

Estimating the Economic Impact of Mass
Digitization Projects on Copyright Holders:
Evidence from the Google Book Search Litigation

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FIU Legal Studies Research Paper Series

Research Paper No. 10-31

June 2010

Forthcoming in:

57 JOURNAL OF THE COPYRIGHT SOCIETY OF THE USA --- (2010)

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Abstract

Google Book Search (GBS) has captured the attention of many commentators and government officials, but even as they vigorously debate its legality, few of them have marshaled new *facts* to determine its likely effects on publishing and other information markets. This Article challenges the conventional wisdom propounded by the U.S. and German governments, as well as Microsoft and other competitors of Google, concerning the likely economic impact of mass book-digitization projects. Originally advanced by publishing industry lobbying groups, the prevailing account of mass book-digitization projects is that they will devastate authors and publishers, just as Napster and its heirs have supposedly devastated musicians and music labels. Using the impact of GBS on the revenues and operating incomes of U.S. publishers believing themselves to be the most-affected by it, this Article finds no evidence of a negative impact upon them. To the contrary, it provides some evidence of a positive impact, and proposes further empirical research to identify the mechanisms of digitization's economic impact.

The debate surrounding the GBS settlement is critically important to students, writers, researchers, and the general public, as it may decide whether a federal appellate court or even the U.S. Supreme Court allows the best research tool ever designed to survive. If the theory of Microsoft and some publishing trade associations is accepted, the courts may enjoin and destroy GBS, just as Napster was shut down a decade ago.

The Article aims at a preliminary estimate of the economic impact of mass digitization projects, using GBS as a case in point. It finds little support for the much-discussed hypothesis of the Association of American Publishers and Google's competitors that the mass digitization of major U.S. libraries will reduce the revenues and profits of the most-affected publishers. In fact, the revenues and profits of the publishers who believe themselves to be most aggrieved by GBS, as measured by their willingness to file suit against Google for copyright infringement, increased at a faster rate after the project began, as compared to before its commencement. The rate of growth by publishers most affected by GBS is greater than the growth of the overall U.S. economy or of retail sales. Thus, the very publishers that have sued Google have seen their revenues grow faster than retail sales or the U.S. economy as a whole (measured by gross domestic product). This finding parallels some of the research that has been done since the *Napster* case on the economic impact of peer-to-peer file sharing on sales of recorded music. Future studies may provide a more granular estimate of the economic impact of frequent downloads or displays of pages of particular books on the sales of such books.

Estimating the Economic Impact of Mass Digitization Projects on Copyright Holders: Evidence from the Google Book Search Litigation

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Estimating the Economic Impact of Mass Digitization Projects on Copyright Holders and the Structure of the Publishing Industry

“Google will enjoy what can only be called a monopoly – a monopoly of a new kind, not of railroads or steel but of access to information.”¹

“The proposed Settlement results in a de facto monopoly on information and an intensification of media concentration in Google. As a result, the right of free access to information as well as the existing cultural diversity in both Germany and Europe, will be usurped....”²

Google Book Search (GBS) has captured the attention of many commentators and government officials, but few of them have marshaled new *facts* to determine its likely effects on publishing and other information markets, even as they vigorously debate its legality. This debate is critically important, as it may decide whether a federal appellate court or even the U.S. Supreme Court allows the best research tool ever designed to survive. The risk is that the courts will enjoin and destroy GBS as Napster was shut down nearly a decade ago, and as the makers of videocassette recorders were nearly enjoined a generation ago.³ Using annual reports filed with the Securities and Exchange Commission (SEC),⁴ this Article challenges the conventional wisdom propounded by the U.S. and foreign governments, as well as Microsoft and Amazon.com, concerning the likely economic impact of mass book-digitization projects. Looking as a test case into the impact of GBS from 2005 to 2008 on the U.S. publishers believing themselves to be most damaged by it, I find no evidence of a negative impact of GBS on its “victims.” To the contrary, my research reveals some evidence of a positive impact, and proposes further empirical studies to confirm and identify the mechanisms of its positive impact on book sales. In short, this Article questions the simplistic assumption that GBS will destroy book publishers and create a monopoly of information in Google’s hands.

Mass digitization projects are looked to with hope throughout the world as ways to resurrect dead knowledge and counteract the deceptive histories and false choices promoted by

¹ Objections of Microsoft Corp. to Proposed Settlement, at 5, Authors Guild, Inc., v. Google, Inc., Case No. 05 CV 8136-DC (S.D.N.Y. filed Sept. 1, 2009) (quoting Robert Darnton, *Google & the Future of Books*, N.Y. Review of Books, Feb. 12, 2009, <http://www.nybooks.com/articles/22281>).

² Memorandum of the Federal Republic of Germany in Opposition to Proposed Settlement, at 14, The Authors Guild, Inc., et al. v. Google, Inc., Case No. 05 CV 8136-DC (S.D.N.Y. filed Sept. 1, 2009).

³ See, e.g., Pls.’ Compl., at Prayer for Relief ¶ 3, The McGraw-Hill Cos. v. Google Inc., No. 05 CV 8881 (S.D.N.Y. Oct. 19, 2005) (requesting: “An Order that requires Google to delete or otherwise destroy all unauthorized copies made by Google through the Google Library Project of any copyrighted works, whether in whole or in part, owned by Publishers (a) from any computers or web servers owned by Google or that are under its control, or (b) that are otherwise in the possession of Google.”); Objections of the Japanese Publisher’s Association on Book Distribution (Ryutaikyo), at 1, The Authors Guild, Inc., et al. v. Google, Inc., Case No. 05 CV 8136-DC (S.D.N.Y. filed June 5, 2009) (urging court to reject settlement of the GBS litigation, which could lead to a trial and injunction as requested by plaintiffs against GBS).

⁴ The relevant data are set forth in the annual reports of the most-affected publishers as filed with the SEC on Form 10-K. The data are available in the Appendix and the filings are available at the Web sites listed in the Appendix, as well as at <http://www.secinfo.com>.

governments and cultural elites. Yet opponents of such projects contend that their economic impact will be to devastate cultural producers and distributors of knowledge, reducing investment in creative work and the progress of the arts and sciences. Other opponents allege that dangerous information monopolies will result from such projects. Either they will provide the overlords of digitized archives with an unfair and insurmountable advantage over their competitors in other markets who lack such holdings of cultural memory, or they will concentrate the management of knowledge and memory in one or a few entities who will exclude other voices or even entire nations from shaping the way that millions of people experience world history.⁵

The Article aims at a preliminary estimate and theorization of the economic impact of mass digitization projects, using GBS as a case in point. Will the impact on copyright holders be to reduce their revenues or profits, driving some out of business and resulting in layoffs and industry concentration? This has occurred in the “Napsterized” recording industry, some economists argue.⁶ Insofar as the economic impact may be to reduce the number of publishing industry competitors and increase the prices at which books or book excerpts are sold, it will be of interest to antitrust enforcers such as the Federal Trade Commission, Department of Justice, and the European Commission. Insofar as it may affect the diversity and health of knowledge industries and providers of inputs to universities and libraries, it will be of interest to publishers, university faculty, cultural heritage professionals, and librarians. Insofar as it brings to bear the methodologies of microeconomics and antitrust damages analysis on mass digitization project, it will be of interest to economists, law professors, and social scientists.

The findings of this Article may be grouped into four categories. First, it finds little support for the much-discussed hypothesis of the Association of American Publishers and Google’s competitors that the mass digitization of major U.S. libraries will reduce the revenues and profits of the most-affected publishers. In fact, the revenues of the publishers who believe themselves to be most aggrieved by Google Book Search, as measured by their willingness to file suit against Google for copyright infringement, increased at a faster rate after the project

⁵ See, e.g., Posting of Siva Vaidhyanathan to The Googlization of Everything, Dec. 1, 2007, 11:38 AM, http://www.googlizationofeverything.com/2007/12/tim_lee_reminds_us_of_the_none.php; Charles Bremner, *Nicholas Sarkozy Seeks to Fend Off Google's Threat to French Culture*, THE TIMES (U.K.), Dec. 10, 2009, <http://www.timesonline.co.uk/tol/news/world/europe/article6950972.ece?print=yes&randnum=1151003209000>; Mike Swift, *Google's Desire to Scan Old Books Has Critics Casting It as Goliath*, SAN JOSE MERCURY NEWS, Nov. 1, 2009, <http://www.physorg.com/news176738669.html>; see also Tim Brennan, *The Proposed Google Book Settlement – Assessing Exclusionary Effects*, GLOBAL COMPETITION POLICY, Release Two, Oct. 2009, at 1; James Grimmelman, *How to Fix the Google Book Search Settlement*, JOURNAL OF INTERNET LAW, Apr. 2009, at 1, http://works.bepress.com/james_grimmelman/23; James Grimmelman, *The Google Book Search Settlement: Ends, Means, and the Future of Books*, ACS ISSUE BRIEF, Apr. 2009, http://works.bepress.com/james_grimmelman/25; Randal C. Picker, *The Google Book Search Settlement: A New Orphan-Works Monopoly?*, John M. Olin Law and Economics Working Paper No. 462, University of Chicago Law School, at 21 (July 2009).

⁶ See, e.g., Sylvain Dejean, *What Can We Learn from Empirical Studies About Piracy?*, 55 CESIFO ECONOMIC STUDIES 326 (2009); Stan J. Liebowitz, *Will MP3 Downloads Annihilate the Record Industry? The Evidence So Far*, 15 ADVANCES IN THE STUDY OF ENTREPRENEURSHIP 229 (2004), <http://www.emeraldinsight.com/Insight/viewContentItem.do?jsessionid=100BB67C46D4316E9223CF24F140D524?contentType=Book&hdAction=lnkpdf&contentId=1783166>; Felix Oberholzer-Gee & Koleman Strumpf, *File Sharing and Copyright*, 10 INNOVATION POLICY AND THE ECONOMY 19 (2010).

began, as compared to before its commencement. Their profits also increased significantly more on average from 2005-2008 than 2001-2004. The increased rate of growth by publishers most affected by Google Book Search does not disappear when one compares it to the growth of the U.S. economy or to the growth of retail sales. The continued rise in sales is remarkable when one considers the soaring sales and prices of other entertainment products that may compete with books.

Second, this Article finds some support for the view that mass digitization and expanded access to book previews may increase the revenues and profits of the most-affected publishers. The evidence is large increases in revenues and profits for publishers affected by Google Book Search who did not opt out of Google's publishing partner agreement for broader access to previews of works still in copyright.

Third, it reveals that Google Book Search may simultaneously vindicate the public interest in expanded access to the world's cultural heritage and the pecuniary interests of authors and publishers in recouping the substantial fixed costs of book and periodical production and distribution. Analyzing this virtuous circle can help us begin to theorize the relationship between the Internet industry, the producers of cultural products, and the wider public. This relationship is also visible with other advanced Internet services such as YouTube or DailyMotion, which may increase viewership of copyrighted material that they may infringe, such as television shows.⁷ One potential implication is that North American and European initiatives to create state-funded digital archives of European cultural heritage may prove to achieve many of the same results as corporate-funded mass digitization projects, and may benefit from tighter integration with such projects as a step towards universal access to all human knowledge.

Fourth, this Article proposes further empirical research into the economic impacts of mass digitization projects on publishers, and the pathways of these impacts. Specifically, it briefly outlines how it might be possible to parallel, in the context of digital access to printed books, some of the research that has been done since the Napster case on the economic impact of peer-to-peer file sharing on sales of recorded music. Such future studies may provide a more granular estimate of the economic impact of frequent downloads or displays of pages of books on the sales of such books. Most promisingly, conducting multiple future studies of mass digitization's economic impact using distinct but related methodologies may provide "convergent validity," or the confirmation that one measurement of that impact correlates or converges with other potential measures of the same relationship between involuntary digitization and sales.

Part I offers a brief introduction to mass digitization projects and the claims by publishing industry firms and their lobbyists that such projects tend to reduce the sales and

⁷ See Brief of YouTube Inc. in Opposition to Viacom Int'l Inc.'s Motion for Summary Judgment, at 4-6 Viacom Int'l Inc. v. YouTube Inc., No. 07-CV-2103, http://www.google.com/press/youtube_viacom_documents.html; Olga Kharif, *Sour Musical Notes on YouTube, MySpace*, BUSINESSWEEK, Sept. 18, 2006, http://www.businessweek.com/technology/content/sep2006/tc20060918_148703.htm?campaign_id=rss_null.

profits earned from the sale and licensing of books and book excerpts to consumers. Part II situates these disputes within the methodologies provided by antitrust law and statistics for estimating the impact of a customer's or competitor's activities on the sales and profits earned by a firm. Part III applies a few of these methodologies, most notably the before-and-after and yardstick approaches of antitrust law. It also describes recent attempts to conduct economic analyses of the impact of digitization and Internet distribution on sales of physical newspapers and magazines. The four findings described above are the focus of Part III, and are set forth in tabular and graphical form. Part IV draws several preliminary conclusions from the data and statistical relationships reviewed in Part III, including (1) that mass digitization may increase the strength, number, and diversity of publishing industry competitors, and (2) that mass digitization may vastly expand public and competitor access to particular books, the overall book market, and book availability and pricing information. Part V outlines two potential weaknesses in this study's approach, and suggests ways of dealing with them by analyzing more data.

I. Google Book Search (GBS) as an Involuntary Mass Digitization Project

A. Google Book Search and the Resulting Litigation

Google began planning the addition of library content to its search engine in 2002.⁸ Google co-founder Lawrence Page had been influenced by previous research and patents on using citation analysis,⁹ or non-semantic methods of searching and retrieving information based on indirect relationships among textual objects, and incorporated that idea into the PageRank algorithm that made Google's search engine "so useful and revolutionary at the time."¹⁰ In 2004, University of Michigan made most of its library collections available for scanning and indexing in "Google Print," and in 2006 the University of California followed suit, taking the potential collection into the millions.¹¹

Google believed that most of the books held in the University of Michigan and University of California libraries, indeed up to 75% of them, were either out-of-print or have no clearly identifiable person to ask for a license.¹² One in five of the books were published before 1923 and therefore easy to confirm as being in the U.S. public domain.¹³ The other five percent were copyrighted and held by clearly identifiable owners because they were still in-print and available on the open market.¹⁴ For out-of-print works, the rights may have reverted to the author under a copyright agreement in paper form only, or may have expired due to

⁸ See RANDALL E. STROSS, *PLANET GOOGLE: ONE COMPANY'S AUDACIOUS PLAN TO ORGANIZE EVERYTHING WE KNOW* 89-95 (2008).

⁹ See, e.g., *id.* at 63-89; U.S. Patent No. 6,285,999 (issued 2001) (citing U.S. Patent No. 5,832,494 (issued 1998), and Eugene Garfield, *Citation Analysis as a Tool in Journal Evaluation*, 178 *SCIENCE* 471 (1972)).

¹⁰ See Ben Bunnell, Google Book Search and Google Scholar, PowerPoint Presentation to American Library Ass'n 2006 Annual Conf., at min. 12:00, <http://video.google.com/videoplay?docid=-8762514765927564293&ei=wZxkS9GFJ6SGIgfJzOirCA&q=google+book+search&hl=en&view=3#>.

¹¹ See STROSS, *supra* note __, at 231, 233.

¹² Ben Bunnell, Google Book Search and Google Scholar, at min. 16:00 of the video.

¹³ See *id.*

¹⁴ See *id.* at minute 14:00 of the video.

noncompliance with various copyright formalities.¹⁵ An OCLC study found that 60% of the scanned books were held in only one library, creating a good chance a book would be on a coast or even the opposite coast from a U.S. Internet user.¹⁶

Google argued that its scanning of library books and creation of a search engine for their bibliographic information and snippets from inside the books was “fully consistent with fair use under copyright law.”¹⁷ Its spokesperson called GBS “well within the bounds of copyright law.”¹⁸ I have analyzed the GBS fair use issues elsewhere.¹⁹

On or about May of 2006, the plaintiffs, including the Author’s Guild and the publisher plaintiffs, proposed to Google a settlement that put aside the controversial issue of whether scanning books for use in a universal search engine is fair use, in a deal to bring obscure and little-selling books “back to life” in a service like iTunes for selling books and providing samples of books online.²⁰ The settlement of the lawsuits represented a surrender by Google on the issue of whether its scanning of copyrighted books without permission between 2004 and 2009 warranted cash payments to authors and their assignees of about \$60 per book, which will add up to at least \$45 million in cash payments.²¹ Going forward, the settlement allows authors and their assignees to opt out of book previews or sales on Google, and obligates Google to pay authors and assignees 63% of revenue generated by commercial uses of books.²²

The settlement achieved a middle ground between several potential outcomes. One result of the litigation might have been that the federal courts condemned GBS as a vast copyright infringement like Napster, KaZaa, or MP3.com, i.e. as a brazen copying without permission for commercial gain in a country where prior permission before reproduction or display of copies is an important and clearly guaranteed statutory right.²³ The second potential result might have been that the courts treat GBS as a fair use like the videocassette recorder, a Web cache or an image search engine, i.e. as a technology that improved most copyright holders’ access to the public while imposing an incidental harm on a few that was justifiable under the rubric of fair use or other copyright exception.²⁴ A third potential outcome might

¹⁵ See *id.* at minute 15:00 of the video.

