



Turning the page

An economic analysis of the market for textbooks:
Current conditions, new developments and policy options

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Executive summary

The market for college textbooks and related materials is in ferment. Innovations and new technologies bid to overturn long-standing positions of market power enjoyed by publishers, book distributors and bookstores. In particular, the advent of enhanced shopping capabilities on the Internet has made it possible for students to discover many alternative ways to acquire needed textbooks. Now, students are able to weigh the price of those alternatives against other factors such as their learning styles, the quality of the item, their ownership of the item after the term ends and whether they will be able to resell it.

It seems likely that these new student shopping capabilities will increase the price sensitivity (“price elasticity”) of students, which historically has been quite low. The demand side of the textbook market looks very much like the market for pharmaceuticals, where demand is highly inelastic. The individuals (professors and physicians) who tell consumers what items they should purchase aren’t the people (students and patients) who actually pay for the items. Further, evidence reveals that most professors and physicians don’t know as much as they should about the prices of the items they are prescribing.

As a consequence, from December 2002 to December 2012, the Consumer Price Index for all urban workers (CPI-U) grew by an average of 2.38 percent annually, but the sub-index for college textbooks increased an average 6.31 percent annually (2.65 times as much). This past year (2012), the CPI-U grew about 2 percent, but the sub-index for textbooks grew 8 percent

(a rate of increase higher than that implied by Student Monitor data and reported by college bookstores). However, it must be noted that the CPI-U textbook index does not include any rental or used book prices, which account for well more than half of all student textbook purchases. Thus, there is some reason to question the usefulness of the current CPI-U textbook price index. In any case, it remains to be seen whether innovations in textbook markets such as e-books will curtail textbook price increases in the future.

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Data gleaned from publishers and bookstores suggest that approximately 30 percent of college students do not purchase textbooks required for specific classes. Instead, they share books, go to the library, use photocopies, use a different edition or simply go without. When students do purchase a textbook, Student Monitor data for fall

2012 indicate that only 33 percent purchase a new print version, while 42 percent buy a used print version, and 15 percent rent a print version. E-books, whether purchased new or rented, account for only 10 percent of the market, and student reaction to them thus far has been mixed.

Moving to the supply side of the textbook market, it is fair to say that the textbook publishing market is highly concentrated. At Indiana University, the three largest publishers accounted for 64 percent of all dollars spent on required textbook materials in 2012. The national four-firm concentration ratio in 2008 was 87.5, ranking textbook publishing as one of the more concentrated manufacturing markets in the United States — along with highly visible markets such as health insurance, search engines, wireless telecommunications and soft drink

production. The preferred seller concentration measure of the U.S. Department of Justice (DoJ) — the Herfindahl Index — was 2,522 for the textbook publishing market in 2008. The DoJ considers any Herfindahl Index above 2,500 a signal of a “highly concentrated” market in which anti-competitive behavior is more likely to occur. According to the DoJ, this behavior might include high prices, reduced output and diminished innovation.

Whatever one’s view concerning output and innovation in the textbook publishing market, there is abundant evidence that textbook prices have risen much more rapidly than prices in general for at least the past decade.

Publishers and bookstores augment their market power by bundling textbook items into learning packages they seek to convince students to purchase. A textbook bundle may include a new, printed version of the textbook; electronic access to the textbook; learning support items such as a workbook and exercises, plus a DVD. Federal law now requires publishers and bookstores to offer students the opportunity to unbundle such packages and to purchase *a la carte* any item they wish. Even so, some students do not understand that they are able to rip the plastic cover off the bundle and do so. Further, publishers and bookstores sometimes cleverly assign different ISBN numbers to bundled textbook packages on each campus. This makes it difficult for students to engage in comparison pricing on the Internet and consequently reduces their price elasticity.

It has long been the case that publishers have issued new editions of textbooks every few years. While there certainly are legitimate academic reasons to publish new editions, one of the consequences of doing so is that the new editions render obsolete copies of any

older editions. Bookstores usually refuse to buy back older editions of textbooks from students, forcing them to purchase the more expensive new edition. E-books represent a promising new textbook mode, but digital rights-management techniques enable publishers to turn off digital access at the end of an academic term. This is a stronger and more immediate form of

artificial obsolescence than publishers have enjoyed with print textbooks. Against this, both Amazon and Apple have announced plans to develop marketplaces where used e-books can be resold.

Most publishers selling popular books offer international editions along with the conventional U.S. editions. The international editions, which typically closely parallel the U.S. editions in content, often feature prices well below those of the U.S. editions. In March 2013, the U.S. Supreme Court ruled that the doctrine of “first sale” applies to textbooks purchased outside the United States, opening the

way for the large scale re-importation of textbooks into the United States. Enterprising individuals now will be able to arbitrage textbook price differences between the U.S. and international editions; likely, this will result in a decline in U.S. prices and an increase in international prices. The judicial decision also may accelerate the move of publishers away from print textbooks into digitized textbook materials that can be licensed. Licenses give publishers more tools to prevent textbook resale.

Several promising institutional innovations have appeared on the horizon, led by the 110,000-student Indiana University system, the Internet2 group and the 426,000-student California State University system. IU has negotiated sharp price discounts with publishers for digitized versions of textbooks and related digital

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support such as simulations by guaranteeing that every student in a course will purchase a copy of the digitized materials. Students are charged the equivalent of a laboratory fee to pay for digitized materials. This approach has become known as the “course fee” model and clearly reduces annual student expenditures on textbooks.

In spring 2013, 10,000 students in 250 course sections were registered in “course fee” model course sections at IU, and the university believes these students saved up to \$200,000. However, reactions to this innovation reveal that there is considerable work to be done among students and faculty before this approach is likely to be adopted widely. Students have had mixed reactions to e-books, and there appears to be a learning process attached to their use; student reactions improve as they become more accustomed to e-book use. Incentives for faculty to expend the effort necessary to extract the full benefits of e-books apparently have not been sufficient to cause many to do so. This, in turn, may account for some of the lukewarm response of students to e-books; undertrained or unengaged faculty members do not use all of the features of e-books, and hence, many students find e-books disappointing.

Perhaps most important, IU has invited any interested institution to “free ride” on its experience. IU will share its experiences, software, policies, and billing and accounting techniques with any institution that wishes to move ahead in this arena.

The user-friendly Affordable Learning Solutions (ALS) website of the 426,000-student California State University (CSU) system makes it easy for faculty to adopt less expensive textbooks and for students to be able to choose from a variety of textbook modes, including e-books and e-book rentals. Like IU, the CSU system has negotiated lower prices with many major publishers; student use of the site is heavy. ALS currently affects more students and faculty than any other single textbook innovation in the United States.

Other interesting textbook developments (both profit and nonprofit) such as CourseSmart, Coursera, Apple and Flat World Knowledge offer alternative ways to provide digitized educational materials and textbooks to students and faculty. Such innovations represent disruptive influences in the market for textbooks, but it is still too early to judge their results.

CourseSmart is a privately held company founded in 2007 by five of the largest textbook publishers (Cengage, MacMillan, McGraw-Hill, Wiley and Pearson). It aims to create the world’s largest library of e-texts and digital course materials. Probably, it is the world’s largest vendor of e-texts. CourseSmart asserts that its catalog now includes 20,000 textbooks representing 90 percent of all textbooks in use. It claims that it can save students up to 60 percent on the price of a new print textbook.

Coursera is an organization of 33 universities that offers 211 online courses under the aegis of Coursera. Its relevance to textbooks is that publishers and companies such as Apple will have a strong interest in supplying textbooks and course materials to Coursera students, who potentially could be very numerous. The 33 institutions involved have the resources to make Coursera a success, but they must find a viable business model that enables them to cover their costs.

Whenever Apple expresses interest in a market, it is wise to pay attention. In January 2012, Apple declared that it was going to reinvent the conventional textbook by making it possible for faculty members to put their syllabi, lecture videos, audio recordings and e-textbooks in one customized spot for students. Apple’s software, iBooks Author, will be the vehicle for this. However, as usual, the software is designed to route users to other Apple products such as iPads and iTunes. Apple’s disclosure that it intends to sell existing textbooks (albeit at the K-12 level) as e-books for a price of \$15 per copy should have been a wake-up call for existing publishers, textbook vendors, and Internet content and delivery platforms. If and when Apple begins to do the same for college-level textbooks, it should have a powerful, disruptive impact on that market.

Flat World Knowledge (FWK) is the world’s leading publisher of open textbooks and digital supplements, and it publishes 115 books under Creative Commons Non-Commercial Share-Alike licenses, including 69 in business and economics and 32 in the social sciences and humanities. FWK’s ambition is to publish an open textbook for each of the 125 most heavily enrolled college courses by 2014. The company reports that its textbooks have been adopted at 2,000 institutions and used by 300,000 students. FWK provides an easy-to-use platform so faculty can modify books and deliver customized versions to students if they wish to do so. As

is the case with the software used at Indiana University, FWK students have the ability to create, share and even sell study resources to one another. FWK announced in November 2012 that it was moving away from a pure zero price textbook pricing model and has begun to sell institution-wide licenses priced at about \$20 per student. FWK's experience underlines the difficulty that most open-source textbook providers have in developing a viable, long-term business model.

The public policy options available to the federal government in the area of textbooks realistically are limited to leveraging its threat to limit the federal financial support (financial aid, research funding) going to colleges if colleges do not adhere to federal rules. There have been very few calls for the federal government to start producing open-source textbooks or to impose price controls. Ironically, the federal government actually is part of the textbook-pricing problem; its financial aid

formulas have tended to ratify and encourage textbook and tuition price increases.

Organizations such as the Hewlett Foundation and the Bill & Melinda Gates Foundation have been generous in funding innovations relating to digitized information and textbooks (for example, the Open Course Library), as have a few state governments. Ultimately, however, there is no free lunch in textbook markets. Virtually all participants in this arena are searching for a viable business model, one that will provide sufficient incentives to authors, publishers, bookstores and faculty to inspire their participation in the innovations over the long term.

The stakes are high: 18.62 million full-time college students spend an average of \$600 to \$1,200 per year on textbooks (depending on the source). Further, these costs have been rising at more than twice the rate of the Consumer Price Index. The market is ripe for change.



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I. Introduction

The market for college textbooks is in ferment. Digitization of educational resources and textbooks has generated new products and competition in an industry that until recently reflected classic oligopolistic characteristics. In 2008, the five largest college textbook producers controlled about 90 percent of the market. Further, the consolidation and merger of existing publishers was occurring at an accelerated rate, and new competitors were scarce.

On the demand side of the market, the primary individuals that select college textbooks — faculty — are somewhat ignorant of the cost of textbooks. Meanwhile, the individuals who actually have to pay for the textbooks — students — exhibit low sensitivity to price changes because they have had only limited ability to shop for the best available materials at the best possible price. In addition, the financial aid policies of the federal and state governments have tended to ratify publishers' price increases, and this has reduced resistance to price increases.

Consequently, most college textbook markets exhibit characteristics similar to those found in markets for prescription drugs.¹ Here's why: Physicians prescribe drugs for their patients, who typically take the advice of those physicians and purchase what has been prescribed. The physicians, however, neither pay for the drugs they prescribe nor often know the drugs' prices. In the case of textbooks, the physician-equivalent is the faculty member who prescribes the textbook yet does not have to pay for his/her choice, and frequently does not know the price of the textbook.²

Market conditions such as these typically result in prices that rise more rapidly than average; this is what

one observes both in the markets for prescription drugs and for textbooks. From December 2002 to December 2012, the Consumer Price Index for all urban workers (CPI-U) grew by an average of 2.38 percent annually. However, the sub-index for prescription drugs grew by 3.34 percent a year on average, while the annual sub-index for educational books and supplies grew by an average of 6.35 percent, and the sub-index index solely for college textbooks increased 6.31 percent annually. Hence, prices of college textbooks grew 2.65 times as fast as all prices, as represented by the CPI-U. Figure 1, on the next page, illustrates the CPI-U/college

textbooks price relationship from 2002 to 2012.³ Note that in 2009, even though the CPI-U actually declined by 0.4 percent, textbook prices nonetheless increased 6.9 percent. This is an unusual result to say the least, and it supports explanations of rapidly rising textbook prices that focus on the existence of market imperfections and monopoly power.

The conditions just described have begun to change, primarily because of the Internet. Digitization of information on the Internet has stimulated new products, generated new competitors and dramatically increased the ability of students to comparison shop. A profusion (although perhaps to some, a confusion) of college textbook alternatives now exists:

- Low- or zero-cost digitized textbooks and materials that substitute for those of the large publishers.
- Internet platforms that enable faculty and students to assemble customized packages of learning materials.

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Figure 1

Annual changes in college textbook prices versus the consumer price index (CPI-U), 2002-2012



Source: Bureau of Labor Statistics, U.S. Department of Labor, www.bls.gov.

- Ubiquitous Internet sites that allow students to comparison shop for regular paper, digital, used and rental textbooks.

The stakes are high. The National Association of College Stores reported that book sales (all types) in U.S. college stores in 2011 were \$5.752 billion, of which \$5.506 billion was spent on new textbooks, custom published materials, used books and e-books (books that can be downloaded to, and read on, a computer or e-reader).⁴ Nevertheless, it is not abundantly clear how much the typical full-time undergraduate student spends only on textbooks. The College Board's *2012 Trends in College Pricing* reports that the typical full-time undergraduate student spent \$1,168 on textbooks and supplies in the 2011-12 academic year.⁵ The usual assumption among financial-aid directors is that about 75 percent of this expenditure category is attributable to textbooks, and

hence generates an estimate that the average student spent about \$876 on textbooks in 2011-12.

Nevertheless, Student Monitor LLC, the most widely cited source of information on student textbook purchasing activity, reported that in the fall 2012 semester, undergraduate students spent only \$292 on new and used printed textbooks, rentals and e-books, down 11.5 percent from \$330 in fall 2011.⁶ Multiplying this semester estimate by two generates a \$584 estimate for textbook expenditures for the entire academic year. Student Monitor has been administering this survey for several years; for the fall 2008 semester, it estimated that the typical undergraduate student spent \$348 on textbooks.⁷ Multiplying again by two produces a \$696 estimate for the 2008-09 academic year. Thus, Student Monitor's typical student apparently will spend 16.1 percent fewer dollars on textbooks in the 2012-13 academic year than he/she spent in 2008-09.

Because some printed textbooks are so expensive — especially when bundled with other digitized learning materials — it would be possible to spend Student Monitor's entire \$292 single-semester estimate on just one textbook. Consider a leading undergraduate textbook such as N. Gregory Mankiw's *Principles of Economics*, 6th Edition (published by Cengage, perhaps the largest college textbook seller in the U.S.). This textbook retails for \$258.99 on Cengage's website (www.cengage.com), though the company offers a one-semester rental for \$90.49, an e-book for \$112.99, and a bundled package of the textbook with learning with digital access and software access for \$350.95. Of course, both the rental book and the e-book turn into proverbial

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on the Internet has stimulated
new products, generated new
competitors, and dramatically
increased the ability of students to
comparison shop.

pumpkins at the end of the course. Cengage's student book renters must return their books in decent condition at the end of the term, and the company's digital

purchasers lose access to the digital contents of their e-books at the end of the term.

In the remainder of this paper, I will examine: (1) the market structure for college textbooks; (2) current price and sales data; (3) new, primarily digitized textbook and educational materials content providers; (4) new digital learning and shopping portals

primarily directed at faculty and students, including the most promising hosted by California State University and Indiana University/Internet2 Group; and, (5) policy initiatives and alternatives.

