

Online Book Retailing: Operational Strategies (A)

*The logistics of distribution are the iceberg below the waterline of online bookselling.*¹ —Jeffrey Bezos, Founder and CEO, Amazon.com

American publishers sold an estimated \$40 billion in books in 2007—a number representing a relatively stable annual increase of 3 percent over the last decade.² A big chunk of this revenue flowed through three major book retailers, whose only major similarity was size: Amazon.com, Barnes & Noble, and the Borders Group. While Barnes & Noble and the Borders Group primarily sold books through bricks-and-mortar establishments, including superstores, Amazon.com sold only through the Internet. With sales of only \$0.5 million in 1995, Amazon.com grew more than 1,000-fold in 10 years, surpassing, along the way, both major bricks-and-mortar competitors in terms of total book revenues. Overall, online sales have grown steadily at a 25 percent annual rate and Amazon.com remained the proverbial 800-pound gorilla of Web retailing, accounting for 8 percent of all U.S. online sales, while ranking at the top on purchase intent and consistency of Web site functioning.³ Yet, as Amazon developed its Web sales, added new lines of merchandise, and expanded internationally, the company's net income, nonetheless, fell throughout the 2006 fiscal year.

AMAZON.COM'S VIRTUAL OPERATION

Despite popular perceptions, Amazon.com was not the first Internet book retailer. Book Stacks Unlimited is often credited with being the first company to offer books on an online bulletin board back in 1992, that was subsequently replaced by a Web site in 1994. In contrast, Amazon.com did not ship its first book until 1995 and went public in 1997.

Amazon.com's operation was organized around a "sell all, carry few" business model. In Amazon.com's first annual letter to shareholders in 1997, founder and CEO Jeff Bezos stated that "our store would now occupy six football fields" and from the very beginning, the company offered a million-plus book titles, but only about 2,000 of these titles were stocked at the single warehouse in Seattle, Washington.⁴ The remaining book titles were sourced according to one of two arrangements. The first arrangement was drop-shipping fulfillment. Under this arrangement, the company would simply forward customer orders to book wholesalers or publishers who would then ship products directly to consumers. Thus, Amazon.com would never touch or even see books sold under this particular

Professor Serguei Netessine prepared this case as the basis for class discussion rather than to illustrate either effective or ineffective handling of an administrative situation.

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¹ Anthony Bianco, "Virtual Bookstores Start to Get Real," *Business Week*, October 27, 1997, p. 146.

² Standard & Poor's Industry Surveys: Publishing, March 8, 2007.

³ Internet Retailer Top 500 Guide (2007 edition).

⁴ For further information, see "Leadership Online: Barnes & Noble vs. Amazon.com (A)," HBS No. 9-798-063.

arrangement. Under an alternative arrangement, Amazon.com would immediately order needed titles from the publisher or the wholesaler in a mixed box or pallet, then break up these bulk shipments, repackage individual books, and ship them to customers. Since publishers were much less adept at shipping books quickly, Amazon.com mostly worked with wholesalers that carried significant book inventories and were much more responsive. Originally, Amazon.com obtained about 60 percent of its books from a single wholesaler, Ingram, and in large part, the decision to locate Amazon's warehouse in Seattle was driven by the city's proximity to Ingram's warehouse in Oregon. The stockless fulfillment model allowed Amazon to achieve remarkable inventory turnover (see Exhibit 5), resulting in an attractive cash conversion cycle (see Exhibit 1). Moreover, only 1 to 2 percent of Internet customers returned books, whereas bricks-and-mortar booksellers had to deal with return rates that were 10 to 15 times higher.

The Ingram warehouse in Oregon was not the sole factor in choosing Seattle as the site of the first Amazon warehouse. Other factors included the availability of a large number of highly qualified IT specialists, the relatively small tax burden, and, finally, the ability to ship books to the East Coast the same day that they were ordered. The Seattle facility quickly expanded to 93,000 square feet and then Amazon.com opened a second facility in Delaware in November 1997.⁵ The choice of the second site was again driven by tax considerations (i.e., Delaware does not charge consumers outside the state sales tax on books shipped from within it), as well as, a desire to minimize transportation costs to the densely populated East Coast. Both distribution centers in Washington State and Delaware were predominantly manually operated. Distribution center employees ("pickers") circled the two warehouses with small carts assembling individual orders from warehouse shelves. The only truly automated procedure was box wrapping. At the same time, Amazon.com was discovering that wholesalers and publishers were unable to provide speedy drop-shipping and on-demand fulfillment for Amazon's fast-growing sales volume. As a result, by the end of 1997, the company took on a larger part of order fulfillment duties in-house by carrying 200,000 titles in inventory. The necessity to carry so many titles in the warehouse and ship them in single units to consumers drove a significant investment in technology; since many books were stocked in very small quantities, the company decided to allocate shelf space dynamically (e.g., at different points in time, the same book could be moved around the warehouse from place to place and at other times, the same book could be stocked at multiple locations, as well), and special software kept track of each book's location, then pointed the picker to the book as efficiently as possible.

