

Digital Asset Pricing in the Textbook Market

By

Katherine Molina

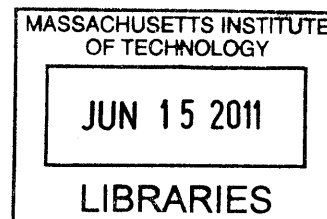
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Katherine Molina

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ABSTRACT

The U.S. college textbook market is in the midst of a seismic shift: publishers are creating new products, students are demanding more sophisticated digital content and instructors are just beginning to experiment with easily customizable, low-cost “open” textbooks. Although this industry has been picking up digital content in various forms for decades, their main revenue driver has always been print titles, a basic business fact that is poised to change permanently by 2020. The ongoing changes in product, profitability and market expectations drive home the importance of digital asset pricing in the textbook market. Textbook publishers are now grappling with the challenge of developing untested products at uncertain costs in ambiguous markets while their bread-and-butter print sales are expected to decline, and overall profit margins rapidly shifting below their feet.

Changes in this market—both at the supplier and consumer level—can affect educational quality worldwide. Recognizing this fact, this thesis explores the conditions of the textbook market, both historically and in the present day, and the implications of certain market changes over the course of time. It also examines current pricing trends for digital assets based around single “source” textbook products (complete e-textbooks compared to their print-version counterparts). Using this information, with an eye on changing adoption trends and a focus on revenue management, it offers pricing and product recommendations to help publishers think ahead about how to maximize revenue over a product’s life cycle as digital goods approach and eventually usurp new print sales.

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Introduction

The textbook market has long been bracing for a fundamental shift in their product, market and industry—very likely even more fundamental than the shift happening in trade publishing today. Print textbooks, e-textbooks and a vast array of excerpts and supplements are sold through disparate channels and sales models as publishers add, subtract and highlight different features of what used to be a single product.

How can we re-conceptualize the value chain for textbooks in the world of mixed print and digital production? What pricing strategies are current digital textbook publishers employing? And, with a focus on changing adoption rates and an eye toward revenue management, how might they price different digital materials in a particular content package to maximize revenue over the product's life cycle?

Topic Introduction

The potential for new, widely differentiated digital products in higher education presents a formidable challenge to textbook publishers—both established players and new entrants. Much of the conversation about digitizing books, textbooks in particular, centers on the dizzying possibilities involved in “unbinding” books—once you release a book from its physical casing, so to speak, what is left? And what else can be added? Linked references and multimedia components—audio, video and animations—seem almost conventional next to interactive charts, maps and graphs,

embedded simulations, games and social studying, highlighting and note-taking options. For producers, these possibilities bring up much less appealing questions: as I begin to build out these new features, what market am I actually working in? Who are my competitors? What distribution mechanisms and channels are reliable, and which should I avoid? For textbook publishers involved in faculty training, what new obligations come with these new products? Most importantly: what are these new products and features truly worth in the marketplace? When and how can I recoup my development investments and turn these digital assets from a series of risky experiments into a profitable business model?

Industry sustainability is also a major concern as the shift from print to digital textbook and new “substitutable” products begins to take hold. In cash terms, margins on digital assets have traditionally been much slimmer than those on printed books, and for large publishers, the shape of regular fixed costs changes dramatically when the focus shifts from revising older editions of established works to creating many new, smaller and less durable products, not all of which are guaranteed to reach a wide audience or turn a reliable profit. These established players may find that the advantages of size and scale that once allowed them broad sales and distribution reach may leave them vulnerable to faster, more flexible new entrants as all- or mostly-digital product sales become more widely accepted.

Issues of spotty adoption and uneven access promise to make the transition between print and digital textbook resources a bumpy one, for producers and

consumers alike. Textbook publishers are still smarting from a premature jump into digital product development in the late 1990s early 2000s, where much money was invested in a race to “go digital” before distribution channels were concrete and before consumers were quite ready to start switching formats. Accessibility remains an important issue even now, as more consumers are beginning to commit to digital products. If print textbooks fall out of style faster than colleges and universities serving low-income populations can adopt digital products, the quality gaps in curriculum from institution to institution could become even larger. And publishers themselves are still grappling with distribution issues: the new crop of digital readers—many with their own proprietary formats—begs the question of where to offer digital products, and with each outlet a publisher chooses *not* to include, a certain segment of a formerly rather homogenous market is automatically left out. Concurrently, the rapid uptake of learning management systems (LMSs) in higher educational institutions and the potential for these systems to serve as content distribution platforms opens up the clear possibility that publishers could be negotiating with large institutions rather than traditional retail outlets as they strive to reach their customer base.

The ongoing changes in all of these areas—product, profitability and market expectations—drive home the importance of digital asset pricing in the textbook market. Textbook publishers are grappling with the challenge of developing untested products at uncertain costs in ambiguous markets while their bread-and-butter print sales are declining and overall profit margins rapidly shifting below

their feet. But on a social level, textbook publishers cannot be considered just another potential business casualty of the information age. These institutions have been—and they, or their successors, will be—the gatekeepers for the educational materials used to help generations of children understand the world. They are responsible to educators, students, parents and their larger societies to provide quality products at reasonable prices—a responsibility that they have, in the past, been accused of shirking and that they will, in the future, almost certainly not meet unless they can find a sustainable pricing model for these new digital products.

Changes in this market—both at the supplier and consumer level—affect educational quality worldwide. Recognizing this fact, my thesis will explore the conditions of the textbook market, both historically and in the present day, and the implications of certain market changes over the course of time. I also will look at current pricing trends for digital assets based around single “source” textbook products (complete e-textbooks, extracts, supplements, services, etc.). Using this information, with an eye on changing adoption trends and a focus on yield management, I hope to create a pricing model to help publishers maximize revenue over a product’s life cycle.

What is a textbook?

In their recent study of the American publishing industry, *The Culture and Commerce of Publishing in the 21st Century*, Greco, Rodríguez and Wharton describe two basic categories of college textbooks:

- A “traditional” textbook that brings together “information, facts, theories and knowledge in a specific academic field.” (Greco, et. al., p.126) These come in a variety of physical and digital formats, and can include four-color media (photos, maps, charts and graphs), review questions, and instructor editions and other multimedia supplements
- Nonfiction and fiction works from the regular “trade” publishing realm that are assigned to students taking a particular class. This would include literary classics (e.g. Dante’s *Inferno*), cultural criticism, biographies and certain history books on specific topics, among others.

These kinds of books are, for the most part, radically different products that undergo different development, promotional and sales cycles. Trade titles are typically developed with a broader audience in mind; even works geared toward specific corners of academia do not necessarily come from the same publishers or assume a student audience.

What will this study cover?

This study will focus primarily on the first category of “traditional” textbooks in the U.S. market; and will lean toward analysis of textbooks geared toward the higher educational realm. These constraints are practical in nature:

- **U.S. focus:** Education is a highly fragmented industry internationally, with many levels of technology adoption and integration from country to country. The trends that are emerging in the United States, particularly in terms of technology adoption, are not necessarily relevant to foreign markets. It is

worth noting, however, that many of the companies involved in textbook production and distribution – both on the physical and digital side – are international in nature. There is certainly potential for an international exchange of products, innovations and even regulatory ideas that will affect development of this industry, but unless otherwise specified, this analysis will deal mostly with the U.S. textbook industry.

- **College-level focus:** Within the U.S., publishers treat the K-12 and college textbook markets as entirely separate entities. Purchase cycles at the K-12 levels are much longer and higher-stakes. So while textbook publishers are actively engaged in developing and utilizing new technologies for K-12 customers, there is more varied and telling information available at the higher education level.

Where appropriate, this study will touch on trends and initiatives in the international and U.S. K-12 markets, especially as they relate to how the college textbook market currently functions or might evolve. In general, however, a limited analysis will allow a deeper look into a fascinating sphere of the publishing industry.

What are the goals?

This study has three major goals:

1. To examine the **historical context, pricing trends and traditional value chain** in the textbook industry
2. To **explore current digital textbook pricing practices**, company initiatives and consumer preferences from a revenue management perspective

3. To analyze the **potential impact of external factors** – including regulation and large-scale technology shift among educational institutions – on textbook pricing practices in the future

In combination, it is my hope that these sections will provide both the relevant industry context and **potential frameworks** for thought around how textbook publishers and retail outlets may need to change or react in order to stay profitable in the midst of a large-scale industry transition.

Part I: Industry Overview

The Postsecondary Textbook Supply Chain

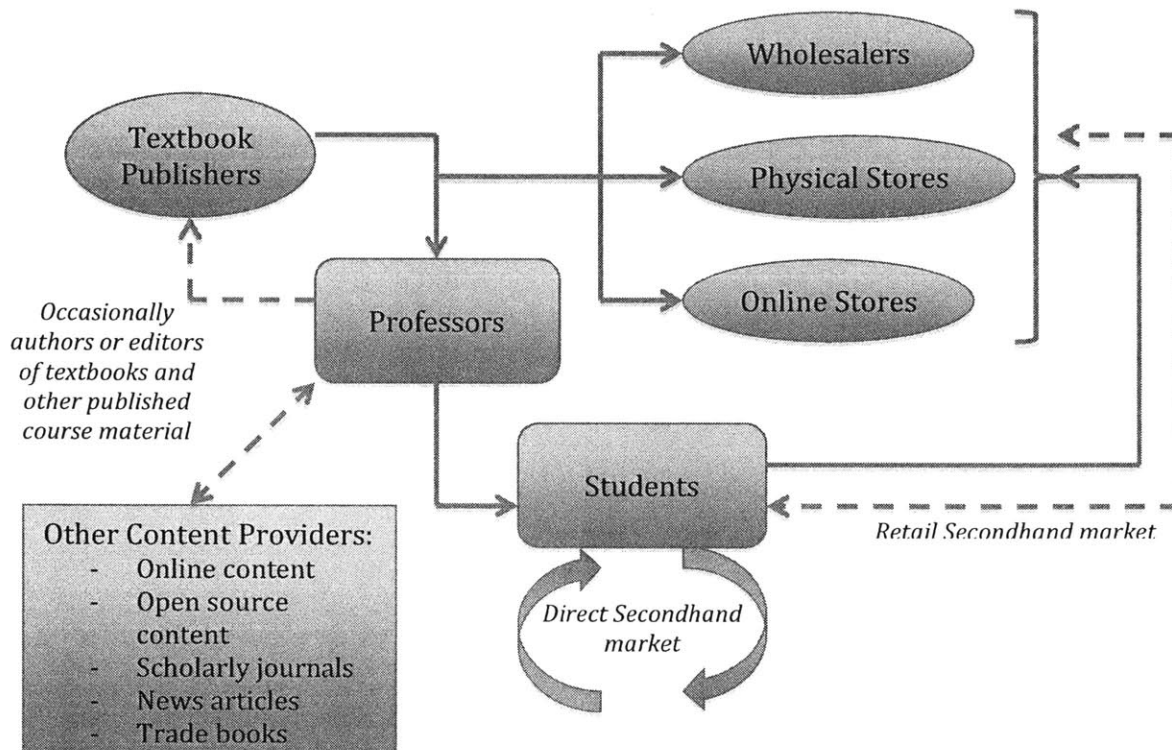


Figure 1: Simplified Textbook Supply Chain

The textbook supply chain is fairly self-contained (sales and processes have not historically strayed outside well-established boundaries), but intricately woven. The image above gives viewers an idea of the kinds of relationships and processes that are involved in the creation, distribution and consumption of these products. In summary, the major players in this industry are the following:

- **Textbook publishers:** Publishing houses – typically corporate subsidiaries with well-established sales and marketing inroads into U.S. colleges and universities.

- **Professors** tend to have a fair amount of flexibility in choosing textbooks and other course materials. They are therefore the target of most focused marketing and sales efforts from publishers. There are several important things to note about this group:
 - Professors are also in some cases the **authors** (or partial authors) of the textbooks in their field of study, although they will not necessarily be adopting their own texts in every course that they teach.
 - Several online platforms now give professors the ability to “**customize**” textbooks according to their own need – Flat World Knowledge and DynamicBooks are the prominent examples. Although the original books here stay constant, the final customized textbooks actually used in class are only available to those students enrolled in that specific course.
- **Wholesalers and Retailers** can be broken into several categories:
 - Once course adoptions are made, **campus bookstores** will typically order stock based on what they know students will specifically need.
 - **Other wholesale and retail outlets** (physical and online) communicate with publishers on what the “big” items will be every season, and order according to their expected needs. This changes a bit with digital products, which do not create stock constraints for the retailers that offer them.
- **Students** participate in this value chain in a variety of ways:

- **As buyers**, college students have the final say over the specifics of their purchase: the format, edition, channel and even the final decision whether to buy the book or not are all dependent on the choices of this group. They have less control over the actual product; although they could try to substitute a different textbook altogether than the one they were assigned, this choice carries the risk of the student not being able to access specific content that may be required for their course.
- Student also can participate as **sellers** of textbooks, reselling textbooks that they no longer plan to use. Campus bookstores will typically accept titles that they expect to be used the following year; otherwise students may not be able to resell in this venue. They can, however, go online to find other buyers that may still be interested in older editions (U.S. G.A.O., 2005).

The Postsecondary Textbook Supply Chain: Dollar Allocation

The cost breakdown in Fig. 2 allows casual observers to see the opportunity presented by digital textbooks to reallocate costs, but high fixed costs on the publishing and retail side present a substantial challenge. Publishers and retailers must both balance higher-percentage profit margins with lower real-dollar values in digital sales, and possible cannibalization from more expensive print products. The possibilities for maximizing profits for publishers and retailers with a focus on digital products will be explored further in Section IV.

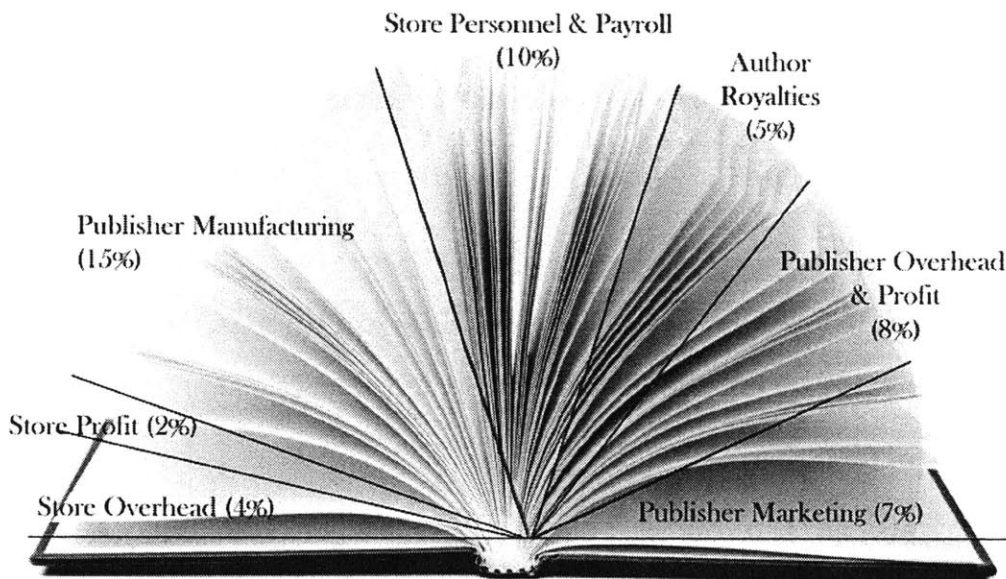


Figure 2: Average Allocation of Textbook Revenues¹

Major Market Players

Producers

Ongoing mergers and acquisitions for the previous several decades have defined the textbook industry as a whole, and today it is dominated by a few major players. The market share for postsecondary textbook publishers as of 2008 is listed below:

<u>Publisher</u> ²	<u>2008 Market Share</u>
Cengage Learning	34.60%
Pearson Education	31.70%
McGraw-Hill	16.80%
Bedford, Freeman & Worth	4.40%
John Wiley & Sons	4.30%
Jones & Bartlett	2.10%
W.W. Norton	1.40%
Other	4.70%

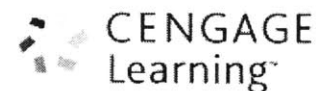
The textbook publishing industry has not been the target of substantial antitrust activity in the U.S., although certain key exceptions will be discussed later on in this report. One

¹ (SIIA, 2011)

² (SIIA, 2011)

note by the U.S. Department of Justice relating to this industry in 2008 estimated that the Herfindahl–Hirschman Index (HHI) for the postsecondary market could shift by 500 points, to over 3000, if the Cengage acquisition of Houghton Mifflin’s College division remained unqualified (they did require certain divestitures in order for the acquisition to proceed) (U.S. DOJ, 2008). Even still, the HHI of just over 2529 puts postsecondary textbooks into well into the range of a highly concentrated industry.

What follows is a snapshot of the top 4 players in the industry, with particular notes on their activity in digital publishing up to now:



Notable Subsidiaries

Gale (K-12); Brooks/Cole;
Heinle; South-Western

2010 Revenues / op. profits

Academic & Professional:

\$1.718B rev; 44.3% op. profit

Total company: \$2.018B rev;

41.6% overall operating profit

PEARSON

Notable Subsidiaries

Addison-Wesley, Prentice

Cengage Learning is the largest publisher of college-level textbooks in the U.S. market. Through aggressive expansion and acquisitions, they have achieved the lion’s share of the college market and positioned themselves strategically in order to explore a variety of technology-driven models: an e-commerce platform called CengageBrain encourages college students to purchase, rent and download Cengage products, including e-textbooks, “essentials” versions of textbooks and individual chapters.