¹⁶ See *id.* at minute 10:00 of the video.

¹⁷ Dan Carnevale & Jeffrey R. Young, *Publishers' Group Asks Google to Stop Scanning Copyrighted Works for 6 Months*, CHRON. HIGHER ED., July 1, 2005, at 29.

¹⁸ Jeffrey R. Young, *Publishing Groups Say Google's Book-Scanning Effort May Violate Copyrights*, CHRON HIGHER ED., Feb. 18, 2005, at 35.

¹⁹ See Hannibal Travis, *Google Book Search and Fair Use: iTunes for Authors, or Napster for Books?*, 33 MIAMI L. REV. 601 (2006).

²⁰ James Gleick, *How to Publish Without Perishing*, N.Y. TIMES, Nov. 30, 2008, at WK10; see Objections of Open Content Alliance, *supra* note __, at 20.

²¹ See Google Inc., *Google Book Settlement FAQs*, § 29, <http://www.googlebooksettlement.com/help/bin/answer.py?answer=118704&hl=en>.

²² See *id.*

²³ See 17 U.S.C. § 106.

²⁴ See Travis, *supra* note __, *passim*. A related potential outcome might regard GBS as a *de minimis* infringement, like the capturing of a painting in the background of a television show, or a lifted riff incorporated into a larger musical tapestry, i.e. as a violation of copyright law inflicting minimal damages and unworthy of

have been to condemn GBS as an infringement but require the payment of a continuing royalty rather than shut it down by an injunction like Napster.²⁵

The settlement will prevent the courts from enjoining public access to millions of books that are still in-copyright and were published or distributed in hard copy format on or before January 5, 2009.²⁶ Copyright owners will have the choice to opt out of GBS, or to sell their books at a price of their devising. In the event that they fail to exercise this option, Google will use an algorithm to assess the demand for and revenue-generating price for a book, unlike in recorded music where song prices are usually fixed at a uniform high level even when there is little demand or all production costs have been recouped many decades ago.²⁷ Assuming that a consumer does not like the prices made available on GBS, he or she will retain the option of buying the book or a close competitor with it, new or used, at a physical or online bookstore; downloading the book on a peer-to-peer file sharing network; or using a display or download of a public-domain book or licensed in-copyright book from GBS or another source instead.²⁸ Even the critics of GBS must therefore concede that it would be, at its worst, a duopoly with Amazon.com, which can now offer digital previews of up to 3 million books.²⁹ One critic,

judicial intervention. *See, e.g.*, *Newton v. Diamond* 388 F.3d 1189 (9th Cir. 2004) (discussing this option); SHELDON W. HALPERN, *COPYRIGHT LAW: PROTECTION OF ORIGINAL EXPRESSION* 369 (2002) (same).

²⁵ *See* *Abend v. MCA, Inc.*, 863 F.2d 1465, 1479 (9th Cir. 1988) (discussing this option).

²⁶ *See* Google Book Settlement Summary Notice,

http://www.googlebooksettlement.com/r/view_summary_notice (last visited Dec. 28, 2009).

²⁷ *See* Proposed Settlement, at § 4.2(b), *Authors Guild v. Google, Inc.*, No. 05 CV 8136 (S.D.N.Y. filed Oct. 28, 2008).

²⁸ *See* Christopher Suarez, *Proactive FTC/DOJ Intervention in the Google Book Search Settlement: Defending Our Public Values, Protecting Competition*, at 14, -- NEW YORK LAW SCHOOL LAW REV. ---- (2010), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1409824 (“If a user searches using GBS, locates a book, and then runs to the bookstore to purchase the printed book, this could be an instance where pure substitutability could be inferred.”). Of course, one need not run to a bookstore in the age of Amazon.com and Half.com. And, as set forth below and in my prior works, there are many sources of eBooks other than GBS or Amazon.

²⁹ *See* Objections of Open Content Alliance, *supra* note __ at 24-25 (citing Timothy B. Lee, Publisher Speculates about Amazon/Google e-book “Duopoly,” *Ars Technica* (Feb. 23, 2009), <http://arstechnica.com/tech-policy/news/2009/02/publisher-speculates-about-amazongoogle-e-book-duopoly.ars>); *id.* at 25 (acknowledging that Amazon had book-scanning capability before Google); *see also* Objections of Amazon.com, Inc., *supra* note __, at 1 (“Amazon also brings a unique perspective to this Court because it has engaged in a book scanning project very similar to Google’s, with one major distinction: As to books still subject to copyright protection, Amazon has only scanned those for which it could obtain permission to do so from the copyright holder. Amazon’s scanning project has to date resulted in the lawful scanning of over 1 million English-language works and 3 million books in total.”); *id.* at 5 (“Today, Amazon has 3 million unique titles scanned and available worldwide to customers who wish to search inside those books and display the text surrounding the words they have queried. Amazon estimates that its book detail pages are viewed tens, if not hundreds, of millions of times each week.”); Objections of Microsoft Corp. *supra* note __, at 6 (citing Timothy B. Lee, *Publisher Speculates about Amazon/Google e-Book “Duopoly,”* *ARS TECHNICA*, Feb. 23, 2009, at <http://arstechnica.com/tech-policy/news/2009/02/publisher-speculates-about-amazongoogle-e-bookduopoly.ars>); *id.* at 3 (“Numerous entities – public (including the U.S. Copyright Office and Library of Congress), non-profit (including the Internet Archive), educational (including leading universities) and commercial (including Google, Amazon, Yahoo and Microsoft) – have invested countless time and hundreds of millions of dollars in” efforts to “creat[e] universal and broadly accessible repositories of digital books”).

Microsoft, readily admits that even the U.S. Copyright Office and Library of Congress have joined Amazon and Microsoft itself in building digital libraries.³⁰

Microsoft and other competitors of Google in building a “universal” search engine, such as Amazon and Yahoo!, argue that the settlement will give Google an unfair advantage and a monopoly over the market for digital libraries of copyrighted books. In the fall of 2006, the Microsoft Corporation joined Yahoo! and the Internet Archive in a project called the “Open Content Alliance,” which was a bit of a misnomer because it did not declare all content open to searching, but decided as a policy matter to restrict its efforts to scan library collections on public domain books.³¹ This more limited digital library project earned the praise of the Association of American Publishers.³²

Google offered copyright holders until Nov. 1, 2005 to opt out of GBS altogether. The publishers who filed suit against Google in 2005 apparently did not avail themselves of the option to exclude themselves from the project by providing bibliographic information concerning their works to Google. They argued that “Google's pronouncement that publishers must provide to Google detailed lists of books that they wish to be excluded are contrary to the black letter requirements of the Copyright Act.”³³ The exclusive rights of copyright owners under the Copyright Act of 1976, they contended, placed the onus on Google to seek permission first, using the records of the U.S. Copyright Office and University of Michigan online card catalog if necessary.³⁴

At least three of the four (McGraw-Hill Education, Penguin Group, and John Wiley & Sons) also signed partnership agreements with Google to make previews of their books available on GBS.³⁵ As a result of these decisions, the books of the four publishers who filed suit in 2005 remain available to be previewed entire pages at a time, due to their participation, as of 2007 and seemingly into the present, in the GBS Partner Program for publishers.³⁶ Their other books are also selectively viewable in snippet form on GBS as of the spring of 2010.³⁷

³⁰ See *Objections of Microsoft Corp.*, *supra* note __, at 3.

³¹ See *Objections of Open Content Alliance to Proposed Settlement*, at 19, *Authors Guild v. Google, Inc.*, No. 05 CV 8136 (S.D.N.Y. filed Sept. 4, 2009).

³² See *id.*

³³ *Pls.’ Compl.*, at ¶ 33, *The McGraw-Hill Cos. v. Google Inc.*, No. 05 CV 8881 (S.D.N.Y. Oct. 19, 2005). See also *id.* (“Each Publisher has already made quite clear to Google that none of its works should be included in the Google Library Project without permission, the Publishers are under no obligation to provide Google with any further information....”).

³⁴ See *id.*

³⁵ See Bunnell, *supra* note __ at minute 10:00 of the video.

³⁶ See, e.g., *Pls.’ Compl.*, at ¶ 33, *The McGraw-Hill Cos. v. Google Inc.*; *Google, Inc., Google Book Search The Story*, at 14 (Feb. 2007), available at <http://www.google.co.uk/press/files/booksearch-en.pdf>.

³⁷ I estimate that at least 1,500 titles from these four publishers may have been scanned and made available in “Snippet View” on GBS. For example, a search of GBS in June 2010 generates 346 titles from plaintiff Penguin published between 1940 and 1965, a period in which most titles published are now out-of-print and not part of the GBS Partner Program, as well as 600 from Simon & Schuster in that period, 159 from McGraw-Hill Education, and 530 from John Wiley & Sons, the vast majority of the books appearing in the results being displayed in “Snippet View” or “No Preview” due to their scanning from a library. See *Google Inc., Google*

B. Public Policy Implications of GBS as a Mass Digitization Project

Mass digitization projects have been hailed by participants and observers expressing hope that they will expand access to obscure books and articles.³⁸ Not only will such projects allow Internet users to read a vastly expanded universe of books, but they will also greatly multiply the number of copies of books disseminated by authors.³⁹

Books (2010), http://books.google.com/books?as_q=&num=10&btnG=Google+Search&as_epq=&as_oq=&as_eq=&as_brr=0&as_pt=ALLTYPES&lr=&as_vt=&as_auth=&as_pub=penguin&as_sub=&as_drrb_is=b&as_minm_is=0&as_miny_is=1940&as_maxm_is=0&as_maxy_is=1965&as_isbn=&as_issn=;
http://www.google.com/search?q=inpublisher:schuster&hl=en&tbs=bks:1,cd:1,cd_min:1/1/1940,cd_max:12/31/1965&ei=zxkqTLPxK4O88gb84_DSCA&start=590&sa=Nu;
http://www.google.com/search?q=inpublisher%3Aamcgraw-hill+inpublisher%3Aeducation&btnG=Search&hl=en&tbs=bks%3A1%2Ccdr%3A1%2Ccd_min%3A1%2F1%2F1940%2Ccd_max%3A12%2F31%2F1965&sa=2;
http://www.google.com/search?q=inpublisher:wiley+inpublisher:sons&hl=en&tbs=bks:1,cd:1,cd_min:1/1/1940,cd_max:12/31/1965&ei=uRoqTMCIH8KB8gaU-PXRCA&start=520&sa=N. A similar search in spring 2010 for books published by plaintiff Penguin from 1940 to 1965, reveals nearly 183,000 titles, with the entire first page of results (with one exception) being books displayed in “Snippet View” or “No Preview” due to their scanning from a library, without the prior permission of the publisher. See Google Inc., Google Books (2010), http://books.google.com/books?as_q=&num=10&btnG=Google+Search&as_epq=&as_oq=&as_eq=&as_brr=0&as_pt=ALLTYPES&lr=&as_vt=&as_auth=&as_pub=penguin&as_sub=&as_drrb_is=b&as_minm_is=0&as_miny_is=1940&as_maxm_is=0&as_maxy_is=1965&as_isbn=&as_issn=. Simon & Schuster from 1940 to 1965 reveals nearly 52,000 titles, the entire first page of results being books displayed in “Snippet View” or “No Preview.” See Google Inc., Google Books (2010), http://books.google.com/books?as_q=&num=10&btnG=Google+Search&as_epq=&as_oq=&as_eq=&as_brr=0&as_pt=ALLTYPES&lr=&as_vt=&as_auth=&as_pub=schuster&as_sub=&as_drrb_is=b&as_minm_is=0&as_miny_is=1940&as_maxm_is=0&as_maxy_is=1965&as_isbn=&as_issn=. A similar search of GBS for books published by McGraw-Hill from 1940 to 1965 reveals nearly 34,000 titles, with the entire first page of results being books displayed in “Snippet View” due to their scanning from a library. See Google Inc., Google Books (2010), http://books.google.com/books?as_q=&num=10&btnG=Google+Search&as_epq=&as_oq=&as_eq=&as_brr=0&as_pt=ALLTYPES&lr=&as_vt=&as_auth=&as_pub=mcgraw-hill&as_sub=&as_drrb_is=b&as_minm_is=0&as_miny_is=1940&as_maxm_is=0&as_maxy_is=1965&as_isbn=&as_issn=. Finally, a search of GBS for books published by plaintiff Wiley from 1940 to 1965 reveals nearly 17,000 titles, with the entire first page of results being books displayed in “Snippet View” or “No Preview” due to their scanning from a library. See Google Inc., Google Books (2010), http://books.google.com/books?as_q=&num=10&btnG=Google+Search&as_epq=&as_oq=&as_eq=&as_brr=0&as_pt=ALLTYPES&lr=&as_vt=&as_auth=&as_pub=wiley&as_sub=&as_drrb_is=b&as_minm_is=0&as_miny_is=1940&as_maxm_is=0&as_maxy_is=1965&as_isbn=&as_issn=.

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See, e.g., Jason Epstein, *Books@Google*, N.Y. REV. OF BOOKS, Oct. 19, 2006, <http://www.nybooks.com/articles/19436> (arguing that authors and publishers should follow Google’s initiative to make “every book ever printed in whatever language will be available to everyone on earth with access to the Internet.”); Motoko Rich, *Google Gives Out-Of-Print Books a New Life Online*, N.Y. TIMES, Jan. 5, 2009 (“More students in small towns around America are going to have a lot more stuff at their fingertips,” said Michael Keller, the university librarian at Stanford. “That is really important.”); *id.* (Sergey Brin, Google’s co-founder and president of technology, argued that: “There is fantastic information in books. Often when I do a search, what is in a book is miles ahead of what I find on a Web site.”).

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See, e.g., Einer Elhauge, *Why the Google Books Settlement is Procompetitive*, Harvard Law School John M. Olin Center for Law, Economics and Business Discussion Paper Series, Paper 629, at 32 (2009), http://lsr.nellco.org/harvard_olin/629 (“Making these out-of-print books searchable on Google vastly increases the

In this way, mass digitization projects represent a triumph of the principles underlying the “access to knowledge” or A2K movement. Many countries suffer from the scourge of biased history and social sciences textbooks, which justify crimes against humanity and minimize injustices suffered by minorities and indigenous peoples.⁴⁰ Others are afflicted with corrupt elites who foist prejudices and false beliefs upon undereducated publics, particularly in the broadcast media and mass-circulation newspapers.⁴¹ The GBS interface, like the Internet more generally, but faster and sometimes more authoritatively, will assault these monopolies of opinion, which are perpetuated by fraud and violence.

ability of potential readers to identify and locate the books they want, dramatically increasing the output of these books.”); *id.* at 50 (arguing that a legal settlement of that will allow Google Book Search to continue operating “will provide a vast increase in the availability of human knowledge that is desirable for its own sake and promises to improve research to further advance knowledge.”); *id.* at 43 (“In addition to selling institutional subscriptions [to all out-of-print books and select in-print books whose rightsholders do not opt out], Google must provide free access to them at one terminal per public library, as well as at one terminal per 4,000 students at two-year colleges, and one terminal per 10,000 students at four-year colleges.”); Eric Fraser, *Antitrust and the Google Books Settlement: The Problem of Simultaneity* (2009), http://ssrn.com/abstract_id=1417722; Mark Lemley, *An Antitrust Assessment of the Google Book Search Settlement* (2009), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1431555; Alexander Macgillivray, “A Discussion Around the Google Book Search Settlement,” Berkman Center for Internet & Society at Harvard University (July 21, 2009), video available at <http://cyber.law.harvard.edu/events/luncheon/2009/07/macgillivray>.

