investment for a prosperous life. Students who attain a bachelor's degree or higher are less likely to be unemployed[37] and have substantially higher lifetime earnings[38]

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[33] OpenOregon, *Two Years and a Big Difference: Transfer Degree Course Materials Costs are Down at Oregon's Community Colleges* (Jan. 17, 2018), https://openoregon.org/two-years-and-a-big-difference/.
[34] North Dakota Office of the State Auditor, *2018 North Dakota University System - Open Educational Resources* (Nov. 14, 2018), https://www.nd.gov/auditor/2018-north-dakota-university-system-open-educational-resources.
[35] New York State, *Governor Cuomo Announces $8 Million for Open Educational Resources Initiative at SUNY and CUNY to Cut High Cost of Textbooks* (May 16, 2018), https://www.governor.ny.gov/news/governor-cuomo-announces-8-million-open-educational-resources-initiative-suny-and-cuny-cut-high.
[36] U.S. Department of Education, *Open Textbooks Pilot Program,* (July 31, 2018), *available at* https://www2.ed.gov/programs/otp/index.html.
[37] U.S. Department of Labor, Bureau of Labor Statistics, Unemployment Rates and Earnings by Educational Attainment 2018, https://www.bls.gov/emp/tables/unemployment-earnings-education.htm (last visited Aug. 8, 2019).

than those with only a high school diploma. Yet, the systems in place to help students pay for an education can leave them saddled with unmanageable amounts of debt—particularly for those who do not successfully attain a credential.[39] This can affect even the most cost-conscious students who select an affordable institution; borrowers with loan balances under $5,000 have the highest default rate of any borrower category.[40] A recent report from the Manhattan Institute notes how students face a complex variety of loan types and repayment options, and that there are sometimes perverse incentives that do not serve borrowers well.[41] Currently, there are more than 44 million student loan recipients in the U.S. who owe a collective $1.5 trillion. Student loan debt is now considered the second highest consumer debt category, trailing only mortgage debt and surpassing both auto loans and credit card debt.[42] It is estimated that the average student loan borrower in the United States owes $28,650.[43]

Researchers from Ohio State University found that 70 percent of college students reported feeling stressed about finances, with 60 percent reporting that they worry about having enough money to pay for their education.[44] There has been a sharp increase in the amount of hours worked while enrolled in higher education, with one study finding that nearly 40 percent of undergraduate students and 76 percent of graduate students are working up to 30 hours per week on top of their regular studies.[45] This is exacerbated by the shifting demographic of college students, with up to 20 percent of today's college students supporting children and many more reporting that they contribute income to their parents or other extended family members.[46] There is a disproportionately high rate of precarity amongst students, with 56 percent facing housing insecurity in 2018 and 17 percent dealing with the struggles of homelessness.[47] Additionally, up to 52 percent of this

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[38] Christopher R. Tamborini, et al., *Education and Lifetime Earnings in the United States*, 52 Demography 4, 1383-1407 (2015), *available at* https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4534330/.
[39] Glenn C. Altschuler, *The Student Debt Crisis isn't What You Think it Is*, The Hill (May 5, 2019), https://thehill.com/opinion/education/442170-the-student-debt-crisis-isnt-what-you-think-it-is.
[40] College Board, Share of Defaulters and Three-Year Default Rates by Loan Balance, https://trends.collegeboard.org/student-aid/figures-tables/share-defaulters-and-three-year-default-rates-loan-balance.
[41] Jason Delisle, *How to Make Student Debt Affordable and Equitable*, at 5 (July 2019), https://media4.manhattan-institute.org/sites/default/files/R-0719-JD2.pdf.
[42] Zack Friedman, *Student Loan Debt Statistics in 2019: A $1.5 Trillion Crisis*, Forbes (Feb. 25, 2019), https://www.forbes.com/sites/zackfriedman/2019/02/25/student-loan-debt-statistics-2019/#3a2bfbe6133f.
[43] *Id.*
[44] Ohio State News, *70 Percent of College Students Stressed Out About Finances* (June 30, 2015), https://news.osu.edu/70-percent-of-college-students-stressed-about-finances/.
[45] Emily Deruy, National Journal, *At Universities, More Students are Working Full-Time,* The Atlantic (Oct. 28, 2015), https://www.theatlantic.com/politics/archive/2015/10/at-universities-more-students-are-working-full-time/433245/.
[46] *Id*.
[47] Sara Goldrick-Rab, et al., *College and University Basic Needs Insecurity: A National #RealCollege Survey Report* (April 2019),

population experiences some form of food insecurity[48], well above the national average of 12 percent[49].

While the cost of course materials alone is not the largest expense most students face, it has a disproportionate financial impact. Unlike the cost of tuition, textbook costs vary by course and are thus difficult to predict from semester-to-semester. Depending on when students register for courses, they may have little notice to prepare for these costs and may then delay purchasing well into the course or forego the materials entirely. A survey of more than 21,000 Florida students found the impact of textbook costs caused 64 percent to not purchase a required textbook, 36 percent to earn a poor grade, and 23 percent to drop a course.[50] If the cost of a textbook is the last financial straw for a student, lack of access to course materials can diminish the entire value of an education by causing them to do poorly in a course or seek an alternative field of study. Moreover, 30 percent of students said they had used financial aid to pay for textbooks, which could work out to $1.5 billion per semester in funding that is largely financed or loaned by American taxpayers.[51]

2. MERGER WOULD SUBSTANTIALLY HARM COMPETITION IN RELEVANT MARKETS

Cengage and McGraw-Hill are two of the three largest college publishers that compete head-to-head in the development, marketing, and sale of postsecondary course materials. The company's combined 45% share would far exceed benchmarks established for presumed illegality, and the merger should be blocked as a violation of Section 7 of the Clayton Act (15 U.S.C. § 18).

2.1 Relevant Markets for Merger Analysis

There are at least three relevant markets for analysis where the proposed merger between Cengage and McGraw-Hill would substantially lessen competition.

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https://hope4college.com/wp-content/uploads/2019/04/HOPE_realcollege_National_report_digital.pdf.

[48] Meg Bruening, et al., *The Struggle is Real: A Systematic Review of Food Insecurity on Postsecondary Education Campuses*, 117 Journal of the Academy of Nutrition and Dietetics 11 (Nov. 2017), *available at* https://www.sciencedirect.com/science/article/abs/pii/S2212267217305518.

[49] U.S. Dept. of Agriculture, Food Security in the U.S., https://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/key-statistics-graphics.aspx (last visited Aug. 8, 2019).

[50] Florida Virtual Campus: Office of Distance Learning & Student Services, *2018 Student Textbook and Course Materials Survey: Results and Findings*, at 13.

[51] Ethan Senack & Robert Donoghue, *Covering the Cost: Why We Can No Longer Afford to Ignore High Textbook Prices*, Student PIRGs (Feb. 2016), https://uspirg.org/reports/usp/covering-cost.

2.1.1 New Postsecondary Course Materials Relevant Market

The most important relevant market for merger analysis is the sale of new[52] postsecondary course materials within the United States. This is the market where both parties earn the majority of their revenue and it is where both companies identify their primary competitors.[53, 54] New postsecondary course materials includes college textbooks (print and digital) and accompanying supplemental material, such as homework software, adaptive learning tools, and CD-ROMs. It should exclude the sale of used materials, as well as supplies (calculators, lab goggles, etc.), library materials, and electronic devices.

The total new postsecondary course material market is estimated by the Association of American Publishers (AAP) at $3.38 billion in 2017, comprising the revenues of six large firms.[55] Pearson estimates itself to hold approximately 40-41.5 percent market share,[56] and the two parties of the merger, Cengage and McGraw-Hill,[57] hold approximately 24 percent and 21 percent respectively for a total of 45 percent.[58]

There is a large gap between these three significant competitors and the other three firms who hold the remaining 15 percent: John Wiley & Sons (Wiley), Macmillan Education (Macmillan), and Oxford University Press. While there is a range of small independent

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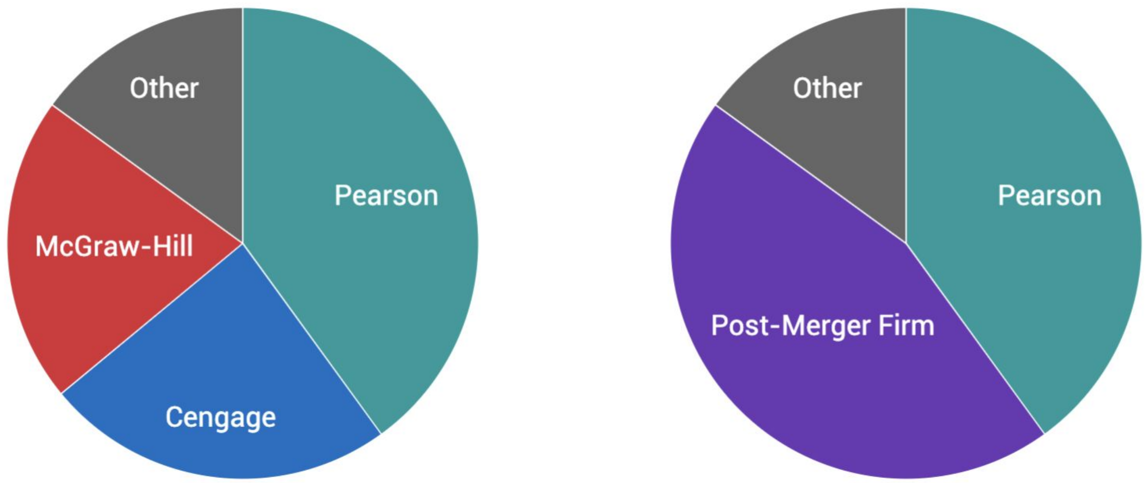
[52] The term "new" is commonly used in the publishing industry to distinguish between course material sales that are connected to the publisher, as opposed to the sale of "used" materials on the secondary market.
[53] McGraw-Hill Education, Inc., *Annual Report as of December 31, 2018*, at 15, https://s22.q4cdn.com/942918855/files/doc_financials/annual/2018/MHE-2018.12.31-Annual-Report_FINAL.pdf.
[54] Cengage, *Cengage Learning Holdings II, Inc.: Annual Report for Fiscal Year Ended March 31, 2019*, at 11.
[55] Association of American Publishers, *Higher Education Books & Materials Annual Report 2017*, at 3.
[56] Pearson, *Learning for Life: Pearson Annual Report and Accounts 2018*, at 54, https://www.pearson.com/content/dam/one-dot-com/one-dot-com/global/standalone/ar2018/PearsonAR18.pdf.
[57] Calculated using the AAP 2017 net total higher education revenue and the merging firms' 2018 higher education revenue reported in an investor presentation: McGraw-Hill at $702 million and Cengage at $790 million. These figures are provided as a representation of market shares in the absence of precise data. If anything, our calculations underestimate the size of the merging companies' share by using the 2017 market total, since the 2018 figure just released by AAP is lower at $3.20, representing revenue reported by the six firms reflected in 2017 plus the addition of Taylor and Francis. We chose to use AAP's 2017 figure over the 2018 figure since we were unable to determine which figure better aligns with the reported company revenues, and we prefer to err on the side of caution.
[58] Tony Wan, *In Move to 'Unlimited' Pricing Model, Cengage Hopes for a Comeback*, EdSurge (April 24, 2018), https://www.edsurge.com/news/2018-04-24-in-move-to-unlimited-pricing-model-cengage-hopes-for-a-comeback. In this interview, Cengage's Mr. Hansen confirmed "Our U.S. market shares are slightly north of 20 percent."