The company is also focused on offering an expanding array of digital learning solutions: their CourseMate, Course360 and MindTap products (among others) offer students a range of ways to engage with their classes through technology.³

Pearson Education is a subsidiary of Pearson, PLC, with its North American Education segment bringing in the lion’s share of the business (other groups include its International Education wing, a Professional segment, the Financial Times Group and Penguin trade

³ Information from Cengage company website (www.cengage.com) and financial statements from the 2010 annual report. (Cengage Learning Holdings, LLP., 2010)

Hall, Allyn & Bacon

Revenues / op. profits

North American Education:

2010 Half-year: \$1.5B; 5.0%

2009 Full year: \$3.9B; 16.3%

Total company:

2010 Half-year: \$3.9B; 9.6%

2009 Full year: \$8.8B; 15.3%

McGraw-Hill Education



Notable Subsidiaries

MH Higher Education, MH

Learning Solutions, MH

Online Learning

2010 Revenues / op. profits

Higher Ed., Prof. & Int'l

\$1.3B (total segment revenue)

Total for MH-Education:

\$2.4B; 14.9% overall

operating margin



Notable Subsidiaries

Bedford/St. Martin's, W.H.

Freeman & Co., Worth

Publishers

publishers). The company is headquartered in the U.K., with corporate offices in New York City.

Pearson has also made ambitious expansions into digital learning products and services; their MyLab products, CourseConnect online learning materials and Learning Studio LMS help to integrate print products into more personalized and interactive offerings for instructors and students.⁴

McGraw-Hill Education is a major subsidiary of McGraw-Hill, a corporation active in multiple fields spanning educational content and services, business information, consumer information and financial services. The Education group specializes in producing educational content (both print and digital) and services for K-12 and college students worldwide.

Both their K-12-focused School Education Group and their Higher Education division have been focused on developing software and online solutions for learning as well as digital versions of their staple print content. Most recently, McGraw-Hill has announced a partnership between their Connect assignment/assessment platform with LMS market leader Blackboard.⁵

Bedford, Freeman & Worth is the college and academic powerhouse of Macmillan Publishers Ltd. (itself a subsidiary of Verlagsgruppe Georg Von Holtzbrinck GmbH). Although it has a comparatively smaller share of the postsecondary market than Cengage, Pearson and McGraw-Hill, the company is well-regarded in the academic space and has been assertive in exploring opportunities for new products and business models presented by

⁴ Information gathered from Pearson's web site (www.pearson.com and www.pearsoned.co.uk) and the company's 2010 interim annual report (Pearson, PLC, 2010).

⁵ Information gathered from the McGraw-Hill website (www.mcgraw-hill.com and www.mhhe.com) and the company's 2010 annual report (McGraw-Hill, 2011). More information on LMS integration efforts by publishers will be covered in Section IV.

<p>2009 Revenues / op. profits <i>Total for Macmillan:</i> \$269.1M; 5.8% overall operating margin (privately held company, no sectional breakdown available)⁶</p>	<p>digital course materials, assessments, test preparation and other online supplements and services.</p> <p>In 2009, Macmillan launched DynamicBooks, an imprint focused on textbooks that are customizable by instructors to fit their specific curricular needs.</p>
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Combined, these companies accounted for 87.5% of the total college textbook market in 2008. (As a comparison point, the top 4 producers in book publishing industry overall accounted for only 33.4% of industry revenue in 2007.) (U.S. Census Bureau, 2009) All have been aggressive in their digital exploration and technological initiatives, although actual adoption of these products has been slow and is expected, at least within the industry, to stay that way for at least several more years.

Consumers: Demographics, Spending and Digital Outlook

According to the National Center for Education Statistics, there are more than 19 million students enrolled in postsecondary programs across the U.S. Around 57% of these are female, 43% male, a ratio that has been steadily tilting toward women over the course of the past several decades and has started to stabilize in recent years. Well over half (around 61%) of these students are in the 18-24 age bracket, with 38% representing students 25+ and just a sliver (1%) representing students aged 14-17. They are split roughly 70-30% between four-year and two-year

⁶ Information gathered from the Macmillan Education website (www.macmillaneducation.com) and Capital IQ (Capital IQ, 2009)

institutions, respectively, and are increasingly diverse (growth in Hispanic and African-American enrollments have both been between 4.5% and 9% in recent years, while since 2002 the growth rate of Caucasian students has hovered between 1% and 3%).⁷

U.S. postsecondary students attend a mix of public and private universities; according to the SIIA's 2011 Higher Education Market Trends Report, over 6,500 institutions grant degrees in the U.S. (SIIA, 2011). Expenses vary widely from one institution to another, with public in-state tuition costs averaging across the country at just above \$6,300 and private schools nationwide on average costing \$22,000 in tuition alone.⁸ For graduate and first-professional courses of study, average annual tuition has risen from \$3,340 in 1987 to \$7,800 in 2008 at public institutions and from \$12,370 to \$19,160 during the same timeframe at private institutions.⁹

As tuition has shot up in postsecondary institutions around the country, so have the costs of individual textbooks. In 2005, the U.S. Government Accountability Office released a report examining the rise in textbook prices, which had experienced a 186% increase between 1986 and 2004, which significantly outpaced inflation (72% over that same timeframe) and followed closely behind tuition costs (on average, a dramatic 240% increase nationwide) (U.S. G.A.O., 2005). Exact dollar

⁷ Numbers in this section are all from the National Center for Education Statistics, <http://nces.ed.gov/>, Tables 191, 226 and 265 unless otherwise noted. See Appendix C1 for graphical breakdown of the college student market.

⁸ Tuition averages weighted to undergraduate student population, but not adjusted for residency. See Appendix C2 for average college cost breakdown.

⁹ All figures adjusted to 2007-08 dollars, reflecting in-state tuition only. NCES Table 337, 2009.

spending on textbooks ranges widely from report to report—the GAO estimated 2003-2004 spending at an average of \$898 per student, a 2006 report by the AAP put that number at \$650 (AAP, 2006), and the College Board reported that average textbook spending in the 2007-2008 school year ranged from \$805 to \$1129.¹⁰ For individual students, this number will also vary from institution to institution and program to program. However, if in 2008 a typical college student was expected to spend at least \$800 on textbooks, this would amount to an added expense of between 10% and 13% on top of public institutional tuition costs and 3 to 4% of private institutional tuition costs; in either case, no inconsequential financial decision.

Consumer Attitudes toward Digital Products and Adoption

Despite the high costs of traditional textbooks, college students are only beginning to show interest in electronic versions. As of fall 2010, the National Association of College Stores' OnCampus Research Student Watch Report noted that 74% of college students still prefer print textbooks to electronic versions (NACS, 2010). In 2009 according to the AAP, eTextbook products accounted for just 1.15% of the \$4.94B domestic college textbook market (AAP, 2009). The OnCampus report put the 2010 share of eTextbooks at around 3% of the total market, and that number has been growing quickly and is expected to reach 10 to 15% by 2012.¹¹ The NACS report lists the two key factors for this rapid growth as increased student awareness

¹⁰ From the 2007 Trends in College Pricing Report from the College Board (Baum & Ma, 2008)

¹¹ Oddly, although all start at very different points, most analyst predictions converge to the claim that digital products will account for 45-50% of the market by 2020.

of digital products and increased professorial savvy about how to access, assign and use these resources. There are at least two other important factors to recognize in this trend, however:

1. **Increased product sophistication from publishers.** Early eTextbooks were little more than “glorified PDFs” according to the *Chronicle of Higher Education* (Laster, 2010). Due to improvements in both browser- and device-based reader software and a better grasp by publishers of what is possible (and scalable) with digital products, current eTextbooks, although not highly sophisticated, are becoming more interactive and customized to students’ and professors’ needs.
2. **The rise of e-reading devices and tablets.** Although the textbook-gearred Kindle DX from Amazon was described as a “flop” in a battery of pilot tests in schools across the nation, this may have been a timing error rather than a product misstep on Amazon’s part (Young, 2010). E-readers of all kinds are becoming more ubiquitous nationwide: the *New York Times* published estimates in late 2010 anticipating that the installed base of iPads and similar tablets will grow to over 40 million in 2011, while lower-cost e-readers like Amazon’s Kindle and Barnes & Noble’s Nook will reach an estimated base of 14 million users over the course of the year (Taub, 2010). The portability and potential for easily accessible content on these devices (and the overall increase in consumer familiarity with the e-book and e-textbook products) makes a rapid expansion of the e-textbook market seem far more plausible.

One final potential factor in the expansion of the market for digital course materials is the rising popularity of online learning. According to the 2011 SIIA Trends Report for higher education, “More than 4.6 million students were taking at least one online course during the fall 2008 term, a 17% increase over the number reported the previous year. In 2009, about one-third of all students had taken at least one course online,” a huge jump over the reported figure of 9.6% in 2002.¹² This means that just over 24% of college students were taking at least one online course at the time, with one-third of all students having been exposed to online learning in the past—a remarkable amount of awareness and engagement (SIIA, 2011).

The SIIA report goes on to note that this growth rate “far exceeds the 1.2% growth of the overall higher education student population, pointing to a decrease in traditional course enrollments” (SIIA, 2011). Particularly for adult learners, the flexibility offered by online coursework is appealing; if online courses begin to adopt more digital-only supporting material, this market alone could boost both direct sales of digital course content and student awareness of digital content availability and options.

Influential External Stakeholders

The disjointed sales cycle for college textbooks allows for several centers of influence outside of the ordinary producer-consumer dynamic. The three major outside stakeholders in the sales process are:

¹² Table 20b, (Baum and Ma), full dataset.

1. **Professors:** As the decision-makers in the adoption process, college professors can make buying “decisions” for their students – although their influence on the actual format (digital vs. physical) and mode of purchase (new vs. used, rent vs. buy) is limited, and students have the final say over whether or not they will use less traditional channels in order to access the material (purchasing older or international editions of a book, accessing a reserve copy at a library, downloading a pirated online edition or sharing one copy with friends). Still, professors are the “deciders” as to which products are purchased over others in the market.
2. **Colleges / Universities:** As institutions, colleges and universities do not usually interfere with individual product selection, but they are capable of influencing professors’ adoption decisions through changing structural emphasis in core courses, as well as in overall IT support, technical training and technological initiatives that might favor digitally available products—or products available in specific digital formats—over others.
3. **Government agencies:** On the federal and state levels, government agencies can influence digital textbook sales through specific funding for technological initiatives, or conversely through funding cuts that force creative system consolidation and streamlining in large university systems (an example of this in California State will be examined in Section IV).

Acting independently or in response to one another, all of these groups – professors most of all – hold sway over the college textbook market as a whole. Although the will to leap into digital textbooks among students may be lackluster at the moment,

a sufficient push from any of these parties could change the outlook for digital textbooks quite suddenly.

Re-Imagining the Supply Chain: Customization and Open Content

Although the current supply chain for e-textbooks is not usually dramatically different from the one described earlier in this report, significant shifts from the traditional model are now possible, and several companies and organizations have started exploring their options for reinventing the creation and distribution processes. The two most significant areas for disruption are in customization and open content initiatives.

Customization of digital course materials can involve steps as simple as rearranging existing textbook chapters and sections (a service offered by companies such as Flat World Knowledge and DynamicBooks) to mixing-and-matching various textbook chapters, lecture notes, and multimedia resources into something more like a course packet than a “traditional” textbook. Customization tools that allow professors to sort, reorganize and create new course materials have expanded dramatically in recent years and are being rapidly pushed forward by enhanced Learning Management Systems, which will be covered more in-depth in Section IV. Industry spectators and researchers sense in these initiatives a drift toward disaggregated content rather than fully-fledged textbooks, a trend that traditional

publishers have tentatively started to take up, but which also leaves them vulnerable to flexible, smaller-scale new entrants.¹³

Open content initiatives (also known as “open source textbooks”) are a more flexible way for higher educational institutions to provide digital course materials to their students. These initiatives typically involve colleges and universities using (or independently developing) textbooks and course materials that are open-licensed, or available for public access, customization and dissemination (U.S. Senate, 2009). Flat World Knowledge creates open content for professors to select, rearrange, and add to as each sees fit; the textbooks are free online and available cheaply—black-and-white print-on-demand (POD) textbook copies start at \$35, color POD textbooks start at \$70.

There has been encouragement and research in the open content sector, although a full-scale rollout to a major university has yet to be realized. In 2011, the Institute for the Study of Knowledge Management in Education (ISKME) backed the Community College Open Textbook Project, which found positive results for both student and faculty engagement when open source textbooks were adopted, with ease of use and faculty training cited as key drivers for success in these initiatives (Weiss, 2011).

¹³ Examples of traditional publishers dabbling in disaggregated content can be found in their recent agreement to support the California State University system’s Digital Marketplace program and in Cengage’s willingness to sell individual “eChapters” of certain textbooks online.

Although open source content and customization are not necessarily the same things and both can certainly involve textbook publishers (DynamicBooks is a Macmillan initiative, and Flat World Knowledge, though nontraditional, is certainly a “textbook publisher” by definition), both of these options involve a greater amount of autonomy over course material content being exercised at the university and professorial level. The desire for greater control over this content will be tempered by constraints on professors’ time and training, as well as overall momentum (or lack thereof) at the university level, which makes overall digital product growth from these forces less predictable. But as “open” products and customization services proliferate and their use becomes more recognized and accepted, particularly through LMS platforms, universities will have incentives to at least run limited experiments with digital content of both kinds.

Part II: Distribution and Sales Models

Distribution History and Context

A shift in distribution channels for any product brings with it questions regarding reach, pricing and market power. This certainly applies to college textbooks, which have seen disruptive change in their distribution centers already in the recent past. The following timeline illustrates various channels as they became prominent sites for textbook and related course material distribution:

- **Through 1990s:**
 - Brick-and-mortar bookstores (new and used)
 - Other students (used)
- **Late 1990s:**
 - Ecommerce sites: Amazon (new/used); Textbooks.com (new/used); Craigslist (used), eBay (used)
- **2000s:**
 - Brick and Mortar + Ecommerce – introduction of rental options
- **Late 2000s+:**
 - Publisher Websites (specialized learning content / tools)
 - Learning Management Systems

Until the 1990s, the only major outlets for students to purchase textbooks were brick-and-mortar bookstores (college bookstores or ordinary bookstores serving a large enough college clientele that they were able and willing to stock these titles). Students also had access to the secondary textbook market; they could buy titles

directly from students who no longer needed the books or they could buy used textbooks from local bookstores.

In the late 1990s, the rapid expansion of online services and ecommerce sites provided an irresistible opportunity for students and retailers to integrate the secondary market for textbooks, which began to shift from regional pockets of locally circulating materials to a rich international ecosystem of available titles and formats. The international “grey market” for textbooks was of particular interest, as a 1998 Supreme Court ruling established that it did not violate federal copyright law for firms to ship materials intended for international markets back into the U.S. (Lewin, 2003) This created an easy arbitrage network for “International Edition” textbooks sold at deep discounts overseas. However, while this grey market is still flourishing on websites and campuses nationwide, it does not appear to have had any major effects on publishers’ approaches to new textbook pricing, either within the U.S. or abroad.

The better-known and better-organized used textbook market has been more contentious in terms of its effects on overall textbook prices. In a 2006 report to the Advisory Committee on Student Financial Assistance, the Association of American Publishers estimated that one-third of college textbooks purchased annually were used versions—also noting that “revenue from used book sales is not available to help fund the development of new educational materials.” (AAP, 2006). The same report also points out that the reported amounts that college students spend on

textbooks do not take into account the amount that those students may get from college store buybacks and participation as sellers in the secondary market; they estimate these at 35-50% of the original purchase price.

The GAO investigation into college textbook pricing also shed some light on how used book prices of textbooks are set: “Wholesalers and retailers agree that the standard pricing practice for used books is to assign a price that is equal to 75 percent of the new price of the same book, so that if the new book price increases by 3 percent, the used book also increases by 3 percent.” (U.S. G.A.O., 2005) E-commerce sites tend to have a lower number; for used versions of current textbook editions, prices range from 40 – 70% of the new price;¹⁴ for those students willing to buy older editions of the book, the price differential can be even lower.

In the past several years, the rental model for college textbooks has offered another low-cost-for-access route for certain college students; these programs are typically implemented through the same brick-and-mortar and online retail channels that handle print and digital textbook sales. In 2009, Barnes & Noble (the largest retail bookselling chain in the U.S., which operates over 600 college bookstores) launched a pilot rental program that quickly expanded from three to 25 of its stores (Pantagraph, 2010); a growing number of independent college stores and online retailers have launched similar programs.

¹⁴ Based on online e-commerce dataset.

One important detail about the textbook rental market comes in the basic business model of (larger) online rental programs. Although smaller-scale rental programs still rely on inventory turns to earn out the money they paid for books from publishers, larger ones tend to clear inventory after one rental season. The driver for this is the flourishing used market: a rental program can buy a textbook from a publisher or wholesaler at a discount rate, rent it for a term or year and then resell it at a higher net profit than they would receive by keeping the title in inventory. Rental-only programs do not tend to stock large amounts of inventory in general, preferring third-party fulfillment services or low-cost, on-demand purchases that keep their own overall costs down. As long as college bookstore rental programs do not take too significant a bite out of the online services geared toward textbook rental, there is no immediate reason for this business model to change, and these programs can be expected to at least partially help keep the used book market afloat in the face of an otherwise grim future (Cohen, 2011).

For eTextbooks and digital supplements, the distribution channels range from extremely traditional to the barely explored, and some of the latter categories have significant implications for the balance of pricing power in the textbook and course materials market. For the traditional route, it is now possible to purchase an access code to download digital versions of print textbooks from within some brick-and-mortar college stores. In 2009, Barnes & Noble rolled out a pilot program called NookStudy, which they later expanded for general use. NookStudy is a desktop-based integrated software product that allows students to download and organize

various eTextbooks for their courses (Miller M. , 2010). Prices in this program typically list semester-long “rentals” at a 40%-50% discount from new as traditional print books get in the market, while permanent access purchases net a 30%-40% discount from new print versions. At other major websites (Amazon, CourseSmart and publisher websites), e-books are listed alongside various print purchase and (occasionally) rental options, with the full array of prices visible to consumers up front.