Beginning in 1998, Amazon.com started leveraging its success in book retailing to expand into other products, as well as, into other countries (see Exhibit 2). The very first major product expansion, the Amazon.com music store, became the leading online music retailer in its first full quarter. The addition of music was followed by the addition of videos and gifts, and Amazon.com became the leading online video retailer in the U.S. in only six weeks.⁶ At the same time, due to the necessity to support international operations, the company opened distribution and customer service centers in the U.K. and Germany. Simultaneously, Amazon.com relentlessly invested in improving the customer experience with innovations like One-ClickSM shopping, Gift Click, store-wide sales ranking of different products, instant recommendations, and Amazon auctions. The sizable investment in technology development behind the Web page and the back-end fulfillment system led Amazon.com to create in-house applications to accept and validate customer orders, place and track orders with suppliers, manage and assign inventory to customer orders, and ensure the proper shipment of products to customers using various ordering criteria. The transaction-processing system not only handled millions of items, a number of different status inquiries, gift-wrapping requests and multiple shipment methods, but also allowed the customer to choose whether to receive a single or several shipments based on availability. These applications also managed the process of accepting, authorizing, and charging customer credit cards.⁷ Of the sizable investment into information technology, 80 percent went to support initiatives related to back-office logistics and only 20 percent went to the front-end user screens.

In early 1999, the company announced that it was leasing a highly mechanized distribution center of approximately 323,000 square feet in Fernley, Nevada. In 12 months, the company further expanded its worldwide distribution capacity to about 5 million square feet across 10 old and new distribution facilities.⁸ But even with this significant

⁵ Amazon.com Annual Report, 1997.

⁶ Amazon.com Annual Report, 1998.

⁷ Ibid.

⁸ Amazon.com Annual Report, 1999.

warehouse expansion, the company owned no real estate; all warehouses were leased. These new facilities were far more automated than the original two facilities—an automation with which the company had no experience and thus, additional investments into IT infrastructure were necessary. The denser distribution center network allowed Amazon to save on transportation costs by being closer to its customers. But this expansion came with its own problems, such as split shipments (i.e., when customers ordered items stocked in different locations and ended up with multiple shipping charges), higher inventory due to multiple stocking points, and the need for additional investment into IT infrastructure to coordinate replenishments of multiple warehouses. After realizing numerous problems caused by the expansion of distribution space, the company decided to scale back in January 2001 by closing the new fulfillment center in McDonough, Georgia, and scaling down the operation of the fulfillment center in Seattle. The remaining distribution facilities were adequate until 2004, when further expansions were needed to handle demand.

Simultaneously, Amazon.com worked hard to improve inventory management through a variety of initiatives. First, in an attempt to improve demand forecasting, Amazon.com upgraded software to predict spikes in local demand. Second, it streamlined procedures for choosing when to order from wholesalers versus publishers, using the former only as a backup in case the publisher was out of stock or for slow-moving items. Third, by integrating supplier information systems into its interface, Amazon was able to accurately quote on its Web site lead times for shipping each product; if the item was available from Amazon's warehouse, then the quote was 24 hours, and if the product was in stock at a distribution center, then the quote would read two to three days, etc. Finally, the company implemented sophisticated algorithms that compared book availability and prices across multiple vendors, and selected the best possible fulfillment option given current and future demand. For example, Amazon might order a book from a drop-shipping vendor that could achieve delivery within a week, even though there was an identical, cheaper book available at Amazon's own warehouse. This would be done in anticipation of other, future orders that might need to be fulfilled quickly.⁹

Beginning in 2000, Amazon.com directed a major effort toward inviting third parties to compete with Amazon's offerings directly using Amazon's Web pages through the Amazon Marketplace and Merchants @ programs. Moreover, Amazon Enterprise Solutions provided other retailers with backend e-commerce and fulfillment solutions, such that they could operate through the Amazon.com Web site using their own brand names and Web site addresses. Such agreements were used, for example, by Toys R Us, Target, and Borders, among others.