publishers and university presses who sell new materials, the AAP estimate is widely understood to represent the vast majority of the market.[59]

Estimated Shares of New College Course Materials Market



2.1.2 All-Access Subscriptions Relevant Market

Another relevant product market for merger analysis is for all-access subscriptions. All-access subscriptions offer access to a comprehensive catalog of course materials for a flat fee. Currently, the only education publisher to offer such a product is Cengage through its Unlimited subscription service, which includes Cengage's full catalog of course materials plus bundled services from partners including Chegg, Kaplan, and Evernote. Cengage has described Unlimited as similar to Netflix, where students pay a flat fee for access to the service, and can consume as much content as they wish.[60]

While neither of Cengage's chief head-to-head competitors, McGraw-Hill and Pearson, have launched a similar all-access subscription to date, both are likely capable of doing so. The *Horizontal Merger Guidelines* specify that "[f]irms that clearly possess the necessary assets to supply into the relevant market rapidly may also be rapid entrants."[61] Both McGraw-Hill and Pearson possess the single most important asset: a broad catalog of digital course materials. To launch an all-access subscription, they need only to package it into a single product. Cengage's Mr. Hansen explained in a joint interview with McGraw-Hill's Dr. Banerjee, that integrating McGraw-Hill's content post-merger "won't be that complicated"

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[59] Simba Information and others have supported this assessment.
[60] Lindsay McKenzie, *A Cengage Buffet*, Inside Higher Ed (Dec. 5, 2017), https://www.insidehighered.com/news/2017/12/05/cengage-announces-unlimited-digital-subscription.
[61] U.S. Department of Justice & Federal Trade Commission, *Horizontal Merger Guidelines*, at § 5.1 (Aug. 19, 2010), *available at* https://www.justice.gov/atr/horizontal-merger-guidelines-08192010#5c.

because "the [U]nlimited subscription model is a business model. It is not a platform."[62] According to the interview, Unlimited was implemented by creating an account that can work across existing products, rather than going to the expense of putting all of the products on the same platform.

If the chief executives of the merging firms do not see adding McGraw-Hill's content to Cengage's all-access subscription as a complicated process, then it stands to reason that it would not be complicated for McGraw-Hill to launch a similar product on its own in the absence of the merger. Likewise, Pearson recently announced that it was transitioning to a "digital first" business model that prioritizes digital content, which presumably would make it even easier to launch an all-access subscription.[63] It therefore is logical to conclude that there is a relevant market for all-access plans comprised of Cengage, McGraw-Hill, and Pearson.

2.1.3 Student Data Relevant Market

A final relevant market for merger analysis is the market for student data. As course materials continue to transition toward digital formats, publishers will be able to capture vast amounts of data through students' use of digital courseware and agreements with institutions. Publishers then have the ability to exploit exclusive access to this data in order to fuel increasingly sophisticated analytics products and other activities. Thus, the firms' data assets are an essential measure of competitive significance. This market includes raw data, the algorithms used to process it, and the resulting products that can be derived.

2.2 The Merger Vastly Exceeds Thresholds For Presumptive Illegality

For the new course material relevant market, this is an effective three-to-two merger that would give the combined firm an outrageous 45 percent share. This is well above the 30 percent market share threshold for presumptive violations of the Clayton Act established by *United States v. Philadelphia National Bank*, 374 U.S. 321 (1963). The merger would produce an astronomical increase in the Herfindahl-Hirschman Index (HHI), which is commonly used to measure market concentration.[64] Even with the most conservative

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[62] Jeffrey R. Young, *How Merger of Two Textbook Giants Could Impact Course Materials*, EdSurge (May 3, 2019), https://www.edsurge.com/news/2019-05-03-how-merger-of-two-textbook-giants-could-impact-course-materials.

[63] Pearson, *Pearson Turns the Page on College Textbooks as Digital Courseware Demand Grows* (July 16, 2019), https://www.pearson.com/corporate/news/media/news-announcements/2019/07/pearson-turns-the-page-on-college-textbooks-as-digital-coursewar.html.

[64] *Horizontal Merger Guidelines*, at § 5.3. "The HHI is calculated by summing the squares of the individual firms' market shares, and thus gives proportionately greater weight to the larger market shares. When using the HHI, the Agencies consider both the post-merger level of the HHI and the increase in the HHI resulting from the merger." *Id*.

interpretation, the pre-merger new materials market is already well over the 2,500 point threshold to be considered "highly concentrated" according to the HHI. The proposed merger would produce an increase in the HHI of more than 1,000, which is more than five times the 200 point benchmark specified in the *Horizontal Merger Guidelines* to be presumed likely to enhance market power.[65]

In the all-access relevant market, the potential market concentration is even greater than the general new course materials market, only the three largest firms possess the necessary assets—most importantly a comprehensive catalog of digital materials—in order to compete. Therefore, it would be a pure three-to-two merger, presumptively increasing the combined company's market power substantially, particularly considering that Cengage has the first mover advantage. We cannot speculate on exact figures, but the combined shares would be as least as great as the 45 percent share of the new materials market, but most likely far greater—and thereby even far beyond the threshold for a presumptive violation of the Clayton Act.

In the student data relevant market, we urge the Department to perform a thorough analysis of the merging companies' data assets, including what kinds of data they possess, what algorithms they control, which of their products derive value from data, and how these assets are likely to evolve as adoption of digital subscriptions continues to grow. While it is impossible to speculate on market shares, we would argue that a three-to-two merger in an industry with rapidly growing access to user data could have drastic negative consequences for competition. In 2017, *The Economist* labeled data "the world's most valuable resource," surpassing even oil in value, highlighting the critical need to preserve competition in data markets.[66]

It is clear that this merger would significantly increase market power in all three of the markets we have identified and blatantly exceeds thresholds in at least two. As we will demonstrate in the remainder of this document, there are no factors to mitigate the anticompetitive effects of this merger. Therefore, the proposed merger between Cengage and McGraw-Hill is presumptively illegal.

2.3 Revenue Is The Correct Measure of Product Market Share

The *Horizontal Merger Guidelines* state that revenues "tend to be the best measure of attractiveness to customers, since they reflect the real-world ability of firms to surmount all of the obstacles necessary to offer products on terms and conditions that are attractive to

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[65] *Id*. "Mergers resulting in highly concentrated markets that involve an increase in the HHI of more than 200 points will be presumed to be likely to enhance market power."
[66] The Economist, *The World's Most Valuable Resource is No Longer Oil, But Data* (May 6, 2017), https://www.economist.com/leaders/2017/05/06/the-worlds-most-valuable-resource-is-no-longer-oil-but-data.

customers."[67] Given the complexity and variety of how course materials are published, selected, and purchased, we agree that revenue offers the simplest and most accurate measure of competitive significance for the new course material and all-access subscription relevant markets.

Unit sales would be less accurate in the case of course materials, since there is a wide variation in the price and types of units sold. For example, Cengage's website offers students eighteen distinct purchasing options for *Biology, 11th Edition*, including a $99.49 print rental, a six month e-textbook for $45.49, and a courseware subscription plus hardcover for $312.95.[68] Students can also get four months of digital access through a $119.99 Cengage Unlimited subscription, which would potentially include materials for some of the student's other assigned courses. The difference between selling 100 units of the e-textbook versus 100 units of the hardcover versus 100 units of Unlimited is substantial—and potentially existential for the publisher's revenues. Therefore, unit sales are not a good indicator of a company's ability to compete in any of the relevant markets for this merger.

While not covered by the *Guidelines*, another way to consider measuring market share could be student seats, i.e., the number of students enrolled in a course that assigns each publisher's materials. Like unit sales, this measure is complex, since faculty may assign multiple materials from multiple publishers that might be required or simply recommended. Moreover, the number of students who have been assigned a specific material only represents a publisher's *potential* share of the market. Their actual market power depends on how effectively the publisher can capitalize on its student seats. A class of 100 students assigned a $100 textbook could yield anywhere from zero to $10,000 in revenue for the publisher, depending on the perceived value of the material, how many seek the secondary market, and whether the material is needed to pass the course.

Measuring market share by revenue is therefore the simplest and most accurate option, and it solves the challenges posed by measurement by unit sales or seats.

2.4 Used Materials Are Not Part of The Relevant Market

Courts have examined the question of secondary markets for more than half a century, and key decisions have held that secondary markets do not increase competition.

The secondary market for college textbooks is estimated at $954 million.[69] This includes the rental and sale of used copies of textbooks, international editions produced overseas and imported, and other forms of access such as library access. Sometimes, illegal downloads

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[67] *Id*. at § 5.2.
[68] Cengage, Students, *Biology: 11th Edition*, https://www.cengage.com/c/biology-11e-solomon/ (last visited Aug. 8, 2019).
[69] Simba Information, State of College Course Materials 2017-2018, at 36 (Dec. 5, 2018).

and piracy are suggested as part of the secondary market. None of these forms of accessing publishers' materials are part of the relevant market for the purposes of assessing the market power of the merging firms.

In the landmark case *U.S. v. Aluminum Company of America (Alcoa)*, 148 F. 2d 416 (2d Cir. 1945), the court determined that the relevant product market in the case consisted only of each year's sale of new (virgin) aluminum and excluded the sale of used (secondary) aluminum.[70] The decision held that Alcoa was certainly aware that a significant percentage of its aluminum would be salvaged would thereby re-enter the marketplace. For this reason, Alcoa could and did take these sales and their effects into account when it priced its virgin aluminum, and it therefore effectively controlled the market for secondary aluminum over time. The defendant was found to have "always [known] that the future supply of [aluminum] would be made up in part of what it produced at the time, and . . . that consideration must have had its share in determining how much to produce."[71]

The *Alcoa* decision explicitly evokes the secondary market for copyrighted goods—which would of course include textbooks—as an illustration. Because copyright holders are granted a lawful monopoly over selling new copies of a work, they are necessarily in control of how many copies of the work enter the secondary market. They also control the price of the new material, which in turn directly affects the pricing and demand for secondary copies.

