

# **Thriving at Amazon: How Schumpeter Lives in Books Today**

Short running title: Schumpeter at Amazon

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## Abstract

Amazon.com's "Search Inside the Book" feature provides a new and exciting tool for bibliometric research. Over the last few years, a growing number of books listed on Amazon.com reference Schumpeter in some way. As of May 3, 2007, Amazon listed 8,086 books that in some way refer to Schumpeter. Of these, I currently have names and titles of 3,719 books in the Schumpeter Amazon database. Of these, I have done content-analysis for 1,176 books that make reference to Schumpeter. The main result is that a significant number of the references to Schumpeter are related to creative destruction. The percent of Schumpeter-references where the reference is related to creative destruction is significantly higher for books on business than books on economics. I believe this is a case where market demand reflects intellectual value, even if academic economics has not done much to incorporate Schumpeter's central ideas.

**JEL codes:** A11 - Role of Economics; Role of Economists; Market for Economists; B25 - Historical; Institutional; Evolutionary; Austrian; O30 - Technological Change, General.

**Key words:** Schumpeter, creative destruction, bibliometrics, technology, growth, productivity

Capitalism is by nature a form of economic change and not only never is but never can be stationary. The process of Creative Destruction is the essential fact about capitalism. . . . To ignore this central fact is like *Hamlet* without the Danish prince. **Schumpeter** as quoted in p. 2 of Max Page, *The Creative Destruction of Manhattan, 1900-1940*, p. 2.

Schumpeter famously argued (1950, p. 83) that the essential fact about capitalism is creative destruction, and evidence generally supports the claim (Diamond 2006). Academics are increasingly recognizing the importance of Schumpeter's work (Diamond 2007d). Since the mid-1990s annual citations to *Capitalism, Socialism and Democracy* have even exceeded annual citations to Keynes's *General Theory*.

Nonetheless, the economics profession generally has neglected the process of creative destruction in its research, in what it teaches (Diamond 2007b; Johansson 2004), and in its policy advice. I see two main reasons for the neglect. One involves the difficulty in representing some important aspects of creative destruction in formal models. Another is the common belief that creative destruction's negative effects on labor outweigh its positive effects on consumers. I discuss the first reason in Diamond 2007a and the second in Diamond 2007c.

Life is continual action. To act effectively, part of what business practitioners, government policy makers, and voters need to know is how the economy works. Unfortunately for these actors, most academic economists seem not to care much about how useful their research is to these practitioners. Academic economists generally

write for each other through journal articles. Book authors, in contrast, are more likely to care about how useful their research is to practitioners. So one way to learn what practitioners find useful is to look at the supply and demand of ideas as represented by the Amazon book market. Does the market make much use of Schumpeter's ideas? And if it does, which of Schumpeter's ideas does it find most useful?

The phrase "creative destruction" has stimulated a wide audience of thinkers and doers. No fewer than 14 books have appeared since the mid-1990s with "creative destruction" *in the title*.

On October 23, 2003, Amazon introduced a new feature called "Search Inside the Book" (Wolf 2003). *Wired* journalist Gary Wolf reported that as of that date, Amazon had over 120,000 books available through the feature. That amounted to more than 33 million pages, from more than 190 publishers, "including Wiley, Time Warner Book Group, Simon & Schuster, Inc., Random House, Inc., and many others" (Price 2003). As of November 2006, information scientist Peter Jasco estimates that approximately 280,000 books were in the "Search Inside the Book" database (Jasco 2006).

If a publisher submits a book to the "Search Inside the Book" feature, then Amazon customers are able to search the entire contents of the book for pages where any word appears. The customers can then read the pages where the word appears, as well as the preceding two and following two. Since its debut, not much additional information about the feature has become available.

Because the "Search Inside the Book" resource is still evolving and unexplored, the results reported here are tentative. Since there would be many more books that

mention Schumpeter than could be examined in a first effort, it was necessary to select a sample.

Using Amazon's "bestselling" ranking criterion, on February 29, 2004, a "Search Inside the Book" search for 'Schumpeter' yielded 2,692 "results." On May 11, 2004, a "Search Inside the Book" search for 'Schumpeter' yielded 2,866 "results," when ranked by the "bestselling" criterion. So over a period of about 10 weeks, 174 Schumpeter-referencing books were added to the "Search Inside the Book" feature. This represents a 6.5 percent increase over the period.

At intervals since "Search Inside the Book" began, I have entered Amazon and searched for "Schumpeter" under the "books" heading. The "results" number has increased steadily, as seen in Table 1. Admittedly, the increase could be simply due to an increase in the number of books included in the "Search Inside the Book" list, but it might also reflect an increased propensity of authors to reference Schumpeter.