II. The distinctive market structure for textbooks

The supply side of the market

The textbook market is vertically integrated at three major stages or levels. In Stage One, publishers produce textbooks (print and e-books) and learning software. As Table 1 on Page 5 reveals, textbook publishing is oligopolistic. Five firms dominate the college textbook publishing: Cengage Learning, Pearson Education, McGraw-Hill, Bedford, Freeman & Worth, and John Wiley & Sons. The Big Five accounted for more than 90 percent of all college textbook publisher revenue in 2008, the most recent year for which reliable data are available. On the campus of Indiana University, the largest three publishers (Cengage, Pearson and McGraw-Hill) accounted for 64 percent of the dollars student spent on required text materials in 2012.⁸

In Stage Two, textbooks (broadly defined as above) are distributed via a relatively small number of wholesalers to bookstores (on-campus, off-campus, Internet), which then sell them to students (Stage Three). In a small though increasing number of cases, textbooks are purchased directly from publishers.

Instinctively, many are inclined to point fingers of blame at textbook publishers when anyone broaches the subject of textbook prices. After all, the publishing market is an oligopoly, and such markets typically are characterized by elevated prices relative to costs. Further, textbook prices have been rising much more rapidly than most other prices.

Seller concentration and market shares

As Table 1 reveals, the largest four textbook publishing firms accounted for 87.5 percent of the market in 2008. This establishes textbook publishing as one of the more concentrated manufacturing industries in the United States along with health insurance, search engines, wireless telecommunications, and soft drink production. Mountains of empirical evidence have been accumulated by economists demonstrating that very

highly concentrated markets are likely to generate anti-competitive behavior that harms consumers.⁹

The preferred measure of seller concentration of the U.S. Department of Justice (DoJ) is the Herfindahl Index, which is computed as $\sum(MSi)$, where MSi is the market share of firm “ i ” stated as a whole number. The Index was 2,530 for textbook publishing in 2008 and may have risen since then. The DoJ considers any Herfindahl Index above 2,500 to represent a “highly concentrated” market where anti-competitive behavior by firms is more likely to occur.¹⁰ According to the DoJ, the anti-competitive behavior might include higher prices, reduced output and diminished innovation. Whatever one’s view concerning output and innovation in the U.S. textbook publishing market, there is abundant evidence that textbook prices have risen much more rapidly than prices in general for at least the past decade.

It is apparent that seller concentration and consolidation have been rising in the textbook publishing industry, but it’s not clear precisely how much. There are two reasons for this. First, the Bureau of the Census has shifted from relying on Standard Industrial Classification (SIC) codes to the North American Industrial Classification System (NAICS), and the industry translation has not been exact. Second, data are published for “book publishers” rather than “textbook publishers.” Nevertheless, with the caveat that the data might not be completely comparable, it appears that the four-firm concentration ratio for book publishing rose from 23 in 1987 to 40.7 in 2002. Since then, it has skyrocketed to 87.5, primarily because of mergers and acquisitions.

Whatever the level of seller concentration, the key to a firm being able to maintain elevated prices is the presence of barriers to the entry of new competitors. Such barriers clearly exist in textbook markets in the form of significant capital requirements; economies of scale and scope; product differentiation and reputation; contractual relationships with wholesalers, bookstores

Table 1
Market shares of college textbook publishers, 2008

Publisher	Market share	Cumulative shares
Cengage Learning	34.6%	34.6%
Pearson Education	31.7%	66.3%
McGraw-Hill	16.8%	83.1%
Bedford, Freeman & Worth	4.4%	87.5%
John Wiley & Sons	4.3%	91.8%

Source: Katherine Molina, "Digital Pricing in the Textbook Market," MBA thesis, Massachusetts Institute of Technology Sloan School of Management, 2011.

and authors and the like. Nevertheless, it remains possible for publishers to enter the market at much smaller sizes. Further, dozens of academic presses exist that potentially could publish textbooks (and some do). In addition, digitization of data and textbook materials means it is possible to produce digitized textbooks and materials, or send them offshore for production, and to do so at relatively low scale with some efficiency. Therefore, barriers for firms considering entry into textbook publishing, while still significant, perhaps are not as foreboding as they were only five years ago.

The proof of the digital pudding, however, is in the eating. If the advent of digitization has lowered barriers to entry into textbook publishing, and if digitization has diminished the market power of college bookstores, then gradually we should expect to see the following outcomes:

1. A larger number of textbook publishers (i.e., more competitors).
2. A reduction in market seller concentration in textbook publishing.
3. A greater variety of ways for students to obtain information conventionally contained in textbooks (via new textbooks, used textbooks,

rented textbooks, e-books, copied materials, etc.).

4. More retail sellers of textbooks and textbook-like materials (publishers, college bookstores, college-affiliated textbook rental systems, off-campus bookstores, Internet merchants, etc.).
5. A reduction in the market shares of the largest college bookstore chains such as Follett, Nebraska and Barnes and Noble.
6. A moderation in the rate of increase in textbook prices.
7. A greater proportion of students actually purchasing some form of a textbook.
8. A reduction in the profitability of major textbook publishers.

We have seen (1), (3) and (4) occur. There is no firm evidence yet that (2) and (5) are taking place, though these may be developments that will evolve over time, and even then perhaps they will be difficult to measure. As already noted, the opposite of (6) is occurring; textbook price increases, at least as measured by the BLS, have not moderated. And, if reports of textbook publishers and bookstores are accurate, we also may be moving in the opposite direction on (7). Item (8) is not

Table 2
Comparing Pearson and McGraw-Hill

	Pearson	McGraw-Hill	Industry average
Annual revenue	\$5.86 billion	\$4.45 billion	—
Average revenue growth	6.8%	0.6%	-13.7%
Average earnings per share growth	48.3%	6.1%	—
Net margin TTM	15.9%	13.6%	3.8%
Price to earnings ratio	10.0	16.3	17.5
Return on investment TTM	17.4%	43.4%	10.3

Notes: TTM = trailing twelve months; revenue growth and earnings per share are the average of the past three years

Source: Morningstar (Feb. 18, 2013), www.morningstar.com.

occurring for large textbook publishers, but may be in process for smaller ones.

A closer look at Pearson and McGraw-Hill

Only two of the five largest college textbook publishers are publicly held firms. They are Pearson (#2) and McGraw-Hill (#3). Because they are publicly held, one can procure relevant economic data about each. Table 2 examines the economic performance of Pearson and McGraw-Hill. Pearson is the larger of the two; according to morningstar.com, it has passed Cengage Learning to become the largest publisher of college textbooks and related course materials in the U.S. According to the *Wall Street Journal*, Cengage is burdened by high debt and falling profits,¹¹ and it may not survive as an independent unit much longer.

Both Pearson and McGraw-Hill are healthy companies and generate large profit streams. Investors are aware of this and have bid up the share price of Pearson's stock by 43.1 percent since Jan. 4, 2010, and McGraw-Hill's share price by 44.3 percent during the same time period. These healthy increases in share prices

occurred during a period when Standard and Poor's 500 stock price index rose only 12.7 percent.¹²

Nor are Pearson and McGraw-Hill perceived by investors to be particularly risky because their prices are volatile. The Pearson stock's β -coefficient is .95, while McGraw-Hill's is 1.04.¹³ A β -coefficient larger than 1.00 indicates that the price of a stock is more variable than the market as a whole, while a β -coefficient less than 1.00 indicates a stock's price is less variable than the market as a whole. Over time, these two publishers' β -coefficients reveal that their prices have been no more or less variable than those of the average stock. Hence, investors have little reason to anticipate violent fluctuations in their stock prices. Finally, both pay respectable dividends (Pearson, 2.50 percent, McGraw-Hill, 1.90 percent).¹⁴ All of these factors have positioned Pearson and McGraw-Hill as steady, solid, profitable investments.

Ultimately, investors in capital markets react and invest on the basis of expected future profits. Where Pearson and McGraw-Hill are concerned, investors have noted that both have enjoyed very healthy profit streams and expect those profit streams to continue. Why?

Because in the past, both publishers have possessed price-making power that has flowed from apparent barriers that discourage entry into their markets.¹⁵ Nevertheless, their positions may be threatened because they inhabit a market that appears to be contracting. As the *Wall Street Journal* put it, “Educational publishing is losing steam broadly.”¹⁶

It follows that not all publishers have been doing as well as Pearson and McGraw-Hill (as one can see in Table 2). I’ve already noted that Cengage, the largest among the textbook publishers, is struggling financially. At the same time, it appears that smaller publishers in particular find it difficult to realize potential economies of scale and sometimes cannot respond adequately to the progressive digitization of textbook production. Morningstar.com reported that North American educational revenue for publishers was down 12 percent in 2012.¹⁷ Houghton Mifflin, for example, “has been through a long, difficult financial stretch” and had to survive a bankruptcy court proceeding after being merged into another firm.¹⁸ Several of the publishers that focus on the K-12 textbook market have been stung by its diminishing size; from 2007 to 2012, K-12 textbook sales fell by 21.7 percent.¹⁹

While financial data on other leading textbook publishers such as Cengage are not public, a tenable hypothesis based on Table 2 is that larger publishers are gradually gaining larger slices of a textbook pie whose overall size is constant or declining. Market share, however, does not necessarily translate to profitability.

Textbook distributors and bookstores

Textbook publishers typically distribute their books via a textbook wholesaler/distributor. This market also is oligopolistic, though less so than textbook publishing. Three wholesalers dominate this market: Follett, Barnes and Noble, and Nebraska, which acquired College Bookstores of America in 2006. These firms also own or operate college bookstores under contract.

Approximately 3,000 college bookstores exist, and about 30 percent of them are directly owned and operated by colleges and universities; about 55 percent are operated by wholesalers such as Follett, Barnes and Noble, and Nebraska; the remaining 15 percent are private and independent bookstores, including some that

are nonprofit. Examples of the latter include bookstores at the universities of Montana, Oregon, Tennessee, Texas and Wisconsin, along with those at Virginia Tech and UC-Santa Barbara. At least in theory, all of these are nonprofit, though all make a variety of contributions to their home campuses. Their announced purpose is to provide students with textbooks and other merchandise at low prices, and there is evidence their prices often are below those at off-campus bookstores.²⁰

Follett is the largest college bookstore retailer and operates more than 800 stores. Barnes and Noble operates more than 700 stores, and Nebraska about 250. There also exists an Independent College Bookstore Association (ICBA) with 130 members. ICBA members operate bookstores that have not been outsourced to Follett, Barnes and Noble, or Nebraska.

The three textbook wholesalers are especially active in the used textbook market. They purchase unneeded used books from college bookstores at about 15 percent to 25 percent of the new book price. They then resell these used books to other bookstores for about 50 percent of the new book price.

Textbook development and overhead costs

The cost of developing a new textbook can be substantial (\$1 million or more in some cases). Fifty percent or more of the sales of a textbook usually occur in the first year after its publication. After the first year when a textbook is available, or even after the first semester, used textbooks can be purchased from a supply created when students sell back their textbooks to a bookstore or sell them to other students.

In the typical case, a textbook author (usually a faculty member) will receive a financial royalty from the book’s publisher based on sales revenue earned by the textbook. Some colleges and universities prohibit faculty from requiring students to use a textbook that faculty members themselves have written and from which they will receive royalties. In some cases where faculty are allowed to do so, educational institutions may require the faculty member to remit royalties to the school. However, it is often true that faculty are allowed to keep royalties earned from sales of self-authored textbooks to students required to purchase the books. In many markets, such an arrangement would be regarded as a conflict of

interest, but higher education is far from unanimous in how it chooses to treat such situations.

In a minority of cases, faculty will develop their own textbook-like course materials. These often include copies of their lectures, copies of related scholarly and newspaper articles, data sets and the like. In all but a few cases, faculty who do so make individual arrangements with a local bookstore to handle and sell these materials and therefore usually do not receive royalty payments. When students purchase these local course materials, in nearly all cases the price is lower than it would be if the same students had to purchase a textbook. The downside is that such course packages usually cannot be resold in a used market when the student has finished the course. Hence, it is not clear that, in net terms, students end up substantially better off when they purchase locally generated course materials rather than a textbook.

New editions and artificial obsolescence

Because the unit sales of a new textbook are highest in the first year or two after it has been published, there is a tendency for publishers to push the development of new editions of textbooks that have sold well in order to render obsolete the inventory of used books that seriously reduces their sale of new books. In this respect, textbook markets are similar to many durable goods markets (e.g., automobiles and electronics) in which sellers periodically offer for sale new versions of their products. In such situations, these sellers end up in competition with themselves, as both new and used versions of their products are bought and sold.

The difference here is that the textbook publishers and the bookstores together have a much greater ability to remove the older versions of textbooks from circulation. By contrast, Ford Motor Co. cannot wipe out used car markets. Textbook producers, however, in conjunction with the textbook wholesalers and

bookstores, have a substantial ability to eliminate competition from previous editions of their textbooks and can even declare that they no longer will purchase used copies from students.

Textbook markets are similar to many durable goods markets (e.g., automobiles and electronics) in which sellers periodically offer for sale new versions of their products.

Publishers also can “dodge and feint” (a description offered by a college bookstore manager) by creating a unique ISBN for every bundled textbook package at every institution. Thus, when students go to the Internet to check book prices, they cannot make direct comparisons because every package has a different ISBN. Of course, if they are willing to take the time necessary to compare the precise contents of each ISBN package, then they might

be able to comparison shop effectively. However, unique ISBN numbers constitute an impediment to their doing so.

Some economists (e.g., Chevalier and Goolsbee)²¹ argue that students are rational, knowledgeable consumers who anticipate publisher behavior in the form of new textbook editions and therefore are not greatly disadvantaged by the appearance of frequent new editions. They make a similar argument with respect to bookstores. However, even if one agrees with Chevalier and Goolsbee, and the typical student actually is capable of anticipating and gaming the system, student economic welfare still would increase if new textbook editions appeared less frequently.

There are, of course, legitimate reasons for textbooks to be revised. The rationale is especially strong in academic disciplines where rapidly changing economic, social and political conditions render irrelevant previous data sets and illustrations, or in disciplines where fundamental theoretical and empirical advances have taken place and now must be recognized in a new edition.

Less compelling are new editions in which none of these conditions holds sway. The students I interviewed, for example, complained of having to pay for new textbook editions in subjects such as introductory calculus and beginning French. They argue (often

persuasively) that the “old,” less expensive edition would have served them just as well because very little of the content had changed.

Whether or not each bundled textbook package has its own unique ISBN on each campus, the digitized materials within that bundle typically self-destruct at the end of the academic term. Digital rights-management techniques enable publishers to turn off digital access at the end of an academic term. This is a stronger and more immediate form of artificial obsolescence than publishers have with print textbooks.

The mixed incentives confronting many colleges and universities

Yet another distinctive characteristic of textbook markets is that nearly every institution of higher education has a financial stake in higher textbook prices. With a few exceptions noted below, either institutions of higher education own and operate their own bookstores, or they contract that responsibility to an external vendor such as Follett, Barnes and Noble, and Nebraska. In this latter case, they usually receive a lump-sum payment plus a percentage of dollar value of sales at contracted on-campus stores.

Textbook prices, however, constitute a two-edged sword for colleges. On one hand, higher textbook prices usually generate more money for institutions of higher education, whether they own and operate their own store or contract the operation of a store to an outside firm.

On the other hand, higher textbook prices generate greater student financial need, and most institutions make some effort to recognize such increases. In the case of public institutions, governments typically pay most of this financial freight, even while the public institutions keep the profits their bookstores generate for them. Seldom are institutions required to devote these profits to student financial aid or similar purposes.