> *The competition of 'secondary' must therefore be disregarded, as . . . it was as much within 'Alcoa's' control as was the production of the 'virgin' from which it had been derived. This can be well illustrated by the case of a lawful monopoly: e.g. a patent or a copyright. The monopolist cannot prevent those to whom he sells from reselling at whatever prices they please . . . At any moment his control over the market will therefore be limited to that part of what he has formerly sold, which the price he now charges may bring upon the market, as second hand or reclaimed articles. Yet no one would think of saying that for this reason the patent or the copyright did not confer a monopoly.*[72]

The same issues arose in another prominent case, *U.S. v. Microsoft Corporation*, 87 F. Supp. 2d 9 (D.D.C. 1999), which was affirmed in relevant part in *U.S. v. Microsoft Corporation*, 253 F. 3d 34 (D.C. Cir. 2001). The court determined that the relevant market consisted only of annual sales of new personal computer (PC) operating systems (OS). Microsoft argued that each PC user faced an annual choice of either continuing to use their existing (i.e., used) OS, or purchasing a new one. The court nevertheless excluded the then-existing OS from the relevant market, and focused only on Microsoft's share of new OS sales because Microsoft knew and could control the effects of its existing OS on the market for new OS.

[70] 148 F. 2d 416, 425 (2d Cir. 1945).
[71] *Id.*
[72] *Id.*

The Court stated that PC consumers "buy new PC systems relatively frequently"[73] but observed that "the average price it sets for those [new] systems is little affected by the fact that older versions of Windows never wear out."[74]

The reasons for excluding the secondary market in this case are even more clear-cut than in *Alcoa* or *Microsoft*. Whereas an average consumer might substitute a used product from any company for Alcoa's aluminum or Microsoft's OS, students are assigned to purchase a specific product from a specific publisher that cannot be reasonably substituted with any other—new or used. Used copies of Pearson's titles present no competitive threat to either Cengage or McGraw-Hill, since students need to purchase the exact book they have been assigned. Therefore, the entire secondary market for a specific book is controlled by the publisher, and that publisher alone. The supply and profitability of used copies is dependent on how many new copies the publisher sells and the price the publisher charges. As Alcoa and Microsoft were found to be expected to factor the secondary market into their new prices, likewise textbook publishers should be expected to factor the secondary market into theirs. Therefore, the extent to which the secondary market affects competition is already factored in to the new materials market, so to add it separately would be duplicative and incorrect.

Another reason the secondary market should be excluded is that used materials are not reasonably interchangeable with new materials for the purposes of the hypothetical monopolist test.[75] While there are some cases where used books are in "like new condition," used materials may end up dogeared, marked up, highlighted, or dirty. Further, with the rise of bundling and digital courseware, used materials may not reliably include all of the anticipated components, particularly if an access code has expired or a workbook has been used. Some used textbooks are even imported from international markets, and therefore may bear content differences such as use of the metric system or watermarks.[76]

The question of interchangeability was addressed in a 2010 case involving one of the parties to the proposed merger, *John Wiley & Sons, Inc. and the McGraw-Hill Companies, Inc. v. Schumacher*, 2010 WL 103886 (S.D.N.Y. 2010). The Court borrowed the Defendant's language in stating that "new editions of books are considered so different by the market that an old edition can often be found for a small fraction of the cost of a new edition."[77] The fundamental difference between new and used books was invoked in *Capitol Records, LLC v. ReDigi Inc.*, 910 F. 3d 649, 664 (2nd Cir. 2018), concerning the resale of digital files. The Court held that resold digital files were included in a relevant digital market, because

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73 U.S. v. Microsoft Corporation, 87 F. Supp. 2d 9, 25 (D.D.C. 1999).
74 *Id.*
75 *Horizontal Merger Guidelines*, at § 4.1.1. "[T]he hypothetical monopolist test [identifies] a set of products that are reasonably interchangeable with a product sold by one of the merging firms." *Id*.
76 The legality of such sales was established in *Kirtsaeng v. John Wiley & Sons, Inc.*, 568 U.S. 519 (2013).
77 *John Wiley & Sons, Inc. and the McGraw-Hill Companies, Inc. v. Schumacher*, 2010 WL 103886, 5 (S.D.N.Y. 2010).

Capitol Records would be competing with "resellers of the same merchandise in digital form…unlike second hand books and records, [which would not be] good as new."[78]

A final reason to exclude the secondary market is that the merging firms intend to close it. Cengage and McGraw-Hill have made it plain that their intent is to shift the market to digital subscriptions, and to the extent print will be available, it will be in the form of rentals that cannot be resold on the secondary market. On the merging firms' May 1, 2019 joint investor call, Dr. Banerjee of McGraw-Hill stated plans to "[take] out this used secondary market book enterprise that has really been a disruptor for us."[79] He specified a "four to six year" timeline, and projected that they would be "more than half way through" within two and a half years. Therefore, it is moot to assess the potential impact of the merger on the basis of a market that would not exist post-merger.

2.5 Open Educational Resources Are Not a Significant Part of The Relevant Market

Open educational resources (OER) should be included in the relevant markets for merger analysis only to the extent that these resources are monetized. OER that are used for free should be excluded.

OER are fundamentally different from traditional course materials because they are published under an open copyright license that permits anyone to copy, add value to, and redistribute the material for free.[80] Whereas the default "all rights reserved" terms of copyright give companies like Cengage and McGraw-Hill exclusive control over their respective titles, anyone can use OER content in any way they wish, so long as they comply with the terms of the license.[81] OER can be used for free by faculty who assign and distribute it to their students, or it can be used in conjunction with paid products and services.

All five of the largest publishing firms offer add-on products that are built on OER content. Cengage's OpenNow sells curated OER content in a digital platform coupled with assessments and instructor materials. McGraw-Hill's Open Learning Solutions enables faculty to create custom content, merging locally authored material, OER, and

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[78] *Capitol Records, LLC v. ReDigi Inc.*, 910 F. 3d 649, 664 (2nd Cir. 2018).
[79] Call Transcript, *supra*.
[80] The term OER was coined by UNESCO in 2002 with the official definition "teaching, learning or research materials that are in the public domain or released with intellectual property licenses that facilitate the free use, adaptation and distribution of resources." *See* UNESCO, Open Educational Resources, https://en.unesco.org/themes/ict-education/oer.
[81] Open licenses typically condition free public use of materials on attribution for the copyright holder and sometimes a requirement to license derivatives under the same terms. While some OER carry open licenses that limit commercial use, the majority of OER does not. The open license provider Creative Commons estimates that only about a third of the works carrying one of its licenses permit commercial reuse. *See* Creative Commons, *Data Notes and Sources: 1.4 Billion Creative Commons Licensed Works*, https://stateof.creativecommons.org/data-notes-and-sources-2017/.

McGraw-Hill's catalog. Pearson, Macmillan, and Wiley also offer products that are either built on or incorporate OER.[82] There is also a handful of smaller companies that have developed add-on products and services around OER, including Lumen Learning, PanOpen, and TopHat, as well as some courseware products offered by bookstore retailers Follet and Barnes & Noble. OpenStax, a prominent non-profit publisher, offers some paid add-ons and print sales.[83] To the extent there are revenues earned from OER add-on products, this is part of the relevant market for new course materials.[84]

To the extent OER is used on its own for free, it should be excluded from the relevant market for new materials. It would be nonsensical to consider something that everyone has an equal right to build upon as a separate competitor—regardless of how likely or not faculty are to substitute it. For example, no one would reasonably include tap water in the relevant market for bottled water, even though it is a widely-available and effectively free alternative.[85]

Publishers distinguish between products built on OER and faculty who use standalone OER. Cengage's website states that "integrating OER is a complex task and many instructors don't know where to start" and that "50 percent of instructors found it difficult to find what they needed in OER resources."[86] McGraw-Hill's Open Learning Solutions page states that their services "bring flat OER content to life through additional content and interactive technologies."[87] Cengage CEO Michael E. Hansen told *Wired*, "One faculty member told me only half-jokingly, that OER is like a puppy that's free. You get the free puppy, but then you have to do all the work."[88]

Even if we were to grant *arguendo* that OER used for free should be included in the relevant markets, it would still comprise a relatively small or zero share. As we have pointed out, OER used for free would generate no revenue, and therefore has zero share according to

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[82] Association of American Publishers, *Higher Education Publishers Continue to Provide Students with Course Material Options, Including OER* (Mar. 5, 2018), https://newsroom.publishers.org/higher-education-publishers-continue-to-provide-students-with-course-material-options-including-oer/.
[83] Many OER add-on services, including those from major publishers, have been built using OER content developed by the non-profit publisher OpenStax. Many of these companies are listed as OpenStax Partners. *See* OpenStax Partners, https://openstax.org/partners (last visited Aug. 11, 2019).
[84] Any revenues earned by the major publishers are already included in the market estimate by AAP. While we do not have the information to estimate revenues earned by other OER add-on products, we do not believe that they would be significant in the context of the $3.38 billion market.
[85] The water analogy is apt, given that some bottled water is sourced from tap water, and bottled water is not always better. Mark Baumgartner, *Study: Bottled Water No Safer Than Tap Water*, ABC News (May 3, 2019), https://abcnews.go.com/Business/study-bottled-water-safer-tap-water/story?id=87558.
[86] Cengage, OpenNow, https://www.cengage.com/institutional/opennow/ (last visited Aug. 11, 2019).
[87] McGraw-Hill, Open Learning Solutions, https://www.mheducation.com/highered/learning-solutions/open-learning-solutions.html (last visited Aug. 11, 2019).
[88] Barrett, *supra*.

the best measure of competitive significance. Unit sales, too, make little sense for OER, since there is nothing being sold, and the concept of a unit is predicated on there being a finite supply. OER is unlimited and can be used by anyone.[89] Measurement by student seats may show a nonzero share, but it is still likely to be small. SPARC conducted a survey during the Fall 2018 semester and found that OER was assigned as the primary material 6 percent of courses.[90] Other surveys have found higher percentages, but do not offer precise estimates. A 2018 survey of Chief Information Officers estimated that the percent of classes using OER as a curricular resource was 12 percent,[91] and a 2018 survey of faculty found that the percent who say they use OER as required material in at least one course was 13 percent.[92] Both likely include courses that use OER as a supplement rather than as a primary resource, and the latter is almost certainly inflated by faculty who teach multiple courses but use OER in only one. We have argued that student seats is not a good measure of competitive significance, but either way OER has a small share.