The new and potential distribution channels for digital textbooks and supplementary materials, however, hold the most potential for disruptive industry change. The greatest of these is an area that textbook publishers are already actively trying to engage with: course management systems (CMS) and learning management systems for colleges and universities (LMS). According to the Software Information & Industry Association, in 2006 fully 92% of higher educational institutions surveyed by MDR reported that they use one or more CMS or LMS “to help educators develop and deliver their materials” (SIIA, 2009). Colleges and universities use these systems in a variety of ways, and most at this point do not integrate actual full-length digital textbooks into their current systems. But a dramatic move by the California State University system may push more exploration in this field. During the 2010-2011 academic school year, the Cal State system launched the Digital Marketplace, an online resource for students to obtain low-cost eTextbooks (a reported 65% discount from list prices), as well as a pilot program at five CSU campuses where certain courses do not require any printed material,

expecting students to use the Digital Marketplace resources rather than the physical textbooks (CSUSB Alumni, 2010).

The Cal State program was launched with participation from five major academic publishers: Cengage Learning, McGraw-Hill, Pearson, John Wiley and MacMillan's Bedford, Freeman and Worth publishing group (CSUSB Alumni, 2010). Other major LMS and PLE (personalized learning environments) systems have been established by or recently tied in with major publishers:

- McGraw-Hill has tied in their Connect platform with Blackboard (Kolowich, 2010)
- Pearson's LearningStudio LMS is a combination of its content and systems acquisitions, eCollege and Frontier
- Cengage Learning recently announced MindTap, a Personalized Learning Environment offered as an alternative to the traditional LMS (Cairns, 2011)
- John Wiley & Sons offers WileyPlus, a site offering online courses and course materials for both instructors and students

Blackboard is by far the market leader in higher-education learning management systems, with a 48.5% share in private four-year colleges to a 70.7% share in private universities (SIIA, 2009). According to the Campus Computing Project's annual report on Managing Online Education, competition is fierce and heating up in the LMS space (see Appendix A for the change in major LMS market share from 2009 – 2010) (Green, 2010).

The competitive and changing nature of the LMS market is important to digital textbook pricing for a fairly straightforward reason: it could introduce both entire universities and LMSs representing networks of universities as powerful negotiating players pushing for lower eTextbook prices. Universities have a real incentive to make this happen. John Richards, president of Consulting Services for Education, notes that “[many] universities are strapped for cash as well – they want to keep the overall ‘cost of college’ down for their students without cutting into tuition” (John Richards, 2011). As universities become more sophisticated buyers and users of these products, they may demand that their LMS of choice be as well-stocked with affordable digital content as possible.

It is important to note that this demand could open the floodgates for low-overhead competition to traditional textbook publishers, particularly in core subjects where content is not very differentiated from title to title (one introductory calculus or microeconomics title, for example, will usually not differ wildly from any other). Greco, Rodríguez and Wharton offer a sample P&L for a textbook title over the course of three years, which puts net profits as a percent of sales (over a three-year book life-cycle) at 33.5%. Adjusting that model to eliminate printing costs and returns *only* – marketing, plant (editorial and proofreading, etc.), royalties and foreign rights arrangements all remain constant – that margin jumps to 59.06% over three years. That is quite a bit of pricing flexibility for new and existing competitors to exploit. See Appendix B for further details on this model.

In reality, per-unit sales costs for digital-only items distributed through a large-scale LMS will very likely fall. At present, the largest textbook publishers all have a well-established sales force to get in front of individual professors and department chairs and promote new editions and textbook products. In an LMS-driven world, that relationship may need to change its shape; professors may have somewhat more limited options for course materials if they are expected by their universities to adopt digital materials (with or without print versions). The reach and established relationships of current industry sales reps will continue to be a significant advantage for large publishers, but these might no longer be the strong barriers to entry that they were in the past (John Richards, 2011).

Regulatory Questions

Two kinds of pressure from state and federal agencies have the potential to affect digital asset pricing among textbooks and supplementary course materials:

1. **Direct regulatory influence on textbook publishers:** this can take the form of direct price controls on textbooks; stipulations for format availability among titles intended to be sold to schools; or antitrust action against large publishers as they continue to acquire smaller competitors and technology verticals.
2. **Any change in the amount or nature of federal funding** dedicated to improving technology in higher educational institutions.

The first is unpredictable, but there is enough activity in this space for publishers to pay attention. Investigations into e-book pricing in trade publishing have cropped up in several U.S. states and Europe; new state laws have started to require digital availability of textbooks by 2020 and beyond. Antitrust activity against textbook publishers has not been widespread, but one particularly aggressive campaign in California against the Houghton Mifflin-Harcourt merger in 2007 netted the state price caps on CA-specific textbooks and compensation for legal fees over the course of two years (CA Dept. of Justice, 2010), and a year later the U.S. Department of Justice required Cengage Learning to divest certain college-level textbook properties around humanities, foreign language and business in order to move forward with its acquisition of Houghton Mifflin’s College publishing division (U.S. DOJ, 2008). The following timeline gives an overview of governmental inquiry and legislative action in regards to the textbook publishing specifically and digital publishing for the book publishing industry as a whole.

Year	Location	Industry	Action / Event
2005	US	Textbook, PS	The U.S. Government Accountability Office submits a report to Congress on the reasons behind seeming rapid increases in college textbook prices (twice the rate of inflation); higher development costs are found to be a suitable explanation.
2007	CA	Textbook, K12	Houghton-Mifflin merges with Harcourt; Although the U.S. Dept. of Justice approved the deal, the California Attorney General’s Office pressed the case until it won concessions around CA-specific textbook pricing (K-12)
2008	US	Textbook, PS	The U.S. Department of Justice allows Cengage Learning to acquire Houghton Mifflin’s College textbook publishing

division, but requires the company to shed certain assets.

2008	US	Textbook, PS	The Higher Education Opportunity Act reauthorization requires textbook publishers to offer unbundled versions of textbooks for sale (without online subscriptions or CDs, and to make pricing and new release information more transparent to students and teachers.
2009	TX	Textbook, K12	A new law grants Texas schools the right to buy digital textbooks rather than hard copies, for an estimated cost savings of \$200M / year statewide.
2009	US	Textbook, PS	Sen. Richard Durbin (D-IL) sponsors the Open College Textbook Act of 2009, encouraging grants for higher education institutions to purchase or develop open textbooks. ¹⁵ Rep. David Wu (D-OR) in the House introduces a similar bill in 2010.
2010	CA	Textbook, PS	CA state law requires all textbooks used in public and private postsecondary institutions to be made available in electronic form "to the extent practicable."
2010	CT	Trade e-books	The State of Connecticut launches an investigation targeting Apple and Amazon for possible anticompetitive agreements with trade publishers
2010	TX	Trade e-books	The State of Texas Attorney General's office begins contacting major publishers with inquiries into e-book pricing; industry publications report that Apple is the target of this inquiry.
2011	FL	Textbook, K12	FL education officials announce a five-year plan to use "only electronic materials" in classrooms by 2015 (K-12)

¹⁵ Open Textbooks are defined in this bill as "college textbooks or course materials in electronic format that are licensed under an open license, which is an irrevocable intellectual property license that grants the public the right to access, customize, and distribute copyrighted material," circumventing limiting and possibly onerous ongoing financial burdens stemming from licensing agreements with publishers. (U.S. Senate, 2009)

2011	UK	Trade e-books	The Office of Fair Trading in the UK launches an investigation into possible anticompetitive effects of the "agency pricing" model adopted by several major international trade publishers
2011	EU	Trade e-books	The European Commission launches early-morning raids on several publishing houses suspected of fixing e-book prices at artificially high levels

Few of these events and actions have been targeted specifically at the US postsecondary college market, but none can be ignored in terms of their implications for digital textbook pricing practices and adoption trends going forward. New regulation regarding pricing practices, fair-use, or licensing terms for digital books in any format may quite plausibly have an impact on how textbook publishers conduct their own business going forward. Particularly in high-adoption states like Texas and California, any push toward digital access from the K-12 side will almost certainly give the major publishers (most of whom also publish postsecondary material) the impetus to find a way to digitize and disseminate their products in a scalable way. Many have this ability already, and are already starting to use it for new editions and popular older products.

On the funding side, those interested in digital textbooks must remember the one key difference between e-textbooks and ordinary trade e-books: on the trade side, the decision to purchase and use supporting technology rests with the buyer, who is also the decision-maker for which titles to purchase. With textbooks, while access to

technology may still be a student decision, support from faculty and university IT systems will very likely be critical to widespread adoption.

This may come in the form of more content-focused LMS rollouts, but it will also depend on professional training and development for the faculty and support staff expected to help students access and use their digital materials. On the whole, technology spending in universities experienced rapid growth during the early years of the 21st century, only to be trimmed back during the recent economic downturn (SIIA, 2009). Custom content (information collected and packaged for a specific course, such as journal articles, lecture notes and case studies) is an area of rapid growth in the postsecondary market according to SIIA (via Simba Information), as well as the use of multimedia course materials; the more reliable funding becomes available to institutions to roll out support for these digital materials, the more universities are likely to take steps to actively encourage digital textbook adoption (SIIA, 2009).

Part III: Textbook economics

Textbook pricing: What are the levers?

Considering the many options for textbooks and related products now in the market, the two main determinants for how much a student will pay for these materials (compared to the “list price” or suggested retail price set by the publisher) are still **where** and **how** they make the purchase. Later, we will also see that in a pure dollars sense, the **subject** of their studies can also make a difference, since different course subjects tend to command different starting prices.

If the subject is already a given, the first decision a student must make upon finding out what materials are required for their class or classes is where to go in order to acquire them. Students have several options as to where they can purchase materials:

- **On-campus bookstore:** A late 2009 study by MBS Textbook Exchange found that 49% of textbook sales (about \$3.69B of what this report estimated as an overall \$7.45B total market—much larger than the AAP textbook market estimate and likely including other scholarly products) occurred in on-campus bookstores (MBS Textbook Exchange, 2009). Campus bookstores have the advantages of physical convenience and a higher likelihood to stock the necessary materials for most or all student courses—facilitated by direct communication with professors and departments about course requirements for the upcoming semester. Campus bookstores are typically seen as charging higher prices than their online competitors, but they will also often

have attractive buyback programs and some are experimenting with rental programs to help control costs for price-sensitive students.

- **Off-campus bookstore:** Other brick-and-mortar stores accounted for 9% of textbook sales in 2009,¹⁶ and although they may not have the same convenience of location or guaranteed stock for all students, they may be closer physically to some students (especially those living off-campus or attending online programs) and can stock a wider assortment of non-textbook materials, including trade books that may be assigned or recommended for certain courses.
- **Online outlets:** these include both bookstore websites (campus bookstores, independent stores and larger chains, particularly Barnes & Noble's bn.com) and e-commerce sites known for stocking textbooks: dedicated sites like Textbooks.com or larger online retail outlets like Amazon. Students can also purchase textbooks directly from most publisher websites; Cengage has opened a student-facing marketplace called CengageBrain to help sell their products directly. On the other end of the spectrum fully web-based secondhand markets like Craigslist and eBay also facilitate textbook sales.
- **Friends or student-to-student secondhand markets:** This channel is difficult to track and does not always involve monetary exchange: students can trade textbooks for different courses or exchange unrelated goods, services or general goodwill for required textbooks. MBS estimates that this makes up 2% of the overall textbook market.

¹⁶ All percentage numbers in this section are from the MBS Textbook Exchange *2009 Textbook Market Study* unless otherwise noted.

- **No purchase:** Students who cannot or choose not to purchase or rent the required textbooks for their course do exist; they are estimated by industry insiders to be 7-8% of the overall student population, and by the National Association of College Stores at 15% (Levaux, 2010). These students might borrow books from classmates, use copies that are on reserve at the university library, or simply make do without the required material. Although it is unclear that price is the sole driver in this decision, or what channel or purchase type they would choose if they did purchase materials, these students do represent a substantial lost opportunity for revenue for retailers and publishers alike.

Once students have determined their preferred channel (and understanding that even students who make an initial decision can explore several channels before finally making a purchase), they are presented with several format and purchase type options. Purchasing the **new, print** version of a book through any channel will typically command the highest price (close to list price in many stores and from 80-100% of list price online), and will often confer added benefits (online material access codes and the near-guarantee of a complete, undamaged product) that make these products worth the added expense for some students. **Used print versions** of the same textbooks will cost anywhere from 45-75% of list price depending on channel and may not have working access codes or reliable physical product quality.¹⁷ **Older and international editions** of textbooks will vary widely in price and reliability depending on channel, but tend to offer cut-rate prices and are widely

¹⁷ Based on industry interviews and online retailer dataset.

available on secondhand markets to price-sensitive students. **Rental programs** for print textbooks have gained momentum in the past several years, as bookstores and online retailers experiment with this new model. On the e-commerce side, certain sites specialize exclusively in textbook rental (chegg.com and textbookrenter.com are the best-known options); in both outlets average textbook rental prices for one term hover at a consistent 40-45% of a new book price. This model bears an interesting similarity to the “licensure” model for some eTextbooks, and could serve to help students feel more comfortable not “owning” their textbooks outright. Due to the as-yet low volume of rentals compared to traditional sales, this model has not yet had a noticeable impact on new book pricing, although its complicated relationship with the used book market and future pricing implications of this interaction will be discussed in more detail later on.

This brings us to **eTextbooks**, where publishers and retailers are both just beginning to explore the different sales models and channels available for these products. Right now, there are two models for eTextbook access: a purchase model, where students have permanent access upon paying for the product (thus far, this has not included automatic or discounted “updates” to newer editions), and a “licensure” or rental model, where students have limited access to the book for a lower price. Both of these options have been scattered in implementation, pricing and logistics details. Depending on the product and the purchase source (websites vary even for the “same” product), a “purchased” eTextbook may or may not be downloadable, printable, or accessible on multiple devices, and file formats.

Licensure/e-rental time frames also vary from site to site; the standard has been 180 days (compared to a print rental typical window of 125-140 days), but the major eTextbook website CourseSmart offers licenses for use that span from a traditional 180 days up to 540 days, depending on the product. Although on websites that offer both purchase and e-rental models (notably Barnes & Noble), rental prices are lower than the permanent purchase prices. Few sites, however, offer both options, and in general the state of eTextbook pricing has been industry-wide confusion as different revenue models, comparative price points and student access preferences evolve.

For all of these products and purchase models, **externalities** are a difficult-to-quantify but inextricable part of the decision process. Externalities are defined here as any “indirect effects of consumption or production activity [which] do not work through the price system” (Laffont, 2008). These include access to digital resources (usually available when purchasing new print products, less certain with rentals or secondhand materials); buyback programs from certain retail outlets, and individual format preferences among students (whether or not a student will be interested in eTextbooks may partially depend on how that student plans to access their digital materials, and if their assigned materials are available in a compatible format). Individual student plans for continued use of a particular book (vs. a semester-long need for a standalone course) can also impact, for example, whether or not that student plans to rent, license or buy this product, and will factor into their ultimate product valuation when they are exploring various purchase options.

Comparative Pricing practices among Online Retailers

Major online textbook retailers vary in their approach to e-textbook pricing when compared to other available purchase types and models. Some, like CourseSmart, focus on digital products only and offer a wider range of digital products, whereas major players like Amazon and Barnes & Noble (bn.com) offer limited types of digital products but a mix of print and digital products and purchase types.

The following images represent the distribution of prices for different formats and purchase-type options the same textbook among several major online retailers: Amazon.com, Barnes & Noble (bn.com) and eCampus.¹⁸

¹⁸ See Appendix D for notes on survey methodology.

Hardcover Textbooks - Prices as a % of List (SRP)



Paperback Textbooks - Prices as a % of List (SRP)

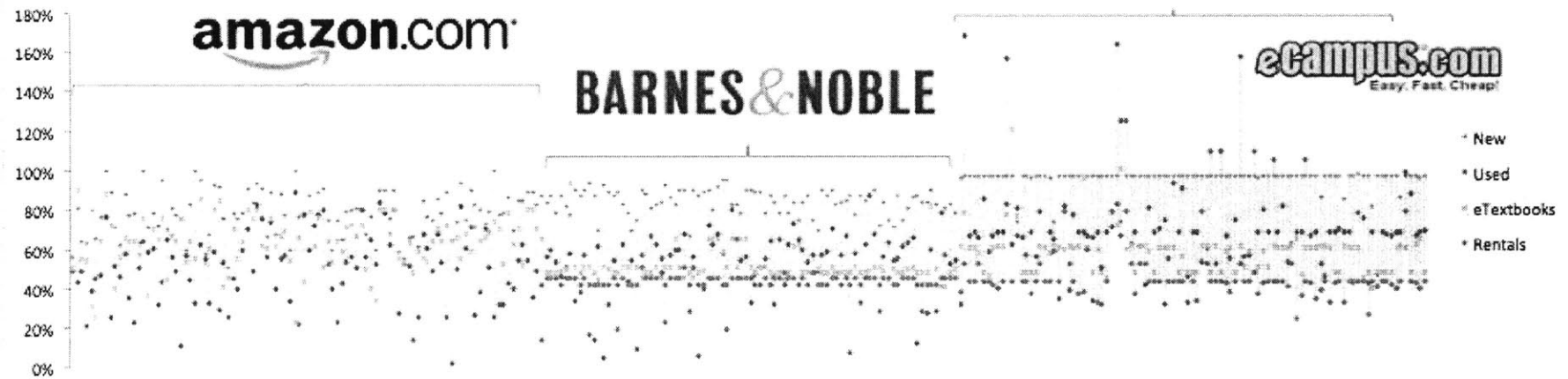


Figure 3: Textbook Prices as a % of Print SRP Across Major Online Retail Outlets

The differences in pricing strategy between these three sites are obvious. Amazon has a variety of price points for new and eTextbook editions across all product categories (they do not currently offer print textbook rentals, although it is a model they could later explore). eTextbooks from Amazon are purchase-only in a proprietary format: users can access their content permanently as Kindle Editions, which limits product portability, although Kindle content is available through apps for iOS, Android and desktop devices. For hardcover textbooks, Barnes & Noble has a tightly controlled, comparatively low range for both eTextbook and rental pricing, while new print versions vary¹⁹. Among hardcovers, eCampus lists new print versions consistently at the upper range of the available prices, keeps eTextbooks (available for 180-day download) constant at around 60% of list price and rental prices well below that, usually in the area of 42-45%.