The bottom line is that most colleges and universities have at least a modest conflict of interest. The current system of selling textbooks to students typically generates profits for each institution. In the case of public institutions, these profits are typically unrestricted, “auxiliary” revenues that institutions can use however they like.

Further, these revenues don’t usually revert to the state at the end of a fiscal year. Hence, many institutions are reluctant to give up this revenue stream. If they drag their feet when change is suggested, it might be because they have a financial incentive to do so.

Textbook bundling

The benefits of commodity bundling are well-known to economists.²² Under certain circumstances, a firm can increase its sales and profits by bundling items for sale rather than selling items *a la carte*. Those conditions often exist in textbook markets where bundling has become quite common.

The media’s take on the 2005 GAO study of the pricing of college textbooks²³ was that bundled enhancements to conventional textbooks were the primary reason textbook prices had increased so rapidly. In this view, publishers construct print and digital packages of materials and sell them to students, some of whom don’t know they could purchase the items in the package *a la carte* (the Higher Education Opportunity Act of 2008 makes this option mandatory), and some of whom falsely believe their success in the class involved will directly depend on the purchase of the bundle.

There is an intellectually respectable economic case that can be made to support bundling. In essence, it says that if *a la carte* purchasing were possible, many items in the bundle would not attract sufficient buyers. Hence, these items would be excessively expensive and end up being eliminated as consumer options. Consumer choice would diminish, and some customers would not have access to choices they want (e.g., specific, specialized cable television channels). Further, absent the revenue from the bundle, sellers will end up charging higher prices for the sum of the *a la carte* items than they would have charged for the bundled package of items.

In addition to this economic argument (which may or may not hold water in specific markets), publishers and some faculty argue that tremendous differences in student preparation, plus the increasing volume of students who are undertaking distance learning, make it essential that many different learning modes be provided in bundled textbook packages. The rationale is that not everyone has the same learning style, and bundled textbook packages recognize this.

A variation of this argument focuses on the preparation of students. Complete College America reported in 2012 that 51.7 percent of two-year college students and 19.9 percent of four-year college students had to take at least one remedial course when they entered college.^{24,25} The supposition is that students who need remediation will not fare well when confronted only with a conventional textbook — that's why they may be in this situation in the first place. Hence, publishers and some educators argue that such students require the additional learning aids one finds in many textbook packages.

At the same time, the percentage of all college students taking at least one online course rose from 9.6 percent in fall 2002 to 32.0 percent in fall 2011.²⁶ By definition, these students are doing higher education a different way and perhaps must use a variety of means to learn. Publishers and some educators contend that technology — perhaps in the form of a CD/DVD, or via access to materials on websites — looms large for these students.

Publishers also argue that faculty have become much more diverse in recent years and therefore many now require teaching aids and materials that were not necessary when full-time faculty members predominated on campus. In this regard, a 2013 *Wall Street Journal* report revealed that already in 2009, only about one-third of all headcount faculty members were either tenured or tenure-line at U.S. colleges and universities. Almost 50 percent are part-time (see Figure 2).²⁷ The upshot is that publishers assert that part-time faculty members require more support than full-time faculty, and that bundled textbook packages respond to this need.

Hence, there is some basis for publishers (and some faculty) to assert that increasingly diverse student bodies and faculty rosters benefit from more diverse, bundled textbook packages. However, it is important to note that this is a thinly researched topic, and very little rigorous empirical evidence exists that speaks to this hypothesis. For example, it could be the case that the very diversity of today's student bodies and faculty rosters is a good reason to unbundle textbook packages because "one size will not fit all," and hence unbundling is the best approach.

Regardless, the immediate problem is that bundled packages are expensive to develop, and this has put upward pressure on textbook prices. A textbook bundle such as Mankiw's *Principles of Economics, 6th Edition*

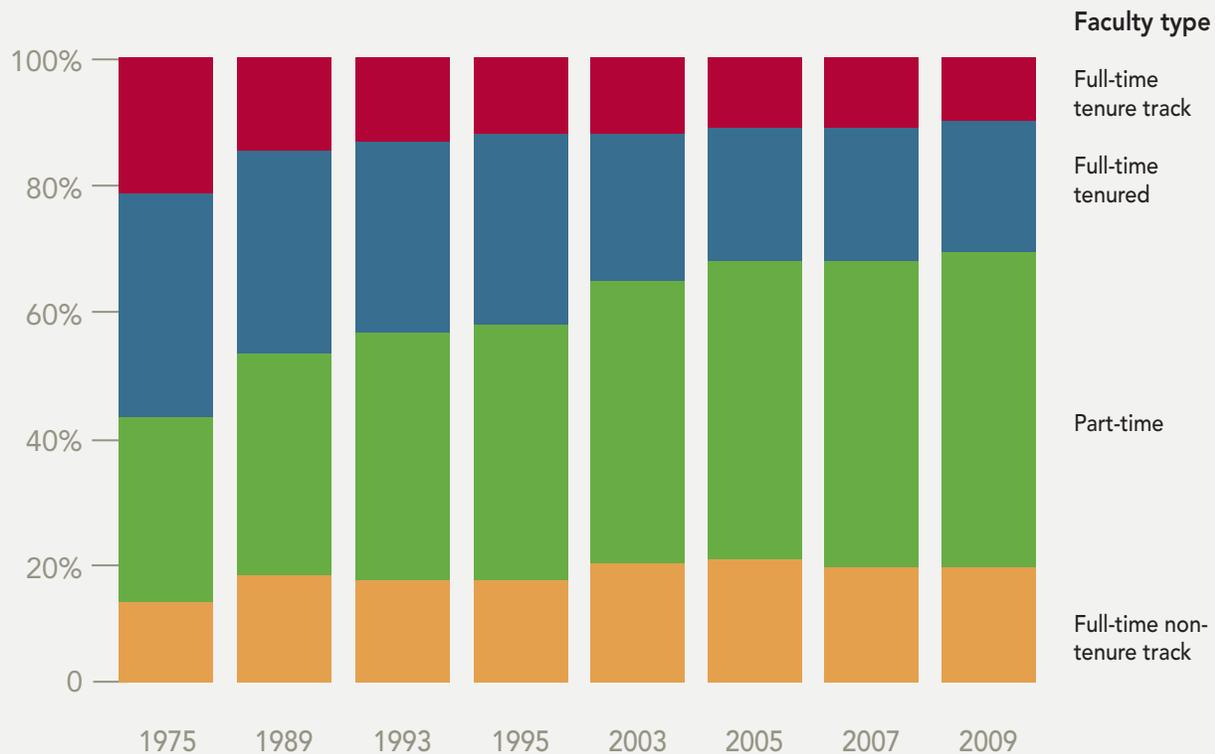
may cost more than \$300. Further, many students do not use the bundled items and would prefer not to have to purchase all of them in a package. They want to be able to purchase textbook and learning items *a la carte*. One is struck here by how similar these arguments are to those one hears when the subject is the "unbundling" of cable television packages.

Many observers believe that the total amount students spend on textbooks would decline if textbook packages were unbundled and students could purchase what they wanted *a la carte*. This seems plausible, but whether it actually would occur depends on actual student choices. Consider the cost of developing and producing a bundled item such as a CD or DVD that can be used in remote locations. This cost is substantial, and publishers attempt to recoup that cost in the price of bundled textbooks they sell. If textbook packages are unbundled and many students choose not to purchase the CDs/DVDs, then the price of the CDs/DVDs to those who do purchase them will be higher, perhaps substantially so.

Is the sum of the gains to students (the money *not spent* on the CDs/DVDs) greater than the sum of the losses to students (the higher prices some must pay for the CDs/DVDs when they are not bundled)? This is unknown. In a comparable situation (the possible unbundling of individual stations that constitute cable television packages), cable television firms argue that unbundling will lead to higher, not lower prices. However, it is not clear that this argument holds water. To the contrary, where textbooks are concerned, some bookstores and faculty argue that unbundling would unleash a torrent of independent, privately developed learning packages that would stimulate highly desirable price competition and lower prices.

Textbook bundling, analogous to the bundling of cable television channel packages, results in cross-subsidization of some student consumers by others. Student Emily may not want the workbook that accompanies the textbook, but student Fred does. When the workbook is bundled into a package, Emily ends up subsidizing Fred. Even though federal law now requires publishers and bookstores to offer unbundled textbook packages, the "unique ISBN" phenomenon makes it more difficult for Emily to figure out how to avoid subsidizing Fred.

Figure 2
U.S. college and university faculty members, by employment type



Source: Mark Peters and Douglas Belkin, "Health Law Pinches Colleges," *Wall Street Journal*, 261 (Jan. 18, 2013), A3.

What also is unknown at this stage is whether students who purchase only some of the recommended items in a textbook package learn more or less in classes than students who opt for the entire package. That is, do students do better or worse when they have access to bundled textbook and learning packages? If any conclusion is merited, and it is tentative, it is that bundled packages do not have a statistically significant impact on student learning and performance.

The Higher Education Opportunity Act of 2008 requires publishers and college bookstores to allow students to unbundle textbook packages. The Student Monitor surveys indicate that most students do choose to do this. This probably reduces total student expenditures on textbooks; however, it is possible this may increase the price of individual textbooks that are sold because

publishers cannot realize potential economies of scale. (Remember the cable television bundling argument.)

There is a related innovation in textbook markets that is worthy of note. Some publishers have decided to market "no frills" versions of some textbooks. These textbooks usually are black-and-white, reduced versions of larger, more elaborate textbooks; they typically sell for 25 percent to 50 percent less than the regular version. It's not yet clear if many students like this option, or if publishers earn an acceptable rate of return by supplying such textbooks.

Internet textbook sales

Textbook publishers seldom make the actual sale of a textbook to a student. More often, a bookstore does

so. Internet-based bookstores have become increasingly important in recent years, but no one knows precisely what share of the market Internet sellers have. Student Monitor's fall 2012 survey suggested that only about 20 percent of all textbooks were purchased via the Internet. However, bookstore managers and publishers believe it is from 30 percent to 50 percent if one aggregates new books, used books, rental books, e-books and closely related course materials. There is a consensus that perhaps two-thirds of all used books are sold over the Internet.

Regardless, college bookstore operators firmly believe Internet textbook sales are putting a serious dent in their own sales. College bookstore operators assert that the Internet has made student demand for textbooks much more price elastic (that is, much more sensitive to price changes). They cite stagnant or declining book sales in their own stores as support for this notion (unit sales increases have lagged enrollment increases).

Do used book sales and Internet book sales cannibalize (reduce) new book sales? Almost certainly, but once again, it's not clear precisely how much. Student Monitor's fall 2012 survey revealed that used books accounted for 42 percent of all books purchased by students. It seems likely that three-quarters or more of these purchases came at the expense of new books.

It is apparent that the Internet has provided beneficial new competition both to publishers and college bookstores. Developments that increase student ability to shop prices by using the Internet are likely to restrain textbook prices and reduce overall student costs.

Trends in textbook rental

Student rental of textbooks always has constituted a major alternative to outright purchase. Textbook rental was quite popular for 50 years, but lost momentum in the 1970s and 1980s before rebounding to become much more common in recent years. Continual increases in textbook prices above the CPI-U and political pressure from student groups and legislators have stimulated renewed interest.

Three major varieties of textbook renting exist today:

- **A full-scale, major option on-campus textbook rental system** in which the institution takes the responsibility for renting textbooks to students

and formally assesses a mandatory fee on all students to support the system. Eastern Illinois University is an example.

- **An optional, on-campus textbook rental system** that exists side by side with a conventional college bookstore. Students may use the system or purchase textbooks any other way they prefer. The University of Alabama is an example.
- **Off-campus textbook rental vendors** compete to attract student patrons but receive no endorsement from institutions of higher education (and often no publicity). Chegg.com and barnesandnoble.com are examples.

In brief, in a textbook rental system, institutions purchase textbooks they subsequently rent to students, who must return the book in good condition at the end of the course or pay for it. Rental systems work best when they serve classes with large, predictable enrollments and when institutions use the same edition of a textbook for two to four years (a practice objectionable to some faculty for a variety of reasons). Usually it is not until the second year of a textbook's use that a typical rental system breaks even financially on that textbook.

Full-scale, major option, on-campus rental systems typically cut the total cost of textbooks to students by at least half. More than 50 institutions operate major option textbook rental systems, including Eastern Illinois University, Southeastern Louisiana University and seven campuses within the University of Wisconsin system (though not Madison or Milwaukee).

Eastern Illinois students paid \$9.95 per semester hour for their textbook rentals in 2012-13, up from \$7.95 per semester hour in 2006-07. An Eastern student who registered for a conventional 32 credit hours during 2012-13 spent \$318.40 for textbooks, substantially below most reported average annual student expenditures for textbooks. Southeastern Louisiana students pay \$45 per course as a textbook rental fee, regardless of how many books are required for a course. Thus, an undergraduate student who takes 10 courses per year will pay \$450 per year in textbook rental fees.

The rental fee (including related supplies) at the University of Wisconsin-Eau Claire (which has maintained

a rental system since 1916) was \$482 for full-time undergraduate students and \$618 for full-time graduate students in 2012-13. The University of Wisconsin-River Falls was less expensive — only \$143.30 per year.

Perhaps the largest textbook rental firm is chegg.com, which was constituted in its current form by three former Iowa State University students in 2007. Chegg has branched out from textbook rentals and appears to be attempting to establish itself as an Internet portal (“a connected learning platform”) for many different student needs. It now offers Zinch, which connects students to scholarships, Cramster for homework assistance, CourseRank for choosing classes, and Student of Fortune for online student tutorials.²⁸

By 2011, Chegg reported that it had rented textbooks to students on more than 6,400 campuses worldwide. Chegg states that it rents more than 4,000 distinct textbook titles and 100,000 e-textbooks. Chegg’s greatest rental competitors are campus bookstore giants Barnes and Noble and Follett.²⁹ Advancing rapidly, however, is Rafter, which offers campuses services that enable institutions to operate bookstores and rental systems that feature scan-and-pay checkout by students by means of smartphones or tablets.³⁰

A non-rigorous *Wall Street Journal* 2009 study of rental textbook costs found that chegg.com quoted higher prices than bookrenter.com and campusbookrentals.com.³¹ Regardless, student book rentals have grown over time and now account for 8 percent of all expenditures on textbooks.³²

In addition to the disdain of some faculty for textbook rental systems, there are two other major barriers to their wider implementation. The first is the sizable initial investment that institutions must make to initiate such a system. Full-blown, major option textbook rental systems covering nearly all undergraduate courses require institutions to invest millions of dollars on inventory, facilities, training and orientation before they rent a single book. A 2005 Illinois Board of Higher

Education study estimated start-up costs for its public university campuses of \$1.39 million to \$15.93 million.³³

Capital expenditures of that magnitude are a deterrent to establishing a rental system. However, the numbers are attractive. If each of 10,000 undergraduates saves \$200 per year on textbooks, the aggregate student savings would be \$2 million. It would take an endowment of at least \$40 million to generate that amount of scholarship aid annually. It does not take a textbook rental system long to pay for itself and to benefit students, even if they pay for the rental system. If we adopt the Student Monitor-based estimate that a full-time undergraduate student will spend \$584 on

textbooks in the 2012-13 academic year, an Eastern Illinois student will save \$265 annually, while those at Southeastern Louisiana and the University of Wisconsin-Eau Claire will save \$134 and \$102, respectively.

The second significant barrier to establishing a rental system is the conflicting motivations of the colleges and universities themselves. Nearly all institutions garner profits either from owning and operating bookstores or from contracting bookstore operations to outside firms such as Follett or Barnes and Noble. Many institutions are reluctant to forfeit this revenue stream, which for very large institutions can amount to \$1 million a year. In essence, rather than raising student tuition, institutions tax students through a less visible route — the profits institutions earn on textbook sales.