By 2005, Amazon.com had created a very advanced supply chain that relied on rigorously analyzing data using operations research techniques—this effort, incidentally, was directed by Gang Yu, Amazon.com's vice president of Worldwide Supply Chain Operations, who received his Ph.D. from the OPIM department at the Wharton School at the University of Pennsylvania. Jeff Bezos opened his 2005 letter to shareholders by emphasizing Amazon's achievements in this area:

Many of the important decisions we make at Amazon.com can be made with data. There is a right answer or a wrong answer, a better answer or a worse answer, and math tells us which is which. These are our favorite kinds of decisions. Opening a new fulfillment center is an example. We use history from our existing fulfillment network to estimate seasonal peaks and to model alternatives for new capacity. We look at anticipated product mix, including product dimensions and weight, to decide how much space we need and whether we need a facility for smaller "sortable" items or for larger items that usually ship alone. To shorten delivery times and reduce outbound transportation costs, we analyze prospective locations based on proximity to customers, transportation hubs, and existing facilities. Quantitative analysis improves the customer's experience and our cost structure.

Similarly, most of our inventory purchase decisions can be numerically modeled and analyzed. We want products in stock and immediately available to customers, and we want minimal total inventory in order to keep associated holding costs, and thus prices, low. To achieve both, there is a right amount of inventory. We use historical purchase data to forecast customer demand for a product and expected variability in that demand. We use data on the historical performance of

⁹ For further information, see "Amazon.com's European distribution strategy," HBS No. 9-605-002.

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vendors to estimate replenishment times. We can determine where to stock the product within our fulfillment network based on inbound and outbound transportation costs, storage costs, and anticipated customer locations. With this approach, we keep over one million unique items under our own roof, immediately available for customers, while still turning inventory more than fourteen times per year. The above decisions require us to make some assumptions and judgments, but in such decisions, judgment and opinion come into play only as junior partners. The heavy lifting is done by the math.¹⁰

In 2006, Amazon unveiled the "Fulfillment by Amazon" program, which allowed independent sellers to use Amazon's network of warehouses to fill orders. Unlike many of the earlier initiatives, participants would physically send their goods to Amazon, which would ultimately ship them to customers. Describing the program, Bezos noted: "We have this beautiful, elegant, high-IQ part of our business that we have been working hard on for many years. We've gotten good at it. Why not make money off it another way?"¹¹

By using "Fulfillment by Amazon," third-party sellers became eligible for any shipping discounts that Amazon offered on its Web site. But the biggest benefit was freeing sellers of the most arduous part of the work, which was packing products and shipping them to customers. "This is the dirty secret of e-commerce. It is not just bits and bytes. You have to figure out this part of it," said Joe Walowski, a senior product manager in charge of "Fulfillment by Amazon."¹²

Throughout 2007, the sales mix continued to evolve toward non-media products, as well as, toward non-U.S. sales, which were expected to account eventually for 50 percent of overall sales (see Exhibit 3).¹³ Moreover, Amazon.com continued to expand product variety that far exceeded what a typical bricks-and-mortar retailer would offer (see Exhibit 4). Together, these factors complicated inventory management and contributed to a reduction in inventory turnover, and an increase in spending on technology. As a result, Amazon.com's net income in 2006 fell 47 percent relative to 2005 (from \$359 million to \$190 million), even though revenues continued to grow fast. The newly introduced "Amazon Prime" membership, which provided free second-day shipping for an annual fee of \$79, coupled with the waiving of shipping charges for orders over \$25 and other promotional pricing activities, resulted in about \$600 million in forgone shipping revenue per quarter in 2006 and did not help profitability either.¹⁴

BARNES & NOBLE'S FORAY INTO INTERNET RETAILING AND COMPETITION WITH AMAZON.COM

In 2007, the largest bricks-and-mortar bookseller in the United States, Barnes & Noble, Inc. operated 793 bookstores across the country. The company was incorporated in Delaware in 1986 and went public in 1993. During 2007, the company's stores ranged from 10,000 to 60,000 square feet in size, averaging about 25,000 each and adding up to a total of 17.5 million square feet of selling space. In addition to Barnes & Noble bookstores, the company operated a Web site, BN.com, the B. Dalton chain of booksellers, and the Sterling Publishing Co, and also owned a majority in the Calendar Club LLC.¹⁵ Nevertheless, a vast majority of the company's revenues and profits came from its bricks-and-mortar superstores and mall stores.