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See Gilbert Allardyce, *Toward World History: American Historians and the Coming of the World History Course*, 1 JOURNAL OF WORLD HISTORY 23, 30 (1990) (describing how Universal Peace Congress of 1889 expressed concern that textbooks glorified war and contributed to hostility among peoples); *id.* (“[A]fter the Second World War, British historian Ernest Barker, adviser to Unesco, concluded that historians too were responsible for the war and that the world now needed a united history as much as a United Nations.”); Bodo von Borries, *The Third Reich in German History Textbooks since 1945*, 38 JOURNAL OF CONTEMPORARY HISTORY 45 (2003) (discussing various strategies used in German textbooks to justify German people’s participation in crimes against humanity affecting Jews, Slavs, and other victims prior to and during World War II); Belinda Cooper & Taner Akcam, *Turks, Armenians, and the “G-Word,”* 22 WORLD POLICY JOURNAL No. 3 (2005), <http://www.worldpolicy.org/journal/articles/wpj05-3/cooper.html> (describing how Turkey’s grade-school textbooks deny the Armenian genocide and justify the ethnic cleansing of the Greek population of Anatolia during and after World War I); R.B. Jeans, *Victims or Victimizers? Museums, Textbooks, and the War Debate in Contemporary Japan*, 69 JOURNAL OF MILITARY HISTORY 149 (2005) (describing how Japanese right-wingers justify World War II-era leaders’ crimes against humanity in China in fairly recent Japanese textbooks); Sean Kay, *From Sputnik to Minerva: Education and American National Security*, DEFENSE HORIZONS, Jan. 2009, at 4-5 (“Even in societies that have governments allied with the United States, such as Saudi Arabia, official schoolbooks offer a range of ideological hatred of Christians, Jews, and Muslims who do not follow Wahabi doctrine. This ... culminates in the 12th-grade text, which instructs students on religious obligations, including waging jihad against the infidel....”); *id.* (“Moreover, Saudi Arabia exports religious texts to Islamic schools around the world and directly runs academies in 19 international capitals.”); JAMES W. LOEWEN, LIES MY TEACHER TOLD ME: EVERYTHING YOUR AMERICAN HISTORY TEXTBOOK GOT WRONG 105-58 (1995) (describing how U.S. history textbooks justify and minimize crimes against humanity affecting enslaved and murdered Native Americans and African-Americans in particular); HOWARD D. MEHLINGER, SCHOOL TEXTBOOKS: WEAPONS FOR THE COLD WAR, IN SCHOOL AND SOCIETY IN TSARIST AND SOVIET RUSSIA (B. Ekloff ed., Macmillan, 1992) (discussing how Soviet textbooks minimized crimes against humanity, including torture and deportation, committed against Ukrainians and Soviet dissidents); EDWARD MARSDEN, THE SCHOOL TEXTBOOK: GEOGRAPHY, HISTORY, AND SOCIAL STUDIES 165-66 (Routledge, 2001) (U.N. Educational, Scientific, and Cultural Organization recognized in 1950 that school textbooks often taught harmful stereotypes and contributed to repeated outbreaks of world war in twentieth century).

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For example, in Saudi Arabia and throughout the Middle East in the 1990s, journalists and media workers were frequently subjected to torture or murder for reporting the news. See, e.g., ANDERS JERICHOW, THE SAUDI FILE: PEOPLE, POWER, POLITICS 189 (1998).

Even where more balanced offerings are available, as in many American universities, the expansion of the GBS library will provide widespread, unprecedented access to sources of knowledge formerly available cheaply and quickly at only elite research universities.⁴² Poor and working-class students are hit hard by out-of-control textbook prices, which average about \$1,100 per student.⁴³ As the largest organization representing American college and university students argues, the settlement may demolish many geographic and socio-economic barriers to accessing books and anthologies formerly available only to the “privileged few.”⁴⁴

Nevertheless, the opponents of mass digitization projects argue that the effect of scanning books and making them searchable is to steal sales from authors and publishers. This will result, the theory goes, in authors and publishers becoming impoverished, discouraged, and unwilling to devote further time and resources to releasing books.⁴⁵

Other critics of GBS maintain that unless it is checked by copyright law, Google will amass an irresistible monopoly of digital copies of books.⁴⁶ This will destroy the ability to

⁴² See, e.g., Letter of United States Student Association in Support of Settlement, at 1-2 (“The settlement [of the Google Book Search copyright litigation] will dramatically expand access to millions of books through Google Book Search and other services that are enabled by the settlement. These services will have a transformative impact on research and scholarship, and will help level the educational playing field.”); *id.* at 2 (arguing that now “[s]chools big and small” will compete with Stanford for book holdings).

⁴³ See *id.* at 2. The figure cited includes supplies, which are low for the average student but may contribute significantly to the average expenses due to the higher costs of artistic and scientific supplies.

⁴⁴ Letter of United States Student Association in Support of Settlement, at 1-2.

⁴⁵ See, e.g., Objections of Amazon.com to Proposed Settlement, at 32, The Authors Guild, Inc., et al. v. Google, Inc., Case No. 05 CV 8136-DC (S.D.N.Y. objection filed Sept. 1, 2009) (arguing that those who contend that Google Book Search should not be enjoined from copyright infringement unjustifiably ignore the “detriment to social welfare caused by the reduction in incentives to innovate or create that would be caused if Google and, later, others are allowed to use the class action device to avoid complying with the law that prevents them from exploiting works that they have not licensed.”). Cf. Memorandum of the Federal Republic of Germany in Opposition to Proposed Settlement, at 20, The Authors Guild, Inc., et al. v. Google, Inc., Case No. 05 CV 8136-DC (S.D.N.Y. objection filed Aug. 31, 2009) (“It seems unfair that many German authors have to wait an uncertain, likely prolonged, period of time for compensation when everyone else who is profiting from the authors’ endeavors [e.g. Google] get paid much sooner.”); Objections of Microsoft Corp. to Proposed Settlement, *supra* note __, at 21 (“In addition, Google and the Registry ‘may, over time, agree to new revenue models’ without consent of copyright owners. No one can predict what new forms of infringement the proposed settlement would authorize.”) (citing Proposed Settlement, at § 4.7, The Authors Guild, Inc., et al. v. Google, Inc., Case No. 05 CV 8136-DC).

⁴⁶ See, e.g., Objections of Microsoft Corp., *supra* note __, at 5 (“A class action settlement is the wrong mechanism, this Court is the wrong venue, and monopolization is the wrong means to carry out the worthy goal of digitizing and increasing the accessibility of books.”); Objections of Open Content Alliance, *supra* note __ at 22 (“The monopoly that Google can now almost grasp flows instead from misdirection to the company’s competitors coupled with years of secret negotiations to form a cartel. The public now finds itself bereft of the protections competition provides.”); Memorandum of the Federal Republic of Germany in Opposition to Proposed Settlement, at 14, The Authors Guild, Inc., et al. v. Google, Inc., Case No. 05 CV 8136-DC (S.D.N.Y. objection filed Sept. 1, 2009) (“The proposed Settlement results in a *de facto* monopoly on information and an intensification of media concentration in Google. As a result, the right of free access to information as well as the existing cultural diversity in both Germany and Europe, will be usurped....”); *id.* at 15 (full-featured Google Book Search will “vest virtual monopoly power in a single private corporation”); Randall Picker, *Antitrust and Innovation: Framing Baselines in the Google Book Search Settlement*, GCP: THE ANTITRUST CHRONICLE, Oct. 2009, at 6 (arguing that if a proposed settlement is approved absolving Google of liability for infringing

compete of less popular search engines such as Bing or Yahoo!⁴⁷ It could hand over the common heritage of humankind to a profit-obsessed corporate giant with few public or private entities able to moderate its biases or curb its power over knowledge.⁴⁸ The fear is that people, companies, and even entire countries who are ignored or hated by Google could suffer from conceptual liquidation and historical amnesia.

II. Estimating the Economic Impact of Unlawful Activity: The Methodologies Used in Antitrust and Copyright Jurisprudence and Scholarship

The Copyright Act and its legislative history do not define or quantify actual damages or harm to the market for a work.⁴⁹ The Supreme Court, however, has held that in order to obtain actual damages, “a copyright holder establishes with reasonable probability the existence of a causal connection between the infringement and a loss of revenue.”⁵⁰ The Court has also refused to permit copyright plaintiffs to recover defendant's profits as an unjust

copyrights in scanned books, “Google is likely to be the only firm offering a broad comprehensive offering in the near future even if the orphanworks license contemplated by the settlement is extended to other entrants. There is every reason to expect that Google will have market power in the institutional subscription market for some time.”). *Cf.* U.S. Dep’t of Justice, Statement of Interest, *The Authors Guild, Inc., et al. v. Google, Inc.*, Case No. 05 CV 8136-DC (S.D.N.Y. filed Sept. 18, 2009), <http://www.usdoj.gov/atr/cases/f250100/250180.pdf>.

⁴⁷ *See, e.g.*, Letter of Academic Authors in Opposition to Settlement, at 2, *Authors Guild, Inc., et al. v. Google, Inc.*, Case No. 05 CV 8136-DC (S.D.N.Y. filed Sept. 3, 2009), <http://thepublicindex.org/docs/letters/samuelson.pdf> (arguing that legal settlement allowing full-featured Google Book Search to exist “will unquestionably bring about a significant expansion of access to knowledge in the near term,” but “will effectively create two complementary monopolies that will control access to the largest digital library in the world.”); James Grimmelmann, *How to Fix the Google Book Search Settlement*, 12 *Journal of Internet Law* No. 10, Apr. 2009, at 1, http://works.bepress.com/james_grimmelmann/23 (arguing that a legal settlement of Google Book Search litigation “creates two new entities—the Books Rights Registry Leviathan and the Google Book Search Behemoth—with dangerously concentrated power over the publishing industry.”); James Grimmelmann, *The Google Book Search Settlement: Ends, Means, and the Future of Books*, *American Constitution Society Paper*, Apr. 2009, at 1, 6 (arguing that full-featured Google Book Search threatens a “dangerous monopoly” because: “The settlement authorizes Google to start selling orphan works. That’s good for the public to the extent it makes them available again, but potentially bad to the extent it turns Google into a dominant platform with control over a huge catalog of books that no one else has access to.”).

⁴⁸ *See, e.g.*, JEAN NOËL JEANNENEY, *GOOGLE AND THE MYTH OF UNIVERSAL KNOWLEDGE: A VIEW FROM EUROPE* (Chicago: University of Chicago Press, 2006). As the Federal Republic of Germany argues:

Under the Settlement, Google may exclude books from the available database at its own discretion. (Settlement, § 3.7(e)). This effectively empowers Google to censor written content that may be considered politically or socially sensitive, thus limiting the public's meaningful access to the marketplace of ideas. This unfettered power would clearly be unconstitutional in the hands of the government and is questionable even in a state-sanctioned Settlement. Calling the Settlement non-exclusive is specious given the likelihood that little meaningful competition will be fostered because of Google's size, vast economic resources, and advanced head start aided by its unauthorized activity and the exclusive competitive advantages sanctioned by the Settlement....

Memorandum of the Federal Republic of Germany, *supra* note __, at 16.

⁴⁹ *See* 17 U.S.C. §§ 101, 504 (1978); 4 MELVILLE B. NIMMER & DAVID NIMMER, *NIMMER ON COPYRIGHT* § 14.02 (2009).

⁵⁰ *Harper & Row, Publr. v. Nation Enters., Inc.*, 471 U.S. 539, 567 (1984).

enrichment measure of damages when the profits sought would have been earned regardless of the infringement.⁵¹

Similarly, a use that does not cause harmful effects to the potential market for a copyrighted work or its derivative works is more likely to be a fair use.⁵² In *Universal City Studios, Inc. v. Sony Corp. of America*,⁵³ one of the Court's few detailed explorations of market harm and economic impact in a copyright case, the Court reinstated the findings of the district court that motion picture copyright owners failed to show any harm to their markets because there was “no evidence to suggest that the public interest in later theatrical exhibitions of motion pictures will be reduced any more by Betamax recording than it already is by the television broadcast of the film.”⁵⁴ The Supreme Court agreed that any harm was “speculative and, at best, minimal.”⁵⁵ For purposes of fair use analysis, *Sony* “emphasizes proof of harm in fair use analysis.”⁵⁶ Under *Sony*, “courts will find fair use where a defendant's use of copyrighted material, while technically a violation of a copyright owner's exclusive rights, causes no meaningful harm to the copyright owner of a kind that is likely to affect incentives to create copyrighted works.”⁵⁷ Thus, digitization of content without resulting harm is lawful.⁵⁸

Antitrust law has developed more detailed methodologies for ensuring that an aggrieved competitor does not recover as damages more profits that it would have obtained but for the alleged anticompetitive conduct. It also requires some antitrust plaintiffs to prove economic harm as an element of their prima facie case under the Sherman Act or Robinson-Patman Act.⁵⁹ Antitrust case law estimates the economic impact of a business practice, and the

⁵¹ See *Sheldon v. Metro-Goldwyn Pictures Corp.*, 309 U.S. 390, 406 (1940) (holding that infringer of copyright can escape paying its full profits as damages when it “can make a separation of the profits so as to assure to the injured party all that justly belongs to him.”).

⁵² See *Harper & Row*, 471 U.S. at 567-68; *Sony Corp. of America v. Universal City Studios, Inc.*, 464 U.S., 417, 451 (1984) (emphasis added); *id.*, at 484 & n. 36 (collecting cases) (dissenting opinion); S. Rep. No. 93-983, pp. 65 (1974).

⁵³ 480 F. Supp. 429 (C.D. Cal. 1979), *aff'd in part and rev'd in part*, 659 F.2d 963 (9th Cir. 1981), *rev'd*, 464 U.S. 417 (1984).

⁵⁴ See *Sony*, 464 U.S. at 452-54.

⁵⁵ *Id.* at 454 (quoting district court opinion, 480 F. Supp. at 467).

⁵⁶ Christina Bohannon, *Copyright Harm, Foreseeability, and Fair Use*, 85 WASH. U. L. REV. 969, 995-96 (2007).

⁵⁷ *Id.*

⁵⁸ See *Kelly v. Arriba Soft Corp.*, 336 F.3d 811, 818-20 (9th Cir. 2003). *Cf.* *Bill Graham Archives v. Dorling Kindersley Ltd.*, 448 F.3d 605 (2d Cir. 2006) (holding that where six out of that “[t]he fourth factor disfavors a finding of fair use only when the market is impaired because the ... material serves the consumer as a substitute, or, ... supersedes the use of the original”) (quoting Pierre N. Leval, *Toward a Fair Use Standard*, 103 HARV. L. REV. 1105, 1125 (1990), and citing *Kelly v. Arriba Soft Corp.*, 336 F.3d 811, 818-20 (9th Cir. 2003)).

⁵⁹ See 15 U.S.C. § 1 (prohibiting only “unreasonable” restraints of trade); 15 U.S.C. § 13 (prohibiting price discrimination only “where the effect of such discrimination may be substantially to lessen competition or tend to create a monopoly in any line of commerce, or to injure, destroy, or prevent competition with any person who either grants or knowingly receives the benefit of such discrimination, or with customers of either of them”); 15 U.S.C. § 13a (prohibiting price discrimination and “unreasonably low prices” only when undertaken “for the purpose of destroying competition, or eliminating a competitor”); *FTC v. Indiana Fed'n of Dentists*, 476 U.S. 447, 460-61 (1986) (defining offense of unreasonable restraint of trade under 15 U.S.C. § 1, as requiring either a presumption or direct evidence of harm to competition); *Spectrum Sports, Inc. v. McQuillan*, 506 U.S. 447, 458

damages flowing from it, by employing the “yardstick” and “before-and-after” methods. The following represents a summary of each method and its significance to my study of the impact of GBS on publishers.

A. The Before and After Method

The “before-and-after” method estimates economic impact by comparing a firm’s revenues and profits “before the violation [of law] occurred, during the violation period, and after the violation ended, and estimates the amount by which the violation reduced the plaintiff’s profits.”⁶⁰ Courts use it as a “very accurate method . . . to compute lost profit damages in cases where the market conditions are relatively static over time or where there is sufficient data from a competitive period.”⁶¹ The comparison or “control” periods for before and after analysis have varied from one month to several years.⁶² The Supreme Court has stated to use the before and after method, a firm should be able to show that its “decline in prices, profits and values” is “not shown to be attributable to other causes,” so “that defendants’ wrongful acts had caused damage to the plaintiffs.”⁶³

Rossi v. Standard Roofing, Inc.,⁶⁴ provides a good example of the before-and-after method. In that case, the court found that a reasonable jury could credit an economist’s report estimating the plaintiff’s lost profits over a 19-year period by using revenue growth figures from the “before” period represented by the three years in which the plaintiff managed as a branch office the business that the defendants’ group boycott forced him to sell to a national chain. The United States Court of Appeals for the Third Circuit rejected the defendants’ argument that the estimate failed to control for a severe recession in the New Jersey housing market, the plaintiff’s rising costs of doing business, and the plaintiff’s distractions from the branch office due to its other businesses.⁶⁵ The court held that any problems with the estimates undermined their weight, rather than making them inadmissible.⁶⁶ The court found the study to

(1993) (defining offense of unreasonable restraint of trade under 15 U.S.C. § 2, as requiring evidence of harm to competition); *Brooke Group Ltd. v. Brown & Williamson Tobacco Corp.*, 509 U.S. 209, 225 (1993) (defining offense of price discrimination under 15 U.S.C. § 13(a), as requiring either evidence of harm to competition); *United States v. Microsoft Corp.*, 253 F.3d 34, 79 (D.C. Cir. 2001) (en banc) (holding that deceptive statements and anticompetitive contracts could violate antitrust law and that lower courts could properly “infer causation [of competitive harm] when exclusionary conduct is aimed at producers of nascent competitive technologies as well as when it is aimed at producers of established substitutes” to the defendant’s product).