For paperbacks, all companies exhibit a wider range of prices overall, with more consistently low rental prices and slightly lower eTextbook versions. Used books in all categories are widely varied, with many third-party sellers competing for attention and sales, typically without a coherent pricing strategy to follow (in some cases, third-party sellers priced used goods even higher than the new product versions). Overall, used prices in these sellers averaged between 50 – 70% of list prices.

¹⁹ Barnes & Noble was the only seller among these three to offer both permanent access and licensed eTextbook models. Since permanent-download products are not as common, the 180-day license prices are used here.

If the cacophony of prices above does not shed light on any optimal or even perfectly comparative pricing strategies for textbook products, it does emphasize the importance of channel in shaping students' perceptions about what constitutes a "good" or "fair" deal when comparing available options. Emphasizing the full list price at eCampus may result in lower sales for new textbooks, and could drive a disproportionate number of students toward used, rental or eTextbook options simply because of the glaring price differences between products. In B&N's case, discounting new products from list price while keeping digital and rental products at close quarters gives students more room to decide between less-draastically priced options. There is even some method to Amazon's madness; within subject categories, the price differences between new print and eTextbook products may not be small, but stay more consistent than the overall landscape of textbook prices on the site suggests.

Subject categories have long been acknowledged to influence textbook categories: the bulky textbooks associated with management, mathematics and the physical sciences tend to cost more, in sheer dollars, than textbooks associated with education, communications or the humanities. The findings in this dataset suggest that at the moment, publishers and retailers are not taking those different price sensitivities to mean that students taking different types of courses are likely to respond differently to the price *differences* between new, used, print rental and eTextbook purchase/license models. Across all three retailers, discounts from print

list price among the categories of textbooks sampled here, in fact, remained remarkably stable:

Textbook Subject	Format	New ²⁰	Used	eTextbook	Rental (print)
Business	HC	85.39%	54.44%	55.85%	45.81%
Business	PB	91.54%	58.06%	65.97%	45.62%
Business	All	87.19%	55.50%	58.81%	45.77%
Communications	HC	86.97%	81.31%	38.96%	54.34%
Communications	PB	88.36%	60.99%	57.64%	47.62%
Communications	All	87.94%	67.16%	51.97%	48.74%
Education* ²¹	HC	84.06%	66.48%	55.87%	43.47%
Education	PB	86.74%	67.34%	54.98%	43.65%
Education	All	85.77%	67.03%	55.30%	43.60%
Mathematics	HC	85.27%	51.37%	55.97%	44.58%
Mathematics*	PB	86.27%	61.78%	58.04%	41.51%
Mathematics	All	85.47%	53.45%	56.38%	44.12%
Physical Science	HC	86.68%	52.80%	55.55%	43.48%
Physical Science	PB	88.78%	55.06%	57.07%	43.78%
Physical Science	All	87.35%	53.51%	56.03%	43.58%
Social Science	HC	85.66%	53.93%	50.22%	42.08%
Social Science	PB	83.61%	56.30%	57.55%	41.46%
Social Science	All	84.85%	54.87%	53.12%	41.85%

As yet, it is unclear whether students value digital materials differently when compared to print products according to their course of study. However, as textbook publishers begin to take advantage of digital flexibility and create tailored material

²⁰ Category / subcategory prices as a percentage of list price (SRP) for print versions of the textbook. Certain new textbooks have a separate SRP for e-products, but this is not consistently available, so print SRP is typically the benchmark used with this dataset.

²¹ * indicates a subcategory for which n<30, and results may therefore be disproportionately affected by a few outliers. In practice, however, even within these categories the numbers remained remarkably consistent with others.

for different subjects, this does represent a promising opportunity for research and productive price experimentation among various subject-specific digital products.

Understanding Student Demand

Now that we understand the student market, the industry trends and a little more about comparative pricing between products, what can we do to recommend a pricing strategy? The natural option for marketers and economists would be to build an overall student demand curve. Independent curves for different product types could allow publishers and retailers to find sections of price sensitivity overlap among products and, over time, help both groups to track and respond effectively to changing valuations of digital products when compared to other product types. But price is not the only important lever in the decision-making process; adoption by professors, push from universities, infrastructure support through LMS, portable file formats, or a lack of any/all of the above will combine to drive digital sales in the coming years.

Xplana's recent revised report on the shift toward digital textbooks noted that a significant amount (20%) of overall textbook demand is driven by digital availability, and that availability of digital versions of textbook products has risen to an estimated 30% (Reynolds, 2011). The growing availability of disaggregate content, the current shift between early adopters of digital textbook products and more mainstream users, and ongoing external technology factors all conspire to render simple demand curves—even multiple demand curves—wholly inadequate for the pricing challenge that publishers and retailers face today.

The alternative, then, is to observe current textbook market dynamics, incorporate analyst projections about their near-future growth, and make some informed guesses as to where trade-offs between product choices (on the student side) and pricing strategy (on the publisher and retailer side) will occur.

Here is what we know:

- The two high-growth areas of note in the textbook market are **digital products** and **print rental programs**. Both produce lower overall revenues than standard print sales, and are perceived as cannibalizing sales in new and used channels. Both, however, are accepted within the industry. Digital uptake is viewed as inevitable (if slow) by publishers and retailers alike. Rental programs, if publishers can find a scalable way to monetize them (“rental fees” per turn have been piloted but the success of these is unclear) (Cohen, 2011), can be viewed as a move to help “stop the bleeding” from the used book marketplace.
- Considering the anemic growth in the overall population of college students, it is reasonable to assume that **the growth in both of these sectors comes from attrition elsewhere**.
- There is a **certain identifiable contingent of students who do not buy textbooks every season**. Although their reasons are not only price-based, we can learn a little about the drivers behind this decision by examining the reasons that students defer textbook purchases. The 2009 MBS Textbook Exchange study found that among the 31% of students who deferred a

textbook purchase in the fall semester, the overlapping reasons for deferral were often solvable issues. In this survey, 43% were unsure “whether a textbook was worth the price,” 36% claimed a shortage of funds at the time they would have otherwise purchased the title, and 25% noted that the book was not available earlier in the term (all of these reasons fell far short of the #1 driver for deferral -- 71% were unsure about whether or not the book was actually required for the course—an intriguing gap that is unfortunately not easily addressable by publishers or retailers at scale) (MBS Textbook Exchange, 2009). The focus on pricing and availability suggests that some of those students not purchasing textbooks can be reclaimed as paying customers, although this should not be the primary goal of digital pricing strategy.

One final point to keep in mind when imagining the changing shape of the textbook industry over the coming decade is that **the gradual diminution of the secondary textbook market may put strong price pressure on new products**. A 2005 report by New York University researchers Ghose, Smith and Telang on used book exchanges pointed out that “the availability of a resale market may increase user valuation of [books] and thereby increase the prices that retailers are able to charge” (Ghose, Smith, & Telang, 2005). They went on to point out that “This is precisely what happened to prices for used textbooks following the large-scale introduction of campus book exchanges.” This is an intriguing point that begs the question: what happens when a once-thriving resale market begins to die? The 2009 MBS study also concluded that among students purchasing textbooks from a range

of different channels, 53.1% rated the importance of the offered buyback price on their purchase decision as 4 or 5 on a 1-to-5 scale (5 being “extremely important”) (MBS Textbook Exchange, 2009). With digital and rental growth both rapidly expanding at the expense of used markets, students are likely to begin taking a harder look at textbook prices in any format.

Part IV: Survey Data and Analysis

In order to begin to understand the implications of pricing decisions for digital products on the textbook market at large, we must dive into the murky world of interactions between different product types. In order to get a clearer picture of interactions between product types as they occur at the moment, I decided to conduct a survey of potential textbook consumers. Collaborating on survey design, strategy and outreach with Pearson Education’s market research specialists Seth Reichlin (Senior Vice President, market Research) and Jennie Burger (Market Research Analyst), we launched an “immersive” choice-based conjoint survey to get a better understanding of how college students decide between the different textbook products available in the market.

Methodology

At its core, this survey is a simple choice-based conjoint survey analyzing the following levels and attributes:

Attribute	Levels
Format	Print Digital
Access (purchase type)	Permanent Temporary
Price	<u>Measured as a % of SRP</u> Print products: Static prices across all questions: 100% (new print purchase) 75% (used print purchase) 45% (print rental) Digital products, varying between purchases ²² 40% - 60% (eTextbook, permanent access) 30% - 50% (eTextbook, 180-day access)

²² where $p_{\text{permanent access}} > p_{\text{temporary access}}$

This survey was presented as an experiment in “immersive” format for respondents, which requires some explanation. In order to better simulate the purchasing environment, we deployed two versions of the same survey: one designed to simulate an online store interface and another to approximate what customers see when entering a brick-and-mortar bookstore. We believe that the physical bookstore version of this survey was important to include for two reasons: first, 49% of college textbooks are still sold through brick-and-mortar outlets (MBS Textbook Exchange, 2009), and second, because certain college bookstores are beginning to experiment with offering “download codes” for eTextbooks for purchase on-site. The most notable example here is Barnes & Noble, which has launched a pilot program to offer in-store eTextbook purchase options at certain campus bookstores nationwide (B&N College Booksellers, 2010). This is an important development in the evolution of eTextbooks’ place in the overall market, and deserves recognition in this survey. Although the survey was conducted entirely online and thus could only offer a rough approximation of what customers would see in a brick-and-mortar bookstore, not the entire experience, we believe that the format of this survey could allow consumers to make choices through both channels based on information as it would be presented in real life.²³

Several other important methodological notes are appropriate here:

²³ See Appendix E for screenshots from the online version of this survey, as well as the list of profile questions that students were asked.

- Past the bookstore/online route difference, users were randomly presented with one other split in context: some users were asked to approach the situation as though they had several weeks of lead time before classes start, and the other group was informed that it was already the first day of class. We added this layer of potential complexity in order to mimic real life—although new regulations strongly encourage professors to give students more time to purchase their books before classes, this does not always happen in practice, and this could be an important distinction for both publishers and retailers to make.
- This was conducted in the spirit of a full-profile, choice-based conjoint study, with one important departure from tradition: full-profile studies assume independence of all measured attributes (Answers Research, Inc., 2010). In reality, textbook prices are linked to certain other attributes being measured: for example, permanent access is usually priced higher than temporary access in both print and digital formats, and new print editions of textbooks are almost always the most expensive option. Our goal required us to strive for realism (with flexibility to experiment), and so prices in this survey are distributed along the lines of what is currently imaginable in the market.
- This survey was not adaptive – all respondents answered all available questions.
- For clarity of analysis, we kept prices of all print products steady at the following levels throughout all four questions:

Print purchase, New: (100% SRP): \$224.95

Print purchase, Used: (75% SRP): \$168.71

Print rental: (45% SRP): \$101.23

Survey walkthrough

The survey presented students with a sample class syllabus, and asked respondents to choose which route they would take: go to the campus bookstore to look for the textbook or search for the book online. Based on their answer, they were taken to the “immersive” portion of the survey, where they saw their chosen interface with the “assigned” textbook lined up.

The students were then presented with four questions, each presenting five product/purchase-type options at particular prices, asking which they would choose. Bookstore and Online respondents were asked the same questions in the same order. The options they were given included:

- Purchase a new print textbook
- Purchase a used print textbook
- Rent a print textbook (125 days, standard print rental period)
- Download permanent access to an eTextbook
- Download 180-day access to an eTextbook

The prices offered for each question were as follows:

Book Type	Question 1	Question 2	Question 3	Question 4
New (print)	\$224.95	\$224.95	\$224.95	\$224.95
Used (print)	\$168.71	\$168.71	\$168.71	\$168.71
Rental	\$101.23	\$101.23	\$101.23	\$101.23
eTextbook (permanent)	\$89.98	\$101.23	\$123.72	\$134.97
eTextbook (180-day)	\$67.49	\$ 67.49	\$ 78.73	\$112.48

We focused our efforts in this survey on tracking the changes between and within print and digital formats. Changing both prices from question to question limits our ability to generate particularly reliable elasticity data, although we will use this to estimate some possible cross-price elasticities in the analysis. It does, however, allow us to explore the potential effects of widening or narrowing the price gap between permanent and temporary access to digital eTextbook products.

Once respondents had answered these questions, they were asked general information about their experience with eTextbooks, rented print textbooks, eReaders and eBooks in general, as well as their access to and experience with different eReading devices.

Survey Results

This survey attracted 923 respondents from a specific list of current college students at Pearson. In order to get the most complete picture of price interactions, we narrowed this down to the 886 who provided answers to all four available questions (443 each from both the online bookstore routes). The answers offered several interesting insights into how students approach textbook purchasing decisions, with some potentially important implications for revenue management as publishers think about digital textbook prices going forward.

Overall Results:

	Print / New \$224.95	Print / Used \$168.71	Print / Rent \$101.23	eTextbook Permanent	eTextbook Temporary
Question 1:				\$89.98	\$67.49
Bookstore	116	187	42	46	42
Online	<u>41</u>	<u>166</u>	<u>49</u>	<u>84</u>	<u>103</u>
Total	157	353	91	130	145
Question 2:				\$101.23	\$67.49
Bookstore	82	146	74	54	77
Online	<u>34</u>	<u>161</u>	<u>55</u>	<u>60</u>	<u>133</u>
Total	116	307	129	114	210
Question 3:				\$123.72	\$78.73
Bookstore	73	147	73	54	86
Online	<u>29</u>	<u>156</u>	<u>65</u>	<u>52</u>	<u>141</u>
Total	102	303	138	106	227
Question 4:				\$134.97	\$112.48
Bookstore	78	155	120	52	28
Online	<u>34</u>	<u>171</u>	<u>145</u>	<u>54</u>	<u>39</u>
Total	112	326	265	106	67

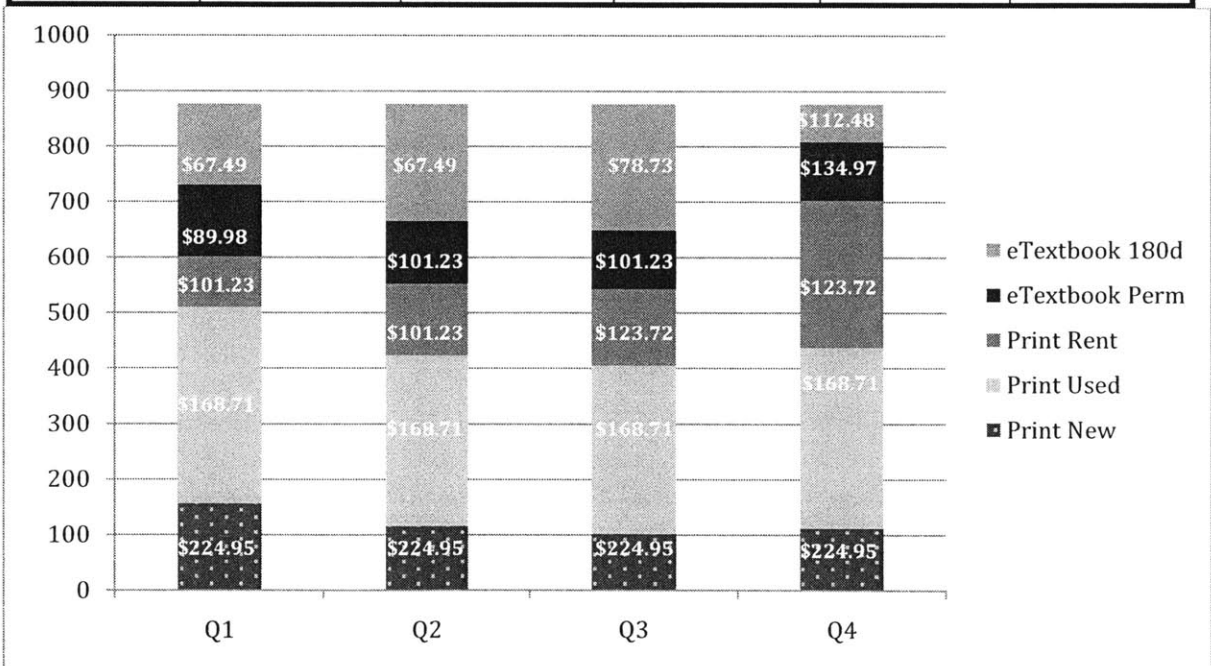


Figure 4: Overall Demand Dynamics from eTextbook Survey Results

In general, the biggest trade-offs came between print rental and temporary-access digital options, with the preference for digital products dropping off sharply as prices passed 50% of SRP. There was also a sizable contingent of respondents that were “loyal” to one format/purchase type across all questions, totaling nearly half of

the overall dataset (431 respondents, or 48.7%). Just over half of these product-loyal respondents were consistent in preferring the used, print version of a book. The breakdown of these consistent answers can be summarized as follows:

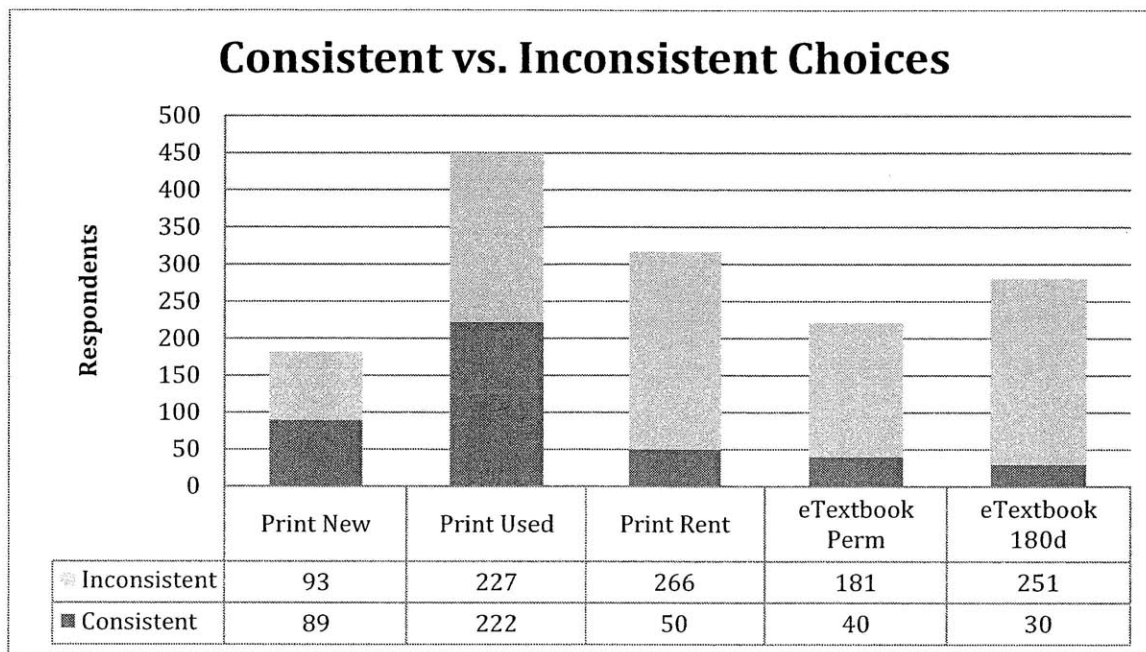


Figure 5: Consistent vs. Inconsistent Choices among eTextbook options

Here, “consistent” respondents are defined as those who only picked a given product option across all four available questions, while “inconsistent” respondents are those who picked this format between one and three times in the survey. This chart could partially explain the overall demand dynamics in Figure 4 above: a core of loyal consumers makes up a notable proportion of those purchasing new and used print textbooks. These consumers will not necessarily be swayed to other options by price alone (although the availability of a resale market for print textbooks here may be a factor, we did not ask questions about resale intention or history in this survey). Current consumers of print rental and digital options,

however, have comparatively smaller “loyal” bases and may attract consumers based on objective or comparative price points.