If approved, the merger would further decrease any competitive significance that OER might have had, since the expansion of all-access subscriptions that is likely to ensue will fundamentally change the market. Currently, cost is a strong motivating factor for faculty to adopt OER. One study found that 68 percent of faculty report cost as a perceived benefit of using OER, far exceeding any other reason.[93] All-access subscriptions lower the perceived marginal cost of a publisher's materials to zero, which would remove cost as a reason for faculty to assign OER over traditional materials if they believe students are already subscribed. While some faculty would certainly continue using OER for its pedagogical and academic freedom benefits, those primarily concerned with cost may not. Of course, it would be false to assume that all-access plans will reduce costs permanently, given the industry's history of price inflation. However, any impact of all-access subscriptions on individual faculty decision-making may nevertheless render any potential competitive pressure from OER in any relevant market moot.

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[89] While it may be possible to count the use of OER in terms of statistics such as "downloads" or "hits," it would be difficult to do so accurately. Access and distribution is not restricted, so a single student may download or access an OER multiple times, or a professor may download an OER a single time and distribute it directly to students. Moreover web traffic could come from anywhere in the country or world. We should note that there are print sales of OER content that could be measured, but these numbers are likely vanishingly small compared to the number of unit sales in the new materials relevant market.

[90] Mo Nyamweya, *A New Method for Estimating OER Savings*, SPARC (Dec. 20, 2018), https://sparcopen.org/news/2018/estimating-oer-student-savings/. More information, including the dataset used for the analysis is available at the source.

[91] Kenneth C. Green, *2018 Campus Computing: The 29th National Survey of Computing and Information Technology in American Higher Education*, The Campus Computing Project, at 16 (Oct. 2018), https://static1.squarespace.com/static/5757372f8a65e295305044dc/t/5bd70c94f4e1fc4181923249/1540820120742/CAMPUS+COMPUTING+-+2018+REPORT.pdf.

[92] Seaman, *supra* at 32.

[93] Talea Anderson, et al., *Faculty and Instructor Perceptions of Open Educational Resources in Engineering*, 58 The Reference Librarian 4, 257-277 (Aug. 25, 2017), https://www.tandfonline.com/doi/full/10.1080/02763877.2017.1355768.

3. MERGER WOULD INCREASE BARRIERS TO ENTRY

The college textbook market has been dominated by the same three firms for decades because the barriers to entry are notoriously high. Allowing two of these three firms to merge would raise these barriers even higher, choking off any remaining smaller companies and consolidating the entire market in the hands of just two giants. The merger therefore threatens to substantially lessen competition in these markets, leading to higher prices, decreased variety, and a lower quality experience for students.

3.1 Market History Devoid of Successful Entries

For more than thirty years, the college course materials market has been dominated by the same three firms without a successful major entry. *Publishers Weekly* noted in 2000 that the industry used to be a "collegial community of some two dozen players," but that by the 1990's, it had gone through a series of mergers and buyouts that left it "consolidated to about half a dozen intense competitors, dominated by three companies: McGraw-Hill Higher Education, Pearson Education and [Cengage] Learning."[94] In 2005, the GAO noted that despite there being hundreds of publishers, substantial industry consolidation left over 80 percent of the market in the hands of the top five publishers.[95] Today, the numbers we have presented suggest that almost 90 percent of the market is in the hands of the top three firms.

The *Horizontal Merger Guidelines* give "substantial weight" to the history of a market as evidence of high barriers to entry.[96] While the relative position of each of the three giants has shifted over time, the concentration of power has remained relatively constant, despite the winds that have transformed virtually every other media industry. Any turmoil that major publishers are facing now is not the result of any new force in the market, but instead is a long overdue correction after pushing the inelastic demand of financially distressed students to its breaking point.

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[94] James Lichtenberg, *PW: Thomson Learning Adapts to Market*, Publishers Weekly (July 31, 2000), https://www.publishersweekly.com/pw/print/20000731/19613-pw-thomson-learning-adapts-to-market.html.
[95] U.S. Government Accountability Office, *GAO-05-806,* at 5.
[96] *Horizontal Merger Guidelines*, at § 9. "The Agencies consider the actual history of entry into the relevant market and give substantial weight to this evidence. Lack of successful and effective entry in the face of non-transitory increases in the margins earned on products in the relevant market tends to suggest that successful entry is slow or difficult." *Id*.

3.2 Entry Unlikely To Be Timely or Profitable

The fact that the market is already dominated by a handful of well-established companies sets high barriers to entry. This is amplified by the complex structure of the textbook market, which makes entry exceedingly unlikely to be timely or profitable.

Entry is unlikely to be profitable because of high startup costs and substantial overhead requirements that are difficult to manage without economies of scale. In its 2005 study, the GAO reported analysis that "the consolidation of publishers and a lack of new entrants are largely factors of the enormous investments required to compete in the marketplace" and that "publishers may gain economies of scale and spread their overhead and other costs across more titles."[97]

Marketing in particular is resource-intensive, since adoption decisions are made at the individual professor or department level. This makes factors such as pre-existing relationships, brand recognition, and vendor relationships especially important. Professor James Koch notes in his 2013 analysis of the publishing industry that barriers to entry exist "in the form of significant capital requirements; economies of scale and scope; product differentiation and reputation; contractual relationships with wholesalers, bookstores and authors and the like."[98]

The cost of creating new products is also substantial. According to AAP, creating course materials for a single class can take 24,000 hours of work and cost $500,000 to $3 million.[99] The typical cost of a textbook is often referred to as $1 million.[100] In *United States v. Pearson P.L.C.*, 1999 WL 1705507 (D.D.C. 1999), the government's assessment of barriers to entry is apt:

> *Successful entry involves a costly and time-consuming process in which a publisher must locate an author qualified to write a new textbook, and assemble an editorial staff to edit and develop the textbook. In addition, it must have numerous professors to review the textbook and a large sales staff to market it. Entry is also impeded by the difficulty of challenging the reputation of successful incumbent textbooks.*

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[97] U.S. Government Accountability Office, *GAO-05-806,* at 14.
[98] James Koch, *Turning the Page*, Lumina Foundation (2013). We should note that Dr. Koch also argues that digitization is likely to lower barriers to entry, but was primarily referring to the distribution of digital books versus print books. In 2013, digital content had not yet become the complex array of adaptive software, proprietary platforms, and digital subscriptions that, as we have argued, actually increases barriers to entry today.
[99] Association of American Publishers, Creating Course Materials, https://publishers.org/sites/default/files/uploads/HigherEd/aap_creation_infographic.pdf (last visited Aug. 11, 2019).
[100] Koch, *supra*.

Entry is also notoriously slow, since textbook decisions are typically made on an annual cycle with professors selecting materials each spring for the following academic year. There is also a high cost of switching, since a new textbook requires updating one's curriculum and syllabus. This lengthens the adoption cycle even further, since faculty may wait until the next revision of their current textbook to consider changing to another book, which could be every 3 to 4 years.[101]

Finally, smaller companies that prove successful tend to get acquired by one of the larger firms. This is especially true in the case of digital solutions providers and adaptive software, which are now among the publishers' core offerings. Notable acquisitions include ALEKS by McGraw-Hill in 2013, WebAssign by Cengage in 2016, and Knewton by Wiley in 2019.[102]

3.3 Higher Barriers to Entry

For all of the reasons that the barriers to entry are already high, a merger between Cengage and McGraw-Hill would make these barriers higher. If no recent major entries have occurred in a market dominated by three major players, entry is even less likely to occur in a market dominated by two.

The merger would have a particularly significant effect on raising barriers because Cengage and McGraw-Hill have signaled their intent to offer their combined catalog of 44,000 titles under Unlimited post-merger. Cengage CEO Michael E. Hansen said in an interview, "[T]hink about all the conceivable courses that a student in a higher ed institution can take. We have coverage for more than 99 percent of those courses."[103]

As we have noted, Pearson could likely launch a competing all-access product, but the market would be virtually closed to any other competitor. While the transition away from print may lower some barriers associated with printing and distribution, the all-access model raises insurmountable ones. Even if we took AAP's low estimate of $500,000 per title development cost, it would still cost a startup company $22 billion to develop a comparable catalog, not including the cost of marketing it.

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[101] U.S. Government Accountability Office, *GAO-05-806*, at 3.
[102] Dian Schaffhauser, *The Next Frontier of Adaptive Learning*, Campus Technology (Nov. 14, 2018), https://campustechnology.com/articles/2018/11/14/the-next-frontier-of-adaptive-learning.aspx.
[103] Tony Wan, *In Move to "Unlimited" Pricing Model, Cengage Hopes for a Comeback*, EdSurge (Apr. 24, 2018), https://www.edsurge.com/news/2018-04-24-in-move-to-unlimited-pricing-model-cengage-hopes-for-a-comeback.

3.4 Increased Risk of Further Consolidation

For the same reasons that the merger would raise barriers to entry in the all-access relevant market, it would harm the ability of smaller firms to compete in any of the relevant markets. It is not difficult to see how smaller publishers would struggle to keep up with the level of investment in courseware and marketing costs against faculty who see the perceived value of assigning materials at no marginal cost through a full-catalog subscription.

Over time, there is a substantial risk that all-access products will cause smaller players in the market to wither—and even the more established players Wiley and Macmillan—resulting in eventual failure and acquisition. In fact, Mr. Hansen of Cengage indicated to investors that part of the strategy behind its Unlimited all-access product would be to take share from other smaller publishers:

> *[I]n terms of Unlimited share gains, the reality is there are not just three large publishers in this market, but there are a large number of smaller publishers . . . that are primarily focused on print in this market. So we believe that there's opportunity to continue to take share.*[104]

If the merger is not blocked, the expansion of comprehensive all-access subscriptions will starve out smaller firms, causing further concentration and wiping out any possibility of new competitors.

3.5 OER Does Not Qualify As an Entrant

While the impact of OER has been substantial from a public policy perspective, its growth is best characterized as steady but slow. The OER movement has developed over a period of more than a decade and a half,[105] which could not be characterized as an entry so much as an evolution.

A major factor limiting the growth in OER use is the limited availability of OER content in many courses. The University of Minnesota is the leading source tracking the publication of OER textbooks through its Open Textbook Library, which includes texts published across multiple OER projects. The size of the catalog has grown from 84 in 2013 to 400 in 2016 to approximately 600 in 2019.[106] While this change is significant from the project's launch in 2012, the rate of growth has remained relatively linear, and some of the subjects overlap.

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104 Call Transcript, *supra*.
105 UNESCO, Building Knowledge Societies, Open Educational Resources, https://en.unesco.org/themes/building-knowledge-societies/oer (last visited Aug. 11, 2019).
106 University of Minnesota, Open Textbook Library, https://open.umn.edu/opentextbooks/ (last visited Aug. 11, 2019). Numbers retrieved from public reports.

Renowned OER advocate and researcher David Wiley, Ph.D., recently wrote that "the most generous estimate you could make is that today there are around 300 distinct courses worth of OER."[107] He also noted this was after "20 years and dozens [or] hundreds of millions of dollars of philanthropic, governmental, and institutional investment." While many of these courses are in high-enrollment subjects, it does not compare it to Cengage and McGraw-Hill's 44,000 title combined catalog.