⁶⁰ *Coastal Fuels*, 79 F.3d at 200 (citing HERBERT HOVENKAMP, FEDERAL ANTITRUST POLICY: THE LAW OF COMPETITION AND ITS PRACTICE § 17.6b1 (1994)).

⁶¹ *Godix Equip. Export Corp. v. Caterpillar, Inc.*, 948 F. Supp. 1570, 1583 n.4 (S.D. Fla. 1996).

⁶² See *Eastman Kodak Co. v. Southern Photo Materials Co.*, 273 U.S. 359, 378-79 (1927) (four years); *Eiberger v. Sony Corp. of Am.*, 622 F.2d 1068 (2d Cir. 1980) (one year); *Malcolm v. Marathon Oil Co.*, 642 F.2d 845, 858 (5th Cir. 1981) (eight months); *Key Enters. of Del. v. Venice Hosp., Sammett Corp.*, 919 F.2d 1550 (11th Cir. 1990) (six months), *reh’g granted*, 979 F.2d 806 (11th Cir. 1992), *appeal dismissed*, 9 F.3d 893 (11th Cir. 1993); *Pierce v. Ramsey Winch Co.*, 753 F.2d 416, 439-40 (5th Cir. 1985) (one month).

⁶³ *Bigelow v. RKO Radio Pictures*, 327 U.S. 251, 264, 66 S. Ct. 574, 90 L. Ed. 652 (1946).

⁶⁴ 156 F.3d 452 (3rd Cir. 1998).

⁶⁵ *Id.* at 487.

⁶⁶ See *id.* at 486-87.

be less speculative than the damages estimate upheld in *Zenith Radio Corp. v. Hazeltine Research, Inc.*⁶⁷

B. The Yardstick Method

Under the yardstick method, a firm claiming to be damaged by an anticompetitive business practice estimates its market share and profits but for the practice by using as a yardstick” either (1) a “portion of the relevant market where the defendant’s antitrust violations were not prevalent,”⁶⁸ or (2) “a firm similar to the plaintiff in all respects but for the impact of the antitrust violation.”⁶⁹ The yardstick method estimates economic damages by subtracting a firm’s actual profits from its projected profits based on the assumption that market shares and profits would have tracked a portion of the economy unharmed by the anticompetitive practice, or on “one or more closely comparable firms in the same industry that, unburdened by the proscribed anticompetitive activity, successfully managed to earn profits.”⁷⁰ Courts have held that when using the yardstick method to estimate the existence and amount of damages, “product, firm, and market comparability are all relevant factors in the selection of a proper yardstick and have also cautioned that the yardstick firm must be unaffected, one way or the other, by the defendant’s antitrust violation.”⁷¹ It allows courts to estimate damages when the defendant, “whose wrongful conduct caused or contributed to the uncertainty of the damages sustained, cannot protest that such a measurement of damages is too imprecise.”⁷² No damages should be assessed for lawful conduct, however.⁷³

⁶⁷ *Id.* at 486 n.22 (citing *Zenith Radio Corp. v. Hazeltine Research, Inc.*, 395 U.S. 100, 89 S. Ct. 1562 (1969)).

⁶⁸ *National Farmers’ Organization, Inc. v. Associated Milk Producers, Inc.*, 850 F.2d 1286 (8th Cir. 1988).

⁶⁹ *Coastal Fuels Inc. v. Caribbean Petroleum Corp.*, 79 F.3d 182, 200 (1st Cir. 1996) (citing HERBERT HOVENKAMP, FEDERAL ANTITRUST POLICY: THE LAW OF COMPETITION AND ITS PRACTICE § 17.6b2 (1994)).

⁷⁰ *Home Placement Serv., Inc. v. Providence Journal Co.*, 819 F.2d 1199, 1205-6 (1st Cir. 1987).

⁷¹ *Id.* at 1206.

⁷² *Id.* at 1206.

⁷³ *See, e.g., Vernon v. Southern Cal. Edison Co.*, 955 F.2d 1361, 1372 (9th Cir. 1992) (firm could not claim damages from lawful refusals to deal, or other “acts which were not antitrust violations”); *William Inglis & Sons Baking Co. v. Continental Baking Co., Inc.*, 942 F.2d 1332, 1341 (9th Cir. 1991) (firm could not recover damages for lost profits caused by increased costs of raw materials, vigorous lawful competition, or changes in consumer tastes); *United States Football League v. National Football League*, 842 F.2d 1335, 1377 (2d Cir. 1988) (holding that jury “could award no damages or one dollar in damages if they found that they could not ‘separate out the amount of losses caused by [NFL misconduct] from the amount caused by other factors, including perfectly lawful competitive acts and including business decisions made by the [USFL] or the [USFL’s] own mismanagement”); *Farley Transp. Co., Inc. v. Santa Fe Trail Transp. Co.*, 786 F.2d 1342, 1352 (9th Cir. 1985) (holding that plaintiff’s “utter failure to make any segregation between damages attributable to lawful competition and that attributable to the unlawful scheme . . . requires reversal of the verdict and remand for a new trial on the amount of damages.”); *Litton Systems, Inc. v. AT&T*, 700 F.2d 785, 825 (2d Cir. 1983) (declaring that “damage studies are inadequate when only some of the conduct complained of is found to be wrongful and the damage study cannot be disaggregated”); *Coleman Motor Co. v. Chrysler Corp.*, 525 F.2d 1338, 1352-53 (3d Cir. 1975) (holding that “we cannot permit a jury to speculate concerning the amount of losses resulting from unlawful, as opposed to lawful, competition.”).

Zenith Radio Corp. v. Hazeltine Research, Inc.,⁷⁴ furnishes a good example of the yardstick method. In that case, the Supreme Court allowed a plaintiff, which was complaining of a conspiracy by patent pool participants to exclude its imports into Canada, to estimate its economic losses by comparing its market share in the United States with its market share in Canada.⁷⁵ The court noted that: “Damages were awarded on the assumption that [plaintiff], absent the conspiracy, would have had 16% of the Canadian television market on May 22, 1959, and throughout the damage period, rather than its actual 3% share.”⁷⁶ The firm’s economic experts measured damages by contrasting the plaintiff’s “percentage share of the United States television market, ranging from 15.6% in 1959 to 21.7% in 1963,” with its “actual share of the Canadian market during the same period, ranging from 3.1% in 1959 to 5.2% in 1961 and down to 3.2% in 1963.”⁷⁷ The Supreme Court affirmed this methodology.

Other economic damages models used in antitrust law are the “market share projection” and regression analysis methods. The market share projection method is in some ways a variant of the yardstick and before-and-after methods that attempts to estimate what a victim of antitrust violations would have achieved as revenues and profits but for the anticompetitive conduct.⁷⁸ Regression analysis, similarly, estimates a firm’s market share and therefore revenues and profits by testing the statistical significance of the correlation between an independent variable such as exclusionary conduct and a dependent variable such as market share.⁷⁹ A relationship is statistically significant when a correlation is unlikely to be due to random error, i.e. when the likelihood that it resulted from randomness is estimated at between one and five percent.⁸⁰

III. Estimating the Economic Impact of Involuntary Mass Digitization on the Revenues and Profits of the Most-Affected Publishers

A. The Before-and-After Method

The application of the before-and-after method to the case of *McGraw-Hill et al. v. Google, Inc.* reveals that the plaintiff publishers have increased their revenues and profits at a faster rate after the commencement of book scanning by Google, than before. Tables 1-5 and Charts 1-4 set forth the findings of this study using the before-an-after method. Table 1 reflects an increase in revenues of \$352 million between 2001 and 2004, compared to \$937 million between 2005 and 2008. or, in inflation-adjusted 2008 dollars, an increase from \$126 million in 2001-2004 but \$330 million from 2005-2008. Although Table 2 suggests a drop-off

⁷⁴ 395 U.S. 100, 89 S. Ct. 1562 (1969).

⁷⁵ *See id.* at 116, 124-25.

⁷⁶ *Id.* at 116.

⁷⁷ *Id.* at 116 n.11.

⁷⁸ *See, e.g.,* Dolphin Tours, Inc. v. Pacifico Creative Serv., Inc., 773 F.2d 1506, 1511 (9th Cir. 1985).

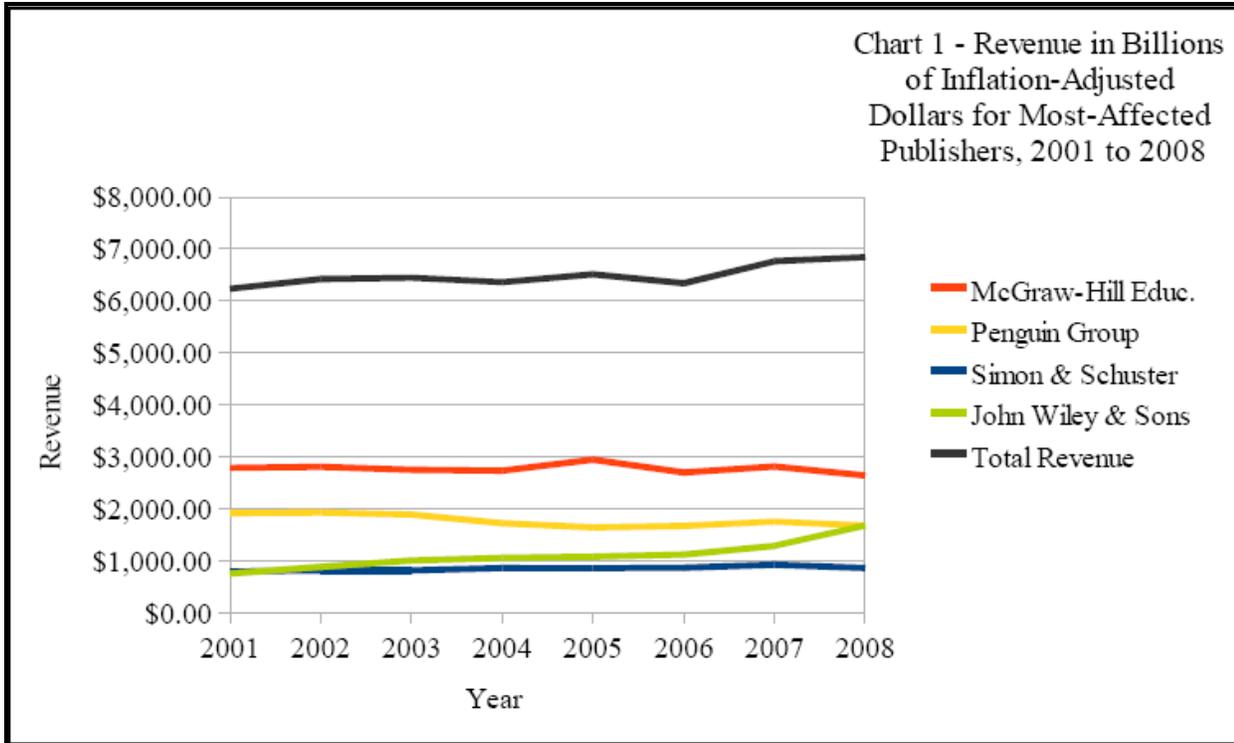
⁷⁹ *See Conwood Co., L.P. v. United States Tobacco Co.*, 290 F.3d 768, 793 (6th Cir. 2002); *In re Industrial Silicon Antitrust Litig.*, 1998-2 Trade Cas. (CCH) ¶ 72,348, 1998 U.S. Dist. LEXIS 20464, *6 (W.D. Pa. Oct. 13, 1998).

⁸⁰ *See* Daniel Rubinfeld, *Reference Guide on Multiple Regression*, in REFERENCE MANUAL ON SCIENTIFIC EVIDENCE 194 (2000); David H. Kaye & David A. Freedman, *Reference Guide on Statistics*, in REFERENCE MANUAL ON SCIENTIFIC EVIDENCE 124 (2000).

in profit growth in 2005-2008 as compared to profit growth in 2001-2004, which one might attribute to GBS, that table as well as Tables 1 and 3 suggests that some of this effect may be an artifice of 2001 and 2008 representing the troughs of the business cycle, with 2004-2005 representing a peak. Profits in 2007 were \$891 million in 2008 dollars, an increase of over 30% since 2001. Tables 4 shows that revenue growth was higher on average during the 2005-2008 period, than during the 2001-2004 period. Specifically, the highest rate of increase in revenue occurred during 2007 for the four plaintiffs in *McGraw-Hill et al. v. Google, Inc.*, who also enjoyed higher revenue growth in 2005 and 2008 than in 2003 or 2004.

The Economic Impact of Mass Digitization Projects								
Table 1 - The Impact of Google Book Search on Most-Affected Publishers' Revenue Growth								
Comparing Period from 2001 to 2004 with Period from 2005 to 2008								
Inflation-Adjusted Revenue (2008 dollars in millions)								
	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	2005	2006	2007	2008
McGraw-Hill Educ.	\$2,784	\$2,804	\$2,749	\$2,731	\$2,945	\$2,696	\$2,810	\$2,639
Penguin Group	\$1,914	\$1,926	\$1,887	\$1,720	\$1,639	\$1,666	\$1,750	\$1,671
Simon & Schuster	\$789	\$809	\$811	\$856	\$854	\$862	\$920	\$858
John Wiley & Sons	\$746	\$878	\$999	\$1,052	\$1,074	\$1,115	\$1,282	\$1,674
Total Revenue	\$6,233	\$6,417	\$6,446	\$6,359	\$6,512	\$6,339	\$6,762	\$6,842
Inflation-Adjusted Profit (2008 dollars in millions)								
McGraw-Hill Educ.	\$332	\$399	\$377	\$388	\$452	\$351	\$415	\$317
Penguin	\$187	\$200	\$205	\$119	\$121	\$129	\$153	\$172
Simon & Schuster	\$50	\$65	\$64	\$68	\$68	\$74	\$91	\$79
John Wiley & Sons	\$115	\$105	\$140	\$147	\$154	\$163	\$232	\$225
Total Profit	\$684	\$769	\$786	\$722	\$795	\$717	\$891	\$793

The Economic Impact of Mass Digitization Projects								
Table 1 - The Impact of Google Book Search on Most-Affected Publishers' Revenue Growth								
Comparing Period from 2001 to 2004 with Period from 2005 to 2008								
Nominal Revenue (dollars in millions)								
	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	2005	2006	2007	2008
Revenue								
McGraw-Hill Educ.	2290	2,343	2,349	2,396	2,671	2,524	2,706	2,639
Penguin Group	1,574	1,609	1,613	1,509	1,487	1,560	1,685	1,671
Simon & Schuster	649	676	693	751	775	807	886	858
John Wiley & Sons	614	734	854	923	974	1,044	1,235	1,674
Total Revenue	\$ 5,127	\$ 5,362	\$ 5,509	\$ 5,579	\$ 5,907	\$ 5,935	\$ 6,512	\$ 6,842
Nominal Profit (dollars in millions)								
McGraw-Hill Educ.	273	333	322	340	410	329	400	317
Penguin	154	167	175	104	111	121	147	172
Simon & Schuster	41	54	55	60	62	69	88	79
John Wiley & Sons	95	88	120	129	140	153	162	225
Total Profit	\$ 563	\$ 642	\$ 672	\$ 633	\$ 723	\$ 672	\$ 797	\$ 793



The Economic Impact of Mass Digitization Projects

Table 2 - The Impact of GBS on Most-Affected Publishers' Revenue Growth
Comparing Period from 2001 to 2004 with Period from 2005 to 2008

Revenue and Profit in 2008 Dollars (in billions)								
	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	2005	2006	2007	2008
Total Revenue of Most-Affected Publishers	\$6.2	\$6.4	\$6.4	\$6.4	\$6.5	\$6.3	\$6.8	\$6.8
Total Operating Income of Most-Affected Publishers	\$0.68	\$0.77	\$0.79	\$0.72	\$0.80	\$0.72	\$0.89	\$0.79