The consistent data gives us some intuition about textbook consumer behavior, and this will be important when we consider strategy and revenue implications of pricing decisions later on. The “inconsistent” data is, of course, more interesting to analyze. Among the 455 respondents who changed at least one answer over the course of the survey, 322 changed between formats (from print to digital and/or vice versa), 149 changed preferences within print options (an apparently irrational decision, since all attributes of all print products stayed consistent over the course of all questions), 82 changed preferences within eTextbook options, and 244 were willing to change preference in access terms (temporary vs. permanent).

Finally, we can look into estimated own- and cross-price elasticity of demand for these products based on changed “demand” from question to question. These numbers should be taken with a healthy dose of skepticism, since for most questions the prices of both permanent- and temporary-access eTextbooks varied simultaneously. This was not the case between Questions 1 and 2 of the survey, where temporary-access eTextbook prices remained constant. This gives us perhaps the best glimpse into the price and demand interactions between permanent-access eTextbooks and other products. Still, the best use for this data is as a clue in identifying which product types among all textbook options are likely to be highly

competitive right now and in the near future, as industry strategy around digital and print rental programs continues to evolve.

Price Elasticities Between Questions (Overall Responses)

Permanent-Access eTextbooks

<u>Comparison:</u>	Question 1: Permanent: \$89.98 Temporary: \$67.49			Question 2: P: \$101.23 T: \$67.49		Question 3: P: \$123.72 T: \$78.73	<i>Average</i>
	To: #2	To: #3	To: #4	To: #3	To: #4*	To #4	
Print New (\$224.95)	-2.089	-0.934	-0.573	-0.543	-0.103	1.078	-0.527
Print Used (\$168.71)	-1.042	-0.378	-0.153	-0.059	0.186	0.835	-0.102
Print Rent (\$101.23)	3.341	1.377	3.824	0.314	3.163	10.123	3.690
eTB Permanent (self)	-0.985	-0.492	-0.369	-0.316	-0.211	0.000	-0.395
eTB 180 days	3.586	1.508	-1.076	0.364	-2.043	-7.753	-0.902
<u>180-day access eTextbooks</u>							
Print New	n/a	-2.102	-0.430	-0.724	-0.052	0.229	-0.616
Print Used	n/a	-0.850	-0.115	-0.078	0.093	0.177	-0.155
Print Rent	n/a	3.099	2.868	0.419	1.581	2.147	2.023
eTB Permanent	n/a	-1.108	-0.277	-0.421	-0.105	0.000	-0.382
eTB 180 days (self)	n/a	3.393	-0.807	0.486	-1.021	-1.645	0.081

*eTextbook prices for Question 4: \$134.97 for permanent access; \$112.48 for temporary access.

These figures reinforce what we saw in the previous figures, with a little more useful information. Print rentals, temporary-access and permanent-access eTextbooks are all highly competitive products, and price changes to one product have the potential change the shape of overall unit-sales share distribution rather dramatically. Surprisingly, price changes in temporary-access eTextbooks also seem to have some effect on purchases of new products, with a fairly consistent negative CPE across the board. Perhaps most surprising—and most incongruous with the rest of the conclusions drawn from the figures above, is the *positive* own-price elasticity for temporary-access eTextbooks between questions 1-3 and 2-3. Here it

might be instructive to look at the price gap between permanent- and temporary-access digital products in these questions:

eTextbook Offered Prices as a % of SRP (\$224.95):				
	Question 1	Question 2	Question 3	Question 4
eTextbook (permanent)	\$89.98 40% SRP	\$101.23 45% SRP	\$123.72 55% SRP	\$134.97 60% SRP
eTextbook (180-day)	\$67.49 30% SRP	\$67.49 30% SRP	\$78.73 35% SRP	\$112.48 50% SRP

When compared to SRP (here, the new-print purchase price), the gap between offered prices for these products increases from 10 percentage points in Q1 to 15 in Q2 and 20 in Q3, narrowing back down to 10 (at a higher price range) in Q4. Although prices for permanent-access product steadily increase, the jump in interest in temporary products from Q1-Q3 and Q2-Q3 may indeed reflect a lack of price sensitivity among consumers at this rate for temporary-access eTextbook products, but it may also reflect a higher level of price sensitivity for permanent-access eTextbooks in the market.

Channel-Specific Results

The aggregate trends in this dataset are compelling; when compared across channels, however, it becomes apparent that consumers who prefer shopping online are different from those that tend toward bookstores in several notable respects. Starting again with an examination of those customers who stood by one product type through all available questions vs. those whose answers varied, we find some evidence of different product tastes in general:

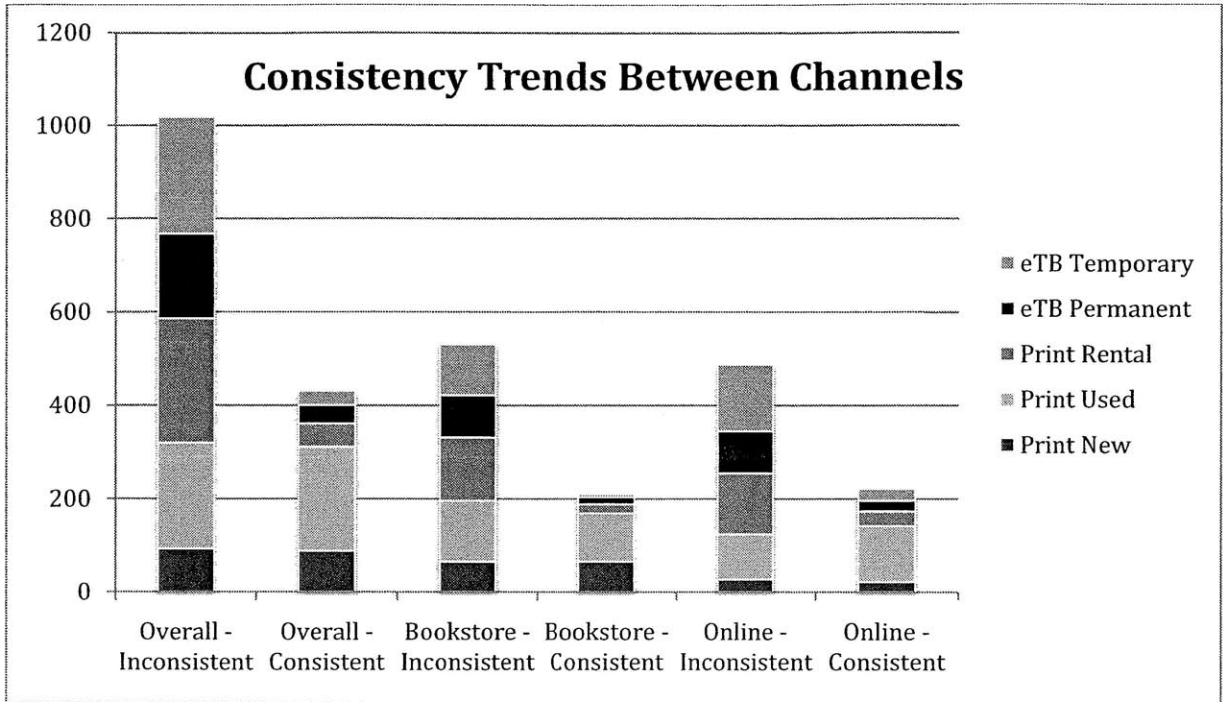


Figure 6: Consistency Trends by Channel

And, among only “format-loyal” customers, the difference is even easier to spot:

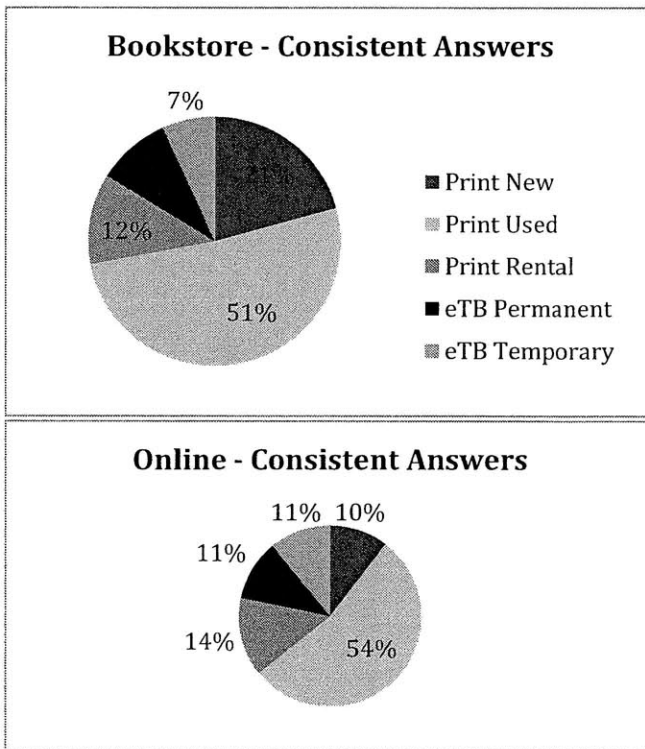


Figure 7: Consistent Answer Proportions by Channel

In both channels, slightly over half of the “loyal” customers are partial to used print versions of books, while loyalty to eTextbooks and rentals is slightly (but not substantially) higher. The notable differences here are in the proportion of loyal users who are specifically loyal to new print textbook editions (nearly doubled among bookstore-shoppers than their online counterparts) and the apparent increased willingness to experiment (as reflected in the variety of new formats in the “inconsistent” category in Fig. 6) of customers shopping online.

The estimated cross- and own-price elasticities for the separate channels²⁴ highlight the same competitive tendencies that appeared in the aggregate dataset, with some difference in impact: online, own-price elasticity for permanent-access eTextbooks was significantly negative where prices of temporary-access eTextbooks remained constant, whereas in bookstores own-price elasticity for permanent-access eTextbooks in the same situation actually appeared to be positive. In both channels, permanent-access eTextbooks appeared to be most competitive with print rentals, with temporary-access eTextbook vs. print rentals following close behind; both effects, however, were more pronounced in the online channel than in bookstores. In general, bookstore patrons seemed to be less price sensitive than their online-shopping counterparts: the average spend per question among bookstore respondents was \$148.76, while the average spend for online shoppers was \$130.89.

²⁴ See Appendix F for estimated elasticities across both channels

Profile Data and Correlation Analysis

One useful advantage of this survey is the fact that it allows us to examine previously-unseen connections and possible new groups of consumer types via correlation analysis. The two most interesting avenues to explore here are the connections between:

- User profiles (based on their self-reported experience with different types of digital products and print rental models) and their **overall choice trends**
- User profiles and their **movement** (or lack thereof) between different choices throughout the survey.

With this in mind, I created two separate correlation matrices in order to examine these relationships. Findings were considered to be significant at $p=0.05$, with a critical value in this dataset of $r = \pm 0.075$. Although the full correlation charts are too large to reprint here in full, the most interesting findings from this part of the study were as follows:

- **Students who are willing to try digital products are far less likely to choose used books.** The correlation here was strongly negative; even stronger than the negative correlation between their willingness to try digital products and their likelihood of choosing new products, although both were significant: recorded at -0.51 and -0.31 respectively.²⁵ Students who picked at least one digital option in the survey were classified as “willing to try”. In some ways this can be attributed to counting information—in a four-question survey, we can obviously expect a negative correlation between

²⁵ Correlation numbers in this section refer to Pearson's r values unless otherwise noted.

students' willingness to try digital products and their total number of print choices. But the uneven distribution of negative correlations between digital purchases and their specific print counterparts could offer valuable strategic insight to publishers and retailers alike—this will be covered more in-depth in the General Takeaways section.

- **Students who have previous experience with eTextbooks are more likely to choose them again (as long as the experience was acceptable).**

There was a fairly strong positive correlation (0.266) between previous experience with eTextbooks and number of eTextbook options chosen; as well as a moderately strong (0.184) positive correlation between previous experience with eTextbooks and willingness to change between formats.

This speaks to a possible snowballing effect as more campuses and individual students begin to experiment with digital textbook products: once students have some experience in this field, they are more likely to choose digital products in the future. (This holds as long as that experience is not terrible—there was a weak but statistically significant negative correlation between the number of eTextbook choices and previous eTextbook experience rated as “poor.”)

- **Students who have rented print textbooks or used eTextbooks before are more price sensitive and less format-loyal.** There was a weak negative correlation between a student's previous experience with renting and their chances of consistently choosing any particular product type; a somewhat **stronger negative** correlation between those students who had some

previous experience with eTextbooks and their chances of being consistent in their format choice.

- **Students who have rented print textbooks before seem to like the model.** There was a fairly strong positive correlation between previous rental experience and the number of rental options chosen, even in the absence of an implicit (or explicit) buyback option for these products, and even when this is not the cheapest option available.
- **Experience with trade eBooks helps eTextbook uptake (a little).** There is a weak but significant correlation between students' previous experience with trade eBooks and their willingness to try digital textbooks; along these lines, students who possessed an iPad or eReader device (Kindles and Nooks in particular) were somewhat more likely to try eTextbooks. This is particularly interesting since most of those students who reported experience with eTextbooks reported that they had used them on desktop or laptop computers—a proportion that may change as tablets proliferate and eReader software improves.
- **Students who opted for the traditional bookstore route were slightly more likely to move away from used books** when presented with other options—a counterintuitive finding that could be good news for in-store digital purchase and rental programs.
- **Timing doesn't matter.** This survey found no significant correlation between timing context (“two weeks’ lead time” vs. “first day of class”) and any movement or overall choice trends.

General Takeaways

Conventional wisdom holds true in this survey: college students still prefer print to digital products. But the results of this survey show some important evidence of a shift in this thinking: out of the 886 respondents here, 420 (47.4%) were willing to try digital products, and a small but noticeable contingent (98, or 11.06%) chose digital products of one kind or another every time. This might be partly explained by added convenience: the web offers easy access to digital products in the form of immediate downloads, which try as they might, brick-and-mortar stores cannot replicate.²⁶ If bookstores remain the channel of choice for a substantial portion of college students, publishers are faced with the same challenge they have faced for decades: how to drive students away from used options and toward other products in the market.

As long as the secondary market is open and thriving, the current preference for print products combined with a traditionally cheaper price point for used products and the potential for eventual resale conspire to make this a difficult challenge. But the results of this survey offer promise here: out of the 449 users who chose used print versions at least once, 227 were willing to be swayed toward other products, and over 60% (138) of those were willing to be swayed to digital options given the right price. The strong negative correlation between previous eTextbook experience and likelihood of buying new books should be taken with a bit of caution—it may to some extent reflect the preferences of an idiosyncratic “pioneer” group of digital

²⁶ A “download code” purchased in a bookstore still needs to be taken home and entered into a company site before the product download can occur—often requiring registration and other intermediate steps along the way.

eTextbook users. But the strength of this link, combined with its difference from these users' willingness to purchase new products or rent print books, is compelling. If the used market does begin to shrink (taking with it both cheap print products and attractive resale options), these price-sensitive consumers have to end up somewhere. A strategic push for digital products as a convenient, low-cost alternative could steer these consumers away from print rental options (which are, in their current form, not quite as appealing to publishers), and toward more profitable digital alternatives.

The Evolving Textbook Industry: A Landscape

Keeping all of these factors in mind, we can begin to imagine what the textbook industry will look like over the course of the coming years.

- **Digital products will increase their share** at a snowballing pace over the next decade. This is in line with what different analysts have already projected about this market. The willingness of students already exposed to digital products to keep trying them, combined with an increasingly favorable technological and academic environment for these products, indicates realistic potential for a high CAGR for digital products over the coming 5-7 years.
- **Major revenue-generating digital products will not be limited to textbook substitutes:** supplementary digital products and services offer a chance for extra revenue without necessarily putting print products at risk.