The only OER example that might resemble a successful entry is the non-profit publisher OpenStax. Based out of Rice University, OpenStax launched its open textbook publishing effort in 2012,[108] and it has since published professional-grade open textbooks in 38 high-enrollment college courses. Funded primarily through philanthropic grants, OpenStax's textbooks are estimated to have reached a competitive average 16.5 percent market share in their relevant courses[109] and are used at least at 48 percent of U.S. colleges and by 2.2 million students per year worldwide.[110] In some cases, OpenStax material is assigned for free use, and in other cases it is assigned with commercial add-on products from one of OpenStax's partners (which includes both Cengage and McGraw-Hill).[111]

While it is a clear success story, OpenStax's circumstances are unique and not replicable. As a non-profit based at a university, OpenStax did not face the same barriers to entry that a for-profit firm would. Given its charitable mission and grant funding, OpenStax was not impeded by the fact that entry was likely to require substantial resources and, even if successful, was unlikely to be profitable. Furthermore, the courses OpenStax selected were ripe for disruption, given the significant number of students and notoriously high prices. For example, in 2014, Cengage reportedly sold more than 500,000 copies of its leading introductory calculus textbook—which currently retails for $300[112]—possibly collecting over $100 million in revenue from students.[113] In contrast, OpenStax's calculus textbook, which is co-authored by renowned mathematician Gilbert Strang from the Massachusetts

[107] David Wiley, *From Here to There: Musings About the Path to Having Good OER for Every Course on Campus*, The Open Content Blog (April 25, 2019), https://opencontent.org/blog/archives/5998.
[108] Richard G. Baraniuk, *OpenStax College is Launched!* (Feb. 7, 2012), http://richb.rice.edu/2012/02/07/openstax-college-is-launched/.
[109] Seaman, *supra* at 35.
[110] David Ruth, *48 Percent of Colleges, 2.2 Million Students Using Free OpenStax Textbooks This Year*, Rice University (Aug. 1, 2018), https://news.rice.edu/2018/08/01/48-percent-of-colleges-2-2-million-students-using-free-openstax-textbooks-this-year-2/.
[111] OpenStax Partners, https://openstax.org/partners (last visited Aug. 11, 2019).
[112] Price information retrieved from Cengage website on June 17, 2019 for the hardcover standalone book (ISBN-13: 9781285741550). Cengage, *Calculus: Early Transcendentals, by James Stewart*, https://www.cengage.com/c/calculus-early-transcendentals-8e-stewart/.
[113] John Brownlee, *The House That Calculus Built* (Oct. 15, 2015), https://www.fastcompany.com/3052267/the-house-that-calculus-built. James Stewart reportedly made $25 million in royalties in 2014, which suggests that Cengage's revenue was likely over $100 million, as author royalties are often set at 10-15 percent.

Institute of Technology, is distributed free online and print copies are sold for $33.50 per volume.[114]

There is no denying that OpenStax has been a disrupter in the limited number of courses it serves. The presence of high quality OER that is significantly less expensive puts downward price pressure on existing legacy options available for specific courses. However, to the extent that entry into these courses may have been a possibility for another firm competing on the basis of price, the presence of OpenStax now makes such entry highly unlikely. Furthermore, now that OpenStax has reached its 38 courses, further expansion would require substantial additional philanthropic investment, as each OpenStax book costs about $1 million to develop.[115] Even if OpenStax is successful in securing this funding, it could take years to bring additional titles to market, and the value proposition for further funding will diminish as courses move away from introductory subjects.

As we have discussed earlier, OER also represents a special case, since the content is also available for any competitors to commercialize. In fact, OpenStax's content forms the basis of most of the content offered in the major publishers' OER products, and four out of five of the largest legacy firms are listed as OpenStax Partners offering value-added services.[116] So, while OpenStax shows what a market entry might look like, it also illustrates why it is already exceedingly difficult for a new competitor to challenge the legacy firms. The merger would only raise these barriers higher, which is why it must be blocked to preserve competition.

4. MERGER WOULD EXACERBATE ANTICOMPETITIVE BEHAVIOR

The history of the textbook market is one of anticompetitive behavior. The free market forces that would normally keep prices in check do not function the way they should, and it gives publishers too much power to increase prices at the expense of captive student consumers. The transition to digital and all-access subscriptions will only exacerbate this dynamic, and the merger threatens to substantially lessen competition, leading to higher prices, decreased variety, and a lower quality experience for students.

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[114] OpenStax, Calculus: Volume 1, https://openstax.org/details/books/calculus-volume-1 (last visited Aug. 11, 2019).
[115] Matt Zalaznick, *A Different Textbook For Every Student*, University Business (June 23, 2014), https://universitybusiness.com/a-different-textbook-for-every-student/.
[116] OpenStax Partners, https://openstax.org/partners (last visited Aug. 11, 2019).

4.1 Likelihood of Increased Coordinated Conduct That Harms Consumers

The textbook industry's relentless trend of annual price increases between 1980 and 2016 [117] is a "textbook" example of coordinated conduct. Over the years, the major firms found that it is more profitable to mutually raise prices rather than compete to offer lower prices. Competition was relegated to the features that appealed to faculty, without regard for the cost to students. The result has been a drop in sustainable innovation and significant harm to student consumers. As Mr. Hansen of Cengage told CNBC, "Over time, the industry just ratcheted up the prices — sometimes 10 percent, twice a year — and that led to an unsustainable model."[118]

The merger would only increase the potential for coordinated conduct across all of the relevant markets. This is true on the basis of price, which is already established by the market's history—something the *Guidelines* give particular weight.[119] With only two major firms controlling the vast majority of the market, coordinated conduct could expand to other areas of potential competition. For example, offering more favorable contracting terms or lengthening subscription periods could be an area where multiple firms might compete. However, it seems likely that the post-merger duopoly would find it mutually beneficial to demand a similar set of favorable terms and conditions that make their respective deals more profitable.

Increased coordinated conduct is especially likely in the all-access relevant market. If as we suspect, the post-merger firm launches a combined all-access plan and Pearson follows suit, the market will become a pure duopoly. While it is possible that the two firms might compete for institutions, it is also possible they might find it more profitable to first lock institutions into subscriptions to both plans, then resume their historical rate of coordinated price increases once introductory discounts expire.

To see the future of coordination in the all-access market, we need only look at the past 20 years of academic journal subscriptions. What started in the 1990's as the perceived benefit of subscribing to full catalogs of journals at substantially lower per-title costs, libraries have

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[117] *See* Section 1.1 for further discussion.
[118] Abigail Hess, *6 Simple Things Every College Student Should Avoid Spending Money On*, CNBC (July 2, 2019), https://www.cnbc.com/2019/07/01/simple-things-college-students-should-avoiding-spending-money-on.html.
[119] *Horizontal Merger Guidelines*, at § 7.2. "The Agencies presume that market conditions are conducive to coordinated interaction if firms representing a substantial share in the relevant market appear to have previously engaged in express collusion affecting the relevant market, unless competitive conditions in the market have since changed significantly." *Id.* Since the principal-agent problem that makes coordinated pricing especially possible still exists, there are no changes to market conditions that would lessen the likelihood of price coordination—the biggest change threatening to increase it would be the merger.

been faced with average price increases of 5-15 percent per year for these subscriptions.[120] This model has often been compared to a cable or satellite TV package, where customers often complain of having to pay for unwanted content and initial discounts that quickly give way to locked-in increases. Much like the millions of consumers who have chosen to "cut the cord" on bundled TV services, a growing number of libraries are electing to critically appraise these "big deals." For example, this year the University of California System declined to renew its bundled journal contract with Elsevier.[121]

The *Horizontal Merger Guidelines* recognize that mergers can reduce competition by increasing the "strength, extent, or likelihood of coordinated conduct." This merger would significantly reduce competition in all three of these areas.

4.2 Reduced Incentives for Innovation

The merger would result in enhanced market power that would reduce innovation competition in both the new courseware and all-access relevant markets.[122] The combined firm would have increased market power to push students to use digital subscriptions that offer inferior quality and variety to the *status quo*. While we agree that the market is likely shifting toward digital over time, the merger would also lessen competitive incentives to create innovative solutions that serve the needs of both students and faculty.

Digital subscriptions limit variety by requiring that all students access their materials at the same price, in the same way. Students are not homogenous; they have a diverse range of preferences, budgets, learning styles, lifestyles, and abilities. Students value that under the *status quo*, they can choose from a wide variety of formats and purchasing options on both the new and secondary markets. Print textbooks may come in hardcover, softcover, loose-leaf, and may be purchased or rented. Digital textbooks can be purchased through subscriptions or a la carte, either from the publisher or through various distributors. Students who do not have financial concerns may enjoy the option to purchase glossy print textbooks that they can keep on a shelf and reference throughout their careers, whereas students on a tight budget have the option to use their own market power to shop around for the cheapest option.

In contrast, digital subscriptions are fundamentally different in quality than print textbooks. Students might pay less for a digital subscription, but they get less in return. Unlike purchasing a new print textbook, digital access typically has an expiration date and

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[120] SPARC, Big Deal Cancellation Tracking, https://sparcopen.org/our-work/big-deal-cancellation-tracking (last visited Aug. 12, 2019).
[121] Lindsay McKenzie, *UC Drops Elsevier*, Inside Higher Ed (Mar. 1, 2019), https://www.insidehighered.com/news/2019/03/01/university-california-cancels-deal-elsevier-after-months-negotiations.
[122] *Horizontal Merger Guidelines*, at § 1. "Enhanced market power can also be manifested in non-price terms and conditions that adversely affect customers, including reduced product quality, reduced product variety, reduced service, or diminished innovation."

therefore course materials cannot be retained for future reference, shared with others, or resold. Moreover, the quality of the experience using digital materials depends substantially on a student's access to technology and an internet connection. "Streaming" digital materials can be a frustrating experience on an older device or low-bandwidth connection, since content may take a long time to load or be difficult to read on a low-resolution screen. The reduction in quality would disproportionately affect lower-income students who cannot afford the most updated technology or those living in rural or disadvantaged areas without access to broadband.