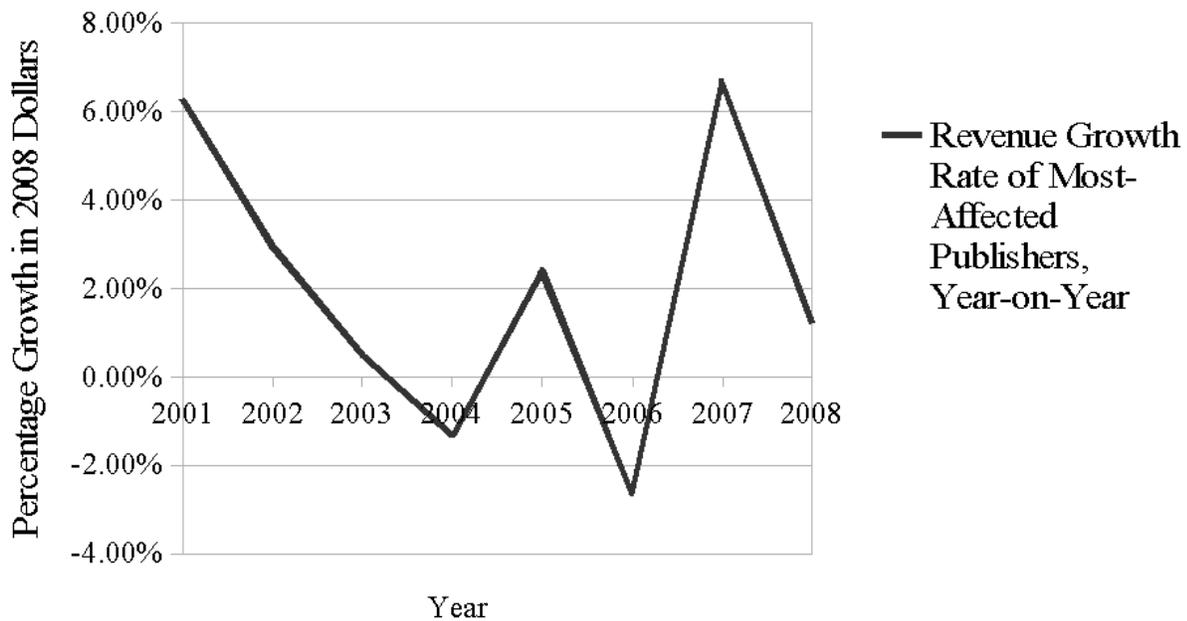
The Economic Impact of Mass Digitization Projects

Table 3 – The Impact of GBS on Most-Affected Publishers’ Revenue Growth Rates

Comparing Period from 2001 to 2004 with Period from 2005 to 2008

Annual Percentage Growth								
	2001	2002	2003	2004	2005	2006	2007	2008
Revenue Growth Rate of Most-Affected Publishers, Year-on-Year in 2008 Dollars	6.27%	2.95%	0.45%	-1.35%	2.41%	-2.66%	6.67%	1.18%

Chart 2 - Revenue Growth Rates of Most-Affected Publishers, 2001 to 2008

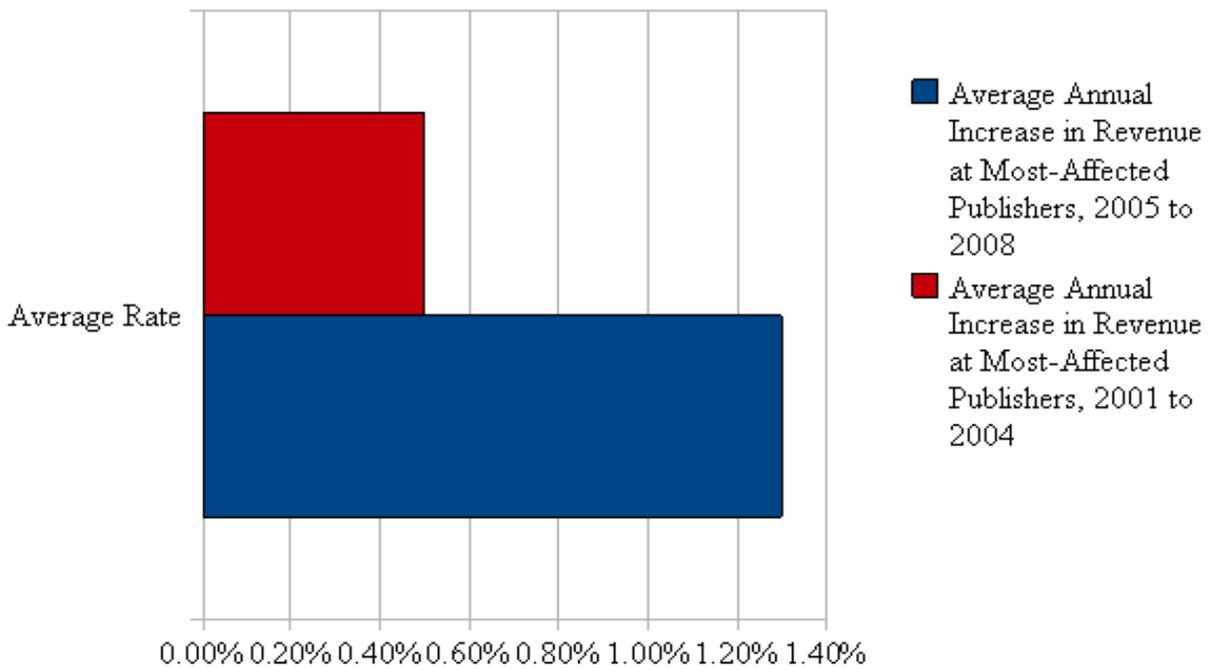


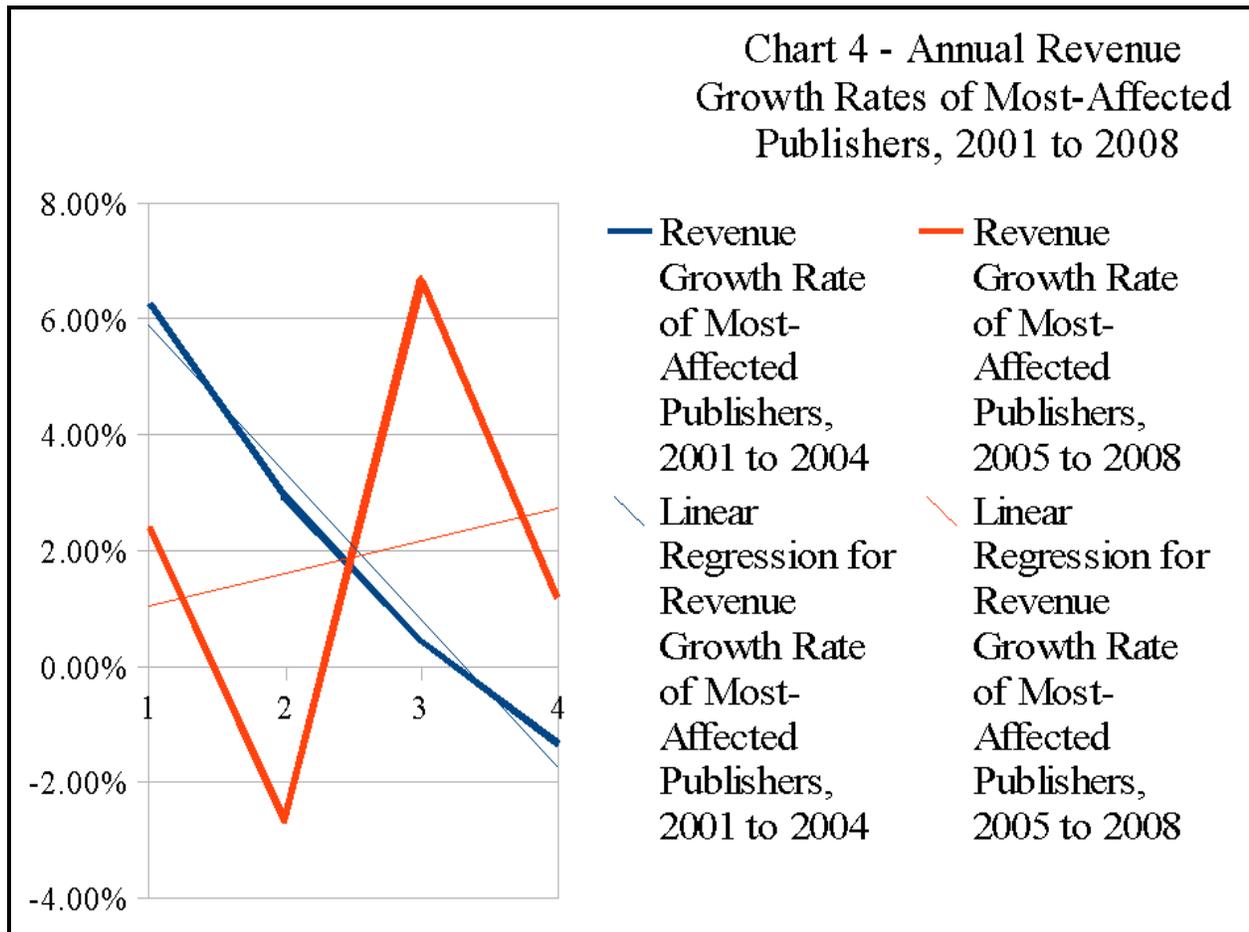
The Economic Impact of Mass Digitization Projects

Table 4 - The Impact of Google Book Search on Most-Affected Publishers' Revenue Growth Rates
 Comparing Period from 2001 to 2004 with Period from 2005 to 2008

Growth Rates (in percentage terms)		
	Average Annual Increase in Revenue at Most-Affected Publishers, 2001 to 2004	Average Annual Increase in Revenue at Most-Affected Publishers, 2005 to 2008
Revenue Growth Rate, Year-on-Year	0.50%	1.30%

Chart 3 - Average Rate of Increase in Revenue at Most-Affected Publishers, 2001 to 2008





B. The Yardstick Method

The yardstick method reinforces the findings revealed by the before-and-after method by demonstrating that the higher rate of revenue growth for the most-affected publishers in 2005-2008, and their ever-higher spikes in profits in 2005 and 2007, are not simply caused by a strong overall economy in 2005, 2007, or the 2005-2008 period. The application of the yardstick method to the case of *McGraw-Hill et al. v. Google, Inc.* reveals that the plaintiff publishers have increased their revenues and profits at a faster rate than overall retail sales or the gross domestic product (GDP) of the United States.

Tables 5-7 and Charts 5-7 set forth the findings of this study using the yardstick method. Table 5 reflects greater increases in revenues among the plaintiff publishers in 2005, 2007, and 2008 than in the 2002-2004 period. Chart 5 indicates that these publishers' revenues in 2008 dollars consistently increased at a rate of about 5% per year between 2001 and 2008, compared to growth of 2% or less in U.S. GDP and retail sales when adjusted to 2008 dollars.

Charts 5A and 5B show that publishers' revenues increased at a dramatically higher rate than U.S. GDP or retail sales in 2007 and 2008.

The publishers' profit growth also outpaced GDP in 2006 and 2007, and the trend line of their profits reflect a consistently higher rate of growth in publishers' profits as compared to GDP and retail sales from 2005 through 2008. Chart 6 illustrates how profits grew more consistently in 2005-2008 than did GDP or retail sales, once all figures are adjusted for inflation to 2008 dollars. Table 7 demonstrates that publishing industry revenues, when compared to their 2000 levels, are higher than the similar figures for retail sales in most years from 2005 to 2008. Chart 7 is perhaps the most powerful one contained in this study, in that it demonstrates that the plaintiff publishers have increased their revenues by nearly 17% on a cumulative basis since 2000, compared to only about 6% for U.S. retail sales as a whole. Chart 7 displays the higher rate of growth by publishers' revenues in 2008 as in 2000, compared to all retail sales.

The Economic Impact of Mass Digitization Projects								
Table 5 – The Most-Affected Publishers' Revenue and Profit Growth								
Compared to GDP and Retail Sales Growth								
Comparing Period from 2001 to 2004 with Period from 2005 to 2008								
	2001	2002	2003	2004	2005	2006	2007	2008
Most-Affected Publishers' Revenue in 2008 Dollars, Percentage Growth Annually	9.29%	4.58%	2.74%	1.27%	5.89%	0.47%	9.72%	5.06%
Retail Sales Growth in 2008 Dollars, Percentage Growth Annually	-0.20%	0.58%	1.94%	3.72%	2.78%	1.69%	0.33%	-4.81%
GDP Growth in 2008 Dollars, Percentage Growth Annually	0.75%	1.60%	2.51%	3.64%	3.06%	2.88%	2.14%	0.44%