- **Where cannibalization does occur, growth in digital sales may affect used print sales more than new print sales**, and these products have the potential to become highly competitive with print rental options—but only within a certain price range. The “sweet spot” for digital options identified in this survey was fairly broad—between 35-50% of SRP—and ongoing research will be necessary to keep tabs on consumer behavior. Past 50% of SRP, however, digital options seem to lose ground quickly to their lower-priced (used and rental) print product options.
- **The rental market will continue to grow:** Right now, rentals are expected to claim 10% of overall textbook revenue in 2011 (Cohen, Flat rental sales, changing leaders: Recap of January Rush, 2011, 2011). This growth will probably be rapid at first, as early adopters continue to rent books and more price-sensitive consumers begin to experiment with this model (this will doubtless be helped along by the growing number of in-store rental programs at campus booksellers nationwide). Growth here will be limited in part by its competition with digital products and by the committed segment of consumers who simply prefer to own their books. With this limit in mind, I would venture to predict that growth in rentals will flatten out once it reaches around 20% of the total market, depending on digital adoption and continued publisher and retailer facilitation of this model. Growth in this area will affect used textbook sales more than new sales, as rental models are competing for the same price-sensitive customers.

- **The used market will decline, but not disappear:** competition from digital and rental options will continue to chip away at this market. Still, the secondhand market will be slightly buoyed by feed-ins from large-scale rental companies.
- **The decline of the used textbook market will necessitate a flattening or even a decline in new print retail textbook prices.** The option to resell textbooks after the relevant course is over is a compelling and important part of the textbook market as it exists today—and has been cited as a major driver behind consumer acceptance of high textbook prices (Smith, Nasir, Chang, Pasala, Lai, & Ng, 2010). As much as publishers bemoan this “lost” revenue, the thriving, ever-more-accessible resale market has served as a scaffold for their pricing strategy over the past several decades. With its decline comes a new reality for publishers, retailers and students alike: although the used market is unlikely to disappear, it may become more difficult for students to sell their books back into the market and with rapid digital expansion, the window of time that print products remain relevant may also begin to decrease. Publishers can expect growing pushback on high prices even for new print products, and it remains to be seen whether or not established publishing houses are flexible enough to accommodate this shift in demand. If not, lower-quality, lower-priced and faster-moving new entrants may begin gain share and seriously disrupt the current oligopoly in the industry.

- **Increased product visibility, availability, lower prices and LMS integration** among all textbook products will lure a thin slice of the current no-buy customers into the paying market. These customers are most likely to filter into the growing digital and rental markets, although decreased overall prices may attract some back to traditional print purchases.

This is a dramatic image, and likely not an exciting one for either established major publishers or retailers of college textbooks. And even if growth was to stay conservative for both rental and digital options, the threat to existing business models is real. Xplana's report warns that "When digital textbooks sales reach 20% of new textbook sales, based on current production and revenue models, textbook publishers will see a 10% decrease in their projected print revenues and a 13% decrease in project margin. At this point, publishers will have little choice but to change product, production and distribution strategies in favor of digital versus print." (Reynolds, 2011) Retailers face different challenges, but not inconsequential ones: revenue from digital products is lower, and both proprietary file formats and LMS integration trends threaten to cut many booksellers—online and brick-and-mortar—out of the digital revolution even if they do try to join. As the reliable cash cows for both business sides of the textbook industry begin to thin out, what pricing strategies can publishers and retailers embrace to keep them afloat as they work to make this giant operational (and perhaps philosophical) transition?

If it exists at all, the answer will come from an examination of where and how publishers and retailers get their money – and where and how they will get their

money in the future. Zeroing in on the final purchase decision, we see that revenues flow through the system in the following ways:

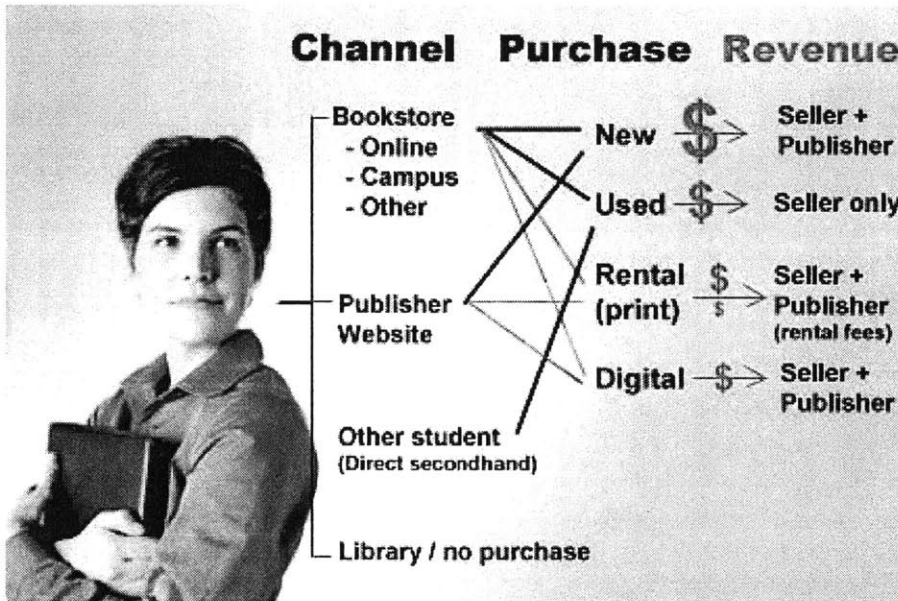


Figure 8: Textbook Purchase Revenues by Channel and Purchase Type

In this image, thin lines of connection between channel and purchase indicate options that are not yet commonly available (but sometimes are), such as publishers offering rentals through their own websites or brick-and-mortar bookstores offering digital download options. Revenue per product is indicated in the size of the dollar sign moving toward the recipient(s), with new print titles bringing in the most dollars per unit and rental/digital products bringing in a fraction of this per unit sold (publishers do receive some revenue from bookstore rentals, and sometimes offer rental programs themselves). Understanding these streams of

income from various products allow us to see potential for a few of the shifts that could help salvage industry profitability during the upcoming turbulent times.

Recommendations

Any coherent and sustainable approach will need to combine product and pricing strategies, and will therefore need to originate with textbook publishers. So the recommendations below will focus mostly on publisher strategies, with the realistic need for ongoing collaboration with retailers. The following strategy is one suggested approach for publishers to take control of the digital shift from both a pricing and product perspective.

Pricing strategy recommendations:

- **Recommendation 1:** As the digital and rental markets grow and both new and used print textbook markets shrink, **publishers should gradually reduce print list prices to 85-90% of current levels.** This strategy will unequivocally reduce the amount of revenue brought in by print titles, but has several attractive features:
 - Publishers can take active control of the process of overall price correction that will happen as resale markets diminish
 - New print unit sales will remain within financial reach of students as other, lower-cost options open up

- **Recommendation 2: As print list prices fall, publishers should experiment with wider gaps between permanent- and temporary-access digital products.** The difference in resale potential between physical and print products is absolute, and as temporary-access models for print and digital products become more widely known and accepted among students, “permanent access” digital textbooks can be expected to attract a different kind of consumer. At the moment, permanent-access digital prices tend to be fairly high across the industry: publishers could start by lowering temporary-access prices while keeping permanent-access prices steady to get a better handle on what different consumers are truly looking for in their digital products. With this in mind, there are two important caveats:

- If digital sales really do approach 50% of the textbook market, publishers should not undervalue these products. There is no strong reason to believe that current users of digital textbooks are driven to this format by savings alone, and it will be disadvantageous for publishers to position their digital offerings as cut-rate versions of their print products
- Closer price points for print and permanent-access digital textbooks allow for better alignment between print and digital offerings, and make it easier for publishers to offer flexibility between formats.

Product recommendations:

- **Allow students to shift between print and digital formats** according to their preference, without unnecessary pain. Students who have already

purchased the e- or print version of a full textbook should be able to “upgrade” to expand their access without needing to re-purchase the content.

- If traditional publishers do not begin offering this service, their competitors will (Flat World Knowledge is the prime example); they also forgo a comparatively easy source of extra revenue. Some price experimentation here will be key to finding an appropriate measure. However, if digital access came with a choice of a print (perhaps a cheaply produced print-on-demand or POD) version for an extra 15% of SRP, those students who have already paid for one textbook would still be paying slightly more into the system without feeling gouged.
- Closer print/digital product tie-ins represent a clear opportunity to bring retail partners on board. It may be easiest for publishers to offer these kinds of “upgrades” only on their own websites, but the reach of such programs will only be significant when retail partners can bring these offerings (immediate or as download / access codes) as point-of-purchase options. It is appropriate here to restate that over 58% of students still buy their textbooks at a brick-and-mortar store of some kind. At least for the foreseeable future, all major retail partners must be on board with new product tie-ins and pricing strategy.
- **Be more aggressive in creating and promoting profitable, non-cannibalizing digital extras:** tutoring services, problem sets, learning forums, stand-alone case studies, advanced or interactive subject deep-dives, etc.

- This is an easy space for smaller, leaner competitors to enter and flourish; current textbook publishers can either leverage their existing brands for quality and well-established instructor relationships to promote extra digital revenue streams while these advantages are still meaningful or relinquish this area to the competition.
- *Counter-point:* Depending on how industry players adapt to (likely) lower overall revenues and digital content distribution and sales models, this space could go either way for current publishers – certain areas may turn out to be very profitable; the sheer breadth of opportunities may be overwhelming and a threat to overall the managerial and strategic focus. Publishers should keep tabs on their own activities and opportunities in this area as it evolves and decide whether they are strategically well-aligned with the company’s other products and long-term goals.
- **Work with retailers to implement sensible transitions between licensure and permanent access for digital products:** allow students to extend access periods for additional semester or “upgrade” to permanent access. Again, this is an easy source of additional revenue from those students who originally purchased semester-long access to a text but would like to keep it for an additional term or permanent reference.

All of these recommendations have counterpoints and trade-offs, but none of them are unmanageable for large publishers—and almost all of them are quite easy for current and potential new entrants. The main point of these recommendations is to stress that textbook publishers, new and old, are probably better-poised to take

advantage of the digital shift than they are commonly assumed to be, *if* they can realistically price their books to the market demand and if they keep close tabs on the evolving relationship between different channels and purchase types. College textbooks are an idiosyncratic market in many ways, not least of which is the forced depression on overall price elasticity due to the fact that specific materials are often required, at least in theory, by their professors. In an evolving digital market, however, publishers would be best served if they keep a close eye on exactly how this otherwise quite price-sensitive consumer demographic are making trade-offs between product types.

A Note on Pricing for LMS Integration

The pricing strategy detailed above concerns the ordinary consumer market, where individual students make purchase decisions based on personal preferences, technology access and budgets. As we now know, however, one of the most notable trends in higher educational technology for textbook publishers is the increasing adoption (and capabilities) of Learning Management Systems. The idea of students being able to purchase content through an LMS has yet to be explored at scale; the idea of universities purchasing bulk licenses for digital content from publishers (either on a per-use or “open” content basis for all students) is still quite new for publishers and universities alike.

It is likely that the initiatives previously discussed in California and Florida will inform the U.S. discussion about how universities can and should (or should not)

use their preferred student LMS for textbook content distribution. If this model becomes popular, the implications for both online and brick-and-mortar retail outlets of college textbooks are clear and unfortunately likely to be dire. Strategic consequences for content publishers are also potentially enormous, but the pricing implications are uncertain.

The three most obvious models for publishers interested in “selling” digital textbooks through university LMSs are:

- 1) Use an LMS-based “marketplace” functionality to allow individual students to purchase and download (or access) content directly (the Cal State model)
- 2) Work with universities to create “open” textbooks for professors to adopt (and possibly adapt) and students to use—either with or without a direct charge to the student (the Flat World Knowledge model)

In either scenario, publishers can expect much tougher price negotiations from large academic institutions than they see from independent retailers and wholesalers at the moment. Cal State was an early example; it is possible that future negotiations could become even tougher over time. Both the threat of being outbid by low-cost competition and the stakes for long-term relationships are substantially higher. Particularly for large campuses or state schools, a strong digital-only push could mean a drastic cut in expected print sales for certain products, requiring faster and cheaper development cycles in order to maintain profitability. These product and sales challenges will not be easy for publishers to solve. Pricing-wise, however, they could benefit by considering Bakos and Brynjolfsson’s approach to bundling

information goods. All formulas and variable labels in this section are from Bakos and Brunjolfsson's 1999 *Management Science* article "Bundling Information Goods: Pricing, Profits and Efficiency" unless otherwise noted. See their original article for the full set of assumptions and special-case caveats that can occur with bundling zero-marginal-cost information goods (Bakos & Brynjolfsson, Bundling Information Goods: Pricing, Profits and Efficiency, 1999). This theory states that under certain conditions for a sufficiently large set of information goods sold at zero marginal cost to the seller, offering these goods as a bundle can be far more profitable than selling each good individually.

The basic math behind this theory is as follows: in a world where an individual consumer (ω) places a value of v_{ni} for each good i in a larger bundle of n goods, the total **per-good valuation** of the bundle is:

$$x_n = \left(\frac{1}{n}\right) \sum_{k=1}^n v_{nk}$$

and where complementary or substitutive goods are offered (as is often the case in the textbook market), that expected valuation shifts to

$$E[x_n] = E\left[\left(\frac{1}{n}\right) \left(\sum_{i=1}^n n^\alpha x_{i1}\right)\right] = n^\alpha \mu_1$$

where "for all $n, i(i \leq n), v_{ni} = n^\alpha v_{11}$ " and where $\alpha < 0$ means that the goods in question are substitutes ($\alpha > 0$ indicates that the goods are complements).

For the purposes of the textbook market, two aspects of Bakos and Brynjolfsson’s research are appropriate to explore more closely: the issue of what happens to this formula when resources for obtaining and using these goods (“budgets”) are limited; and the question of what to do with correlated demand among products.

For the question of limited resources, “budgets” are indeed an appropriate label, especially if the university is negotiating a price that it will pay as an institutional client up front (presumably passing those costs on later to students in the form of increased tuition or special fees). Bakos and Brynjolfsson make the sensible point that if B is the total “budget” of the limited resource in question and γ serves as “an appropriate scaling constant” for this resource, then the individual value for good j within the larger bundle will be

$$\gamma(1 - \gamma)^{j-1}B = B$$

and the value of the bundle itself will (with infinite goods) eventually become

$$\lim_{n \rightarrow \infty} \sum_{j=1}^n \gamma(1 - \gamma)^{j-1}B = B$$

which creates an understandable problem of low per-item valuation among the entire set as the number of items rises. Textbook publishers may therefore be wary of selling very large bundles of their available eTextbooks in an all-inclusive subscription model to universities when the valuation of each eTextbook will be far lower than what it would otherwise be in the market.

The concept of correlated demand for related products, however, may offer a solution to this seemingly tricky problem. The basic Bakos-Brynjolfsson model

assumes that consumer valuations for goods are independent, which as we have seen is not the case for textbooks: for example, a statistics major will likely value a particular group of mathematics and data analysis textbooks more highly than a different set of books on art history. Moreover, these different consumer types have historically paid different prices for their “preferred” books in the marketplace. When valuations are based on this kind of underlying variable (intrinsic to the consumer rather than the kind of good), Bakos and Brynjolfsson suggest that “the market can be segmented according to consumer types.” The takeaway for publishers here is that they may want to offer bundles of goods to particular departments to populate their various corners of the LMS marketplace. While this increases the potential ferocity of competition between different providers and the overall cost of sales, it allows publishers to maintain the practice of differentiation between student segments that has been profitable in the past and, considering the likely need for more strongly differentiated digital products among departments, seems sensible going forward.

Competition among major publishers is the final issue that is likely flare up if subscription-style LMS integration services do become common. In a follow-up paper in 2000, Bakos and Brynjolfsson revisited the concept of information bundling with a focus on possible competitive angles (Bakos & Brynjolfsson, *Bundling and Competition on the Internet*, 2000). Since there are several major textbook publishers in higher education, all with vast current and backlist catalogs, it can be reasonably assumed that if subscription models and bundling take off, all

will want to participate and try their best to profit. In a space with two competing bundles, Bakos and Brynjolfsson state that the mean customer valuation per good (with a probability of 0.5) that they already have the competing product) is:

$$\mu_B(p_A^*) = \int_{v_{Ai}=0}^1 (1 - v_{Ai}) v_{Ai} dv_{Ai} = 1/6$$

as the number of goods (n) in a bundle gets larger, the optimal price for each good in the bundle offered by competing firm B (given a competitor, firm A, charging price p_{Ai}^* for its own goods):

$$\lim_{n \rightarrow \infty} \frac{1}{n} p_{A1...n}^* = \frac{1}{6}, \text{ while for Firm A, } \lim_{n \rightarrow \infty} \frac{1}{n} p_{B1...n}^* = \frac{1}{6},$$

(Bakos & Brynjolfsson, Bundling and Competition on the Internet, 2000)

This pinpoints the average per-item valuation in this two-company bundle mix as 1/6. Realistically, publishers will have to keep a close eye on the competition to find out how many of their major competitors are working on similar initiatives, since as similar bundles compete with each other, the proportion of consumer surplus that remains gets bigger and each producer will earn less per title on the overall sale. The authors of the original research note that “if the bundlers merge...they can capture the consumer surplus...and double their gross profit,” but this kind of collaboration among publishers is unlikely to stand up to antitrust scrutiny in the real world.

Conclusion

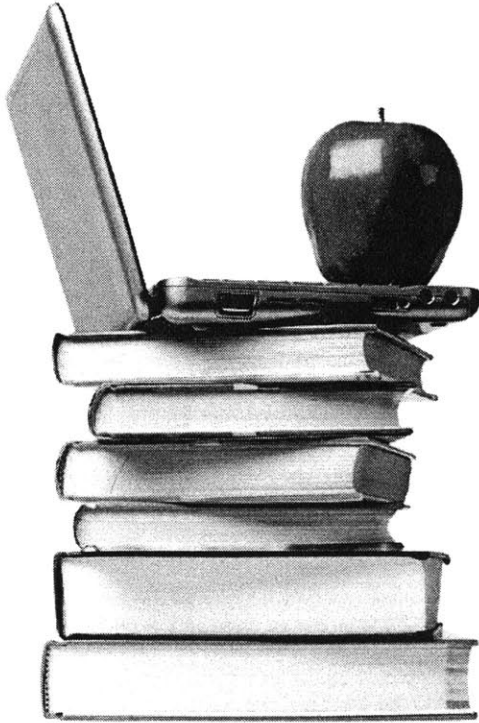
The current decade promises to bring “interesting times” to textbook publishers in the U.S., and all are currently scrambling to update their workflow processes and bracing for a fast and steep print drop-off in the coming years. This study, however, indicates that they do have the ability to save their companies; although the prospect of disaggregated content and LMS content integration open up the doors for hungry competitors to enter this space, established companies have a pre-existing sales advantage and a deep understanding of the market that should help them through the coming transition.