It is important to note, however, that the National Association of College Stores reports that its members earn minimal overall profits on textbooks and instead earn most of their profits from the sales of other items such as logo T-shirts, supplies and food. If so, and if college administrations agree, then this might reduce campus reluctance to move to textbook rental systems because they’re not making big money by selling textbooks. What is unknown is the extent to which textbooks and other items such as T-shirts are complementary goods. Giving up on the sale of textbooks could preordain a decline in the sale of profitable complementary items such as T-shirts.

**Full-scale, major option,
on-campus rental systems
typically cut the total cost
of textbooks to students
by at least half.**

The demand side of the market

The primary purchasers of college textbooks are the estimated 18.62 million students who attended institutions of higher education in fall 2011.³⁴ Additionally, colleges, government agencies and businesses purchase some textbooks as a part of their textbook rental operations.

As already noted, the textbook market is remarkable because the primary individuals who choose college textbooks (faculty) are not the people who pay for those textbooks (students). Only a few other organized markets in the United States are similar in this regard.

The market for textbooks is analogous to the market for prescription drugs, where prices have risen rapidly. As is true for prescription drugs, the separation of textbook choice and textbook payment profoundly influences pricing. Though perhaps ultimately for a good purpose, students end up being coerced to pay for someone else's choices. This tends to make their textbook purchases less responsive to price increases than their purchases of items such as cheeseburgers and jeans.

Long-standing academic custom assigns faculty the right to choose the textbooks and other course materials required or recommended for their courses. Sometimes a collective group of faculty will make that decision. For example, the faculty of an institution's history department might jointly choose the textbook for an introductory American history course. More than 90 percent of the time, however, individual faculty make their textbook choices independently, and sometimes with little regard to the cost of the textbooks, because they are not the individuals who pay for them.³⁵

College faculty members in the United States are evaluated on the basis of their performance in three classic areas — teaching, research and public service. It is fair to say that a faculty member's choice of a textbook seldom is considered in any evaluation, and almost never is the price of that textbook a factor. A Connecticut

Board of Governors for Higher Education study in 2006 revealed that only 58 percent of that state's faculty were aware of the cost of the textbooks they selected for their courses.³⁶

Further, faculty typically receive free examination copies of textbooks from publishers, whether or not they actually end up using the books, and examination copies constitute about 10 percent of any textbook production run. Hence, it is not surprising that the Connecticut study revealed that only 43 percent of faculty chose textbooks on the basis of price and affordability.³⁷

Parenthetically, it should be noted that many faculty sell the examination copies of the textbooks they receive but do not intend to use. If the copy of a textbook the faculty member has received for examination is in demand, then he/she will be paid 30 percent to 40 percent of the new-book price. Faculty have become accustomed to having book buyers knock on their office doors, asking to purchase unwanted examination copies.

The independent operators who purchase these examination copies then resell the book at close to its full price.

Of course, students may choose to purchase or rent textbooks other than those that faculty have chosen; they also may decide to purchase used copies of their textbooks, or buy older editions and e-books. And, as already noted, a significant proportion of students will not purchase a textbook for at least one of their classes. The reports of publishers, combined with those of used book vendors and campus bookstores, suggest that 20 percent to 40 percent of undergraduate students do not purchase a textbook for a specific class. The 2012 Student Watch Survey revealed that 52 percent of students said they did not purchase at least one of their required course materials.³⁸ Students no longer pay quite so much attention to faculty members who have told them to purchase specific textbook materials.

Interestingly, the percentage of student non-textbook buyers typically declines as a term progresses.

The textbook market is remarkable because the primary individuals who choose college textbooks (faculty) are not the people who pay for those textbooks (students).

Some students delay a textbook purchase until they have more income. Others wait and see if they “really need” the textbook. Pragmatically, if they can delay purchase for several months or more, they will pay a smaller rental fee for either printed or e-book versions of “required” textbooks.

In any case, separation still exists between those who choose the textbooks (faculty) and those who eventually must pay for them (students). Very few other organized markets in the United States exhibit the same characteristics.

The bottom line is that in the jargon of economists, the demand of students for textbooks is “price inelastic.” This means that students are not very sensitive to price changes, especially to price increases. The short-run price elasticity of demand for textbooks has been measured to be as low as -0.2 , which means that a 10 percent increase in textbook prices will cause only a 2 percent decline in the number of textbooks purchased. Chevalier and Goolsbee’s 2005 examination of the impact of new textbook editions on student behavior estimated a -0.41 price elasticity of students even for a book they were certain would be revised.³⁹ Here, a 10 percent increase in textbook prices would cause a 4 percent decline in the number of textbooks purchased.

Independently, these two economists analyzed the demand for all types of books at amazon.com and barnesandnoble.com and found consumers at those sites to be quite price sensitive — particularly at Barnes and Noble, where they estimated price elasticity of demand to be -3.5 .⁴⁰ This suggests that a 10 percent increase in barnesandnoble.com’s price on a book would cause a 35 percent decline in the quantity of that book purchased. Note, however, this estimate is not for textbooks alone.

There are two lessons here. First, all consumers are much more sensitive to book prices than individual students, who in many ways constitute a captive consumer audience. Second, price sensitivity often

depends on the precise nature of the product being sold and where, how and when it is being sold.

Used textbooks now constitute 38 percent of the total dollar value of textbooks that students purchase, according to Student Monitor⁴¹ (but only about 20 percent of sales at college bookstores, according to NACS, the National Association of College Stores).⁴² The Internet plays a particularly large role in pushing students toward the purchase of used textbooks off campus. College bookstores earn a somewhat higher gross margin (34.0 percent) on the sale of used books than on new books (22.0 percent), the 2012 annual report of NACS reveals. However, college bookstores earn much higher gross margins on the sale of logo apparel (40.1 percent) and food and beverages (35.1 percent).⁴³

As noted above, need-based financial aid formulas usually include textbook costs. When textbook prices increase, financial aid also increases, though not dollar for dollar. The result is that colleges and the federal government tend to facilitate textbook price increases by injecting additional need-based financial aid after textbook prices have increased. It’s worth noting that once again a roughly analogous situation exists in some medical care markets where rapid medical care price increases have been validated by insurance coverage that expands to meet the price increases. The effect in both cases (textbooks and medicine) is to encourage even more rapid price increases.

Finally, in a few cases, groups of institutions or bookstores purchase textbooks together in an attempt to pay less. This can yield savings, but requires that diverse faculty across campuses agree to use the same textbook and to make changes at the same points in time. As noted above, such agreement can be difficult to obtain, especially in academic fields where the body of knowledge is changing rapidly, or when there are sharply contrasting points of view about the discipline.

III. Sales and price data in the 2013 textbook world

Textbook sales

For several years, the dollar sales of textbooks and custom-published materials have been declining at college bookstores, and from 2010 to 2011 sales fell another 3.84 percent.⁴⁴ Clearly, some of this decline reflects students' decisions to purchase more textbooks and related materials from non-college bookstore sources. Vendors such as amazon.com, textbooks.com, campusbooks.com, chegg.com and ebay.com have become popular with many students, and the websites of some colleges and universities actually contain icons for such sellers side by side with the offerings of those institutions' campus bookstores. Such comparison shopping usually reduces bookstore revenues, but it saves students money. In addition, some students now also purchase textbooks and related materials directly from publishers such as Cengage, Pearson, McGraw-Hill, Worth and Wiley.

Only 34 percent of the 1,800 students surveyed by Student Monitor indicated that they purchased mostly printed textbooks off the shelf at their campus bookstore, and 17 percent said they purchased printed textbooks from an online seller other than their campus bookstore. Table 3 on Page 17 summarizes some of the most interesting findings in the 2012 Student Monitor survey.

Interestingly, Student Monitor's survey revealed that students actually purchased 7 percent *more* units of some form of textbook (new, used, rental, e-book) in fall 2012 than they did the previous year. But Student

Monitor's fall 2012 report also found that spending for new and used textbooks declined 18 percent and 7 percent, respectively, in fall 2012.⁴⁵ If accurate, this means students were shifting purchases away from more expensive textbook items toward less expensive alternatives. Many students have stopped purchasing

expensive new textbooks. Some opt not to purchase a book at all, while many others purchase a used textbook, a textbook rental, a digitized e-book, or a textbook from another student.

If, as Student Monitor reports, students are spending less on textbooks but purchasing more units, does this conflict with the BLS finding that textbook prices increased about 8 percent during 2012? Perhaps. However, the two surveys actually measure different things. The BLS textbook price index data do not include used textbooks, textbook rentals or

sales by one student to another. According to Student Monitor, used textbooks account for 38 percent of *all* unit sales, while rental textbooks (including digital) account for 12 percent of *all* unit sales. Hence, about half of all textbooks purchased by students are not being included in the BLS textbook pricing index. While BLS personnel say they are not certain that students end up paying lower prices for used books and rental books, it is plausible to assume they do and that this accounts for the increasing popularity of used books and rental books.⁴⁶

Second, as noted above, virtually everyone involved in the college textbook market agrees that students increasingly are opting away from expensive print textbooks and toward less expensive versions. Or, they

Only 34 percent of the 1,800 students surveyed by Student Monitor indicated that they purchased mostly printed textbooks off the shelf at their campus bookstore.

don't purchase any textbook at all. These are classic substitution behaviors that the BLS may not be picking up. The "chained CPI" that many economists prefer would take greater account of such substitutions.

Third, the Student Monitor survey is less rigorous than the BLS survey, and the Student Monitor survey could be subject to a certain degree of inaccurate, boastful reporting by students about what they paid for textbook items.

The data in the two reports do not always appear to be completely consistent. Is this a case where the time-tested BLS pricing index has been rendered less useful by rapid changes in the marketplace? Or is this simply a case of two surveys defining the task differently and, therefore, measuring different things? If the BLS textbook

pricing survey has drifted off target, then the textbook pricing problem is not nearly as acute as many believe (and as college bookstore data suggest).

In any case, an increasing number of today's students simply do not purchase a textbook in any form. Instead, they share books, rely on photocopies, use a library copy, or simply go without any textbook. A 2010 Student Public Interest Research Group survey of 1,905 undergraduate students on 13 campuses revealed that 70 percent of all undergraduate students do not purchase one or more required textbooks.⁴⁷ This is consistent with the Student Monitor survey finding that students purchased only 72 percent of the required textbooks for their courses. Even seniors admitted that they purchased only 71 percent of the required textbook items for their courses.⁴⁸

Table 3
Where students acquired textbooks, Fall 2012

Purchased mostly printed textbooks off the shelf at campus bookstore	34%
Purchased mostly printed textbooks from an online bookstore other than the on-campus bookstore	17%
Purchased mostly printed textbooks off the shelf at an off-campus bookstore	13%
Purchased mostly printed textbooks from another student/friend or relative	9%
Rented most textbooks from an online book renter	4%
Rented most textbooks from on-campus bookstore	4%
Purchased mostly e-textbooks	2%

How much do students spend on each mode of textbook, and what is the market share of each type of textbook? Table 4, which is based on Student Monitor 2012 data, reports those data. Note that printed books (new, used or rented) still dominate the market with a 93 percent market share.

Figure 4 on Page 19 illustrates the decline in conventional print textbook sales in the United States in recent years. If the *Wall Street Journal's* projections are on target, then the falloff in conventional paper textbook sales will accelerate in the next few years. Imitating conventional newspapers, the sales of paper textbooks have suffered in recent years. This is despite the general trend of rising college headcount enrollments (at least until fall 2012).

College bookstores' sales and revenue

While the dominance of college bookstores in the sale of textbooks has declined over time, college bookstores still account for the majority of textbooks

sales. The decline of that dominance is illustrated in Figure 5 on Page 20. From fall 2005 to fall 2010, total U.S. college enrollment rose 17.9 percent, but the sales dollars of college bookstores (for all items) actually fell slightly, by .026 percent.⁴⁹

The diminishing importance of college textbook sales to college bookstores encompasses the sales of new textbooks, used textbooks and the rental of textbooks. Table 5 on Page 21 compares the sources of revenue of college bookstores in 2003 and 2012. New textbooks have become relatively less important to college bookstores, even while used course books have declined slightly in importance. Custom published materials have increased modestly in relative importance, and course technology is just beginning to appear on the radar screen of college bookstores.

In fact, the textbook business now accounts only for a bit more than half of the sales dollars of college bookstores. These stores now are deriving more and more of their revenue from sales of non-textbook items such as computers and sweatshirts. One college

Table 4
Average spending on various modes of textbooks, Fall 2012

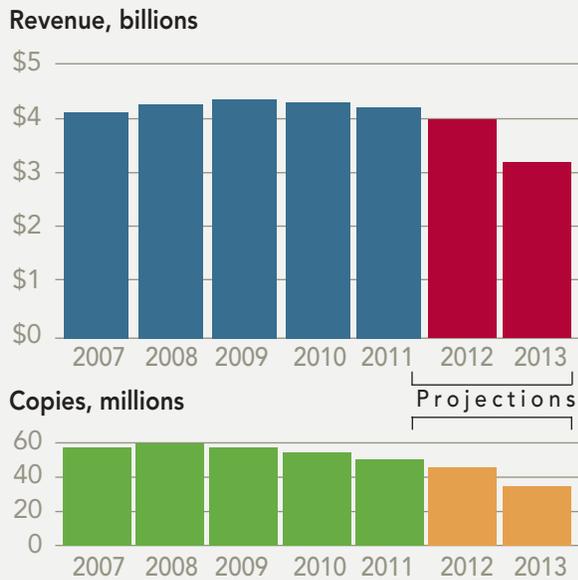
Acquisition mode	Average spent	Market share
New printed textbook	\$133	45%
Used printed textbook	\$112	38%
Rented printed textbook	\$ 28	10%
E-book purchase	\$ 14	5%
E-book rental	\$ 5	2%
Totals	\$292	100%

Note: These are semester data, not academic year data.
Hence, the implied academic year total is \$584.

Source: Student Monitor, "Lifestyle and Media, Fall 2012,"
Student Monitor LLC, Ridgewood, NJ (2012), www.studentmonitor.com

Figure 4
Copies of printed textbook sold, 2007-13

As digital textbooks elbow in, sales of print editions are expected to decline.



Source: Jessica E. Vascellaro, Shara Tibken and Jeffrey A. Trachtenberg, "Apple Jumps Into Textbooks," *Wall Street Journal*, 258 (Jan. 20, 2012), B8.

bookstore manager lamented to me that "We are an endangered species."

Several observations and caveats are in order concerning the decline of college bookstores as textbook vendors. First, as already noted, the decline reflects the reality that students increasingly are purchasing textbooks and related materials from vendors other than college bookstores. One college bookstore manager woefully observed, "We're like newspapers and travel agents." Another college bookstore manager told me: "Disintermediation is destroying us." Still another bookstore manager suggested that her store would be "out of the textbook business except for Internet sales" by the end of this decade. "We'll still make money," she said, "but we'll do it selling different things."

Second, most bookstores, in concert with the major publishers, now sell course packages that usually include a paper version of a textbook plus electronic access to a

wide range of course materials, including the textbook. Therefore, the numbers in the "course technology" sales category in Table 5 are deceptively low because much of the cost of course technology now is being recorded as part of the original textbook sale.

Third, rather than purchase a conventional textbook, some students choose to acquire a photocopied version of their textbook (whether or not lawfully), and they may not be doing this through the college bookstore.