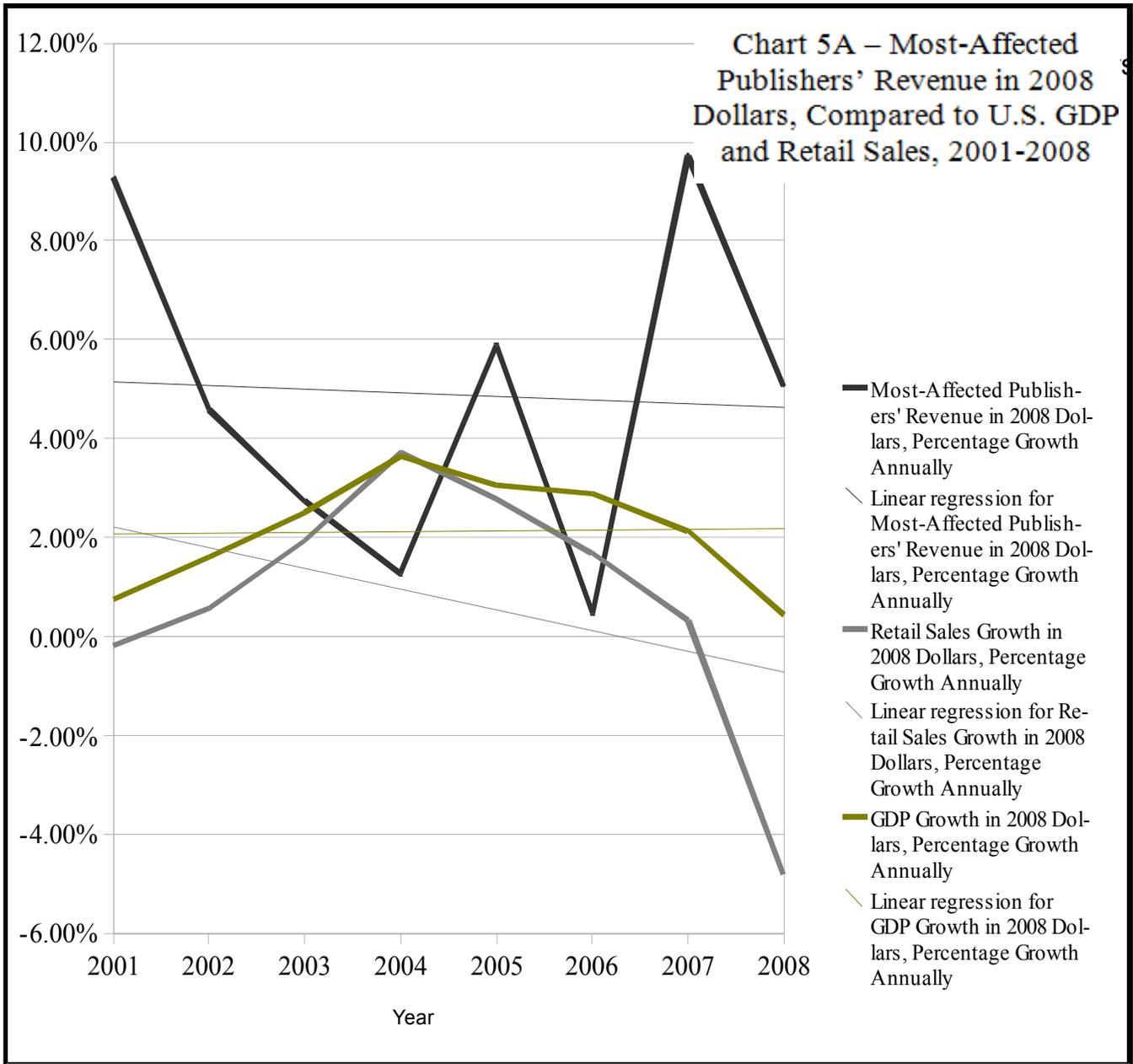
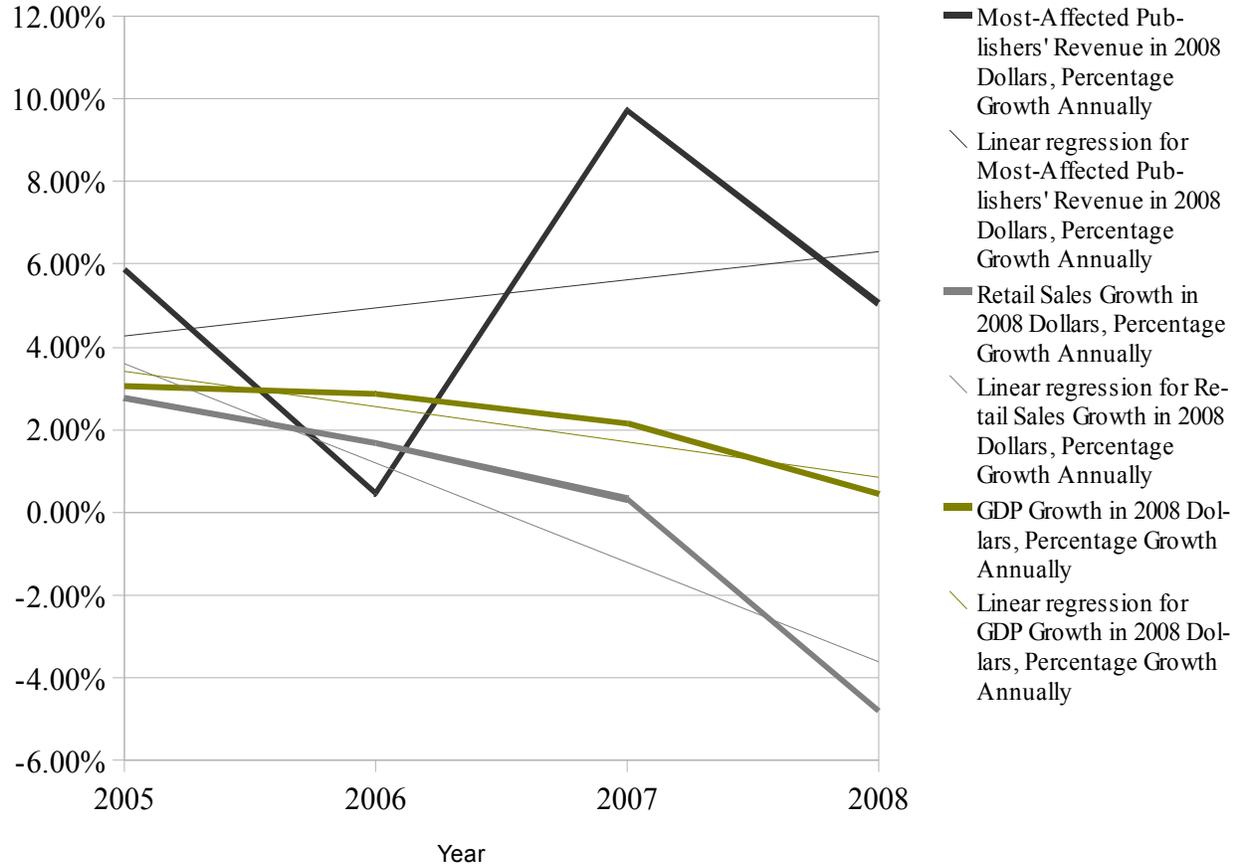
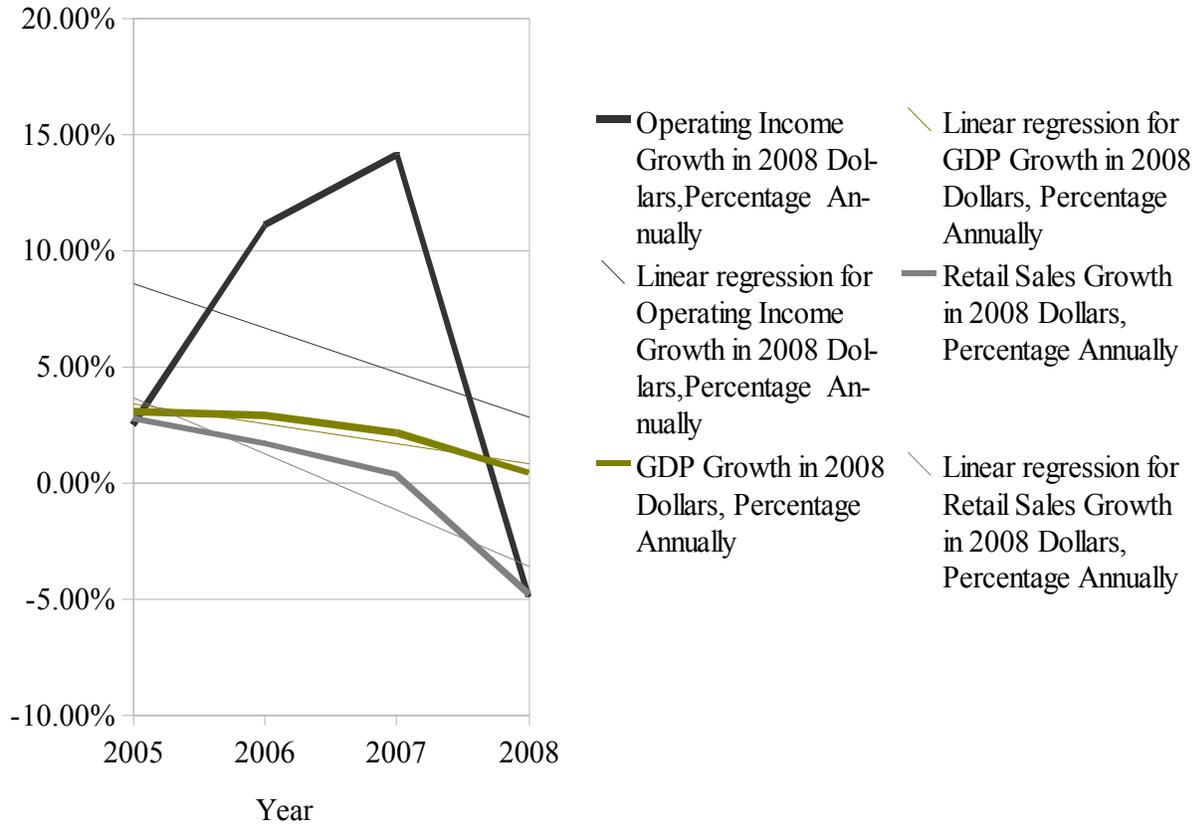


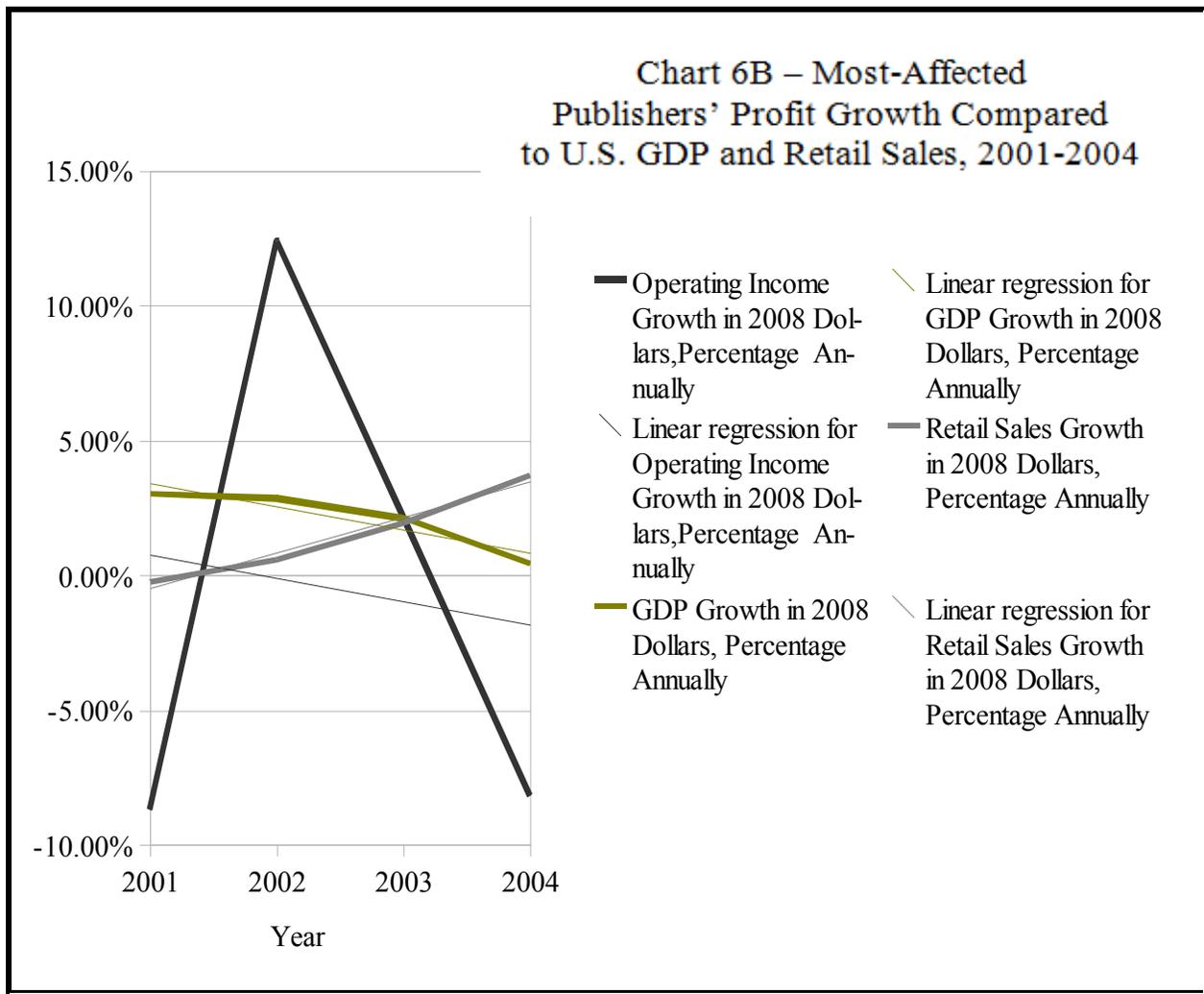
Chart 5B – Most-Affected Publishers' Revenue in 2008 Dollars, Compared to U.S. GDP and Retail Sales, 2005-2008



The Economic Impact of Mass Digitization Projects Table 6 - The Impact of GBS on Most-Affected Publishers' Income Growth Comparing Period from 2001 to 2004 with Period from 2005 to 2008								
Operating Income (in millions of dollars or in percentage terms)								
	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	2005	2006	2007	2008
Operating Income, Adjusted for Inflation to 2008 Dollars	\$684	\$769	\$786	\$722	\$740	\$658	\$751	\$714
Operating Income Growth in 2008 Dollars, Percentage Annually	-8.67%	12.43%	2.21%	8.14%	2.49%	11.08%	14.13%	-4.93%
GDP of U.S. in 2008 Dollars	\$12,321	\$12,518	\$12,832	\$13,299	\$13,707	\$14,101	\$14,403	\$14,466
GDP Growth in 2008 Dollars, Percentage Annually	0.75%	1.60%	2.51%	3.64%	3.06%	2.88%	2.14%	0.44%

Chart 6A - Most-Affected
 Publisher's Profit Growth Compared
 to U.S. GDP and Retail Sales, 2005-2008

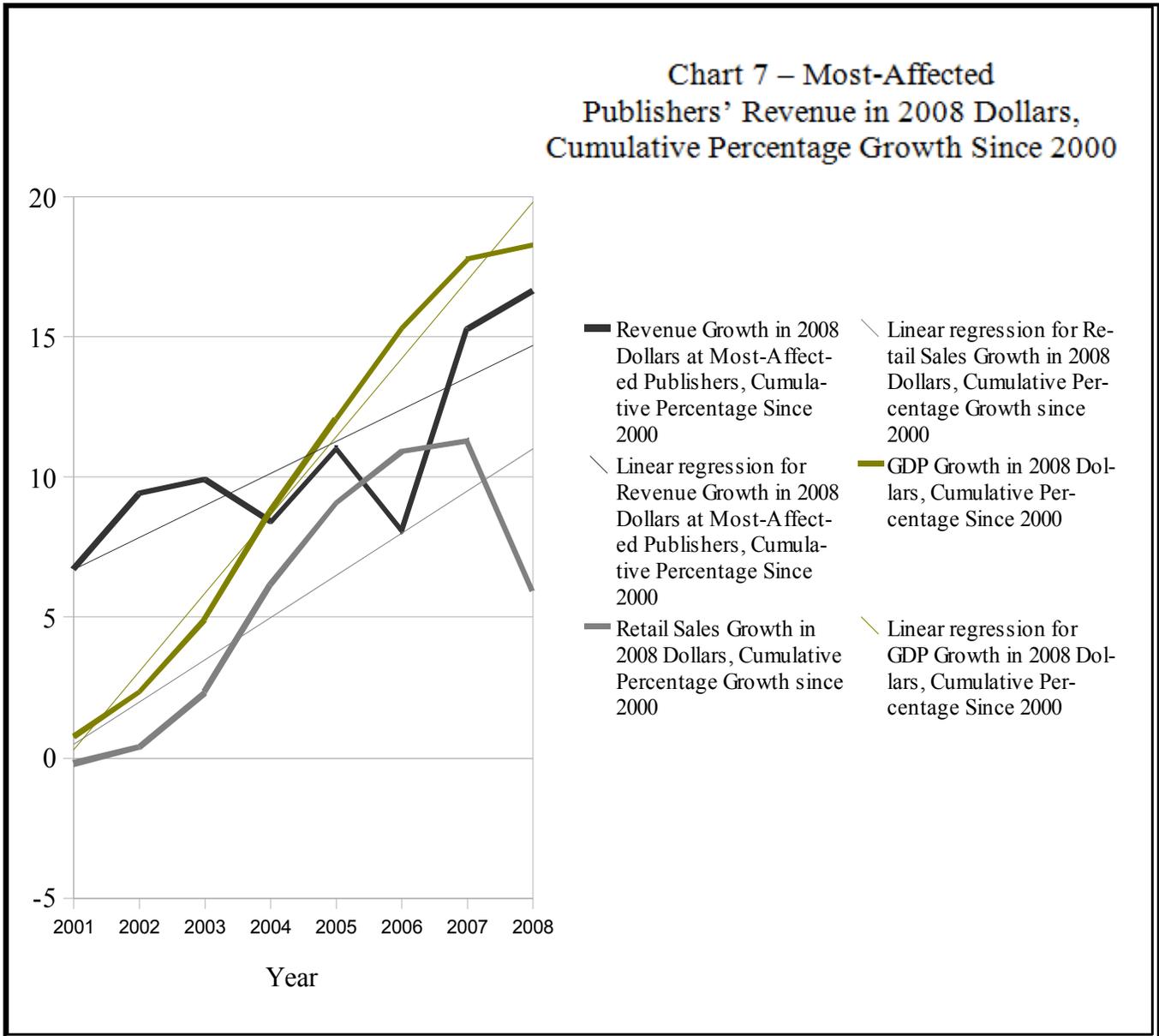




The Economic Impact of Mass Digitization Projects
Table 7 – The Most-Affected Publishers' Revenue and Profit Growth
Compared to GDP and Retail Sales Growth
 Comparing Period from 2001 to 2004 with Period from 2005 to 2008

Growth Rates (in percentage terms)

	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	2005	2006	2007	2008
Revenue Growth in 2008 Dollars at Most-Affected Publishers, Cumulative Percentage Since 2000	6.72%	9.41%	9.91%	8.42%	11.03%	8.08%	15.29%	16.66%
Retail Sales Growth in 2008 Dollars, Cumulative Percentage Growth since 2000	-0.20%	0.38%	2.33%	6.14%	9.08%	10.93%	11.30%	5.95%
GDP Growth in 2008 Dollars, Cumulative Percentage Since 2000	0.75%	2.36%	4.93%	8.75%	12.08%	15.30%	17.77%	18.29%



IV. Drawing Inferences from the Data to Guide Public Policy as to Mass Digitization Projects

A. The Inferences that May Be Drawn from the Data

The principal inference that I draw from the above data is that the fears expressed by Microsoft and others of an information monopoly by Google are unfounded. The publishers most affected by GBS, as measured by their willingness to file suit, are healthier than ever,

with higher profits in 2008 than in 2004, and a higher cumulative revenue growth since 2001 than overall retail sales or the U.S. economy.