Historically, Barnes & Noble centralized its logistics operations and procured all books using its Manhattan office. The primary goal was to leverage economies of scale and obtain the largest possible volume discounts from vendors. Due to its bargaining power, the company often managed to achieve favorable terms and access to books. Almost half of all purchases were channeled through the company's largest distribution center in Jamesburg, New Jersey,

¹⁰ Amazon.com Annual Report, 2005.

¹¹ Stone, B., "Sold on Ebay, shipped by Amazon.com," The New York Times, April 27, 2007.

¹² Ibid.

¹³ Amazon.com Annual Report, 2006.

¹⁴ Presentation at the Annual Shareholder Meeting, June 14, 2007.

¹⁵ Barnes & Noble, Inc., Annual Report 2007.

from which most books could be shipped to stores in two to three days. The supply chain network was synchronized using an online inventory tracking system launched in the early 1990s; the new generation of which, named BookMaster, was rolled out in 1997.¹⁶ This system contained millions of book titles and allowed company employees to check real-time inventory availability in stores, warehouses, and the distribution center. At this point, only salesclerks had access to computer terminals.

By far, Barnes & Noble incurred its greatest expenses in running its stores, almost all of which were leased. A new superstore was estimated to cost \$2 million to build and required average daily sales of \$11,000 just to break even because of large fixed employee-related and indirect costs. Each store carried between 60,000 and 175,000 book titles, 50,000 of which were common to all stores. The remaining titles were customized by store managers to each particular location.

Barnes & Noble closely monitored the development of the online book retailing market but for some time expressed no desire to enter it. However, on May 13, 1997, exactly one week before Amazon.com's own scheduled IPO, Barnes & Noble announced the launch of its own Web site. Simultaneously, Barnes & Noble filed a lawsuit against Amazon.com's claim to be the "Earth's Largest Bookstore." The stated goal of Barnes & Noble was to achieve dominance in online book retailing within a year.¹⁷ As a company, BN.com was organized as an entirely separate entity from Barnes & Noble, although it was wholly owned by the parent company. The main reason was to avoid paying sales tax, which the bricks-and-mortar parent company was obligated to do because of its physical presence in every state in the U.S.

Although BN.com's incorporation structure differed considerably from that of the parent company, the logistics of the online business were closely tied to the parent company. Barnes & Noble buyers would purchase books for both companies—to take advantage of discounts and economies of scale— and books would arrive at the company's distribution center in Jamesburg, where they would be separated into Internet and non-Internet stockpiles to avoid taxation in most states on the books destined for Internet sale. Since BN.com had a physical presence in New Jersey and New York, customers in these states had to pay sales tax even on Internet sales but online customers in other states paid no sales tax. Most books sold through BN.com first passed through the Jamesburg warehouse but because this warehouse was not equipped to ship single books to customers, books were then forwarded to the Internet-only distribution center in Dayton, New Jersey. But some books went to Dayton directly from publishers and wholesalers. In contrast with Amazon.com's strategy, BN.com aimed to stock most, if not all, of the titles for which it expected online demand.¹⁸ In 1997, it held 600,000 book titles in stock that were available for shipping the same day, more than any other Internet retailer and this number increased to 750,000 the following year.

As with the separate corporate structures of Barnes & Noble and BN.com, the stores (i.e., the bricks-and-mortar stores of Barnes & Noble and the Web interface of BN.com) were likewise kept entirely separate, again to avoid taxation. However, the backend fulfillment systems of the Web entity were supposed to be closely tied with those of the bricks-and-mortar operation. The original intent was to use the parent company's expertise on the back end to run Internet fulfillment. As Chairman and CEO Riggio expressed it: "It's a core competency that we have the infrastructure to know how to do business with all these folks and all the back-end apparatus of paying publishers, systems, and the like. It's all there. The Internet company plugs into it. As a result, our online company has been able to hit the ground running without having to invest the extraordinary sums that startups would in such an operation."