Student expenditures on textbooks

The actual number of dollars that students spend on textbooks and related educational materials is not clear because, for financial aid purposes, the U.S. government allows institutions of higher education to report textbook costs in a category known as "books and supplies." One can approximate student expenditures on textbooks, however. Financial aid directors told me that "supplies" usually account for about one-quarter or one-fifth of the "books and supplies" total.

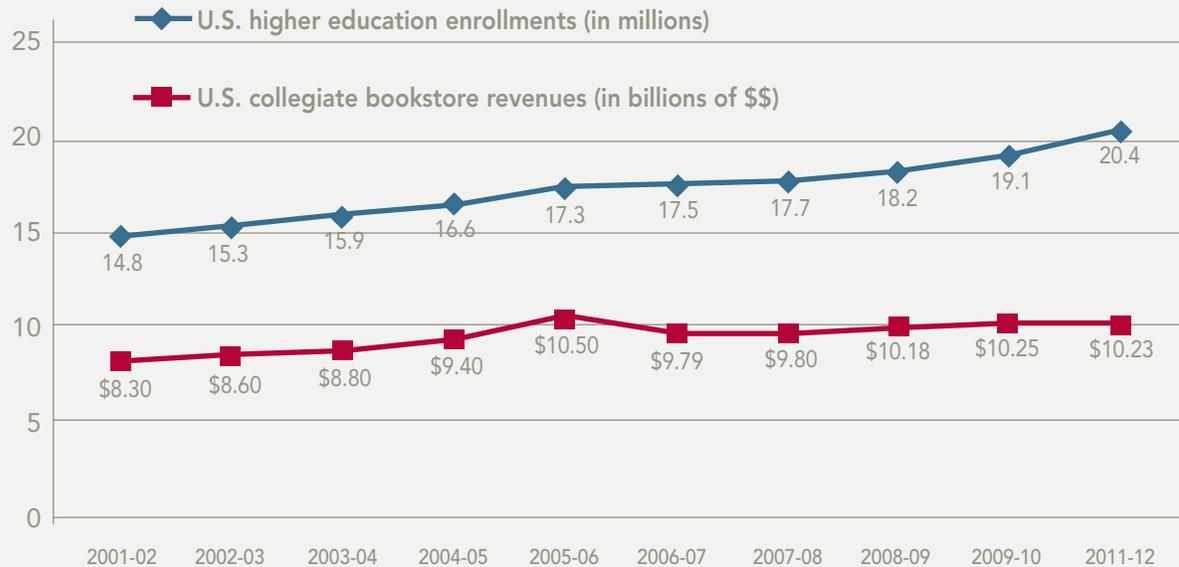
Table 6 on Page 22 reports a measure of the estimated total cost of attending a diverse selection of 20 four-year institutions and those institutions' estimates of the cost of books and supplies for their typical student. Just as the estimated annual cost of attendance varies dramatically among this sample of institutions, so do their estimates of the annual cost of books and supplies, and it is not always clear why this is so. The average of the latter, however, is \$1,332 per year, and this suggests that about \$1,000 is spent per student on textbooks and closely related course materials each year.⁵⁰ These data are consistent with the College Board's estimate that in fall 2011, the typical full-time undergraduate student spent \$1,168 on books and supplies,⁵¹ but well above what Student Monitor reports.

Textbook prices

The data presented in Figure 1 at the beginning of this report demonstrated that the Bureau of Labor Statistics says college textbook prices have been rising much more rapidly than most other prices, and that over the past decade textbook prices have risen 2.65 times as rapidly as the CPI-U. Figure 6 on Page 23 traces this relationship back to 1978, though instead of textbook

Figure 5

U.S. college bookstore revenues vs. U.S. higher education headcount enrollment, 2001-02 to 2010-11



Source : National Association of College Stores, *College Store Industry Financial Report, 2012* (Oberlin, OH: National Association of College Stores, 2012), p. 2.

prices (which have been recorded and published by the BLS only since the turn of the century), Figure 6 examines the prices of *educational books and materials*, a more general category that nonetheless is dominated by college textbooks. Since 1978, the price index for educational books and materials has skyrocketed 812 percent, while comparable indexes for medical services, new homes and the CPI-U increased only 575 percent, 325 percent and 250 percent, respectively.

This trend has not yet been influenced significantly by the advent of digital books, book rentals or greater use of used book markets. In 2012, the BLS price index for textbooks rose 8.0 percent.⁵²

It's important to note that BLS price indexes for educational books and materials — and since 2000, for college textbooks — *do include* the following textbook sources that many believe should ameliorate price increases:

- New books purchased at bricks-and-mortar outlets or on the Internet.

- Books on CD-ROM, DVD or Blu-Ray.
- Downloadable e-Books.

BLS textbook price indexes *do not include*:

- Book rentals.
- Used books.⁵³
- Sales of books by one student to another.

It's also worth noting that the BLS limits its examination of college textbook prices to books actually required for a course being offered by a college or university. Thus, some optional course materials are not priced by the BLS. However, this would not seem to make much difference in published BLS data.⁵⁴

The BLS also is challenged by the increasing size and quality of college textbooks and textbook packages being sold by publishers. Put simply, the BLS attempts to account for the fact that today's paper textbooks often are bigger and flashier and come with more digital supplements than those of 10 or 20 years ago. In a

sense, textbooks over the years gradually have become different products, and the BLS attempts to account for this evolution just as, when examining housing prices, it takes note of the reality that today's houses are larger than houses of 25 years ago.

Hence, some publishers argue that the major reason textbook prices have increased so rapidly is that the quality of textbooks also been increasing. "It's simply a better product now," one publishing executive told me, while another opined, "They're bigger, better and contain all kinds of things that textbooks didn't a generation ago." This may well be true, especially where bundled textbook packages are concerned. Nevertheless, one should bear in mind that the BLS already has attempted to take this into account when it publishes its textbook price index. BLS college textbook price indexes are "quality adjusted" price indexes, insofar as the BLS is able to accurately assess quality adjustments that have occurred.⁵⁵ Even so, college textbook prices have been increasing much more rapidly than most other prices and far more rapidly than the Consumer Price Index.⁵⁶

In any case, the National Association of College Stores (NACS) does not believe textbook prices have been rising nearly as rapidly as the BLS reports. NACS reported only a 4 percent annual increase in the price of

the new college textbooks NACS members have sold from 2008-12 (this is still larger than the growth in the CPI-U, however) and only a 0.5 percent annual increase in the price of the used textbooks that NACS members have sold during the same time period.⁵⁷ If these NACS data are accurate, then the BLS textbook price index is off target for reasons already discussed. If so, then there are fewer villains in the textbook price scenario, and the list does not include NACS members but might still include other textbook sellers such as publishers, amazon.com, chegg.com, etc.

The bewildering set of textbook choices

Let's assume Mary is a student at State University and has learned that a certain textbook is required for a college course that she is going to take. Mary now faces an astonishing variety of alternatives. Sequentially, these are the major decisions she must make:

- 1) Should she pay for a textbook in some form, or should she share a textbook with other students, or perhaps not even purchase a textbook at all?
- 2) If she is going to purchase a textbook in some form, should she buy a print copy or a digitized e-book version?

Table 5
Changing revenue sources for college bookstores, 2003 and 2012

	Percent of total revenues	
	2003	2012
New course books	40.2%	36.4%
Used course books	16.6%	16.1%
Current published materials	1.1%	1.3%
Course technology	—	0.1%
Totals	57.9%	53.9%

Source: National Association of College Stores, *College Store Industry Financial Report, 2012* (Oberlin, OH: National Association of College Stores, 2012), p. 3.

Table 6
Cost of attendance, 2011-12

Institution	Estimated total annual cost	Estimated cost for books and supplies
University of Alabama	\$23,500	\$1,100
Babson College (MA)	\$56,700	\$1,020
California Lutheran University	\$48,565	\$1,665
California State University-Chico	\$19,664	\$1,656
University of Colorado	\$23,204	\$1,992
University of Delaware	\$36,874	\$ 800
Dillard University (LA)	\$23,718	\$1,200
Elizabeth City State University (NC)	\$11,770	\$ 620
Florida Institute of Technology	\$49,490	\$1,200
Illinois State University	\$23,216	\$ 954
New Mexico State University	\$14,793	\$1,084
New York University	\$61,642	\$2,898
Ohio University	\$22,150	\$ 886
Oregon State University	\$20,073	\$1,908
San Francisco State University	\$20,628	\$1,554
St. Olaf College (MN)	\$49,650	\$1,000
St. John's University (NY)	\$51,805	\$1,905
University of Montana	\$14,660	\$ 950
University of Southern Maine	\$19,396	\$1,346
University of Texas-Austin	\$22,588	\$ 904

Average: \$1,332

Note: Total cost includes tuition and fees, room and board, books and supplies for in-state students. It does not include transportation costs or personal expenses. All information was taken from the websites of the individual institutions and www.collegedata.com.

- 3) If she is going to purchase a print textbook, then should she buy a new or used copy, or rent a copy?
- 4) If she is going to purchase a paper textbook, should she also purchase access to learning software that accompanies the textbook? For example, the interactive Aplia software that accompanies N. Gregory Mankiw's *Principles of Economics* (6th) textbook?

Table 7 (Page 25) demonstrates some of the complexity of choices. Consider Mankiw's best-selling beginning economics textbook. On Dec. 28, 2012, Mary could have purchased a new hardbound version from Cengage on its website for \$194, or she could have gone to amazon.com, where it was priced at \$177.99. There were two major e-book alternatives. A conventional e-book cost \$84.99, a Kindle version at \$162.93. Alternatively, Mary could have rented the book for a

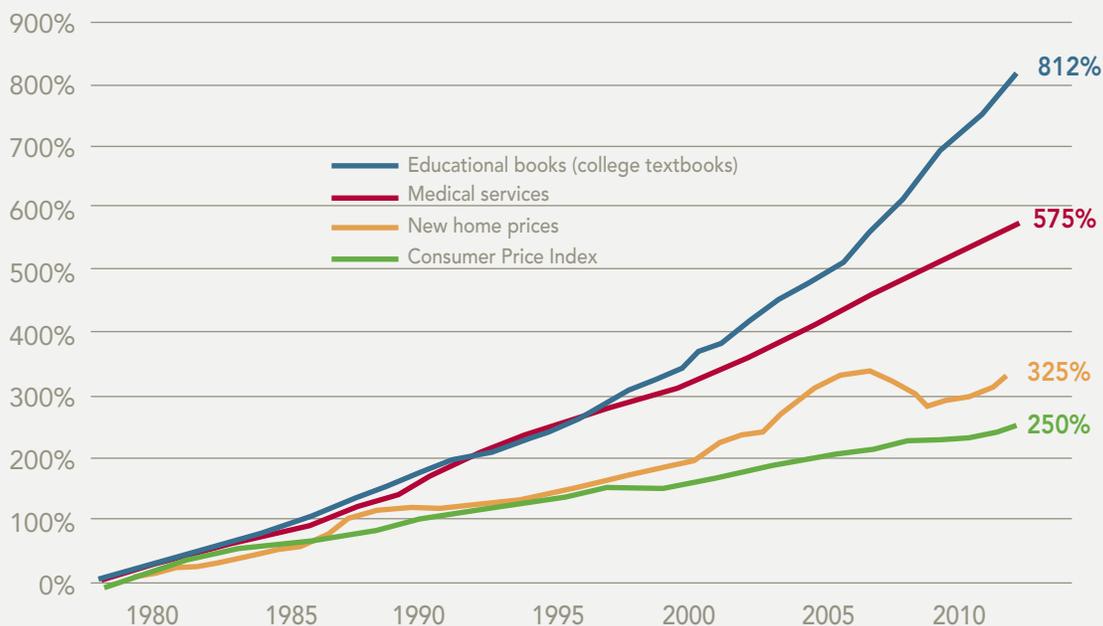
semester from chegg.com for \$47.99, or she could have purchased a used copy on amazon.com for \$110.99 or a paperback version for \$43.87 from Barnes and Noble. There also was an international edition available for \$69.99 and a loose leaf version available for \$99.99.

However, as noted above, Cengage also sells its highly regarded Aplia learning software to accompany Mankiw's textbook. Aplia offers students interactive learning exercises (e.g., manipulating supply and demand curves), and Cengage would have sold it free-standing on that day for \$134. It also was possible for Mary to purchase a bundled package of the hardbound textbook, Aplia, a workbook and other materials from Cengage for \$350.95.

Cengage told college bookstores that the wholesale price a buyer would pay for this bundle was \$239.75. Thus, on that day, there was a 46.4 percent difference between the wholesale price of the bundled textbook package and Cengage's retail price. College bookstores usually don't mark up the prices of textbooks by

Figure 6

Comparing price increases for educational books and materials with those of medical services, homes and the Consumer Price Index, 1978-2012



Source: Mark J. Perry's *Carpe Diem* blog, Dec. 24, 2012, www.aei-ideas.org/channel/carpe-diem.

that amount. National Association of College Stores members reported average gross textbook markups over wholesale costs of only 22 percent in 2011.⁵⁸

“On that day” really is the operational terminology.

Dynamic pricing techniques, often guided by sophisticated software, are used by larger sellers to price textbooks, so prices change from minute to minute in response to supply and demand and other factors. Further, not all prospective purchasers will receive the same price quotes; different prices may be quoted to customers in different locations, or to customers who are presumed to have different characteristics. This is price discrimination (though usually not illegal) in action.

Descriptions on the Internet of the aforementioned textbook products sometimes left something to be desired. Would Barnes and Noble really have been willing to sell a comparable paperback version of Mankiw’s 6th edition for \$43.87? Amazon.com was selling the same paperback version for \$136.49. Or did Barnes and Noble proffer a somehow inferior version? One could not tell. *Caveat emptor*.

The existence of “international” editions of these textbooks provides an interesting demonstration of global price discrimination. While the contents of international editions of a textbook sometimes are stripped-down versions of the textbooks sold in the U.S., it is indisputable that their prices are much lower than they are in the U.S. In one case, however (Shigley’s *Mechanical Engineering Design*, 9th

edition), the Internet description of the book that was priced at an amazingly low \$24.22 claimed that the “contents are the same as the U.S. edition” and that “we may ship the books from Asian regions for inventory

purposes.”⁵⁹ In some cases, this language is a tipoff that the version the student will receive is photocopied, and this may well have been done in violation of copyright. In other cases, however, it is the publisher who is selling the textbook in international markets for prices well below what that publisher charges inside the U.S. This is a profit-maximizing strategy that recognizes international differences in price elasticity of demand (that is, variations in the sensitivity of consumers in various countries to price changes). It is designed to wring the most possible revenue out of the worldwide market.

In order for international price discrimination to work, not only must those differing price sensitivities exist, but entrepreneurs must also find it difficult to “re-import” international textbooks. That is, it must be difficult or impossible for an enterprising soul to buy textbooks at lower prices in countries such as Poland

or Egypt, ship them to the U.S., and then sell the books at prices lower than those charged in the U.S. — but still higher than those in Poland and Egypt. Price arbitrage of this sort reduces the revenue of publishers, and they often take great pains to snuff out this practice.

In March 2013, the U.S. Supreme Court ruled in favor of a Cornell University graduate student who resold

Non-buyer beware!

When students don’t purchase or rent a textbook (whether new, used or e-book), how does this decision affect their academic performance in the class concerned? Several years ago, I did some research in an attempt to answer that question.

I collected extensive demographic and academic data on more than 150 students taking a managerial economics course from me at Old Dominion University. After their grades had been determined, I asked each student via e-mail to tell me if he or she had purchased or rented the required textbook for that class. Almost three-quarters responded, and about 30 percent of the respondents indicated they did not purchase or rent the required textbook.