These results are all the more surprising because many other factors, including increased competition and reduced disposable income, could easily have resulted in diminished publishing industry revenues and profits in the 2005-2008 period, notwithstanding Google's alleged copyright infringement. The U.S. poverty rate reached a high point in 2008 compared to the previous 10 years, as real household incomes were down slightly from 1999 to 2008.⁸¹ Real incomes fell, despite substantial growth in nominal per capita incomes, due to out-of-control costs for staples of middle-class life, such as mortgage payments and rent, gasoline for commuting, college tuition for adult children, and health care costs.⁸² The consumer price index (CPI) for hospital services indicates an increase of nearly 100% per month between 1999 and 2008.⁸³ The CPI for doctor's bills reflects an increase of almost 30% from 1999 to 2008.⁸⁴ The CPI for gasoline, home fuel oil, and propane reflects a doubling of costs paid by families to get around and heat their homes.⁸⁵ The CPI for college tuition and fees rose by 80% per month from 1999 to 2008.⁸⁶ The CPI for beer and liquor consumed in bars and restaurants also indicates a 30% price increase.⁸⁷ These increases reflect a lack of competition in specific markets rather than overall inflation or a generally weak dollar, as the prices of passenger cars,

⁸¹ See Paul Krugman, *The Big Zero*, N.Y. TIMES, Dec. 28, 2009, at A27, http://www.nytimes.com/2009/12/28/opinion/28krugman.html?_r=1&ref=opinion ("Actually, even at the height of the alleged 'Bush boom,' in 2007, median household income adjusted for inflation was lower than it had been in 1999. And you know what happened next.").

⁸² Real household incomes fell about four percent from 2000 to 2008, although nominal incomes increased by about 20%, from \$42,187 to \$50,233. See U.S. Census Bureau, *Income, Poverty and Health Insurance Coverage in The United States* (Sept. 10, 2009), http://www.census.gov/Press-Release/www/releases/archives/income_wealth/014227.html ("US Census Bureau announced today that real median household income in the United States fell 3.6 percent between 2007 and 2008, from \$52163 to \$50303."); Tony Pugh, *US Census: National Poverty Highest Rate in 2008 in Decade*, THE PRESS OF ATLANTIC CITY, Sept. 11, 2009, http://nl.newsbank.com/nl-search/we/Archives?p_product=AC&p_theme=ac&p_action=search&p_maxdocs=200&p_topdoc=1&p_text_direct-0=12AACD8C803BF790&p_field_direct-0=document_id&p_perpage=10&p_sort=YMD_date:D&s_trackval=GooglePM (arguing that "real median household income is 4.2 percent lower than it was in 2000"). Compare Jonathan Peterson, *Poverty Rate Falls to 11.3%, But Trouble Looms*, L.A. TIMES, Sep 26, 2001, at A25 ("Yet overall, the median household income of \$42148 slipped just below the record of \$42187 in 1999...."), with *Inside Obama Budget: Who Gets a Tax Break*, MINN. STAR-TRIBUNE, Feb. 27, 2009, <http://www.startribune.com/politics/40458882.html> ("The median household income was \$50,233 in 2007, according to the Census Bureau.").

⁸³ See U.S. Census Bureau, *Statistical Abstract of the United States: 2009*, at 468 tbl. 705 (2009); U.S. Census Bureau, *Statistical Abstract of the United States: 2000*, at 488 tbl. 770.

⁸⁴ See U.S. Census Bureau, *Statistical Abstract of the United States: 2009*, at 468 tbl. 705 (2009); U.S. Census Bureau, *Statistical Abstract of the United States: 2000*, at 489 tbl. 770.

⁸⁵ See U.S. Census Bureau, *Statistical Abstract of the United States: 2009*, at 468 tbl. 705 (2009); U.S. Census Bureau, *Statistical Abstract of the United States: 2000*, at 488 tbl. 770.

⁸⁶ See U.S. Census Bureau, *Statistical Abstract of the United States: 2009*, at 468 tbl. 705 (2009); U.S. Census Bureau, *Statistical Abstract of the United States: 2000*, at 489 tbl. 770.

⁸⁷ See U.S. Census Bureau, *Statistical Abstract of the United States: 2009*, at 468 tbl. 705 (2009); U.S. Census Bureau, *Statistical Abstract of the United States: 2000*, at 489 tbl. 770.

apparel, footwear, household appliances, home electronics, and sporting goods all remained slightly lower or about the same in 2007 as in 2000.⁸⁸

The idea that television may compete with books for money and attention entered common sense long ago.⁸⁹ Recent studies have lent support to the intuition behind this idea. Judged at its most basic level, book publishing competes not only for consumers' disposable income but with other sources of information, communications, self-expression, and entertainment in the form of words, images, and sounds. Printed matter, including not only books but magazines and newspapers, represents less than nine percent of the average American household's words consumed daily.⁹⁰ Television accounts for nearly half of those words consumed.⁹¹ A study released over two years ago had the average person consuming 4.5 hours of TV daily.⁹² Radio, telephones, motion pictures in the theater, and recorded music contribute less than 20% of the words consumed.⁹³ Computers and computer games surpass all other sources of representations other than television, combined, at nearly 30% of words consumed daily.⁹⁴

Competition for the consumer's hard-earned entertainment dollar was tougher than ever in 2008. The prices of nearly all informational, entertaining, and other media products have outpaced income growth and inflation by a wide margin since 1999. The price of a *USA Today*, *New York Times*, or *Wall Street Journal* newspaper more or less doubled at the newsstand from 1999 to 2008.⁹⁵ Including home delivery prices, the producer price index for

⁸⁸ The Census Bureau measures prices of such goods in 2000 and 2007 against prices in 1984. See U.S. Census Bureau, *Statistical Abstract of the United States: 2009*, at 474 tbl. 713 (2009); U.S. Census Bureau, *Statistical Abstract of the United States: 2000*, at 494 tbl. 774.

⁸⁹ See, e.g. Associated Press, *Teachers Assail TV, Big Classes Seeks to Explain Drop in Reading, Writing Skills*, TOLEDO BLADE (OHIO), Nov 27, 1976, at 12.

⁹⁰ See Posting of Nick Bilton to the New York Times Bits Blog Re: The American Diet: 34 Gigabytes a Day, Dec. 9, 2009, bits.blogs.nytimes.com/2009/12/09/the-american-diet-34-gigabytes-a-day/.

⁹¹ See *id.*

⁹² See Michael Hirschorn, *The Revolution Will Be Televised: TV Can Avoid the Music Industry's Fate and Survive the Digital Age, But Only by Beating the Internet at Its Own Game*, ATLANTIC MONTHLY, Mar. 1, 2008, at 17, 2008 WLNR 5179345.

⁹³ See Posting of Nick Bilton to the New York Times Bits Blog Re: The American Diet: 34 Gigabytes a Day.

⁹⁴ See *id.*

⁹⁵ *Compare Times to Raise New York Price*, LAKELAND LEDGER (FLORIDA), Sept. 2, 1999, <http://news.google.ca/newspapers?id=vZssAAAAIIBAJ&sjid=9PwDAAAAIIBAJ&pg=3674,693821&dq=york-times+newsstand&hl=en> (reporting newsstand price of *The New York Times* metropolitan New York edition of \$0.75), USA TODAY MEDIA KIT (2010), http://www.usatoday.com/marketing/media_kit/pressroom/timeline.html (noting that USA Today had newsstand price of \$0.50 prior to 2004), and *Wall Street Journal to Hike Newsstand Price*, L.A. TIMES, Mar. 2, 2001, at C2 (noting that *The Wall Street Journal* had newsstand price of \$0.75 prior to 2001), with Associated Press, *New York Times to Raise Newsstand Price to \$1.50*, NEWSDAY (N.Y.), July 23, 2008, http://www.nydailynews.com/money/2008/07/23/2008-07-23_new_york_times_to_raise_newsstand_price_.html, Associated Press, *USA Today Price Rising to \$1 on Newsprint Costs*, USA TODAY, Oct. 10, 2008, http://www.usatoday.com/money/media/2008-10-10-usa-today-price-increase_N.htm (*USA Today* raised its price to \$1 per copy at newsstand in 2008), and *Wall St. Journal Will Raise Price to \$1.50*, N.Y. TIMES, June 14, 2007, <http://www.nytimes.com/2007/06/14/business/media/14journal.html> (*The Wall Street Journal* raised its price to \$1.50 in 2007).

newspapers jumped 33% from 1999-2007.⁹⁶ The consumer price index (CPI) for cable and satellite television reflects an increase in monthly rates by about 40% between 1999 and 2008.⁹⁷ Total consumer spending on home video at retail, not counting hardware, surged more than fourfold from \$7.2 billion in 2001 to \$26.8 billion in 2005. Sales of DVDs, VHS tapes, and Blu-ray discs slipped somewhat to \$22.4 billion in 2008.⁹⁸ Approximately \$1 billion in potential home video market sales may have migrated to premium online video services by 2008.⁹⁹ Finally, sales of video games, which often contain similar swords-and-sorcery, shoot-'em-up, and sports content as books, have soared from \$10.3 billion in 2001 to \$21.33 billion in 2008.¹⁰⁰

With the growth of computers, Internet access, cell phones, video game consoles, and other telecommunications and media devices, it is surprising that book publishers' revenues have not plummeted. The number of Americans with Internet access skyrocketed from one million in 1994 to over 150 million users in 2004, and over 220 million in 2008.¹⁰¹ AOL alone had revenues of over \$1.1 billion from Internet subscribers by 2000, an amount greater than all four publisher plaintiffs' profits in 2001, combined, and greater than the revenues of either Wiley or Simon & Schuster in 2001.¹⁰² The popularity of free eBooks has exploded, with over 100 million downloaded from Project Gutenberg alone between 2006 and 2009.¹⁰³ This is a small fraction of the U.S. publishing industry's 2008 unit sales of around 3.1 billion, but represents strong evidence of increasing competition from free eBooks. Similarly, the market

⁹⁶ See U.S. Census Bureau, Statistical Abstract of the United States: 2009, at 477 tbl. 714 (2009); U.S. Census Bureau, Statistical Abstract of the United States: 2000, at 498 tbl. 775.

⁹⁷ See U.S. Census Bureau, Statistical Abstract of the United States: 2009, at 468 tbl. 705 (2009); U.S. Census Bureau, Statistical Abstract of the United States: 2000, at 488 tbl. 770.

⁹⁸ Compare Blockbuster Inc. 2001 10-K, at 6, <http://www.secinfo.com/dScRa.3Tx.htm>, with Andy Meek, *Blockbusted! Local Franchisee Sues Blockbuster Inc., Alleges Dallas Company 'Undercut' His Business*, MEMPHIS DAILY NEWS, Jan. 5, 2007, <http://www.memphisdailynews.com/editorial/ArticleEmail.aspx?id=31762&print=1>, and Carl DiOrio, *Blu-ray May Save Day as DVD Sales Slump*, HOLLYWOOD REPORTER/REUTERS, Jan. 8, 2009, <http://uk.reuters.com/article/idUKTRE5070RF20090108?sp=true>.

⁹⁹ See Parks Associates, Consumers to Spend Billions on Internet Video Services by 2013 (Aug. 12, 2008), http://newsroom.parksassociates.com/article_display.cfm?article_id=5092.

¹⁰⁰ Compare, e.g., NPD Group, Press Release, The NPD Group Reports Annual 2002 US Video Game Sales Break, GAMEINFO.WIRE.COM, Jan. 28, 2003, <http://www.gameinfo.wire.com/news.asp?nid=1467>, with Daniel Terdiman, *Video Game Industry Roars in December*, C-NET NEWS.COM, Jan. 15, 2009, http://news.cnet.com/8300-10797_3-235-1.html?keyword=NPD.

¹⁰¹ See CHARLES H. FERGUSON, THE BROADBAND PROBLEM: ANATOMY OF A MARKET FAILURE AND A POLICY DILEMMA 86 (Washington, DC: Brookings Institution Press, 2004) 86; Ken Auletta, *'Googled': From Brainchild to Behemoth*, NPR (Nov. 19, 2009), <http://www.npr.org/templates/story/story.php?storyId=120389927>.

¹⁰² See Marius Meland, *AOL Junkies*, FORBES, Feb. 2, 2000, <http://www.forbes.com/2000/02/02/mu4.html>.

¹⁰³ See Michael S. Hart, 100 Million More eBooks Downloaded From Project Gutenberg (Aug. 3, 2009), <http://www.gutenbergnews.org/20090803/world-ebook-fair-ends-tuesday-august-4-midnight/>; Book Industry Study Group, Inc., Book Industry TRENDS 2009 Indicates Publishers' Net Revenue Up 1.0 Percent in 2008 to Reach \$40.32 Billion (June 3, 2009), <http://www.bisg.org/news-5-363-book-industry-trends-2009-indicates-publishers-net-revenue-up-10-in-2008-to-reach-4032-billion.php>. For example, Mark Twain's *The Adventures of Huckleberry Finn*, which publishers Wiley & Sons and Simon & Schuster have marketed in various copyrighted editions, is available for free on an advertiser-supported Web site as an audiobook based on the Project Gutenberg edition. See *Adventures of Huckleberry Finn Podcast by Mark Twain* (Jan. 20, 2010), <http://www.learnoutloud.com/Podcast-Directory/Literature/American-Classics/Adventures-of-Huckleberry-Finn-Podcast/18027>.

for free and advertiser-supported online videos has grown dramatically, reaching 14.3 billion videos viewed in the U.S. alone in 2008, with YouTube reaching a monthly rate of nearly six billion views per month in late 2008.¹⁰⁴

B. The Implications of the Data for Public Policy

Leaders within the publishing industry have often claimed that computers, video games, digitization, and “Napsterization” represent serious threats to their revenues and the livelihoods of their authors. If the Napster analogy is accepted, the tendency of the courts and Congress may be to treat computer users, search engines, massively multiplayer online role playing games, digital libraries, and bloggers quoting news stories as infringing, and shut them down or revamp them with publishing industry control over their features, limitations, and level of interactivity. The data reviewed in this study indicates that the many costs of such an approach, including costs to economic innovation, freedom of expression, and personal privacy, need not be tolerated. The publishing industry may benefit from services like GBS, rather than being decimated.

This study suggests that mass digitization may increase the strength, number, and diversity of publishing industry competitors. Publishers subjected to it on a massive scale have seen their revenues and profits soar. They are racing past the economy as a whole.

One way in which mass digitization may impact the publishing industry beneficially is by vastly expanding public and competitor access to not only substantive knowledge in general, but knowledge about books, the book market, and book prices in particular. Rather than an hour-long trip to the bookstore to walk up and down aisles and check shelves for availability and both covers for pricing, GBS represents a portal to multiple and massive online bookstore, library, and public domain holdings. Unlike the books in a bookstore, GBS allows searching for specific words and concepts, and limiting the results one sees before one by year of publication, author’s name, publisher, and other important criteria. GBS is also far more convenient place than Amazon.com to compare published books to each other, to library holdings, to the Web, and to the public domain.

V. Challenges and Obstacles Encountered in This Study

A. The Difficulty Determining Causation of Higher or Lower Sales or Profits

A number of antitrust cases suggest that plaintiffs should ideally distinguish illegal from legal causes of reduced sales or profits. Therefore, they should control for influences on their sales and profits other than the defendant’s unlawful conduct. The well-known case of *MCI Communications Corp. v. AT&T*,¹⁰⁵ suggests that a plaintiff claiming economic damages from unlawful activity should prepare a study adjusting its projected revenues and profits to reflect the adverse impact of the unlawful, as opposed to the lawful, conduct.¹⁰⁶ On the other

¹⁰⁴ See Justin Mann, YouTube Beats Hulu for Online Market Share, TECHSPOT.COM, Feb. 5, 2009, <http://www.techspot.com/news/33493-YouTube-beats-Hulu-for-online-video-market-share.html>.

¹⁰⁵ 708 F.2d 1081 (7th Cir. 1983).

¹⁰⁶ See *id.* at 1161.

hand, the Supreme Court has not required quite as much precision as some of the lower courts. For example, in *J. Truett Payne Co. v. Chrysler Motors Corp.*,¹⁰⁷ the plaintiff was permitted to show a four percent decrease in sales due to the defendant's anticompetitive activity, even though its economic expert testimony did not necessarily support such a decrease, instead suggesting a reduced profit margin on more stable levels of sales.¹⁰⁸ The Supreme Court called the evidence "weak," but reversed the decision of the Court of Appeals to dismiss the complaint.¹⁰⁹

Multiple regression analysis could help test the causal relationship, if any, between the growing popularity of GBS and any increases or decreases in the sales or profits of specific publishers.¹¹⁰ Ideally, a particular publisher's performance would be compared to the level of GBS views of its books, and the effect of the number of views then tested for causation after the effects of all other variables have been controlled.¹¹¹ A sophisticated analysis of this kind may reveal that GBS causes no losses or damages to publishers, even were they to experience a reduction in their sales, market share, growth rate, or profitability, or rate of profit growth, where such reductions are due to poor economic conditions, rising costs of ink or paper, price increases on books, high taxes, foreign competition, domestic competition from other media, unlawful monopolization within the publishing industry, or a failure to invest in new content or marketing.¹¹²

Prior research into the economic impact of peer-to-peer file sharing has revealed that when the use of file-sharing is associated with individual music purchases, the association tends to be positive. A study released in 2004 showed that after controlling for variables like income and market fluctuations, the relationship between Internet access and music purchases tends to be positive.¹¹³ Other studies have found that small reductions in music sales could be linked to file-sharing, while others still found no link.¹¹⁴ For example, a study based on data

¹⁰⁷ 451 U.S. 557 (1981).