However, it soon became obvious that major expenditures were necessary to modify and upgrade existing software systems, which were not flexible enough to handle many of the additional requirements imposed by Internet selling. Thus, in 1997, Barnes & Noble had to absorb \$15 million in operating losses on less than \$15 million in revenues from the e-commerce unit.²⁰

¹⁶ For further information, see "Leadership Online: Barnes & Noble vs. Amazon.com (A)," HBS No. 9-798-063.

¹⁷ Barnes & Noble, Inc. Annual Report, 1996.

¹⁸ "Barnes and Noble Web Unit," Dow Jones Newswires, January 15, 1997.

¹⁹ Ibid.

²⁰ Barnes & Noble, Inc. Annual Report, 1997.

BN.com went public in 1999 and simultaneously announced preparation of two more distribution centers in Memphis and Reno, which would allow BN.com to bring the number of book titles in stock to over one million.²¹ The two new centers featured the latest automated fulfillment systems. Unlike with Amazon.com, the company focused the direction of its development largely on books, which represented 100 percent, 98 percent, and 93 percent of revenues in 1997, 1998 and 1999, respectively. A major part of BN.com's offerings were out-of-print titles sourced through Alibris, a noncommissioned vendor. As a result, BN.com was able to offer over 15 million out-of-print books supplied predominantly by small booksellers.

In an attempt to catch up with Amazon.com's drastic sales growth, BN.com struck several high-profile deals with America Online, The New York Times, Disney Online, CNN, and other companies. But by far, the biggest driver of consumer traffic was expected to be the brand name of the parent company, Barnes & Noble. Nevertheless, the company still lagged behind Amazon.com's impressive growth (see Exhibit 5). In an attempt to bridge this gap, in 2000, BN.com acquired FatBrain.com, the third largest book retailer at the time. Simultaneously, BN.com continued to make significant technology investments. According to BN.com's 2001 annual report:

The same year, significant technology investment was made to provide a fully redundant configuration to power the BN.com Web site, which is ... hosted in two locations. At these locations, BN.com maintains computers that host its Web pages. BN.com maintains its primary host location in its corporate headquarters in New York. A second host location is operated by a third party, which provides additional capacity and full redundancy. Both hosting locations are configured with excess Internet telecommunications capacity to ensure quick response time and seven separate Internet service providers are used. By maintaining redundant host locations, BN.com has significantly reduced its exposure to downtime and service outages.²²

Warehousing space expansion during 2000 was soured by the 2001 dot-com crash, as well as, by the realization that sales volumes at BN.com were not growing fast enough to justify the expansion. The distribution center in Reno was closed and some stores and offices inherited from FatBrain.com were closed, as well. Net losses continued to accrue throughout 2003 and the company continued to slip in e-commerce Web site rankings from fourth place among the most trafficked shopping Web sites of 1999 to 11th place in 2003. Sales growth slowed further and in the 2003 annual report, BN.com commented that "We believe that our properties are suitable and adequate for our present and anticipated near term needs."²³ Like many other Internet retailers at the time, the company turned its focus from sales growth to initiatives to decrease costs in the pursuit of profitability (see Exhibit 6). However, BN.com never became profitable. In November 2003, the parent company, Barnes & Noble, announced that it would take the Internet retailer private and acquire it, after its six-year existence. At the time, a correspondent at the Motley Fool commented: "It's amusing to look back at the predictions for Amazon's swift demise when Barnes & Noble decided to launch its online store. People discounted the mind share that Amazon had already cemented in so many online shoppers. And they overestimated the power of a brand to translate from the 'real' world to the cyber one."²⁴

Shortly thereafter, Barnes & Noble integrated the BookMaster in-store operating system with BN.com so that bricks-and-mortar store customers could search and order online through in-store kiosks when books were out of stock at the store, and to generally share the same experience across both channels. Customers also had the option to purchase a book online and to send it to the store.

For the next few years, revenues of online operations at BN.com were flat, at about 10 percent of the entire company. The 2007 edition of The Internet Retailer Top 500 Guide ranked the Web site BN.com at number 33 in terms of sales volume, whereas Amazon.com ranked number one. And in 2007, Barnes & Noble's Web sales were down 2.4 percent relative to 2006.

²¹ Barnes & Noble.com Annual Report, 2000.

²² Barnes & Noble, Inc. Annual Report, 2001.

²³ Barnes & Noble Inc. Annual Report, 2003.