I inserted this information into a multiple-regression equation, seeking to explain each student’s grade on the basis of more than 10 explanatory variables, including demographic information about him/her, his/her grade-point-average, etc. Students who did not purchase or rent the required textbook received a grade that was .57 lower (on an A=4.0 scale) than the class average, holding constant all other variables in the equation.

This result must be interpreted carefully for many different reasons, including student self-selection. However, it underscores a possible impact that textbook costs could have on student behavior and academic achievement.

Table 7

How textbook prices differ across sellers and modes

Book	Authors	Publisher	Publisher's list price, book only	New amazon.com	International edition	E-book	Rental chegg.com	Used amazon.com	Paperback
Professional Nursing, 6th, 2010	Chitty and Black	W.B. Saunders (Elsevier)	\$54.36	\$40.00	None	\$44.17	\$28.03	\$25.23	\$54.36
Norton Anthology of English Literature, 5th, 2006	Greenblatt, et al.	W.W. Norton	\$65.62	\$57.08	None	None	\$26.99	\$55.99	\$65.62
Sociology, A Brief Introduction, 10th, 2011	Schaefer	McGraw-Hill; \$95 CB wholesale	\$126.67	\$87.56	\$43.78	\$66.50 Csmart	\$39.99	\$88.45	\$87.56
Campbell's Biology, 5th, 2010	Reece, et al.	Pearson	\$208.80	\$125.00	\$93.99	\$86.13	\$50.99	\$99.94	\$93.88
Deutsch: Na Klar! (student edition), 6th, 2011	DiDonato, et al.	McGraw-Hill; \$145 CB wholesale	\$193.33	\$210.00	\$117.22	\$91.50	\$61.49	\$210.00	\$110.00
Shigley's Mechanical Engineering Design, 9th, 2010	Budynas, Nisbet	McGraw-Hill	\$256.99	\$184.99	\$24.22	\$110.75	\$56.99	\$227.23	\$99.45
Principles of Economics, 6th, 2011	Mankiw	Houghton Mifflin (Cengage); \$239.75 CB wholesale; Aplia \$134.00, \$350.95 bundle	\$193.09	\$177.99 (\$99.99 LL)	\$69.99	\$84.99 (\$162.93 Kindle)	\$47.99	\$110.99	\$43.87
Averages			\$157.11	\$126.09 (w/o LL)	\$69.84 (w/o Kindle)	\$80.67	\$44.64	\$116.83	\$79.25

Source: Survey conducted by James V. Koch on Dec. 28, 2012.

textbooks purchased abroad.⁶⁰ John Wiley & Sons had sued the student and won a \$600,000 judgment against him in a lower court, but the Supreme Court reversed that ruling, 6-3.⁶¹ At stake was the meaning of the “first sale” doctrine, which historically has been interpreted to mean that once a company sells a copyrighted product, the purchaser may use it as he/she sees fit and then may resell that product as well. Thus, a student can purchase a Santana music CD or a Jessica Fletcher *Murder She Wrote* novel and later legally resell them to her college roommate for whatever price she wishes.

Until this decision, it never was clear whether the “first sale” doctrine applied to goods produced outside the U.S. as well as to those produced domestically.

Heavyweight corporations such as eBay, Google and Costco took the side of the graduate student because often they either engage in or enable re-importation.

This is an important decision that likely will exert downward pressure on U.S. textbook prices, but upward pressure on prices U.S. publishers charge for essentially the same textbooks abroad. One can anticipate a surge of re-importation businesses actively arbitraging international differences in textbook prices.

The Supreme Court decision also may accelerate the move of publishers away from print textbooks into digitized textbook materials that they can license. Licenses provide publishers with more tools to prevent textbook re-importation and for that matter, any resale.

While this decision clearly will affect textbook markets, the most important non-textbook markets affected may be pharmaceuticals and software. Upheavals would occur in these markets because they feature large international price differentials for identical products.

It's worth noting that it already is possible for students to arbitrage textbook prices from their dormitory rooms. Amazon.com, for example, maintains a separate Internet site in the United Kingdom, www.amazon.com/uk. One can purchase nearly any popular U.S. textbook on this site, often (but not always) for prices

below those being charged in the U.S., even after one pays for the cost of international delivery. Some of the price differentials are almost inexplicably large. *Shigley's Mechanical Engineering Design*, 9th edition, which has a publisher's list price of \$256.99 in the U.S., and a (U.S.) amazon.com price of \$184.99, was being sold for \$67.29 in paperback form on amazon.com/uk on Dec. 28, 2012, well below the U.S. paperback price of \$99.45. On the other hand, Chitty and Black's *Professional Nursing*, 6th edition, was more expensive on amazon.com in the U.K. than in the U.S.

Not every U.S. student, however, is going to be willing and able to find the amazon.com/uk site and place a book order in sufficient time for the book to be shipped (perhaps via sea mail to cut cost) to the U.S. so that it can be used in a course. This is why intermediary firms ordinarily handle such transactions; this is the role the Cornell University graduate student assumed. He imported books assuming he would be able to sell them to U.S. students and make a profit. However, he also assumed all of the risks attached.

In truth, Table 7 only scratches the surface of the profusion of textbook prices and products available. In addition to the publishers themselves and well-known sellers such as amazon.com and chegg.com, there are dozens of other textbook sellers and renters, including textbooks.com, valore.com, ecampus.com (which acts as an intermediary, brings together buyers and sellers, then takes a 15 percent split of the sales revenue), abebooks.com, Barnes and Noble, TextbooksRUS.com, half.com, etc. On Dec. 28, 2012, I counted eight firms selling new hardbound copies of Mankiw's *Principles of Economics* (6th), 18 firms selling used copies, 13 vendors offering rental copies, and six companies selling e-book versions.

The relevant point is that students face an array of alternatives. It's also true that there usually are non-price attributes attached to particular sales modes. For example, some students may enjoy spending time in bookstores and picking up and sampling many different volumes, while other students may regard such activities

It's worth noting that
it already is possible for
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dormitory rooms.

as a waste of time and prefer to surf the Internet in search of bargains. Figure 7 (which is based on the data found in Table 7) provides a rough sense of the nature of those alternatives for the sample of seven textbooks. However, it does not control for the (dis)utility that buyers attach to each mode. It's hardly a surprise that paying the publisher's list price usually is the most expensive way to get a textbook. In descending order, the next most expensive ways to purchase these seven books was a new version at amazon.com, then a used version at amazon.com, followed by an e-book, a paperback, an international edition, and a rental.

Ultimately, however, students must make a decision about how to gain access to their textbook. Only one-third of textbook units were purchased in printed, new form; 42 percent were purchased used; and 15 percent

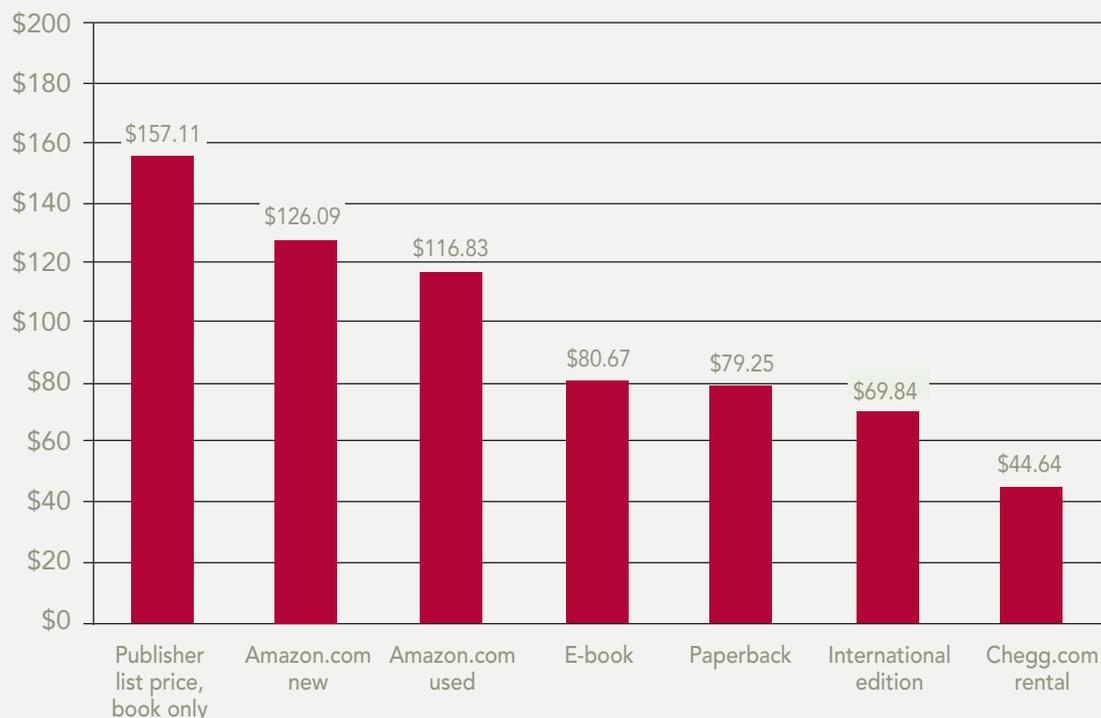
were rented. Figure 8 summarizes those student choices. The fall 2012 Student Monitor survey suggests that the share of e-books (new and rental) has risen to 10 percent of the value of all textbook purchases.⁶²

Nevertheless, the proportionate popularity of e-books among students lags that of the general population by almost 40 percent. Already in 2011, amazon.com reported that it was selling more e-books than print books, though few of these were textbooks.⁶³

For a variety of reasons discussed in a section that follows, e-books have yet to capture the fancy and devotion of most college students. This behavior may well change as time passes; however, it now constitutes an impediment to lowering the total amount of money students spend on textbooks.

Figure 7

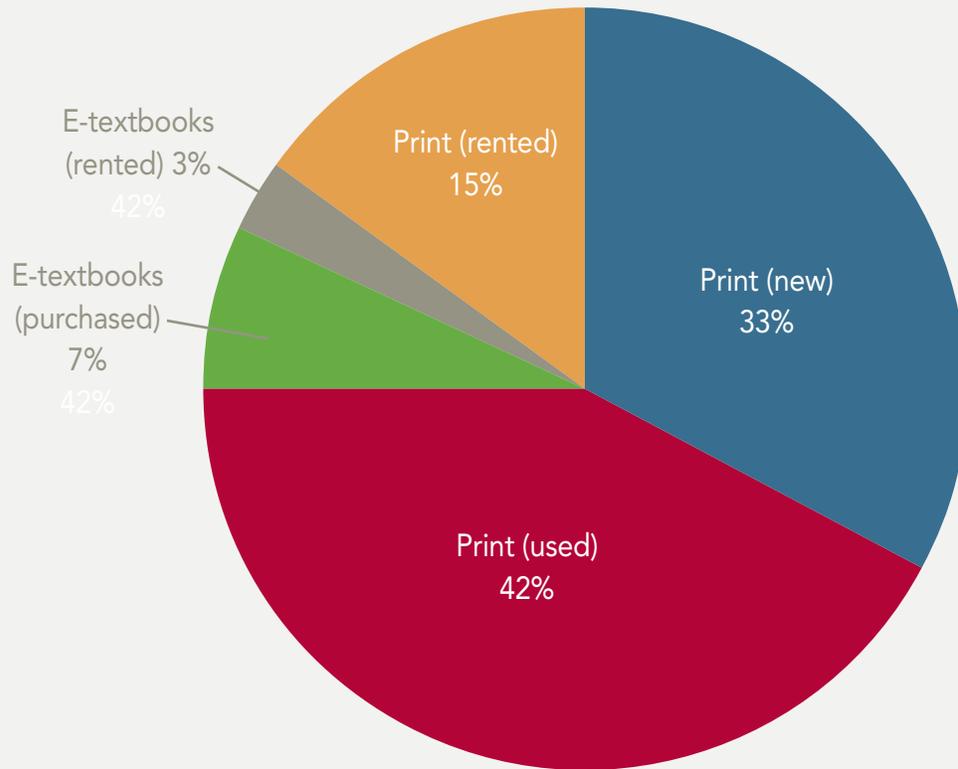
Average textbook price by purchase mode for seven textbook samples, Dec. 28, 2012



Source: Internet sample taken by James V. Koch, December 28, 2012.

Figure 8

Percentage of textbook purchases by mode, Fall 2012



Source: Student Monitor, "Lifestyle and Media, Fall 2012," Student Monitor LLC, Ridgewood, NJ (2012), www.studentmonitor.com

IV. Notable and innovative textbook and educational materials, content developments and distributors

Indiana University/Internet2

The most auspicious and advanced implementation of digitized textbooks (e-books) has been ongoing in the 110,000-student Indiana University system since 2009. IU's path-breaking activities were joined by four other large research Internet2 institutions (Cornell, Minnesota, Virginia, Wisconsin) in a spring 2012 pilot experiment on each of those campuses. In a nutshell, IU has negotiated sharp price discounts with publishers for e-book versions of textbooks by guaranteeing that every student in a course will purchase a copy of the e-book. Students are charged the equivalent of a laboratory fee to pay for their e-book copy. This has become known as the "course fee" model.

The IU model attempts to make the e-book marketplace profitable or productive for publishers, authors, students and faculty:

- Publishers are guaranteed a steady flow of sales, and 100 percent sell-through rather than large sales in the first year of a new edition, followed by a precipitous decline in sales as price-wise students opt for used versions of a textbook.
- Authors likewise will not experience a significant decline in sales after the first year.
- Students pay prices that average 60 percent to 90 percent below the price of a new hardbound print textbook (but they must buy the e-book, whether or not they want it).
- Faculty can be assured that all students in their class actually will have a copy of the textbook (absence of a textbook is reported to be an increasing problem on most campuses).
- Both faculty and publishers will have the opportunity to update e-books on a real-time basis.

IU clearly is the national leader in the e-book arena. It ran digital materials pilot programs in the 2009-10 and 2010-11 academic years and worked out most of the kinks in its e-books program. IU's program has the input and blessings of both faculty and student campus governance, as well as the IU Board of Trustees. The university has developed policies, held seminars and training sessions, mastered billing, and been able to evaluate its efforts.

IU negotiated digitized materials agreements with Wiley, McGraw-Hill, MacMillan, Norton, Flat World Knowledge and more recently, Pearson and Cengage. Rather than negotiate prices that are "X percent less than publisher's list price," IU has focused on flat-rate pricing. The major reason is that Nik Osborne, who leads IU's e-book efforts, believes publishers' list prices sometimes are "a made-up number"⁶⁴ that are substantially unrelated to actual costs. Bradley C. Wheeler, IU's CIO and vice president for IT, believes that the marginal cost of producing an additional printed copy of a major textbook is only about \$5 per unit; this easily allows publishers to offer low, flat-rate prices to IU that in no case are higher than 35 percent of publishers' list prices.⁶⁵

In the spring 2012 IU and Internet2 group pilot project, faculty had the power to decide whether or not to participate and whether to require students to purchase an e-book. Once a faculty member made a positive decision in that regard, however, students were required to purchase the e-book and pay the course fee for the book. Each institution paid \$20,000 for the privilege of using e-books in up to 10 course sections, or for a maximum of 1,000 students.⁶⁶

IU and the other Internet2 institutions relied on Courseload eReader software to deliver the product to students. Courseload software enables students

to read and mark up digitized textbooks and course materials. Students are able to search, highlight and annotate digital content and create Internet links to other material with their textbook or course content. They also can collaborate and communicate with each other. In addition, CourseLoad makes it possible for faculty to track students and how they use the digitized textbook and course material.⁶⁷

IU has been successful in separating the choice of the digital platform (in its case, CourseLoad) from the choices of content (the digital materials supplied by publishers). IU Vice President Wheeler said the publishers “wanted to control the mixing bowl.” Hence, they wished to decide both the content that IU would receive and the digitized learning platform (CourseSmart).⁶⁸ IU and other institutions have worried that the market power of publishers would increase significantly if the publishers controlled both content and digital platform. Thus far, they have avoided that problem, but only after what Wheeler has termed “vigorous negotiations.”