¹⁰⁸ *See id.* at 563-64.

¹⁰⁹ *See id.* at 560-61, 564.

¹¹⁰ *See In re Industrial Silicon Antitrust Litig.*, 1998-2 Trade Cas. (CCH) ¶ 72,348, 1998 U.S. Dist. LEXIS 20464, at *6 (W.D. Pa. Oct. 13, 1998) ("There is no dispute that when used properly multiple regression analysis is one of the mainstream tools in economic study and it is an accepted method of determining damages in antitrust litigation."). Indeed, some economic analyses may be irrelevant if they fail to control for essential variables. *Cf. Bazemore v. Friday*, 478 U.S. 385, 400 n.10 (1986).

¹¹¹ *See* STATISTICS FOR LAWYERS, *supra*, at 324-26; REFERENCE GUIDE ON STATISTICS, *supra*, at 95; REFERENCE GUIDE ON MULTIPLE REGRESSION, *supra* at 188-197.

¹¹² *See Image Tech. Servs. v. Eastman Kodak Co.*, 125 F.3d 1195, 1224 (9th Cir. 1997) (stating that damages attributable to lawful conduct "must be disaggregated"); *MCI Communications*, 708 F.2d at 1161 (similar); *In re Independent Serv. Orgs. Antitrust Litig.*, 85 F. Supp. 2d 1130, 1153-54 (D. Kan. 2000) (similar), *aff'd*, 203 F.3d 1322 (Fed. Cir. 2000); II PHILLIP AREEDA & HERBERT HOVENKAMP, ANTITRUST LAW ¶ 391g, at 490 (2d ed. 2000) (similar).

¹¹³ *See* Eric S. Boorstin, Music Sales in the Age of File Sharing, Senior Thesis, Princeton University, April 2004, <http://www.cs.princeton.edu/~felten/boorstin-thesis.pdf>.

¹¹⁴ *See* Felix Oberholzer-Gee and Koleman Strumpf, *The Effect of File Sharing on Record Sales: An Empirical Analysis*, 115 Journal of Political Economy 1 (2007); Martin Peitz and Patrick Waelbroeck, *The Effect of Internet Piracy on CD Sales: Cross-Section Evidence*, CESifo Working Paper No. 1122 (Jan. 2004), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=511763; Alejandro Zentner, *Measuring the Effect of Online*

from five of the largest file-sharing networks indicated that each file available online is the equivalent of only about 0.4% of a sale of the album per week, or about 0.05% of an album per day.¹¹⁵ Even this study was limited to fewer than 200 top-selling albums, while researchers believe that lesser-selling albums are more likely to benefit from the sampling of music on file-sharing networks than are popular albums with wide media exposure.¹¹⁶ A large-scale survey of adult and older teenage Canadians released in 2007 showed that downloaders of songs purchase more music CDs.¹¹⁷ A survey of Dutch university students released in 2008 established that downloaders buy more music, although those with high-speed connections buy less.¹¹⁸

In this study, it was not possible to conduct such an analysis in a sophisticated way, although the tables and charts comparing the plaintiff publishers' revenues and profits to overall retail sales and GDP growth suggests that general economic conditions do not explain the data standing alone. Future researchers would do well to try to develop a comprehensive series of independent variables that might influence publishers' sales and profits, and control for all such factors, including economic conditions, real incomes, or popularity of media other than books, before estimating the impact of GBS.¹¹⁹ One of the variables should account for the one million public domain books and periodicals contained in GBS as of late 2008, a figure constantly on the rise.¹²⁰

Piracy of Music Sales, Unpublished Manuscript, University of Chicago (December 2003), <http://economics.uchicago.edu/download/musicindustryoct12.pdf> Stan Liebowitz, *Will Downloads Annihilate the Recording Industry? Pitfalls in Measuring the Impact of File-Sharing*, CESifo Conference Paper, July 2004, http://papers.ssrn.com/sol3/papers.cfm?abstract_id=414162; Martin Peitz and Patrick Waelbroeck, *File-Sharing, Sampling and Music Distribution*, International University in Germany, Working Paper 26 (Dec. 2004), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=652743. Some studies purporting to find a large negative effect of file-sharing on sales apparently did not control for other ways that consumers with Internet connections might spend money they would previously have spent on recorded music, such as DVDs and video games, instead assuming that the sole cause of any decreased sales not attributable to age or gender is Internet usage as a proxy for file-sharing. See Stan J. Liebowitz, *Testing File-Sharing's Impact on Music Album Sales in Cities*, 54 *Management Science* 852 (2005), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=829245.

¹¹⁵ See Donald Blackburn, *On-line Piracy and Recorded Music Sales*, at 20, <http://citeseerx.ist.psu.edu/viewdoc/summary?doi=10.1.1.117.2922>. Thus, the author adds that his data "suggests that every 26 additional files available on-line increases the week's sales of the album by one unit." *Id.* Another study "suggests that every additional 66 downloads increase sales by one unit." *Id.*

¹¹⁶ See Sam Reimert, *Downloads and Sales: Mutually Exclusive?*, Master's Thesis, University of Maastricht, Summer 2008, at 14, <http://arno.unimaas.nl/show.cgi?fid=13396>.

¹¹⁷ See Birgitte Andersen & Marion Frenz, *The Impact of Music Downloads and P2P File-Sharing on the Purchase of Music: A Study For Industry Canada* (2007), <http://www.ic.gc.ca/eic/site/ippd-dppi.nsf/eng/ip01461.html>.

¹¹⁸ See Reimert, *supra* note __, at 55.

¹¹⁹ Such studies have been attempted for the impact of file sharing in recorded music sales, but not for the impact of digital libraries on book sales, to my knowledge. See Liebowitz, *supra* note __; Oberholzer-Gee & Strumpf, *supra* note __; Felix Oberholzer-Gee & Koleman Strumpf, *The Effect of File Sharing on Record Sales: An Empirical Analysis*, 115 *J. OF POL. ECON.* 37, 38-40 (2007); Martin Peitz & Patrick Waelbroeck, *Why the Music Industry May Gain from Free Downloading: The Role of Sampling*, 24 *INT'L J. OF INDUS. ORG.* 907 (2006).

¹²⁰ See Tom Sowa, *Google Tools Help Genealogist Track Roots*, SPOKANE SPOKESMAN-REVIEW, July 27, 2008, <http://www.lineages.co.uk/2008/07/28/family-ties-google-tools-help-genealogist-track-roots/>; Posting of

B. The Difficulty Finding Data on Smaller Firms and Non-victims of GBS

This study, as noted above, uses data from the SEC filings of only four publishers to estimate the economic impact of GBS on the publishing industry. There were over 130,000 active publishers in 2008, however, by one estimate.¹²¹ The number of active publishers increased 27% from 2007 to 2008, with the increase concentrated in small publishers with under \$50 million in sales annually.¹²² A much more granular study of the impact of GBS on the structure of the publishing industry would measure the correlation of the popularity of a publisher's titles on GBS in terms of pageviews, with the rate of sales and profit growth or decline for that publisher, compared to all other publishers in the data set.¹²³ This would require data such as that provided to the Book Industry Study Group, but which is often not made accessible to the competitors or the general public.¹²⁴

Although the data analyzed in the present study are therefore very incomplete, there is little reason to doubt that my findings are generalizable to the industry as a whole. The publishing industry's sales in the U.S. grew from \$31.2 billion in 2001 to \$40.3 billion in 2008.¹²⁵ The rate of increase was greater from 2005 to 2008 than from 2001 to 2004, just as Tables 1-7 and Charts 1-7 suggest that it would be based on the four plaintiffs' SEC filings. The increase from 2001 to 2004 was about \$3.39 billion, or 11%, while the increase from 2005 to 2008 was \$5.71 billion, or 17%.¹²⁶ Adjusting for inflation reduces but does not eliminate the difference between the higher revenue growth after 2004 and lower growth up to 2004. No slowdown of sales is visible in the data.

VI. Conclusion

This study has found no support for an imminent monopoly by Google over books. Publishers of printed books continue to increase their sales and profits. Their rate of sales growth has increased since the scanning of books into GBS by Google. Book sales are growing faster than retail sales or the economy as a whole. These findings suggest that the

Mark Stout to Ideas from Mark Stout Re: eBooks from Google, Dec. 22, 2008, 11:08 AM, <http://markstout.blogspot.com/2008/12/ebooks-from-google.html>.

¹²¹ See Michael Healy (Executive Director, Book Industry Study Group), Book Industry TRENDS 2009 (2009), <http://www.slideshare.net/bisg/bookexpo-america-book-industry-trends-2009>.

¹²² See *id.*

¹²³ Cf. Oberholzer-Gee & Koleman Strumpf, *supra* note __, at 38-40 (describing such an analysis comparing record companies' sales and popularity on file-sharing sites).

¹²⁴ See Healy, *supra* note __, at 18.

¹²⁵ Compare Healy, *supra* note __, at 18, with Press Release, Book Indus. Study Group, Book Industry TRENDS 2002 (May 10, 2002), http://74.125.93.132/search?q=cache:FV9_cpjWeMwJ:www.bisg.org/news-5-10-domestic-consumer-expenditures-on-all-books-expected-to-reach-364-billion-by-2006.php.

¹²⁶ Compare Healy, *supra* note __, at 18, with Press Release, Book Indus. Study Group, Book Industry TRENDS 2006 (May 22, 2006), <http://www.bisg.org/news/press.php?pressid=35>, and Press Release, Book Indus. Study Group, Book Industry TRENDS 2002 (May 10, 2002), http://74.125.93.132/search?q=cache:FV9_cpjWeMwJ:www.bisg.org/news-5-10-domestic-consumer-expenditures-on-all-books-expected-to-reach-364-billion-by-2006.php.

benefits of digital libraries to American students and persons of limited disposable income, in terms of accessibility of information about and inside books, need not be sacrificed to save publishers from “Napsterization” and the loss of their customers. Moreover, the potential gains in economic efficiency, freedom of expression, and global democratization represented by digital libraries like GBS are more likely to outweigh any damage done by GBS to publishers, than had the findings of this study been otherwise.

This Article challenges the conventional wisdom within publishing industry lobbying groups concerning the economic impact of mass book-digitization projects. Using the impact of GBS on the U.S. publishers believing themselves to be the most-affected by it, it finds no evidence of a negative impact upon them. To the contrary, it provides some evidence of a positive impact, and proposes further empirical research to identify the mechanisms of book digitization’s economic impact.

Appendix: Data Used in Study

Table A1: Revenues of Publishers Most Affected by Google Book Search Library Project

<u>Publisher</u>	<u>Nominal Revenue</u>							
	<i>Before Period</i>				<i>After Period</i>			
	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	2005	2006	2007	2008
McGraw-Hill Educ.	\$2,290	\$2,343	\$2,349	\$2,396	\$2,671	\$2,524	\$2,706	\$2,639
Penguin	\$1,574	\$1,630	\$1,613	\$1,509	\$1,487	\$1,560	\$1,685	\$1,671
Simon & Schuster	\$649	\$676	\$693	\$751	\$775	\$807	\$886	\$858
John Wiley & Sons	\$614	\$734	\$854	\$923	\$974	\$1,044	\$1,235	\$1,674
<u>Total Revenue</u>	\$5,127	\$5,362	\$5,509	\$5,579	\$5,907	\$5,935	\$6,512	\$6,842

<u>Publisher</u>	<u>Revenue (2008 Dollars)</u>							
	<i>Before Period</i>				<i>After Period</i>			
	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	2005	2006	2007	2008
McGraw-Hill Educ.	\$2,784	\$2,804	\$2,749	\$2,731	\$2,945	\$2,696	\$2,810	\$2,639
Penguin	\$1,914	\$1,926	\$1,887	\$1,720	\$1,639	\$1,666	\$1,750	\$1,671
Simon & Schuster	\$789	\$809	\$811	\$856	\$854	\$862	\$920	\$858
John Wiley & Sons	\$746	\$878	\$999	\$1,052	\$1,074	\$1,115	\$1,282	\$1,674
<u>Total Revenue</u>	\$6,233	\$6,417	\$6,446	\$6,359	\$6,512	\$6,339	\$6,762	\$6,842

<u>Publisher</u>	<u>Nominal Profits</u>							
	<i>Before Period</i>				<i>After Period</i>			
	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	2005	2006	2007	2008
McGraw-Hill Educ.	\$273	\$333	\$322	\$340	\$410	\$329	\$400	\$317
Penguin	\$154	\$167	\$175	\$104	\$60	\$66	\$74	\$93
Simon & Schuster	\$41	\$54	\$55	\$60	\$62	\$69	\$88	\$79
John Wiley & Sons	\$95	\$88	\$120	\$129	\$140	\$153	\$162	\$225
<u>Total Profits</u>	\$563	\$642	\$672	\$633	\$672	\$617	\$724	\$714

<u>Publisher</u>	<u>Profits (in 2008 Dollars)</u>							
	<i>Before Period</i>				After Period			
	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	2005	2006	2007	2008
McGraw-Hill Educ.	\$332	\$399	\$377	\$388	\$452	\$351	\$415	\$317
Penguin	\$187	\$200	\$205	\$119	\$66	\$70	\$77	\$93
Simon & Schuster	\$50	\$65	\$64	\$68	\$68	\$74	\$91	\$79
John Wiley & Sons	\$115	\$105	\$140	\$147	\$154	\$163	\$168	\$225
<u>Total Profits</u>	\$684	\$769	\$786	\$722	\$740	\$658	\$751	\$714

Sources: SEC Filings and Annual Reports, available at:
 CBS/Simon & Schuster, investors.cbcorporation.com
 McGraw-Hill Companies, Inc., investor.mcgraw-hill.com
 Pearson PLC/Penguin, www.pearson.com/investors/
 John Wiley & Sons Inc., eu.wiley.com/WileyCDA/Section/id-301728.html,

Data has been adjusted for inflation using:

Bureau of Labor Statistics, Consumer Price Index & Inflation Calculator,
<http://data.bls.gov/cgi-bin/cpicalc.pl>

Note: All data are drawn from the annual report or Form 10-K issued during the year following the year of the data, so that, for example, Simon & Shuster's 2001 sales and profits are drawn from the annual report for 2001 filed on Form 10-K by CBS Corp. in 2002, the year after 2001. The sources of all data are the relevant corporations annual report filed on SEC Form 10-K and usually available at www.secinfo.com, except for Pearson PLC, sourced from annual reports on <http://www.pearson.com>. Penguin Group results were reported in British pounds but have been converted to U.S. dollars using the following average exchange rates drawn from Pearson PLC's reports: 1.92 pounds/dollar (2001), 1.92 pounds/dollar (2002), 1.92 pounds/dollar (2003), 1.92 pounds/dollar (2004), 1.85 pounds/dollar (2005), 1.84 pounds/dollar (2006), 1.99 pounds/dollar (2007), 1.85 pounds/dollar (2008).

Table A2: Comparative Gross Domestic Product and Retail Sales Data

		<u>Gross Domestic Product (in Billions of 2008 Dollars)</u>							
		<i>Before Period</i>				<i>After Period</i>			
		<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	2005	2006	2007	2008
GDP		\$12,321	\$12,518	\$12,832	\$13,299	\$13,707	\$14,101	\$14,403	\$14,466
GDP, Percentage Growth Annually		0.75%	1.60%	2.51%	3.64%	3.06%	2.88%	2.14%	0.44%
GDP, Cumulative Percentage Growth Since 2000		0.75%	2.36%	4.93%	8.75%	12.08%	15.30%	17.77%	18.29%
		<u>Retail Sales (in Billions of 2008 Dollars)</u>							
		<i>Before Period</i>				<i>After Period</i>			
		<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	2005	2006	2007	2008
Retail Sales		\$3,729	\$3,751	\$3,824	\$3,966	\$4,076	\$4,145	\$4,159	\$3,959
Retail Sales, Percentage Growth Annually		-0.20%	0.58%	1.94%	3.72%	2.78%	1.69%	0.33%	-4.81%
Retail Sales, Cumulative Percentage Growth Since 2000		-0.20%	0.38%	2.33%	6.14%	9.08%	10.93%	11.30%	5.95%

Source: Statistical Abstract of the United States, 2005 and 2010, <http://www.census.gov/compendia/statab/2010/files/income.html> & <https://www.census.gov/compendia/statab/2010/tables/10s1019.xls>; U.S. Bureau of the Census, Retail Sales, <http://www2.census.gov/retail/releases/current/arts/sales.pdf>; U.S. Dep't of Agriculture, Economic Research Serv., Int'l Macroeconomic Data Set (2009), <http://www.ers.usda.gov/data/macroeconomics/>