These natural advantages, however, will not necessarily hold true forever, and will certainly not if publishers continue on a business-as-usual strategic approach. To their credit, none of the top three are currently doing this, although a lack of carefully considered and market-oriented strategy could negate the positive effects of such initiatives. Digital textbooks have been slow to catch on compared to other forms of digital media, including print trade books. But if industry associations and analysts agree on nothing else, they can agree that digital products are likely to be generating a substantial portion of the overall textbook industry’s profits by the end of the decade. Publishers in particular must keep on top of the interaction between product types and sales models as this market matures. They will need better-aligned print and digital products – in terms of design, access options, format availability and especially price – in order to help the transition run smoothly without too detrimental an effect on company revenues. Pricing is only one lever

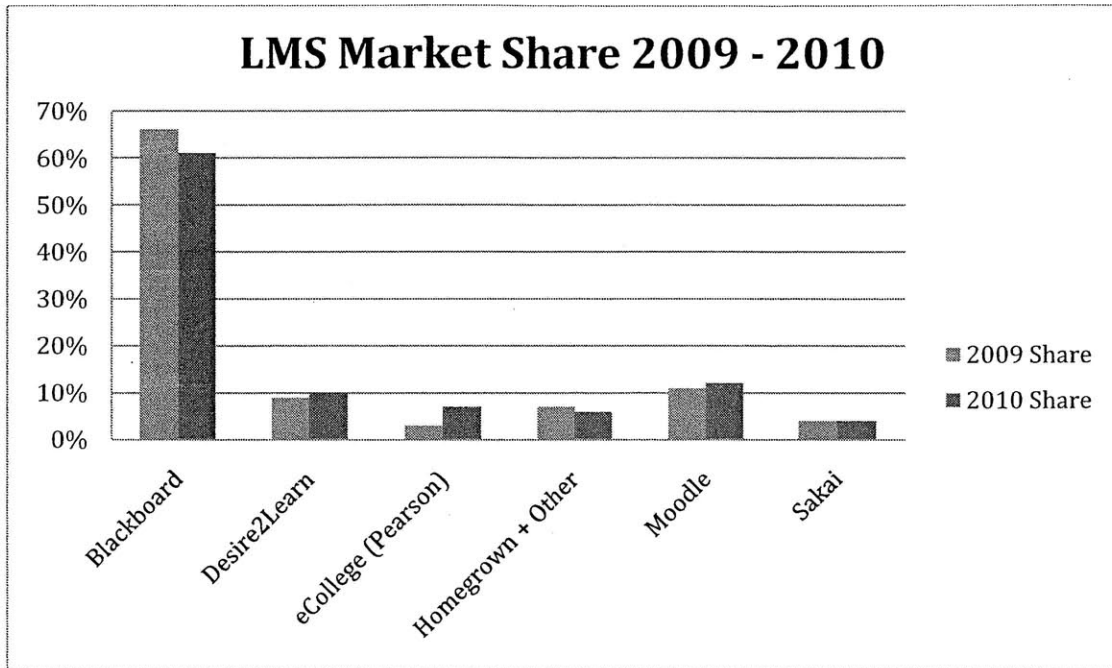
among many in the complex dynamics of this transition; everything from product strategy to operations and sales to human resources are in the process of being re-imagined by publishing companies at the moment. But among all of these moving parts that companies will need to both change and track, pricing is one of the most powerful tools available to help businesses gauge the honest market reactions to their work.

Textbooks have played an immeasurably important role in American education for over a century, and in the higher education market, publishers have remained committed to producing high-quality materials to help promote critical thinking, innovation and education in the sciences, humanities and arts. But in a basic business sense, the industry has become unsustainable in its current form: high development costs, industry consolidation and a disjointed sales cycle have led to irresponsible pricing practices and a risky over-reliance on “hit” products, all of which made the world of textbook publishing ripe for disruption even without a vast and ongoing technological shift. Now that such a shift is forcing change, established players can still survive—even thrive—as long as their product and pricing strategies are well-aligned, and as long as they are willing to work closely with their retail partners and customer base—individual and institutional—to ensure that they are all making the most of these opportunities.

Appendices



Appendix A: LMS Market Share Changes, 2009 - 2010



Source: (Green, 2010)

Appendix B: Textbook P&L, Print and Digital Only

Adapted from Greco, Rodríguez and Wharton's sample P&L statements in *The Culture and Commerce of Publishing in the 21st Century*, Tales 4-7, 4-8 and 4-9; p. 132-134.

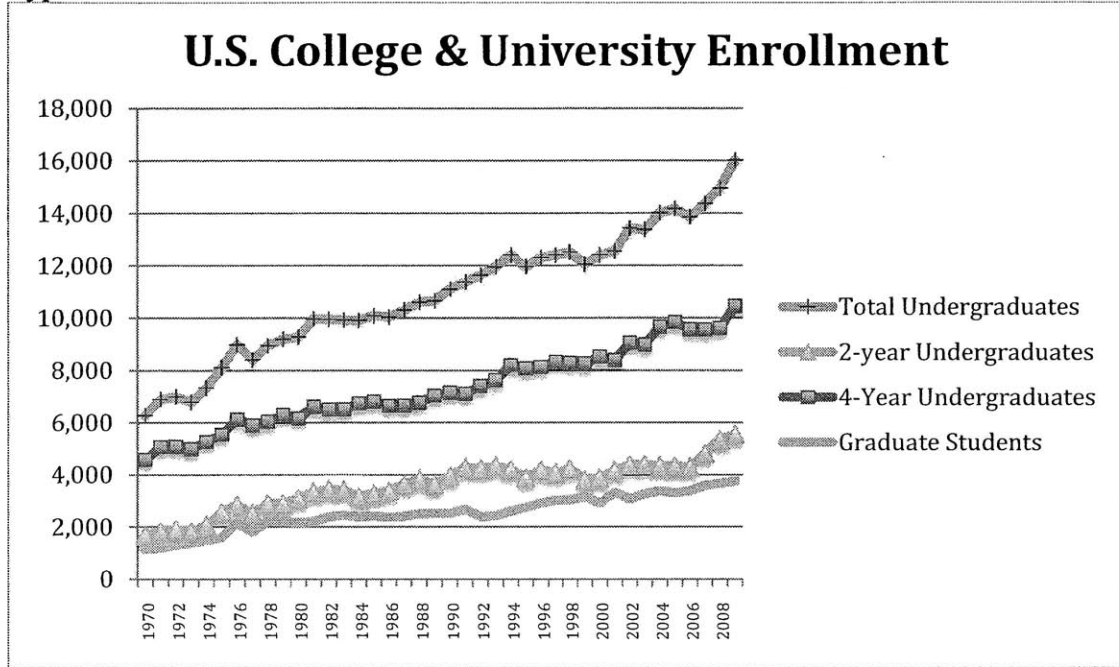
Simplified 3-year P&L projections without print-related costs (thought experiment only – does not incorporating sales effects of mixed or digital-only offerings):

Category	3-Year Lifetime: Print Only	3-Year Lifetime: Digital Only	Notes
Print Quantity	615,000	-	
Free Copies	5,000	-	
Inventory Carry-over			
Gross Sales	741,419	741,419	
Returns	181,499	-	
Net Sales	559,919.35	741,418.63	
Sugg. Retail Price	\$ 100.00	\$ 100.00	
Avg Discount	25%	25%	
Publisher Net Income	\$ 75.00	\$ 75.00	
<u>Royalties:</u>			
Foreign Rights	\$ 100,000.00	\$ 100,000.00	
Misc	\$ -	\$ -	
Total	\$ 100,000.00	\$ 100,000.00	
Author Share	\$ 50,000.00	\$ 50,000.00	
Publisher Share	\$ 50,000.00	\$ 50,000.00	
<u>Expenses</u>			
Unit PPB	\$ 15.94		
Plant	\$ 75,000.00	\$ 75,000.00	Editorial, etc.
Royalty advance	\$ 500,000.00	\$ 500,000.00	
Direct Marketing	\$ 500,000.00	\$ 500,000.00	
<u>P&L Analysis</u>			
Gross Sales	\$ 55,606,397.09	\$ 55,606,397.09	
Returns	\$ 13,612,446.01	\$ -	
Net Sales	\$ 41,993,951.08	\$ 55,606,397.09	
PPB	\$ 9,803,100.00	\$ -	
Plant	\$ 75,000.00	\$ 75,000.00	
Earned Royalty	4,199,395.11	5,560,639.71	10% at \$7.50 / unit
Total Cost	\$ 14,077,495.11	\$ 5,635,639.71	
Gross Margin A	\$ 27,916,455.97	\$ 49,970,757.38	Net Sales - Total Cost
Other Pub. Income	\$ 50,000.00	\$ 50,000.00	
Inventory Write-off	\$ 798,285.60	\$ -	
Royalty Write-off	\$ -	\$ -	
Gross Margin B	\$ 27,168,170.38	\$ 50,020,757.38	
Direct marketing	\$500,000	\$500,000	
Overhead	\$ 12,598,185.32	\$ 16,681,919.13	30% Net Sales
Net Profit	\$14,069,985.05	\$32,838,838.25	GMB - DM - Overhead
Net profit as % of sales	33.50%	59.06%	
Net profit per copy	\$25.13	\$44.29	

Appendix C: The College Student Market

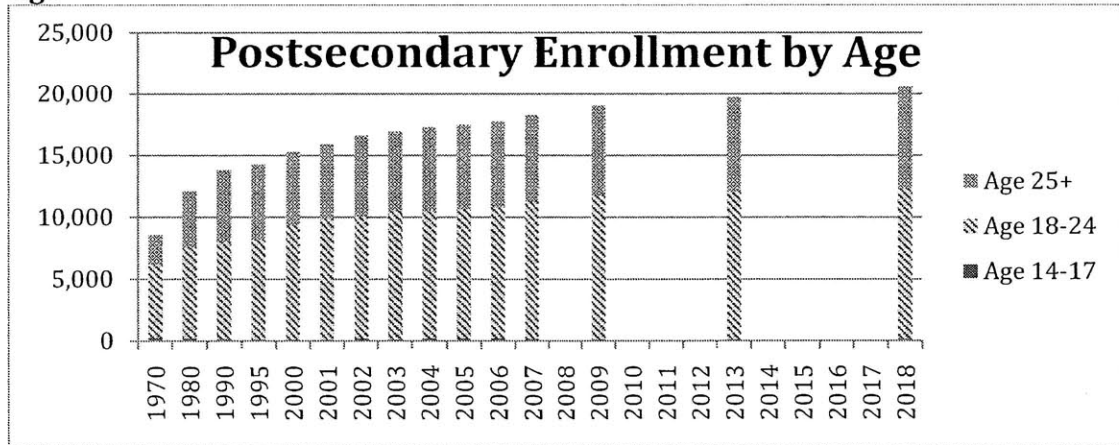
Appendix C-1: College Enrollment Trends

Type of institution



Y-axis in thousands. Source: Table A7 (U.S. Census Bureau, 2009), Table A7

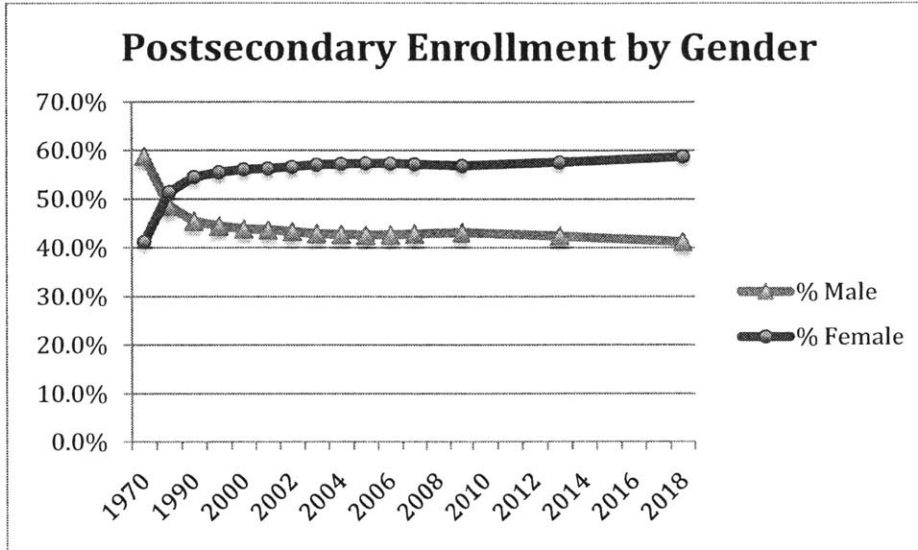
Age



Y-axis in thousands. Source: (NCES, 2009), Table 191

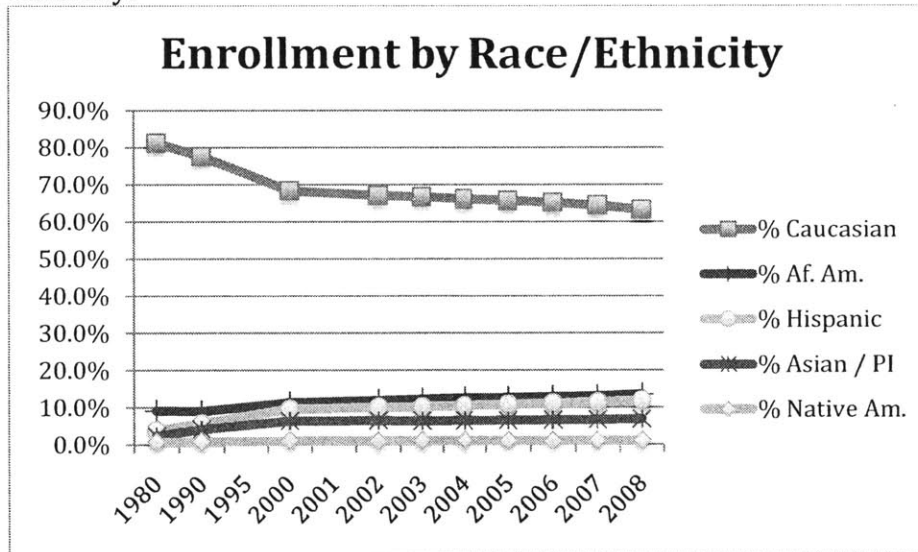
Appendix C-1 Continued: College Enrollment Trends

Gender:



Source: (NCES, 2009), Table 191

Ethnicity:



Source: (NCES, 2009), Table 226

Appendix C-2: The Cost of College in the U.S.

Average Estimated Undergraduate Budgets, 2010-11 (Enrollment-Weighted)						
	Tuition and Fees	Room and Board	Books and Supplies	Transportation	Other Expenses	Total Expenses*
Public Two-Year						
On-Campus	\$2,713	—	\$1,133	—	—	—
Commuter	\$2,713	\$7,259	\$1,133	\$1,491	\$2,041	\$14,637
Public Four-Year						
In-State (On-Campus)	\$7,605	\$8,535	\$1,137	\$1,073	\$1,989	\$20,339
Commuter	\$7,605	\$8,353	\$1,137	\$1,532	\$2,356	\$20,983
Out-of-State (On-Campus)	\$19,595	\$8,535	\$1,137	\$1,073	\$1,989	\$32,329
Private Four-Year						
On-Campus	\$27,293	\$9,700	\$1,181	\$862	\$1,440	\$40,476
Commuter	\$27,293	\$8,150	\$1,181	\$1,319	\$1,822	\$39,765

According to the survey methodology note, “Enrollment-weighted tuition and fees are derived by weighting the price charged by each institution by the number of full-time students enrolled in fall 2009. . . . Room and board charges are weighted by the number of students residing on campus”