There are, however, possible competitive ramifications attached to institutional licensing of e-books that worry some observers. Mark Nelson of the National Association of College Stores believes that it could lead to increased market concentration and fewer suppliers. He and others point to the experience of libraries with digital subscriptions; initially, digital prices were lower than print prices, but this soon changed. Further, the four largest suppliers of digitized journals soon claimed up to 75 percent of the market. The suppliers began to bundle their digitized journals, which drove up the total amount of money libraries were spending on journals.⁶⁹

The evaluated results of the Internet2 project were good enough to inspire plans for greatly expanded use of e-books, but not good enough to assert either that faculty understood how to tap the potential of the e-book system, or that students were enthusiastic about the e-book system. In a word, the results were mixed and receive additional attention in a section below.

Internet2 Net + Box

The members of Internet2, the powerful computer network that unites the major research universities in the U.S. with a variety of business, governmental and nonprofit entities, now enables its members to access and share digital content “with anyone, from anywhere.”⁷⁰ Since 2005, Net + Box has enabled more than 10 million individuals, small businesses and Fortune 1,000 companies to share digital content.

The relevance of Net + Box is, as Indiana University’s Nik Osborne has noted, that “institutions that are interested in IU’s process, they can — for a low rate — try something like IU is doing very easily at their institutions

without a lot of work on their end because of the way we’ve set it up.”⁷¹ The bottom line is that those who wish to replicate what IU has done will not have to start cold. Instead, an impressive haul of intellectual property already is available to them to push them forward at rather low cost. Indeed, IU has spent millions of dollars developing its e-book platform and has

offered other institutions a free ride on its investments. Wheeler has stated that other institutions “can imitate us wholesale” and that IU will give away virtually everything it has developed. This, he believes, will push technological innovation, increase the use of digitized materials and drive down costs.⁷²

California State University system’s Affordable Learning Solutions

The Affordable Learning Solutions (ALS) website⁷³ of the California State University system (which enrolled more than 426,000 students on 23 campuses in fall 2011)⁷⁴ is designed to make it easy for faculty to adopt less expensive textbooks and for students to be able to choose from a variety of textbook modes, including e-books and e-book rentals. The ALS website is user-friendly and enables faculty and staff to peruse a variety of free materials, including textbooks, e-books,

IU has been successful in separating the choice of the digital platform (in its case, CourseLoad) from the choices of content (the digital materials supplied by publishers).

supporting course materials and library resources. However, it also links faculty and students to low-cost materials, including those of Flat World Knowledge.

The ALS website trumpets that it can save students 60 percent or more if they choose to rent e-books via ALS. The centerpiece of this offer is the impressive stable of publishers and organizations with which ALS has signed agreements to supply low-cost materials — Cengage Learning, CourseSmart, Follett, and Barnes and Noble. However, ALS also supplies direct links to McGraw-Hill, MacMillan, Pearson and Wiley in order for students to be able to comparison shop.

The ALS website is the most impressive of any belonging to a state government entity. It is easy to use and clearly offers students access to low-priced textbooks and their alternatives. Simply put, the California State University system is able to do this because it exercises considerable “monopsony power” (buyer power) as a customer. Like Wal-Mart, the California State University system is able to negotiate lower textbook prices because the large volume of its purchases enables it to muscle even major publishers for substantial discounts.

Open Course Library

The Open Course Library is a collection of open textbooks, course syllabi and course materials that can be accessed inexpensively. The organization, which is jointly funded by the State of Washington and the Bill & Melinda Gates Foundation, has supported the completion of 42 textbooks and sets of course materials under Creative Commons licenses. It projects extending this model to 81 high-enrollment, college-level courses.

The Open Course Library does assign a price to its materials, though that price typically does not exceed \$30. However, “that \$30 cap is proving to be daunting.”⁷⁵

The time of faculty and staff is not free, and high-quality open-source materials often are difficult to find. As one participating faculty member lamented, “A lot of things that are open are old.”⁷⁶ Further, students don’t receive a printed copy of the textbook for that price, and their digital access expires at the end of the term.

Connexions

Connexions, headquartered at Rice University, provided one of the first collections of open-source educational materials. Its materials are available at no cost, and users can explore and download all of the content they desire.⁷⁷

Connexions aims to help faculty and authors create open-source materials and to collaborate with each other as well as to help students find materials easily. It is tightly connected to many other open-source organizations and most recently published its first textbook, *College Physics*. Connexions aspires to produce 20 open-source textbooks under the aegis of OpenStax College, which also is related to Rice University. Like Flat World Knowledge, OpenStax College offers students peer-reviewed textbooks “that meet scope and sequence requirements for most courses”⁷⁸

Except for the generosity of Rice University and the Hewlett Foundation, however, it is not clear that Connexions could continue to exist. Once again, treating textbooks as zero-priced free goods is a doubtful long-term strategy.

Flat World Knowledge

Flat World Knowledge (FWK) is the world’s leading publisher of open textbooks and digital supplements (see recent developments below). Though only five years

The MOOC market

Massive Open Online Courses (MOOCs) have captured considerable attention in higher education. Some institutions report enrolling 160,000 or more students for single courses.

However, the business models for these courses are open to question. For one thing, when given the opportunity to register for credit (for a small fee), less than 1 percent of MOOC students have opted to do so. Further, it’s not clear how institutions will find the means to compensate faculty for their MOOC work unless there are course fees. Nor is it clear how that work will count when faculty are evaluated.

Nevertheless, publishers salivate at the prospect of selling textbooks to MOOC students.

old, FWK already publishes 115 books under Creative Commons Non-Commercial Share-Alike licenses, including 69 in business and economics and 32 in the social sciences and humanities. FWK's ambition is to publish an open textbook for each of the 125 most heavily enrolled college courses by 2014.⁷⁹ The company reports that its textbooks have been adopted at 2,000 institutions and used by 300,000 students.⁸⁰

FWK provides an easy-to-use platform so faculty can modify the book and deliver a customized version to their students if they wish to do so. As is true with the Courseware software used at Indiana University, FWK students have the ability to create, share and even sell study resources to one another.

The original business model of FWK, a for-profit company, involved supplying a free copy of its textbooks on the Internet, and then generating income by selling students either a printed version or an e-book version of the free book. Thus, in spring 2012, FWK priced its *Principles of Economics* textbook by Rittenberg and Tregarthen at \$35 for a black-and-white version, \$90 for a color version and \$25 for an e-book.

Some conventional publishers no doubt uttered "I told you so" when FWK announced in November 2012 that it was moving away from a zero-price textbook pricing model. FWK revealed that as of Jan. 1, 2013, it would begin to sell institution-wide licenses priced at about \$20 per student. These licenses will grant access to all of FWK's offerings to students in participating campuses. The company will continue to offer its All Access Pass (AAP) — which includes all digital versions of its textbooks, including e-book files for Kindle Fires and iPads, PDF versions, and digital and audio study aids — to its bookstore partners for sale to individual students. The AAP will cost \$28. FWK also will sell the AAP on its website for \$34.95.

As an *Inside Higher Education* article in November 2012 noted, it's difficult for a for-profit firm to assemble a viable business plan that is based on free textbooks.⁸¹ And, as FWK has found, it is extremely difficult to make the financial numbers work because its underlying model has been based on giving away a product in hopes that consumers will decide to purchase other versions of that product. This "freemium" model is often used by software firms that, for example, offer customers a stripped-down, free version of virus-detection software,

then attempt to convince them that what they really want is full-blown protection (for which they must pay). Perhaps FWK will develop a financially workable model and thrive, but this remains to be seen.

Nevertheless, there are other possibilities such as public-private partnerships that would subsidize either textbook producers or textbook consumers in order to make open-source publishing work financially. Public subsidies, however, typically result in some type of public regulation or control. Would public regulation be confined to overseeing revenues, costs and prices, or would it eventually drift into the selection of authors and vetting of content? The slope could be slippery.

Even websites such as Facebook that generate heavy traffic have difficulty monetizing that traffic and turning it into revenue. Most have attempted to do so by selling advertising, but it's not clear whether this pays off for most websites. Advertising in the form of banner ads and targeted pop-ups and the like, and the selling of personal web-surfing information is anathema in much of higher education. Consequently, firms such as FWK appear to have limited options for generating more revenue.

Now that FWK has scrapped its zero-price model, it no longer is a truly "open" textbook publisher. Nonetheless, it has been the major innovator in the area of free or low-cost textbooks and likely will continue to occupy a major role in the years ahead.

Saylor.org

Saylor.org is interesting at this point, not so much because it has made a major impact, but because its owner, investor and guiding spirit, Michael Saylor, is a wealthy individual with extensive entrepreneurial experience, expansive goals and great energy. Because of this, saylor.org has potential that many other ventures lack.

Saylor.org forthrightly says it "is a free and open collection of college-level courses. There are no registrations or fees required to take our courses, and you will earn a certificate upon completion of each course. Because we are not accredited, you will not earn a college degree or diploma; however, our team of experienced college professors has designed each course so you will be able to achieve the same learning objectives as students enrolled in traditional colleges."⁸²

In fall 2012, Saylor conveyed to the *Chronicle of Higher Education* his frustration with the slow pace of change in higher education. He likened traditional college teaching to “giving people thousands of rubber mallets and asking them to drill a hole through a mountain.” Instead, said Saylor, “We need nitroglycerine.”⁸³ Thus far, however, saylor.org has produced only a few courses, and these courses have yet to receive wide acceptance despite being produced by highly capable individuals. Once again, the question of the long-term business model that will sustain this effort is paramount.

Boundless Learning

The most provocative entry into the open-textbook market is Boundless Learning, which is less than two years old. The strategy of Boundless appears to be to work backward. It identifies highly successful textbooks, notes the topics they cover, and then attempts to pull together a basket of freely available material that closely tracks the best seller.

There is a practical problem, however. Boundless has been sued by several major publishers, who argue that “Boundless gets an ‘F’ in originality for deliberately copying the creative, scholarly and aesthetic expression of plaintiffs and their authors.”⁸⁴ Those who promote open textbooks such as Cable Green, who directs global learning for the Creative Commons, believe the primary motive of the publishers is simply to destroy a potential competitor.⁸⁵ At the same time, should they prevail, they will send a message to any other open-textbook activists who might wish to use the copyrighted material of the publishers’ best-selling textbooks.

The focus of Boundless is on students. Thus far, it hasn’t really attempted to sell its textbook materials to colleges. Boundless boasts that it will “Replace your assigned text for 100% free.”⁸⁶ However, while Boundless has attracted more than \$9 million in angel investor funding (differentiating it from many other open initiatives that have relied on foundation funding), it’s once again not clear how it will earn sufficient revenue to

survive. This is a recurring theme where open textbooks and educational materials are concerned.

Apple

When Apple enters any market, it is big news, and those companies already in the market should be concerned about their futures. Apple has the second-largest market capitalization of any company in the United States (about \$480 billion in January 2013),⁸⁷ and its highly recognizable brand was worth \$77 billion in 2012.⁸⁸ Further, it has more than \$128 billion in cash on hand, waiting to be used.⁸⁹ One does not trifle with Apple.

In January 2012, Apple declared that it was going to reinvent the conventional textbook by making it possible for faculty members to put their syllabi, lecture videos, audio recordings and e-textbooks in one customized spot for students. Apple’s software, iBooks Author, will be the vehicle for this transformation. However, as usual, the software is designed to route users to other Apple products such as iPads and iTunes.

Apple’s revolutionary new textbook development actually isn’t revolutionary at all. A variety of platforms exist that can do the same things. However, those who have focused on this have missed the point. When Apple also disclosed that it intends to sell existing textbooks (albeit at the K-12 level) as e-books for a price of \$15 per copy, it should have been a sharp wake-up call for existing publishers, textbook vendors, and Internet content and delivery platforms. If and when Apple begins to do the same for college-level textbooks, it will have a powerful, disruptive impact on that market.

Because existing textbooks are protected by copyright, either Apple will have to purchase licenses to use the copyrighted material or commission its own new textbooks that then will compete head to head with the market leaders. Either way, it will be expensive; that underlines the huge economies of scale that Apple

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apparently expects to enjoy if it is able to sell tens of thousands of digitized copies of textbooks.

Apple has the personnel, distribution and sales network, and deep financial pockets to enter the college textbook market in a major way. Should it decide to produce iBooks for large-enrollment college courses and actually sell them at \$15 per copy, it would push many publishers to the wall and perhaps destroy whatever business models most of the nonprofits have as well.

To be sure, this hasn't happened yet. Nevertheless, Apple also has created iTunesU, where faculty can deposit digitized learning and textbook materials to go along with iBooks. Some experts say the company is planning to commission college textbook authors and/or offer digital versions of existing textbooks. We will be in a "fasten your seatbelt" environment if these developments mature.

V. The future of e-books

Xplana's projections

The most optimistic view of the future of e-books in the textbook arena has been put forward by Xplana, which is itself a digitized textbook provider. Xplana sees recent increases in the purchase and use of e-books as a predictor of geometric growth in this textbook mode through 2017. Xplana estimates the 2012 market share (by sales) of e-textbooks at 6 percent, but sees this rising to 11 percent in 2012, 19.5 percent in 2014, and an astonishing 44 percent in 2017. These projections translate to annual growth rates ranging from 80 percent to 100 percent. Thus, Xplana projects that sales of e-books will rise from an estimated 336 million copies in 2012 to 2.52 billion in 2017.⁹⁰

These developments, Xplana believes, will drive fundamental pricing changes in the textbook marketplace. The company believes the rising dominance of e-books will drive down the average price of a print textbook by 25 percent as e-books cannibalize the sales of print textbooks. Xplana predicts that unless the leading publishers find ways to dominate e-book markets (which of course they aspire to do), their profits are destined to fall. Further, Xplana forecasts that the price of an e-book will “stabilize between \$25 and \$30.”⁹¹

A whiff of Voltaire's *Candide* is detectable in Xplana's projections, although it is fair to note that Student Monitor reported that the share of textbook expenditures accounted for by e-books increased from 4 percent to 7 percent from fall 2011 to fall 2012.⁹² Even so, it will be difficult for this “best of all possible worlds” view of the future of e-books to materialize unless:

- Publishers (old and new) succeed in producing many additional, high-quality e-books with supporting software that are more usable and attractive than current versions.
- New e-books are offered at lower prices than one usually sees today.

- Student preferences must evolve such that they learn to like e-books much better than most current surveys indicate. Amazon and Apple have announced that they will develop marketplaces where used e-books might be resold. If implemented, this intriguing development could make e-books much more attractive to students and drive down textbook prices.⁹³
- Faculty can be convinced to invest the time necessary to enable them to use the full power of e-book platforms and accompanying software.

Lessons from Indiana University

Price is critically important. In the Indiana University/Internet2 pilot study, 92 percent of students declared that the most attractive feature of an e-book today was its lower price.⁹⁴ The average price of an e-book in the abbreviated seven-textbook sample reported in Table 7 is \$80.67 — only 44 percent of publishers' average list price for hardbound new books, and 61 percent of amazon.com's price for a hardbound new book. Even at that, however, these e-books were 1.7 percent more expensive than the paperback versions of these textbooks and 81 percent more expensive than chegg.com's rental price.