Multiple studies have documented that print is still important. About half of students prefer some kind of print material over exclusively digital.[123] Emerging research also shows that the digital format may not, in fact, be better for students, even if they sometimes prefer it. Researchers at the University of Maryland concluded that students "judged their performance higher when engaged digitally, although their actual performance was much better when reading in print."[124] In *Business Insider*, the authors explained:

> *If all students are being asked to do is to understand and remember the big idea or gist of what they're reading, there's no benefit in selecting one medium over another. But when the reading assignment demands more engagement or deeper comprehension, students may be better off reading print.*[125]

Whatever advantages or enhancements there may be with digital materials, a switch to digital subscriptions that is forcibly accelerated by market power gained through this merger may represent a drop in quality for students who prefer to read in print. While the companies may allay some concerns by promising to offer print rentals, renting is not the same thing as owning, and it is unclear how long publishers would continue offering print in the absence of any market pressure to do so. Merging companies' only true competitor, Pearson, has already announced that they intend to phase out print textbooks in favor of digital subscriptions.[126]

Innovation competition is essential to ensuring that publishers offer products that meet the needs of students. However, the merger would reduce the market from three to two

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[123] Jenny Febbo, *Course Material Spending Declines for 2017-18 Academic Year*, National Association of College Stores (Aug. 15, 2018), https://www.nacs.org/advocacynewsmedia/pressreleases/tabid/1579/ArticleID/867/Student-Spending-on-Course-Materials-Declines.aspx.

[124] Lauren M. Singer Trakhman, et. al., *Effects of Processing Time on Comprehension and Calibration in Print and Digital Mediums*, 87 Journal of Experimental Education 1, 101-115 (Dec. 21, 2017), https://www.tandfonline.com/doi/abs/10.1080/00220973.2017.1411877.

[125] Patricia A. Alexander & Lauren M. Singer, *A New Study Shows that Students Learn Way More Effectively From Print Textbooks Than Screens*, Business Insider (Oct. 15, 2017), https://www.businessinsider.com/students-learning-education-print-textbooks-screens-study-2017-10?utm_content=buffer941ef&utm_medium=social&utm_source=facebook.com&utm_campaign=buffer-bi.

[126] Pearson, *Pearson Turns the Page on College Textbooks as Digital Courseware Demand Grows*.

major players, increasing the likelihood of coordinated effects and raising barriers to entry against potential innovators. As a result, the merger would diminish competition leading to products of reduced quality and variety.

4.3 Adverse Effects On the Marketplace of Ideas

We urge the Department to consider the effects of the merger on innovation competition[127] as it relates to diversity of thought and opinion in higher education. Textbooks are not just a commodity; they are expressions of knowledge and information that play an important role in teaching and learning. Publishers are in a position to influence which authors get published, which ideologies and schools of thought get prioritized, and ultimately what information students consume. Competition to offer products that cater to the full spectrum of American thought is vital to a healthy marketplace of ideas.

With a combined catalog of 44,000 titles from 14,000 authors,[128] it is inevitable that the post-merger firm would seek to cull offerings that serve duplicative markets. This would come at the loss of providing multiple viewpoints that are of value to professors and students. Cengage is already signaling its intent to initiate development of fewer new products. A senior vice president said in an interview that Cengage is being more selective about signing authors than in the past.[129] The company published 120 first-edition textbooks in the past four years but is scheduled to publish just 11 in 2020, instead focusing on digital courseware that puts "quality over quantity."[130]

The trend toward prioritizing a smaller number of enhanced products is only likely to be intensified by the merger. Rather than supporting a more diverse product offering that caters to multiple perspectives, the merged firm is more likely to enter into a race to the bottom for the most profitable one-size-fits-all solution catering to the lowest common denominator of academia. Furthermore, the emphasis on all-inclusive subscription packages will disincentivize new development among smaller firms, since fewer professors may not seek out new materials outside of a particular company's catalog.

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[127] *Horizontal Merger Guidelines*, at § 6.4. "The Agencies may consider whether a merger is likely to diminish innovation competition by encouraging the merged firm to curtail its innovative efforts below the level that would prevail in the absence of the merger. That curtailment of innovation could take the form of reduced incentive to continue with an existing product-development effort or reduced incentive to initiate development of new products." *Id*.

[128] Cengage, *Cengage and McGraw-Hill to Merge, Providing Students with More Affordable Access to Superior Course Materials and Platforms* (May 1, 2019), https://news.cengage.com/46/cengage-and-mcgraw-hill-to-merge-providing-students-with-more-affordable-access-to-superior-course-materials-and-platforms/.

[129] Lindsay McKenzie, *Shifting Focus of Publishers Signals Tough Times for Textbook Authors*, Inside Higher Ed (Dec. 12, 2018), https://www.insidehighered.com/news/2018/12/12/switch-digital-first-products-publishers-are-signing-fewer-textbook-authors.

[130] *Id.*

The merger would not just undercut competition in an economic sense, but also potentially in an ideological sense. If the merger were approved, it would effectively place decision-making authority over course materials in the hands of two companies. What if these two companies decided that, for example, publishing conservative perspectives was no longer profitable? What if the personal biases of editorial staff—consciously or unconsciously—influenced their decisions? Publishers are more than just companies; they are channels for distributing knowledge, and there are risks inherent in consolidating control into too few hands.

4.4 No Mitigating Factors

For the foreseeable future, no mitigating factors are likely to constrain the ability of the post-merger firm to raise prices. For example, the *Horizontal Merger Guidelines* specify that the existence of powerful buyers that can leverage their position to demand lower prices may mitigate anticompetitive effects.[131] Save for the small for-profit segment of the market, textbook decisions are still reserved to individual faculty and departments regardless of any deal the institution may or may not have with a publisher. Therefore, the publisher is in a position of power since students will still need to buy the assigned materials one way or another. Institutions may be able to leverage their market power into volume discounts or preferred partnerships, particularly in the all-access subscription relevant market, but they have limited ability to negotiate on the basis that they could substitute one publisher's materials for another's.

5. MERGER COULD GIVE RISE TO THE "FACEBOOK" OF HIGHER EDUCATION

Cengage and McGraw-Hill's proposed merger is a step toward forming a monopoly over higher education data. The future of academic publishing is not just about digital content—it is about the student data that can be collected and how that data can be exploited. Antitrust analysis must consider the impact of this merger data markets—and the severe and irreversible harms that could result for student consumers.

5.1 The Future of Academic Publishing Is Data

A decade ago, major textbook publishers began rebranding as learning technology companies.[132] Three years ago, revenue from digital courseware outpaced revenue from

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[131] *Horizontal Merger Guidelines*, at § 8. "The Agencies consider the possibility that powerful buyers may constrain the ability of the merging parties to raise prices." *Id*.
[132] Cengage, *Thomson Learning Announces New Name*, https://news.cengage.com/corporate/thomson-learning-announces-new-name-%E2%80%93-cengage-learning/ (last visited Aug. 11, 2019).

print textbooks for the first time.[133] Now, major publishers are pushing for large-scale inclusive access fees that automatically subscribe students to digital materials upon enrollment in a course—and the associated costs and terms of use.[134] Now, one has launched an all-access subscription and others are taking steps to become “digital first” with the eventual goal of limiting print. This transition from print textbooks to digital courseware is about more than the format in which students consume content. With the broad and automatic adoption of digital subscriptions, publishers are effectively installing data collecting machines in every student’s hands.

As the course material market transitions to digital, the amount of data that can be harvested, linked, and exploited will grow exponentially. Like most modern digital resources, digital courseware can collect vast amounts of data without students even knowing it: where they log in, how fast they read, what time they study, what questions they get right, what sections they highlight, or how attentive they are. This information could be used to infer more sensitive information, like who their study partners or friends are, what their favorite coffee shop is, what time of day they commute from home to school, or what their likely route is.

“We now have real time data, about the content, usage, assessment data, and how different people understand different concepts,” said Cengage CEO Michael E. Hansen in an interview with *Publishers Weekly*.[135] McGraw-Hill claims that its SmartBook program collects 12 billion data points on students.[136] Pearson now allows students to access its Revel digital learning environment through Amazon's Alexa devices[137]—which have been criticized for gathering data by “listening in” on consumers.[138]

Once gathered, these millions of data points can be fed into proprietary algorithms that can classify a student’s learning style, assess whether they grasp core concepts, decide

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[133] Carl Straumsheim, *Digital Overtakes Print*, Inside Higher Ed (Mar. 30, 2016), https://www.insidehighered.com/news/2016/03/30/publishers-report-digital-sales-overtaking-print-sales.

[134] Lindsay McKenzie, *‘Inclusive Access’ Takes Off*, Inside Higher Ed (Nov. 7, 2017), https://www.insidehighered.com/news/2017/11/07/inclusive-access-takes-model-college-textbook-sales.

[135] Andrew Albanese, *Frankfurt Book Fair 2018: Cengage CEO Michael Hansen on the Company’s Digital Switch*, Publishers Weekly (Oct. 10, 2018), https://www.publishersweekly.com/pw/by-topic/international/Frankfurt-Book-Fair/article/78276-frankfurt-book-fair-2018-cengage-ceo-michael-hansen-on-the-company-s-digital-switch.html.

[136] Ki Mae Heussner, *McGraw-Hill’s New Adaptive Ebooks Aim to Adjust to Students’ Learning Needs*, GigaOm (Jan. 8, 2013), https://gigaom.com/2013/01/08/mcgraw-hills-new-adaptive-ebooks-aim-to-adjust-to-students-learning-needs/.

[137] Amazon Web Services, *Pearson Announces New Alexa Skill at Imagine EDU* (July 12, 2019), https://aws.amazon.com/blogs/publicsector/pearson-announces-new-alexa-skill-at-imagine-edu/.

[138] TJ McCue, *Alexa is Listening All the Time, Here’s How to Stop It*, Forbes (April 19, 2019), https://www.forbes.com/sites/tjmccue/2019/04/19/alexa-is-listening-all-the-time-heres-how-to-stop-it/#7545a2fe5e2d.

whether a student qualifies for extra help, or identify if a student is at risk of dropping out. Linked with other datasets, this information might be used to predict who is most likely to graduate, what their future earnings might be, how a student identifies their race or sexual orientation, who might be at risk of self-harm or substance abuse, or what their political or religious affiliation might be. While these types of processes can be used for positive ends, our society has learned that something as seemingly innocent as an online personality test can evolve into something as far-reaching as the Cambridge Analytica scandal. The possibilities for how educational data could be used and misused are endless.

Cengage and McGraw-Hill's proposed merger is a far-reaching and potentially irreversible step toward forming a monopoly over higher education data. Cengage alone claims to provide course materials to 11 million of the 20 million students in the U.S.,[139] and the strategy of the merger is focused on transitioning the market to digital and expanding its customer base.[140] After a decade of struggling to entice individual students to choose digital textbooks over the secondary print market, the expansion of inclusive access fees is switching students over by the classroom.[141] The all-access model furthers the potential data collecting opportunities by giving students access to more content and bundled services. While the initial strategy behind the aggressive shift to digital is clearly to increase revenue by eliminating the secondary market, it seems clear that data is part of the long-term plan. With the proposed merger, the potential data empire to be collected is at least twice as big, and can be collected faster given Cengage's first mover advantage in the all-access subscription market.