²⁴ Motley Fool Staff, "Amazon Beat BN.com," November 7, 2003,

http://www.fool.com/investing/general/2003/11/07/amazon-beats-bncom.aspx.

LATECOMER BORDERS CHANGES STRATEGY

While the fight between Barnes & Noble and Amazon.com unfolded, Borders, the second-largest bricks-and-mortar book retailer, selected a decidedly quiet online strategy; it partnered with Amazon.com, which provided a virtual storefront for Borders.com and collected all revenues, except for a commission paid to Borders. But the bricks-and-mortar book market continued to decline at about 3 percent per year while online book sales accounted for 13 percent of the entire book market in 2006—a share that has continued to grow.²⁵ However, after six years of betting on bricks-and-mortar sales, Borders unveiled a change in strategy in 2008; it would dissolve its alliance with Amazon.com and run its own Internet operations instead. Borders Group chief executive officer George Jones said in October 2007:

Our overarching strategy is to be a true cross-channel retailer that offers our customers a rich experience that enhances the way they access and use information and entertainment. Many retailers are multichannel—meaning they operate in more than one channel—but we are seeking to differentiate Borders by blending the best of the online shopping experience with the best of the bricks-and-mortar experience to create a greater overall customer experience. That's why it is so important for us to hear what customers have to say about our beta site. When the new Borders.com launches in 2008, it will truly be created with our customers and not just for them.²⁶

In addition to announcing the beta site, Borders also revealed that the company had selected the wholesaler Baker & Taylor to handle primary fulfillment of book, music, and movie orders to customers when the new Borders.com opens for business. Baker & Taylor would provide fulfillment services to the Borders site from its facilities across the United States.

²⁵ "Borders business plan gets a rewrite," *The Wall Street Journal*, March 22, 2007.

²⁶ "Borders previews upcoming e-commerce site; names Baker&Taylor for e-commerce fulfillment," October 5, 2007, http://www.CNNMoney.com.





Source: Presentation by Tom Szkutak, CFO at Goldman Sachs Eighth Annual Internet Conference, May 24, 2007, and data provided by "Amazon.com – going public," HBS No. 899-003.

	US	UK	Germany	France	Japan	Canada	China
Books	'9 5	'98	'98	'00	' 00	'02	'04
Music/Video	'98	'99	'99	'00 '	'01	'02	'04
DVD/Rental*	'98	'99/'04 *	'99/'05*	'00 '	'01	'02	'04
Video Games & Software	'99	'00 '	'00	'01	'01	'03	'04
Electronics	'99	'01	'01	'05	'03		'04
Toys & Baby	'99	'01	'04	('07)	'04		'04
Tools & Hardware	'99	'04	'04				
Kitchen & Housewares	'00'	'04	'04		'03		' 06
Magazines	'01		'02		'04		
Office Products	'02						
Apparel & Accessories	'02						
Sports & Outdoors	'03	'07	(06)		'05		
Gourmet Food	'03						
Jewelry/Watches	'03	('07)	('07)		('07)		' 06
Health & Personal Care	'03				('06)		' 06
Beauty	'04						'06
Musical Instruments	'04						
Grocery	(06)						
Automotive	(06)						
Third Party Sellers							
Marketplace	' 00	'02	'02	'03	'02	'03	
Merchants@	'02	(06)	(06)		(07)		

Exhibit 2: Global Product Selection at Amazon.com

Source: Presentation at the Amazon.com Annual Shareholder Meeting, June 14, 2007.





Exhibit 4: Product Variety at Bricks-and-Mortar and Internet Retailers

Table 1 Produc Chann	ct Variety Comparison for Inte els	ernet and Brick-and-Mortar												
Product category	Amazon.com	Typical large brick-and-mortar stores	8											
Books CDs	2,300,000 250,000	40,000–100,000 5,000–15,000												
DVDs	18,000	500-1,500	6											
Digital cameras Portable MP3 playe	213 ers 128	36 16	Sales											-
Flatbed scanners	171	13	4 4 A Geckly											-
			≥ 3											
Table 4 Proport	tion of Sales from Obscure T	itles at Amazon	-											
Sales rank	Proportion in total sales	Standard error*	1											
> 40,000	47.9%	2.7%	0	200	400	600		1.000	1 200	1 400	1 600	1 800	2 000	
> 100,000 > 250,000	39.2% 29.3%	2.5% 2.0%		200	400	600	800	1,000 Rank (i	1,200 n thousa	1,400 nds)	1,600	1,800	2,000	

Table 1	Product Variety Comparison for Internet and Brick-and-Mortar
	Channels

Note: Sales rank refers to relative popularity of the book (e.g., the most popular book was ranked #1).