While the standard publisher business model generates prices for e-books that are less than the prices students usually pay for hardbound new textbooks, it isn't clear that these prices are better than those that students pay for rental or used books. As Indiana University's Nik Osborne points out, the existence of the rental and used book markets makes it difficult to assert that e-books always save students money.⁹⁵

Because the typical college store buys back a print textbook in reasonable condition for about half the price

of the new textbook, students could end up worse off financially if they purchase the electronic version. For example, when students purchase a \$100 print textbook, they will lose \$50 after they trade it in at the end of their class. If the comparable electronic version costs \$67, then they will lose that entire amount.

Placing electronic versions of textbooks online in library style at an institution is technologically possible, but it would require that institutions purchase the right to do so, much in the fashion of computer software licenses. This would not be inexpensive and is one of the reasons this notion never has proceeded very far. However, in a different context, this is what Indiana University has been doing — purchasing institution-wide digital materials licenses.

It is here that the Indiana University e-book initiative comes to the fore. If quality e-book textbooks can be produced and sold for prices that range from \$20 to \$50 per copy, then they will be price competitive with print textbooks offered by rental and used book vendors. Nevertheless, in order for such a system to generate sufficient benefits to attract publishers and authors, some version of the “course fee” model — mandatory purchases of the e-book by students — probably is required. When compulsion is not present, a huge majority of students currently choose to purchase or rent print copies of their textbooks.

The Indiana University/Internet2 pilot project also added value because it revealed that many students did not find their e-textbooks to be nearly as functional as they would have preferred. The final project report candidly notes that “difficult readability of the text” was a prominent complaint of students who used the e-books.⁹⁶ Furthermore, students seldom used supporting software to interact with other students, and only 26 percent of participating students on the five

campuses agreed with the statement that the e-book system enabled them to better understand the ideas and concepts taught in the course “quite a bit” or “a great deal.” Discouragingly, 83 percent of the participating students disagreed with the statement that the e-book system caused them to read more of the assigned material than they would have if they had been using a print textbook. Another demonstration of usability problems is the fact that only 20 percent of participating students reported that they highlighted or annotated the course materials more than they would have with a print textbook (53 percent disagreed or strongly disagreed).

Not surprisingly, the pilot project revealed that students prefer to have access to their e-book beyond the single academic term in which they take a course. National surveys indicate that students are turned off when they lose access to digitized textbook and classroom materials at the end of a class. Publishers, however, have strong financial incentives to cut off access to digital materials quickly because this protects the future sales of that product and diminishes opportunities for illegal file copying and transfers. Digital rights-management techniques can be used to ensure that e-books cannot be transferred from one student to another at the end

of a course. Hence, expiration of digital access forces new students to purchase access at the beginning of each course. This is a more powerful form of artificial obsolescence than if a publisher produces a new print textbook edition every three or four years.

Here, then, is the nub of the problem that publishers and their customers face with respect to the e-book pricing, “course fee” models and digital access: If universities want e-book prices low enough to compete with used print books and rentals, then they must guarantee publishers a large, steady number of sales. This may well mean they must adopt a “course fee”

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model that requires students to purchase e-books whether or not they prefer to do so. In addition, even though students and faculty prefer that digital access to an e-book last longer than a single term, they may be forced to agree to the single-term access model that publishers prefer.

Another not-to-be-ignored result of the experiment, however, was the discovery that participating faculty frequently either did not know how to exploit the potential of the e-books and supporting software, or they opted not to do so. Healthy majorities of students reported that their instructors seldom tapped the power of the tools at their disposal. This highlights a potential motivational problem for e-books: How can the use of e-books be made sufficiently worthwhile to faculty that they will take the time to learn how to use the technology and subsequently deploy and use it in their classrooms and laboratories? At least at research institutions (and perhaps at many other institutions as well), faculty are not rewarded for attempting to master optional course software. Hence, as things now stand, faculty cannot point to increased student learning, or to increased student satisfaction, or to their own increased incomes as reasons why they should spend time to learn and implement e-book systems. In order for e-books to succeed on the large scale envisioned by Xplana, this situation must change.

How much do students learn when they use e-books?

Questions of what students actually learn when they use an e-book ultimately will be critically important. Truth be told, very little rigorous empirical evidence exists relating to such matters. E-books are a relatively new innovation, and sophisticated control group studies have yet to be published. It's worth noting that it took almost 15 years for rigorous, control-group studies of the

effectiveness of distance learning to appear. Hundreds of statistically challenged studies of distance learning appeared rather quickly, but they did not persuasively demonstrate what we now know to be true — there is no significant statistical difference between objective learning obtained in conventional bricks-and-mortar classrooms and the learning obtained through a variety of modes of distance learning.⁹⁷

Rigorous statistical analysis of the impact of e-books — both in terms of objective learning measures and in terms of normative, attitudinal variables — is urgently needed. Not only must we compare levels of student achievement when they use e-books as opposed to conventional print books, but we also need to be able to track these students to see how e-book usage affects student retention, graduation, choice of major, etc. There are other important fundamental issues that pertain to e-books. Are they primarily suited for linear narratives of subject matter and material such as those that appear in a novel, but not so well suited for more segmented, non-linear subject matter one encounters in art, physics or mathematics?⁹⁸ This, too, is not yet clear.

Metaphorically, we now stand at the beginning of a very long and complex research road. That said, the little recent empirical evidence we do have (for example, a small study dealing with the learning efficacy of Amazon Kindle readers at the University of Washington and a small study of psychology students at James Madison University financed by Cengage) discourages the view that e-books work well for many students.⁹⁹ It's far too early, however, to conclude that this is actual state of the world. We require rigorous, well-grounded research studies with control groups. Currently, it appears that Indiana University might provide the best laboratory for such experimental work, which should be of great interest both to universities and to publishers — and both should be willing to provide financial support.

VI. New digital learning and shopping portals

It has become almost a hopeless task to differentiate those who produce textbook related materials from those who provide platforms for distributing them. Many organizations (perhaps most) do both, though several prominent innovators focus on distributing, rather than producing, course materials. Among the most important distribution platforms are CourseSmart, Coursera and several state open educational materials libraries.

CourseSmart

CourseSmart is a privately held company founded in 2007 by five of the largest textbook publishers (Cengage, MacMillan, McGraw-Hill, Wiley and Pearson). It aims to create the world's largest library of e-texts and digital course materials. It probably is the world's largest vendor of e-texts. CourseSmart asserts that its catalog now includes 30,000 textbooks representing 90 percent of all textbooks in use. It claims that it can save students up to 60 percent relative to the price of a new print textbook.¹⁰⁰

CourseSmart says its e-texts can be read on any browser-enabled computer or mobile device, and that they come with the ability to transfer individual chapters or the entire book offline. Further, CourseSmart says its e-texts are compatible with Android or Apple handheld devices.

In October 2012, CourseSmart announced that it would invite up to 20 institutions to participate in a trial of the CourseSmart "Subscription Pack," which it describes as a one-stop shopping experience in which students can buy all of their e-textbooks from one website for one fixed price over a defined, limited-access period.

Institutions participating in the research project will be able to choose between two flat-fee options, which allow a select number of students at the institution immediate access to any e-textbook in CourseSmart's catalog of more than 30,000 titles from 40 publishers.

Participating institutions will choose license access from two levels:

- 100 students = \$27,500 per semester.
- 200 students = \$44,000 per semester.
- Additional students can be added at \$200 each after a 200-student minimum is met.
- An added benefit to institutions taking part in the research project is that faculty will receive free, unlimited access to CourseSmart's entire catalog through the Faculty Instant Access (FIA) program.¹⁰¹

Students who have the "Subscription Pack" offers will be able to place up to 12 titles on their digital bookshelves at any point during the semester. CourseSmart estimates that students will pay \$275 or less for all of their digital materials, a significant savings over print retail textbook prices.¹⁰²

CourseSmart is an important, heavily backed participant in textbook markets. Hence, its new subscription pricing model (a variant of the "course fee" model discussed above) is of considerable interest. Publishers and Internet textbook platforms still are searching for viable business models where e-books are concerned. CourseSmart's subscription trial should be regarded as just that — an experiment. It should, however, generate useful (though proprietary) data concerning viable future business models and pricing strategies.

Coursera

Coursera describes itself as "a social entrepreneurship company that partners with the top universities in the world to offer courses online for anyone to take, for free. We envision a future where the top universities are educating not only thousands of students, but millions. Our technology enables the

best professors to teach tens or hundreds of thousands of students. Through this, we hope to give everyone access to the world-class education that has so far been available to a select few. We want to empower people with education that will improve their lives, the lives of their families and the communities they live in.”

Currently, 33 universities offer 211 courses under the aegis of Coursera. Publishers and companies such as Apple will have a strong interest in supplying textbooks and course materials to Coursera students, a potentially huge market. The 33 institutions involved have the resources to make Coursera a success, but once again they must find a viable business model that enables them to cover their costs. What is a noble experiment today will become a financial millstone tomorrow if the institutions involved cannot find ways to generate revenue from their efforts.

State government repositories

A host of states, including California, Florida and Ohio, have developed open-source libraries to house

open-source digitized textbooks and related course materials. This a positive step in reducing the cost of searching for open-source materials and in making them available at minimal or no cost.

Even so, a major challenge any state will face in this situation is convincing faculty and students that the open-source materials in the library are up to date and of high quality. If faculty and students are not convinced of this, then these materials will end up being the digital equivalent of the musty, old books that now occupy space in innumerable library stacks. They will be seldom used and little respected, and thus will have minimal impact on the textbook expenditures of students.

Ultimately, the utility of state digital repositories may depend on states’ willingness to purchase high-quality, new digitized material as it appears. For example, will Florida’s open-source library, the Orange Grove, be willing to purchase access to Flat World Knowledge’s textbooks as they appear? Such textbooks and materials have been written, vetted and reviewed by well-qualified faculty and meet respectable quality standards. The typical faculty member won’t settle for less.

VII. Policy initiatives and alternatives

Most public policy discussions rest on a set of assumptions about what is most important and how the world operates. The recent “fiscal cliff” negotiations in Washington made this abundantly clear; the participants valued things differently and made very different assumptions about what impact their chosen actions would have on the economy and on everyday Americans.

Hence, I’ll start with seven assumptions that underpin my discussion and recommendations concerning textbooks:

- If the costs of acquiring information about textbook content, quality, pricing and resale are low, then most students will have the ability to comparison shop and find the textbook version that is most appropriate to their needs.
- There already is evidence that the Internet has enabled students to find ways to reduce the amount of money they spend on textbooks.
- The major tool the U.S. government currently has available to it if it wishes to influence behavior in textbook markets is its threat to withhold federal financial support from institutions of higher education.
- Direct U.S. government regulation and control of textbook market output, quality and prices would be costly and very difficult to implement, and such efforts are likely to fail. The same can be said for actual federal production of open-source textbooks, though intermediate steps (subsidies to open-source publishers and to students) might meet with greater political acceptance.
- The subsidies provided by state governments such as California to change the nature of

textbook markets have been effective. California exercises “monopsony” (buyer) power and is able to lean on publishers to reduce the prices that students pay for textbooks. However, a subsidy from the State of California is required to operate the system, and therefore, a portion of these gains represents a redistribution of rising textbook costs from students to taxpayers.

- The judicious support of private foundations (for example, Gates and Hewlett) has been critically important in stimulating the changes we see in textbook markets. However, an old-fashioned pursuit of profit has motivated significant changes in the behavior of publishers, bookstores and Internet textbook suppliers and aggregators. Ultimately, the profit motive will be the most important engine of change in textbook markets.
- Publishers, entrepreneurs and nonprofit organizations all are searching for viable business models that will enable them to cover most of their costs as they increase e-textbook activities.

Higher Education Opportunity Act of 2008

This legislation actually amends and extends the Higher Education Act of 1965 and uses the lever of federal financial support such as financial aid and research funding to push colleges and universities to implement the following:

- Publishers must disclose prices during marketing.
- Publishers must allow students to unbundle textbook packages and purchase any

combination of items they wish. For example, students must be able to purchase the textbook and electronic access, but forgo a workbook, if that is their preference.

- During registration, students must be given access to a textbook list with ISBN numbers for all required books so they can comparison shop for required textbooks and related materials.

Each of these requirements improves the operation of the textbook marketplace without getting the federal government into ill-advised attempts to legislate textbook quality and content, textbook prices, or the means by which textbooks are sold. To use economic terminology, each of these rules makes the demand of students for textbooks more elastic (more sensitive to price changes). Students with more elastic demands are better and more determined shoppers because they discipline vendors whose prices and terms are out of line.

Note that there is no comparable impact of the federal rules on faculty members. Faculty members' lack of information about textbook prices, as well as their sometimes expensive choices, are among the root causes of the textbook pricing challenge. More elastic student demands don't change this situation, but they do position students so that they are better able to parry the consequences.

The State of California

In fall 2012, California Gov. Jerry Brown signed legislation designed to give California college students free digital access to 50 popular lower-level undergraduate course textbooks. Assuming that the digitized textbooks are judged by students to be of high quality and that faculty decide to use them, this will diminish the amount of money lower-level undergraduate students spend on textbooks in California.

A degree of caution is merited, however. First, there is no free lunch where the supply of textbooks is concerned. The State of California must pay authors, publishers and distributors an amount sufficient to persuade them to supply their products. In a few cases, this may mean a zero payment. In other cases, however, this may mean a payment of perhaps \$20 per book per student to a company such as Flat World Knowledge. Or, following the example of the Indiana University e-book project, the State of California could negotiate somewhat higher payments with selected publishers such as McGraw-Hill.

The California initiative likely will be in jeopardy if the state decides to produce the needed digitized textbooks itself. Were it to do so, it is easy to visualize pitched battles over book content, how authors and workers are compensated, who owns intellectual property rights, etc. It would be far better for California to allow other parties to develop the needed digitized textbooks then have the state negotiate attractive discounts based on high-volume purchases

VII. Final observations

The United States is littered with the remnants of defunct corporations whose names and reputations once stood tall in the business world. These include Texaco, Bethlehem Steel, LTV, Colt, Kaiser Aluminum, Kodak, Polaroid, Owens Corning, Lionel, Delphi, Braniff, the Milwaukee Road and Wheeling Pittsburgh. Joseph Schumpeter's "waves of creative destruction"¹⁰³ always have existed in American industry and now are driving hard at the shores of American higher education and derivative textbook markets.

The process of creative destruction is twofold: New ideas, innovations and businesses are created even while

old ideas, stale processes and businesses are destroyed. Indeed, this is the dynamic we now observe in textbook markets.

While there is no guarantee, it is likely to produce a result superior to the existing situation because this episode of creative destruction will provide student consumers with valuable new shopping information and many additional choices. It also will reduce their costs and, perhaps, it will reduce seller concentration in the publishing and textbook distribution markets. It is an exciting time, one with possibilities unmatched in the past century.

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James V. Koch is Board of Visitors Professor of Economics and President Emeritus at Old Dominion University. Textbooks are a subject very familiar to him. He purchased and rented textbooks as a student and now recommends their purchase as a faculty member at Old Dominion and at the University of Montana. As a department chair, dean, provost and president, he struggled with the sometimes competing interests of publishers, bookstores, his institutions, and students and faculty where textbooks are concerned. He has authored five textbooks and now is actively involved in converting these and other learning materials into cost-effective digital forms. He has testified before several congressional committees on textbook pricing issues. He may be reached via e-mail at jkoch@odu.edu.

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