Recently, regulators in various jurisdictions have started to probe the competition and consumer benefit issues posed by companies collecting, analyzing and selling (directly or indirectly) data and analytics. This is evident in the Department's own investigation into technology giants Amazon, Apple, Google, and Facebook.[142] The higher education courseware market is susceptible to the very same set of issues, and the proposed merger of Cengage and McGraw-Hill is a step toward exacerbating them.

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[139] Cengage, *University of Missouri System Chooses Cengage Unlimited Subscriptions to Save Students Money on Course Materials*.
[140] Cengage, *Cengage and McGraw-Hill to Merge, Providing Students with More Affordable Access to Superior Course Materials and Platforms*.
[141] Lindsay McKenzie, *'Inclusive Access' Takes Off*, Inside Higher Ed (Nov. 7, 2017), https://www.insidehighered.com/news/2017/11/07/inclusive-access-takes-model-college-textbook-sales.
[142] Jack Kelly, *Justice Department is Investigating Google, Apple, Facebook, and Amazon for Monopolistic Activities*, Forbes (July 24, 2019), https://www.forbes.com/sites/jackkelly/2019/07/24/justice-department-is-investigating-google-apple-facebook-and-amazon-for-monopolistic-activities/#635d5889ba6b.

5.2 "Captive Market" For Student Data Increases Risks

Students are not only a "captive market" in terms of the cost of textbooks, they are a captive market in terms of their data. The same anticompetitive behavior that arose in the relevant market for course materials is bound to repeat itself in the relevant market for student data.

As the market shifts toward inclusive access fees and all-access subscriptions, students increasingly will be required to use digital course materials as a condition of enrolling in a course. Even if a student is not automatically subscribed, they may be enrolled in a course using digital homework, where a portion of a student's grade depends on purchasing an access code, accepting the terms of use, and potentially surrendering data in the process of completing assignments. This is a new dimension of the principal-agent problem. In the same way that it is a foregone conclusion that students will need to purchase assigned materials regardless of the price, it is also a foregone conclusion that they will need to accept the terms of use.

The graph of textbook prices since 1980 in Section 1.1 illustrates what can happen when publishers engage in coordinated pricing practices in a market where consumers have little power, as we discussed in Section 4.1. The same problem could repeat itself in terms of the ever expanding permissions granted under terms of use. Just as professors are sometimes unaware when the price of a textbook goes up, they may not be aware when the terms of use change in a way that may be unacceptable to their students. Therefore, there is potential for publishers to inflate the permissions they require students to grant in exchange for using a digital textbooks in the same way that they have inflated prices through coordinated behavior. Students will not only be paying in dollars and cents, but also in terms of their data.

5.3 Market Concentration Risks Significant Privacy Violations

Further concentration of the relevant data market will negatively impact consumers by increasing the potential for privacy violations.

It is common sense that the more data a company controls, the greater the risk of a breach. Recent experience demonstrates that no company can claim to be immune to the risk of data breaches, even those who can afford the most updated security measures.[143] The size or wealth of a company has proven no obstacle to potential hackers, and in fact larger companies may become more tempting targets. Allowing more student data to

[143] For a list updated to March 2019, please *see* Information is Beautiful, World's Biggest Data Breaches & Hacks, https://www.informationisbeautiful.net/visualizations/worlds-biggest-data-breaches-hacks/ (last visited Aug. 11, 2019).

become concentrated under a single company's control increases the risk of a large scale privacy violation.

As a case in point, Pearson recently made the news for a major data breach. According to reports, the breach affected hundreds of thousands of U.S. students across more than 13,000 school and university accounts.[144] Pearson reports that no social security numbers or financial information was compromised, but this is not the only kind of data that can cause damage. Compromising data on educational performance and personal characteristics can potentially affect students for the rest of their lives if it finds its way to employers, credit agencies, or data brokers.

While state and federal laws provide some measure of privacy protection for student records, including limiting the disclosure of personally identifiable information, they do not go far enough to prevent the increased risk of commercial exploitation of student data or protect it from potential breaches.

The primary federal law concerning disclosure of student information is the Family Educational Rights and Privacy Act (FERPA) (20 U.S.C. § 1232g), which governs the handling of students' education records and the disclosure of their personally identifiable information.[145] This law was codified in 1974, long before our society had conceived of the possibility of educational technology, let alone the vast amounts of data that could be generated and captured through the learning process. A study by Fordham University's Center on Law and Information Policy found "an overall lack of transparency in the student information commercial marketplace and an absence of law to protect student information."[146]

FERPA covers a limited amount of information classified as "education records," and contains exemptions that permit the disclosure of personally identifiable information without consent under certain circumstances. The exemption for "school officials" is often used to disclose personally identifiable student information to relevant third-party service providers including textbook publishers.[147] While there may be practical reasons why this is

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[144] Parmy Olson, *Pearson Hack Exposed Details on Thousands of U.S. Students*, The Wall Street Journal (July 31, 2019), https://www.wsj.com/articles/pearson-hack-exposed-details-on-thousands-of-u-s-students-11564619001.

[145] 20 U.S. Code § 1232g. FERPA applies to "education records," which are records that are: (1) directly related to a student; and (2) maintained by an educational agency or institution, or by a party acting for the agency or institution. Covered entities may not disclose personally identifiable information from a student's education record without consent, unless the disclosure satisfies one of the law's list of exceptions. *Id.*

[146] Center on Law and Information Policy at Fordham Law School, *Transparency and the Marketplace for Student Data* (June 6, 2018), *available at* https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3191436.

[147] 20 U.S. Code § 1232g(b)(1)(A).

necessary, such as creating login accounts, it means that third parties are able to personally identify students and may, in some circumstances, begin building data profiles on them.

FERPA protection does not extend to data that publishers collect directly from students, because publishers are not subject to the law. Third party contracts with FERPA-covered educational institutions may require the de-identification and destruction of FERPA-protected information, but this may not extend to other information, such as usage data collected by publishers through digital courseware, data surrendered voluntarily by students, or other information collected under the applicable terms of use. Even information that has been de-identified to the standards established by the U.S. Department of Education and other laws is not safe, since examples from other sectors show data can be re-identified using artificial intelligence and legally available information.[148]

Finally, as Cambridge Analytica has illustrated, companies can and do make mistakes and distribute personally identifiable data in violation of contracts or applicable law. The $5 billion fine imposed on Facebook by the Federal Trade Commission shows how companies can willfully violate privacy laws or can fail to monitor how data is sold or made available to third parties.[149] Companies—even those with sophisticated administrative, physical and technical safeguards—are still the subject of hacks that lead to sweeping data breaches. Of course, these risks are inherent in any collection and analysis of data, but larger companies can affect many more students through failures to protect data from unauthorized access—as well as improperly or illegally authorized access.

Allowing the merger would increase the risk of harm to students by putting too many eggs in too few baskets.

5.4 Adverse Effects on Competition for Algorithms

The collection and control of data is only part of the equation. Algorithms and analytics services that interpret the data are also an important part of the relevant student data market.

Algorithms are complex sets of rules that are used to perform calculations and are used widely throughout technology to personalize services based on user data. Algorithms decide what is shown on your Facebook feed, what appears at the top of Google's search results, and which movies Netflix recommends you watch next. Algorithms are already

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[148] Boris Lubarsky, *Re-Identification of "Anonymized" Data*, 1 Geo. L. Tech. Rev. 202 (2017), https://georgetownlawtechreview.org/re-identification-of-anonymized-data/GLTR-04-2017/.
[149] Federal Trade Commission, *FTC Imposes $5 Billion Penalty and Sweeping New Privacy Restrictions on Facebook* (July 24, 2019), https://www.ftc.gov/news-events/press-releases/2019/07/ftc-imposes-5-billion-penalty-sweeping-new-privacy-restrictions.

appearing in higher education, including in the admissions process, plagiarism checking, and academic planning.

Algorithms are embedded in some digital courseware as well, including the "adaptive learning" products of the merging companies and some of their competitors. These algorithms can be as simple as grading a quiz, or as complex as changing content based its assessment of a student's personal learning style. Dr. Banerjee of McGraw-Hill explains:

> *Use of data science and technologies allows us to create [a personal learning] environment at scale. The software can be so well optimized that it literally changes the questions and experience of what a student is reading and practicing. You and I might be in the same classroom taking the same math class, but the practice problems being shown to us might be completely different based on our individual states of understanding and what we need to improve on.*[150]

While algorithms can produce positive outcomes for some students, they also carry extreme risks, as it has become increasingly clear that algorithms are not infallible. A recent program held at the Berkman Klein Center for Internet and Society at Harvard University concluded categorically that "it is impossible to create unbiased AI systems at large scale to fit all people."[151] Furthermore, proprietary algorithms are frequently black boxes, where it is impossible for consumers to learn what data is being interpreted and how the calculations are made—making it difficult to determine how well it is working, and whether it might have made mistakes that could end in substantial legal or reputational consequences.[152]

Incorrect analysis by an algorithm can, quite literally, impact a student for the rest of their life. For example, if a student gets wrongly tagged by adaptive learning software as a particular type of learner, they may be counseled to take specific classes, avoid certain majors, or receive content presented in a certain way that affects their grade point average. Information collected through algorithms can also affect other products offered by the same publisher or potential third parties. For example, Cengage Unlimited includes a set of career tools designed to help students look for jobs.[153] What if Cengage used information gleaned from a student's use of course materials in order to customize career tools, potentially affecting what opportunities they consider? Worse, if this data finds its way,

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[150] Binghamton University State University of New York, *Points of View: Nana Banerjee, President and CEO of McGraw-Hill* (April 18, 2019), https://www.binghamton.edu/news/story/1780/points-of-view.
[151] Hilary Ross, *What We Created During Assembly 2019*, Berkman Klein Center (July 11, 2019), https://news.cengage.com/46/cengage-offers-college-students-free-access-to-career-resources-with-cengage-unlimited-subscription/.
[152] The challenges with algorithms in higher education are further explored in SPARC's landscape analysis. *See* Claudio Aspesi, et. al., *Landscape Analysis: The Changing Academic Publishing Industry - Implications for Academic Institutions*, SPARC (Mar. 28, 2019), https://osf.io/preprints/lissa/58yhb/download.
[153] Ross, *What We Created During Assembly 2019*.

legally or illegally, to prospective employers, it may wrongly disqualify some students from being hired in certain companies or misclassify them in other ways.

Competition incentivizes companies to produce the highest quality products, to be accountable to their consumers, and to minimize risks that could harm their reputation. It is vital to preserve competition when it comes to education algorithms. We have discussed in Section 4.2 and 4.3 how further concentration in the market will reduce innovation competition, reducing product variety and seeking to serve the lowest common denominator possible. For algorithms, this is especially relevant to the question of biases and approaches to learning. The merger would allow just two companies to control the rules that decide how a student learns, which could potentially impact students' entire lives based on how the outputs are used.