Source: (Baum & Ma, 2008), Full dataset, Table 1a, Oct. 2010

Appendix D: Online Retail Dataset Methodology

Methodology Notes

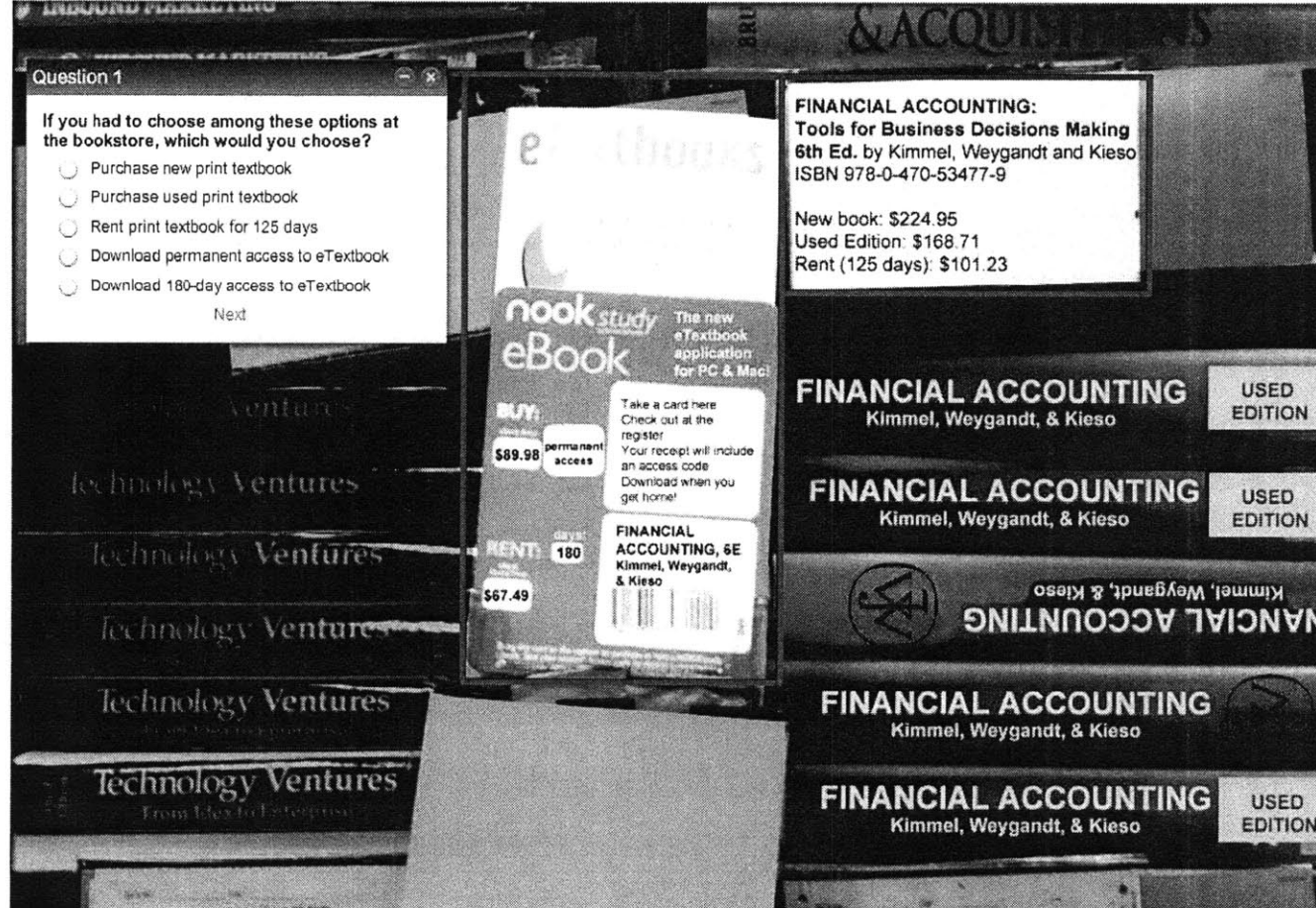
- This dataset is comprised of 730 records among three major online textbook retail outlets. Except for Amazon, all records were required to show prices for new purchases, used purchases, eTextbook sales or licenses, and (except for Amazon) rental options.
- Pricing data was pulled between January and February of 2011, which means these particular prices are likely not what students saw when prices were published for the fall.
- This data is primarily intended to show the relationship between prices of textbooks in different available formats among various online channels that offer most or all of these sales models and formats.
- “New” prices are those orders listed/fulfilled by the specified retailer, not books listed as “New” in their secondhand / marketplace listings. The rationale for this is twofold: third-party marketplace listings do not usually qualify for attractive “free shipping” programs sometimes offered by retailers and there is less accountability for the actual quality of the delivered book. This assumption is supported by Prof. Michael Smith’s work on textbook elasticities, where retailer-listed “New” titles and third-party “new” listings have very low cross-price elasticities (Smith, Nasir, Chang, Pasala, Lai, & Ng, 2010).
- Among third-party marketplace selections, “used” prices always refer to the lowest (first-advertised) listed used price, *except* where $p(\text{new marketplace})$

> *p(used marketplace)*. The rationale for this is that students derive no particular added value from buying a used book *except* its ostensibly lower price. When faced with a (presumably) higher-quality product listed at a lower available price, a rational consumer will always pick this option. The fairly high cross-price elasticity between new and used third-party options (1.37) discovered by Prof. Smith's team helps to substantiate this assumption.

I discovered over the course of this study that published print "list" prices (SRPs) occasionally differ from retailer to retailer—this apparently happens more often with older titles that may have changed listed SRPs between the book's original publication and now. With this in mind, wherever possible, the print list price reflected in the data is the one listed by the retailer on its site. For those few records without a listed SRP on the same page, the list price was pulled from the publisher or another major retailer as appropriate.

Appendix E: Consumer Survey Format

Appendix E-1: Survey Screenshots: Bookstore Route



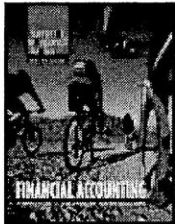
Appendix E-2: Survey Screenshots: Online Route

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Question 1

If you had to choose among these options, which would you choose?

- Purchase new print textbook
- Purchase used print textbook
- Rent print textbook for 125 days
- Download permanent access to eTextbook
- Download 180-day access to eTextbook

[Next](#)

Appendix E-3: Survey Profile Questions

- Have you ever rented a textbook for a college course? (Yes / No)
- Have you ever used an eTextbook for a college course? (Yes / No)
- If “Yes,” how did you access your eTextbook?
 - o Laptop
 - o Desktop computer
 - o iPad
 - o eBook reader (e.g. Kindle, Nook, Sony Reader)
 - o Other (please specify)
- If you have used an eTextbook for a college course, have you used eTextbooks with temporary (e.g., semester-long), permanent access or both kinds?
- If you have used an eTextbook for a college course, how would you rate that experience?
- Have you ever read an eBook of any kind other than an eTextbook?
- Do you have an iPad?
- Do you have an eReader other than an iPad?
- If “Yes,” what type?
 - o Kindle
 - o Nook
 - o Sony Reader
 - o Other (please specify)
- May we contact you with follow-up questions based on your answers to this survey?
(Yes / No; profile information)

Appendix F: Estimated Elasticities by Channel

Price Elasticities Between Questions: Bookstore

Comparisons:	<u>Question 1:</u> Permanent: \$89.98 Temporary: \$67.49			<u>Question 2:</u> P: \$101.23 T: \$67.49		<u>Question 3:</u> P: \$123.72 T: \$78.73	Average
	<u>To #2</u>	<u>To #3</u>	<u>To #4</u>	<u>To #3</u>	<u>To #4</u>	<u>To #4</u>	
Permanent-Access eTextbooks							
Print New (\$224.95)	-2.345	-0.989	-0.655	-0.494	-0.146	0.753	-0.646
Print Used (\$168.71)	-1.754	-0.570	-0.342	0.031	0.185	0.599	-0.309
Print Rent (\$101.23)	6.095	1.968	3.714	-0.061	1.865	7.082	3.444
eTB Permanent (self)	1.391	0.464	0.261	0.000	-0.111	-0.407	0.266
eTB 180d	6.667	2.794	-0.667	0.526	-1.909	-7.419	-0.001
180-day access eTextbooks							
Print New	<i>n/a</i>	-2.224	-0.491	-0.659	-0.073	0.160	-0.657
Print Used	<i>n/a</i>	-1.283	-0.257	0.041	0.092	0.127	-0.256
Print Rent	<i>n/a</i>	4.429	2.786	-0.081	0.932	1.502	1.914
eTB Permanent	<i>n/a</i>	1.043	0.196	0.000	-0.056	-0.086	0.219
eTB 180d (self)	<i>n/a</i>	6.286	-0.500	0.701	-0.955	-1.574	0.792

Price Elasticities Between Questions: Online

Permanent-Access eTextbooks							
Print New	-1.366	-0.780	-0.341	-0.662	0.000	1.897	-0.209
Print Used	-0.241	-0.161	0.060	-0.140	0.186	1.058	0.127
Print Rent	0.980	0.871	3.918	0.818	4.909	13.538	4.172
eTB Permanent (self)	-2.286	-1.016	-0.714	-0.600	-0.300	0.423	-0.749
eTB 180d	2.330	0.984	-1.243	0.271	-2.120	-7.957	-1.289
180-day access eTextbooks							
Print New	<i>n/a</i>	-1.756	-0.256	-0.882	0.000	0.402	-0.498
Print Used	<i>n/a</i>	-0.361	0.045	-0.186	0.093	0.224	-0.037
Print Rent	<i>n/a</i>	1.959	2.939	1.091	2.455	2.872	2.263
eTB Permanent	<i>n/a</i>	-2.286	-0.536	-0.800	-0.150	0.090	-0.736
eTB 180d (self)	<i>n/a</i>	2.214	-0.932	0.361	-1.060	-1.688	-0.221

eTextbook prices for Question 4: Permanent access: \$134.97; 180-day access: \$112.48

Bibliography

AAP. (2006). *The Higher Education Textbook Market: Prepared for Submission to the Advisory Committee on Student Financial Assistance*. New York: Association of American Publishers.

AAP. (2009). "Higher Education Books and Materials." *Annual Report*. New York: Association of American Publishers.

Answers Research, Inc. (2010). *Answers Research*. Retrieved 2011 17-April from FAQ: <http://www.answersresearch.com/faq.php>

B&N College Booksellers. (2010, November 4). *E-Textbooks at the Crossroads*. Retrieved April 10, 2011, from Barnes & Noble College Booksellers: <http://www.bcnnews.com/e-textbooks-at-the-crossroads>

Bakos, Y., & Brynjolfsson, E. (2000). Bundling and Competition on the Internet. *Marketing Science*, 19 (1), 63-82.

Bakos, Y., & Brynjolfsson, E. (1999). Bundling Information Goods: Pricing, Profits and Efficiency. *Management Science*, 45 (12), 1613-1630.

Baum, S., & Ma, J. (2008). *The College Board: Trends in College Pricing 2007*. Washington, DC: College Board.

CA Dept. of Justice. (2010). *State of California Dept. of Justice*. Retrieved 2011 03-March from Antitrust Highlights: <http://ag.ca.gov/antitrust/highlights.php#book>

Cairns, M. (2011 2-March). *Cengage and their MindTap Personal Learning Environment*. Retrieved 2011 2-March from PersonaNonData: <http://personanondata.blogspot.com/2011/03/cengage-and-their-mindtap-personal.html>

Capital IQ. (2009 31-December). Macmillan Publishers Limited: Private Company Profile. Capital IQ, Inc., a division of Standard & Poor's.

Cengage Learning Holdings, LLP. (2010). *Annual Report for the Fiscal Year Ended June 30, 2010*. Independence, KY: Cengage Learning.

Cohen, J. (2011, March 29). (K. Molina, Interviewer)

Cohen, J. (2011, February 14). *Flat rental sales, changing leaders: Recap of January Rush, 2011*. Retrieved March 25, 2011, from Textbook Guru, The: <http://www.thetextbookguru.com/dropping-rentals-changing-leaders-recap-of-ja>

Cooper, C. L., & Argyris, C. (1998). *Concise Blackwell Encyclopedia of Management*. Malden, MA, US: Blackwell Publishers Ltd.

CSUSB Alumni. (2010 7-September). *Digital textbook pilot program will save CSUSB students money*. Retrieved 2011 21-February from CSUSB Alumni:

<http://www.csusbalumni.com/site/apps/nlnet/content2.aspx?c=lvKSL7MTIuG&b=4016085&ct=8643691>

Ghose, A., Smith, M., & Telang, R. (2005). *Internet Exchanges for Used Books: An Empirical Analysis of Welfare Implications*. New York University, Stern School of Business. New York: NYU.

Greco, A. N., Rodriguez, C. E., & Wharton, R. M. *Culture and Commerce of Publishing in the 21st Century*. The. Stanford, CA, USA: Stanford University Press.

Green, K. (2010 12-November). *Managing Online Education 2010*. Retrieved 2011 3-March from Campus Computing Project:
http://www.campuscomputing.net/sites/www.campuscomputing.net/files/ManagingOnlineEd2010-ExecSummaryGraphics_1.pdf

Kolowich, S. (2010 15-July). *Blackboard's Bid to Galvanize E-Texts*. Retrieved 2011 7-March from Inside Higher Ed: <http://www.insidehighered.com/news/2010/07/15/blackboard>

Laffont, J. (2008, May 27). "Externalities". (S. N. Blume, Ed.) Retrieved April 14, 2011, from The New Palgrave Dictionary of Economics Online:
http://www.dictionaryofeconomics.com/article?id=pde2008_E000200

Laster, J. (2010 19-January). *Leading E-Textbook Seller Reports 400 Percent Sales Increase in 2009*. Retrieved 2011 11-March from Chronicle of Higher Education:
<http://chronicle.com/blogs/wiredcampus/leading-e-textbook-seller-reports-400-percent-sales-increase-in-2009/20566>

Lewin, T. (2003 21-10). Students Find \$100 Textbooks Cost \$50, Purchased Overseas . *New York Times* , p. A1.

Levaux, J. (2010, August 15). *Rent-a-book concept arrives*. Retrieved March 10, 2011, from California State University East Bay: <http://www20.csueastbay.edu/news/2010/08/cal-state-east-bay-rent-a-textbook.html>

MBS Textbook Exchange. (2009). *2009 Textbook Market Study*. Columbia: MBS.

McGraw-Hill. (2011). *What Does it Take to Succeed in the Knowledge Economy? 2010 Annual Report*. New York: McGraw-Hill.

Miller, M. (2010 12-July). *ZDNet*. Retrieved 2011 19-February from Barnes & Noble announces NOOKstudy eTextbook college program: <http://www.zdnet.com/blog/mobile-gadgeteer/barnes-noble-announces-nookstudy-etextbook-college-program/3573>

Miller, M. H. (2010 14-January). *California Law Encourages Digital Textbooks by 2020*. Retrieved 2011 03-March from Chronicle of Higher Education:
<http://chronicle.com/blogPost/California-Law-Requires/20526/>

NACS. (2010 10-August). *College Stores Increasingly Offering E-Textbook Option*. Retrieved 2011 03-March from National Association of College Stores:

[http://www.nacs.org/advocacynewsmedia/pressreleases/collegestoresincreasinglyofferin
gettextbooks.aspx](http://www.nacs.org/advocacynewsmedia/pressreleases/collegestoresincreasinglyofferin
gettextbooks.aspx)

NCES. (2009, September 1). *Table 191. Total fall enrollment in degree-granting institutions, by sex, age, and attendance status: Selected years, 1970 through 2018*. Retrieved February 20, 2011, from National Center for Education Statistics: <http://nces.ed.gov/>

NCES. (2009, September 1). *Table 226. Total fall enrollment in degree-granting institutions, by race/ethnicity, sex, attendance status, and level of student: Selected years, 1976 through 2008*. Retrieved February 20, 2011, from National Center for Education Statistics: http://nces.ed.gov/programs/digest/d09/tables/dt09_226.asp

Pantagraph. (2010 11-January). *Barnes & Noble launches college textbook rental service*. Retrieved 2011 5-March from Pantagraph: http://www.pantagraph.com/business/article_a5a692d6-fec5-11de-920a-001cc4c03286.html

Pearson, PLC. (2010). *Interim 2010 Results (unaudited)*. London: Pearson.

Reynolds, R. (2011, March 16). *Digital Textbooks Reaching the Tipping Point in U.S. Higher Education: A Revised 5-Year Forecast*. Retrieved March 27, 2011, from Xplana: http://info.xplana.com/report/pdf/Xplana_Whitepaper_2011.pdf

Richards, John. C. S. (2011 09-March). In-Person Interview. (K. Molina, Interviewer)

SIIA. (2011). *SIIA Expert's Guide to the Postsecondary Market*. Washington, DC: Software & Information Industry Association.

SIIA. (2009). *SIIA Postsecondary Market Report*. Washington, DC: Software & Information Industry Association.

Smith, M. (., Nasir, H., Chang, J., Pasala, S., Lai, S. C., & Ng, Y. W. (2010). *Analysis of Economic Impact of New Online Book Content Delivery Models on Traditional Online Book Retailers*. Carnegie Mellon University, Tepper School of Business; H. John Heinz III School of Public Policy and Management. Pittsburgh: CMU.

Sokol, M., & Solochek, J. (2011 17-February). *Florida looks at taking school textbooks completely digital by 2015*. Retrieved 2011 10-March from St. Petersburg Times: <http://www.tampabay.com/news/education/k12/florida-looks-at-taking-school-textbooks-completely-digital-by-2015/1152138>

Taub, E. A. (2010 7-November). *Color E-Ink to be Sold in Hanvon E-Reader*. Retrieved 2011 17-March from New York Times: http://www.nytimes.com/2010/11/08/technology/08ink.html?_r=1

U.S. Census Bureau. (2009 1-May). *U.S. Census Bureau*. Retrieved 2011 10-February from 2007 Economic Census: <http://www.census.gov/econ/census07/>

U.S. Census Bureau. (2009, October 1). *Current Population Survey, Table A-7. College*

Enrollment of Students 14 Years Old and Over, by Type of College, Attendance Status, Age, and Sex: October 1970 to 2009. Retrieved February 20, 2011, from U.S. Census Bureau: <http://2010.census.gov/2010census/data/>

U.S. DOJ. (2008 28-May). *Competitive Impact Statement: Cengage Learning Holdings, Houghton Mifflin Harcourt.* Retrieved 2011 09-March from U.S. Department of Justice: <http://antitrustcommentary.com/wp-content/uploads/2008/06/cenagepr.pdf>

U.S. G.A.O. (2005 1-July). *College Textbooks: Enhanced Offerings Appear to Drive Recent Price Increases.* Retrieved 2010 20-November from United States Government Accountability Office: <http://www.gao.gov/products/GAO-05-806>

U.S. Senate. (2009 24-September). *S.1714: Open College Textbook Act of 2009.* Retrieved 2011 16-March from OpenCongress.org: <http://www.opencongress.org/bill/111-s1714/show>

Weiss, S. (2011 15-March). *Key Learnings from ISKME's Research on Open Textbook Adoption and Use.* Retrieved 20 2011-March from CollegeOpenTextbooks.org: <http://collegeopentextbooks.org/blog/?p=1025>

Worlock, K. (2010). *The Future of the Textbook Marketplace.* Outsell, Inc. Burlingame: Outsell.

Young, J. (2010 19-April). *Kindle Failed Tests at Several Colleges. Will iPads Do Better?* Retrieved 2011 16-March from Chronicle of Higher Education: <http://chronicle.com/blogPost/Kindle-Failed-Tests-at-Seve/23253/>

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