Source: Erik Brynjolfsson, Yu (Jeffrey) Hu, Michael D. Smith, "Consumer Surplus in the Digital Economy: Estimating the Value of Increased Product Variety at Online Booksellers," Management Science, 2003: 49(11), pp. 1580-1596.

Exhibit 5: Financial Data for Barnes and Noble, Amazon.com, and BN.com

Barnes and Noble	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Revenue (\$M)	2,448	2,797	3,006	3,486	4,376	4,870	5,269	5,951	4,874	5,103	5,261
Cost of sales (% of revenue)	73%	72%	71%	71%	72%	73%	73%	73%	69%	69%	69%
SG&A (% of revenue)	19%	19%	19%	19%	19%	19%	18%	19%	22%	22%	23%
Total expenses (% of revenue)	95%	95%	94%	93%	97%	95%	95%	95%	95%	95%	95%
Inventory turns	2.44	2.37	2.27	2.25	2.56	2.77	2.76	2.83	2.66	2.69	2.67
Amazon.com	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Revenue (\$M)	16	148	610	1,640	2,762	3,122	3,933	5,264	6,921	8,490	10,711
Cost of sales (% of revenue)	78%	81%	78%	82%	76%	74%	75%	76%	77%	76%	77%
Fulfillment (% of revenue)				14%	15%	12%	10%	9%	9%	9%	9%
SG&A (% of revenue)	48%	32%	24%	29%	10%	7%	5%	4%	4%	4%	4%
Technology (% of revenue)	15%	9%	8%	10%	10%	8%	5%	4%	4%	5%	6%
Total expenses (% of revenue)	141%	122%	118%	137%	131%	113%	98%	95%	94%	95%	96%
Inventory turns	21.52	13.26	16.14	6.11	12.07	16.17	14.53	13.63	11.09	11.52	9.41
BN.com	1996	1997	1998	1999	2000	2001	2002	2003			
Revenue (\$M)				194	320	405	423	425			
Cost of sales (% of revenue)				83%	82%	77%	77%	75%			
Fulfillment (% of revenue)				10%	16%	11%	9%	9%			
SG&A (% of revenue)				52%	39%	23%	15%	13%			
Technology (% of revenue)				11%	13%	11%	8%	7%			
Total expenses (% of revenue)				163%	194%	162%	118%	111%			
Inventory turns				41.16	5.43	6.45	6.78	5.54			

Note: For Amazon.com and BN.com, shipping expenses were included in COGS and shipping revenues were included in Revenue. Fulfillment cost is the indirect cost of fulfillment (e.g., warehousing, labor, etc.).

Source: http://www.10KWizard.com.

Exhibit 6: BN.com Consolidated Statement of Operations

	Year ended December 31, 2003	Year ended December 31, 2002	Year ended December 31, 2001		
		n thousands, except per share d			
Net sales	\$424,815	\$422,827	\$ 404,600		
Cost of sales	320,627	327,258	313,365		
Gross profit	104,188	95,569	91,235		
Operating expenses:					
Fulfillment and customer service	36,595	35,990	44,637		
Marketing, sales and editorial	30,390	35,760	61,418		
Technology and web site development	30,725	35,787	45,298		
General and administrative	25,548	26,265	32,362		
Depreciation and amortization	26,167	33,502	41,981		
Impairments and other special charges	_	_	88,213		
Equity in net loss of equity investments, including amortization of intangibles	_	3,537	28,733		
Total operating expenses	149,425	170,841	342,642		
Loss from operations	(45,237)	(75,272)	(251,407)		
Interest income, net	226	1,615	7,041		
Loss before minority interest	(45,011)	(73,657)	(244,366)		
Minority interest	33,665	53,525	176,980		
Net loss — historical	\$ (11,346)	\$ (20,132)	\$ (67,386)		
Basic net loss per common share	\$ (0.28)	\$ (0.46)	\$ (1.54)		
Basic weighted average common shares outstanding(1)	40,707	43,790	43,787		

(1) All periods exclude the assumed conversion of Membership Units and the elimination of minority interest, as it is not dilutive.

Source: http://www.10KWizard.com.