The high risk of coordinated behavior is also significant in the algorithm relevant market. Reducing the number of competitors increases the risk that they will engage in practices that are mutually profitable, which may include avoiding questions about transparency and accountability. Multiple products make it possible to run a dataset through multiple analyses to confirm the results, and competitive pressure will push providers to be more careful about the products they create. In a world where only two—or potentially one—publisher controls all of the algorithms, the biases of a specific product could have an outsized effect with little recourse for consumers.

5.5 Preventing the Next "Facebook" From Emerging in Higher Education

One lesson learned from the rise of technology giants like Facebook is that preventing platform monopoly from forming is far simpler than breaking one up. Given the vast quantity of data that the combined firm would be in a position to capture and monetize, there is a real potential for it to become the next platform monopoly, which would be catastrophic for student privacy, competition, and choice.

For decades, the college course material market has been split between three giants. There is a large difference between a market split three ways and a market split two ways. As these companies aggressively push toward digital offerings and data analytics services, a divided market will limit the size and comprehensiveness of the datasets they are able to amass, and therefore the risk they pose to students and the market. So long as publishers are competing to sell the best products to institutions, and there is significantly less risk of too much student data ending up in one company's hands.[154]

With multiple players in the market, there is an opportunity for companies to compete on the best terms and conditions to protect student data. By keeping the market status quo,

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[154] The risk remains in the private for-profit higher education sector but, as we have noted, this is a small portion of the market.

there may even be opportunities for smaller companies to compete on the basis of offering stronger privacy protections and better terms of use that push the market to be better for consumers. Institutions will play an increasingly important role in negotiating ethical terms of use for data on behalf of their faculty and students, and could potentially leverage their power as buyers to demand better terms and conditions. The merger would substantially diminish the competitive incentives for firms to negotiate.

As the law in this area is still being settled, the single most effective way to avoid the kind of problems that have emerged around Facebook and others is to preserve competition in relevant data markets to prevent data giants from forming in the first place. The merger between Cengage and McGraw-Hill could give rise to the next data giant, and therefore must be blocked.

6. MERGER RESULTS IN NO EFFICIENCIES

The merger between Cengage and McGraw-Hill will not result in any significant efficiencies. In fact, because the merger would create an anticompetitive environment that would suppress innovation,[155] it would lead to less efficiency than the current market.

6.1 Less Innovation Lowers Efficiency

As we have explained in Section 4, the merger is likely to reduce incentives to innovate by lowering competition and increasing the potential for coordinated conduct. The post-merger market is likely to make an irrevocable shift to all-access digital subscriptions that incentivize one-size-fits-all products both in terms of the format students consume and the subject matter viewpoints the materials express. Further, the market has a history of coordinated pricing that favored short-term profits over long-term innovation, which led to the current unsustainability of the industry. The merger will reduce the number of competitors, which only increases the potential that the same cycle will repeat itself. These factors conspire to suppress innovation competition.

6.2 No Proof of Cost Savings For Students

We urge the Department to be especially skeptical of any claims that prices will be lower for students. The companies have presented no public evidence that proves that digital subscription prices will in fact be lower for all students (especially those who would otherwise seek the secondary market), nor can they prove that any lower prices will be sustained given the industry's history of increasing prices at every opportunity.[156] The companies have indicated that the secondary market is the primary factor holding prices down, but have explicitly signaled that they intend to close the secondary market within a

[155] Further discussed in Sections 4.2 and 4.3.
[156] Further discussed in Section 4.1

matter of years.[157] The *Horizontal Merger Guidelines* specify that "[e]fficiency claims will not be considered if they are vague, speculative, or otherwise cannot be verified by reasonable means."[158] Any claims that prices will remain low after the secondary market is closed are pure speculation and unverifiable, and should therefore be disregarded.

Even if it were granted *arguendo* that the combined firm's digital subscription prices may be lower, it would still not qualify as an efficiency, since lower prices would "rest on reductions in product quality or variety that customers value."[159] As we explained in Section 4.2, digital subscriptions are inherently different in quality than print books that can be owned, and a one-size-fits-all subscription model limits variety in the market that students value.[160] The loss of quality and variety *harms* efficiency.

6.3 No Cognizable Efficiencies

Finally, we want to underscore that any efficiencies the companies may claim should only be considered insofar as they are "cognizable" and are unlikely to be "accomplished in the absence of the merger."[161] Both companies have consistently and separately claimed that they are moving in the direction of digital subscriptions, adaptive learning, and lower prices prior to the merger—which was said to have "[come] together in the past few months" prior to the announcement.[162] Needless to say, the elimination of a head-to-head competitor does not count as an efficiency.

7. THE MERGER MUST BE BLOCKED

The proposed merger between Cengage and McGraw-Hill is a three-to-two merger in a market with a history of rapid, coordinated price increases, high barriers to entry, and unsustainable practices that have harmed student consumers. If the merger is allowed, it would substantially lessen competition in at least three relevant markets: the overall course materials market, the all-access subscription market, and the student data market. The merger exceeds established thresholds for presumptive illegality in at least one of these markets, and we have demonstrated substantial harm to competition in each of them. There is no remedy sufficient to mitigate the negative effects of this merger, and it must be blocked in its entirety.

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157 Further discussion in Section 2.4.
158 *Horizontal Merger Guidelines*, at § 10.
159 *Horizontal Merger Guidelines*, at § 10. "[P]urported efficiency claims based on lower prices can be undermined if they rest on reductions in product quality or variety that customers value." *Id.*
160 Further discussed in Section 4.2.
161 *Horizontal Merger Guidelines*, at § 10. "The Agencies credit only those efficiencies likely to be accomplished with the proposed merger and unlikely to be accomplished in the absence of either the proposed merger or another means having comparable anticompetitive effects." *Id.*
162 Cara Lombardo, *McGraw-Hill to Merge with Rival Textbook Publisher*, The Wall Street Journal (May 1, 2019), https://www.wsj.com/articles/mcgraw-hill-cengage-plan-all-stock-merger-11556683590.

7.1 No Remedies Are Sufficient in Any Relevant Market

There is no remedy for the dire and irreversible effects this merger would have on the relevant student data market. As we have laid out in Section 5, whether it is raw student data, algorithms, or other possible products, allowing control of too much data into too few hands runs the risk of creating the next data giant that grows beyond the market's control. The experience with existing technology giants underscores that no amount of oversight, regulation, or monitoring can anticipate or prevent every unforeseen effect that a platform monopoly can have on users and the marketplace. The best time to address outsized data giants is before they form, which is why the merger must be stopped.

There is no remedy that would prevent the anticompetitive impact the merger would have on the all-access subscription relevant market. As we have explained in Sections 2.1 and 4.1, the merger is likely to give rise to a pure duopoly that is likely to revive the industry's history of coordinated pricing behavior that inflated prices more than 700% since 1980. Moreover, this would effectively close the market to competition for smaller firms without comprehensive offerings, who cannot compete with the marginal cost of materials included in an all-access subscription—eliminating any potential challenger who might compete on the basis of cost once all-access prices inevitably begin to rise. Even the downward pressure from OER and the secondary market will be rendered moot by the all-access relevant market, removing any remaining competition to keep prices under control. The proposed merger would have extraordinary negative effects on competition in the all-access market, and therefore must be blocked.

It is difficult to imagine any remedy that would maintain competition in the new course material relevant market. As we discussed in Section 2.1, this merger would put 45 percent of the relevant market into a single firm's hands, far exceeding the thresholds established by *Philadelphia National Bank*. It would generate an increase of more than 1000 points to the HHI, indicating a flagrant increase to market consolidation from three large firms to two. Moreover, the next-largest firms are so small, that even a significant divestiture is likely to increase the HHI well above the 200 point threshold, and is almost certain not to remedy the anticompetitive effects in the all-access market, which will raise barriers to entry impossibly high for any competitor without a comprehensive catalog.

7.2 Traditional Divestiture Is Insufficient in Every Relevant Market

While we remain firm that the merger must be blocked in its entirety, should the Department decline to take action against the merger, we strongly urge the Department not to settle for a traditional remedy. Merely requiring the companies to divest overlapping titles to a smaller competitor is destined to fail, given that the merger will further raise high barriers to entry and effectively block all competitors besides Pearson from the all-access market. Any titles that the merging firms divest to smaller firms have the potential to get gobbled back up by the larger firms as all-access plans starve smaller players out of the market. This merger will make it impossible to preserve competition by traditional means.

If the Department insists on approving the merger, the only remedy that may preserve some form of competition in the new course material relevant market would be the requirement of the merging companies to fund the development of open educational resources (OER). Since OER are released under an open license that permits any student to use the content for free and any firm to build value-added products, OER offer more sustainable competition than simply divesting old titles to a smaller firm. Expanding the ecosystem of OER content would provide some measure of downward price competition to hold prices in check—which will become especially important once the industry succeeds in eliminating the secondary market—and it will create opportunities for smaller firms to compete without facing the high cost of developing core content in order to enter the market.

While no remedy can offset the harms the merger will cause in the all-access or data relevant markets, the only way of preventing even some of the harms in the new course material relevant market would be an investment in OER large enough to counteract the loss of a third competitor. We suggest that the merging firms should be required to grant $300 million to colleges and universities to create, openly license, and sustain OER for 300 courses in which Cengage and McGraw-Hill hold competing titles. This could double the estimated 300 courses for which OER is currently available,[163] and ensure that there is a measure of price competition preserved in courses where the companies would have otherwise competed head-to-head.

$300 million is approximately the cost synergies that the companies claim they will achieve annually by year three of the merger,[164] so would simply use some of the money that they allegedly will save through the merger to offset a small portion of the anticompetitive effects the merger will cause. Institutions granted funding could even use it to purchase unwanted titles from the merging companies if they determined that the content serves the needs of their students. Many institutions house entities that would be qualified to manage the process of developing and sustaining OER, including Rice University's OpenStax and any number of university presses.

Under the Clayton Act, competition must be protected in *all* relevant markets, not just some. We want to reiterate that there are no remedies that will mitigate any of the negative impact on the all-access and student data relevant markets, and this potential remedy is still insufficient to counteract the significant harm to competition in the new course material market. The only solution is to block the merger in its entirety.

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[163] Wiley, *supra*.
[164] Cengage, *Cengage and McGraw-Hill to Merge, Providing Students with More Affordable Access to Superior Course Materials and Platforms*.

7.3 Conclusion

In this document, we have laid out a comprehensive case for why the merger between Cengage and McGraw-Hill must be blocked. It is a three-to-two merger that will significantly reduce competition, increase barriers to entry, stifle innovation, and harm consumers in multiple relevant markets. It violates thresholds established under the Clayton Act and is presumptively illegal. No remedy can overcome the irreparable harm this merger would do to competition, and by extension, student consumers. We urge the Department in the strongest possible sense to block Cengage and McGraw-Hill from merging.