I established eight content categories, and a ninth miscellaneous category, as shown in Table 2. Graduate student Angela Kuhlmann then examined the mentions of Schumpeter, and classified them for each book. If Schumpeter was mentioned on several pages of a connected discussion, then that was counted as one reference. Only if mentions of Schumpeter were in separate sections, or chapters, or were separated by at least several pages, were they counted as multiple references. In cases where there were 10 or fewer pages with mentions of Schumpeter, all of these pages were examined. In cases where there were more than 10 pages with mentions of Schumpeter, a sample of the pages was examined from each connected collection of

mentions.<sup>1</sup> In the infrequent cases where a reference could be placed in more than one category, a judgment was made of which category was the main one.<sup>2</sup>

We currently have names and titles of 3,719 books in the Schumpeter Amazon database. Of these we have done content-analysis for 1,176 books. On the basis of book titles, books were also classified as being about business, economics, both business and economics, or neither business nor economics. Any book with any form of the word “economics” in the title was considered “economics.” We classified broadly, in the sense that if we were not sure if a book belonged in a category, we included it. Any book that was about some aspect of business, or intended to be useful to those engaged in business, or about some aspect of technology, was considered “business.”

The oldest book in the sample of 1,176 had a copyright date of 1957, while the most recent had a copyright date of 2005. The mean was 1998.3, while the median was 2000. An Excel spreadsheet listing the 1,176 books, and their classification by content category and by “economics” or “business” can be found at [www.artdiamond.com](http://www.artdiamond.com). (The data set is too large to provide this information as a table in the paper itself.) Also posted on the web site, is a document called “Amazon Data Details,” that provides more information on variable definitions and other aspects of the data set.

Table 3 provides the basic results of the content-analysis of the 1,176 books that

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<sup>1</sup> Three prominent examples are: Foster and Kaplan’s *Creative Destruction* with 26 pages of mentions, Heilbroner’s *The Worldly Philosophers* with 38 pages of mentions, and Muller’s *The Mind and the Market* with 67 pages of mentions.

<sup>2</sup> Endnotes were not counted as separate references except in the infrequent cases where they included a discussion of Schumpeter that did not correspond to a Schumpeter reference in the main text. Mentions in bibliographies or in indexes, were not counted.

reference Schumpeter. In Table 3, the top numbers are “counts,” while the bottom numbers are “sums.” For example, if a book had three references to creative destruction, it would be recorded under “Creative Destruction” as a count of one and a sum of three. (It follows that the “counts” are always less than or equal to the “sums” in each cell.) The main result in Table 3 is that a significant number of the references to Schumpeter are on issues related to creative destruction. This main result remains true whether we examine the “counts” measure or the “sum” measure.

Table 4 addresses the question of whether books on business, economics, or other fields were more likely to have their Schumpeter references be references to creative destruction. The “narrow” business category included books that were categorized as being on business, but not as being on economics. The “broad” business category included the books in the “narrow” category, and also included the books that were classified as both on business and on economics. (A similar distinction was made between the “narrow” and the “broad” economics categories.) The main result of Table 4 is that *references to Schumpeter in business books were much more likely to be references to creative destruction than were references to Schumpeter in economics books.*

I do not think that Amazon customers are always right. In this particular case, however, I think that they have found a concept to be useful, that academic economists have too often ignored.

**Table 1: Number of Amazon Books that Reference Schumpeter Over Time\***

<b>Date Searched</b>	<b>Number of “Results”</b>
2004-02-29	2,692
2004-05-11	2,866
2005-02-18	5,307
2007-02-01	7,747
2007-05-03	8,086

\*Just the last name was used as the search term. The rate of increase in books referencing Schumpeter would reflect some combination of the increase in the number of books included in “Search Inside the Book” and any increase in authors’ propensity to reference Schumpeter.

**Table 2: Elaboration of Content Analysis Categories\***

<b>Type of Reference</b>	<b>Elaboration of What Counted</b>
Creative Destruction	Had to specifically use the phrase “creative destruction.”
Views on Democracy	Examples: the definition of democracy, a discussion of the democratic process, or the competition for votes.
In Role as Historian of Economic Thought	Referring to his writings, or interpretations, as an historian of economic thought.
Long Cycles	Reference to his theory that technology innovations occur in long waves (usually in the context of Kondratieff cycles).
Prediction of Capitalism’s Demise	Refers to his prediction that capitalism will collapse and be replaced by socialism.
Theory of Imperialism	Refers to his theory of imperialism.
Evolutionary Method in Economics	Emphasis on change, not equilibrium; had to use some form of the word “evolution” somewhere in the discussion.
Dynamic (Leapfrogging) Competition	Dynamic competition rather than price competition; had to use the word “dynamic” somewhere in the discussion.
Hypothesis that Large Firms Innovate More	A reference to his hypothesis that larger firms were more likely to innovate.
Miscellaneous	Anything that did not fit neatly into any of the above categories.

\*Angela Kuhlman wrote the first draft of the summary information in this table.

**Table 3: Content Analysis of References to Schumpeter for 1,176 Books Analyzed\***

Type of Reference	Topic Area of Books				
	Just Bus.	Both Bus. & Econ.	Just Econ.	Neither Bus. nor Econ.	All
Creative Destruction	133 (168)	23 (31)	45 (53)	164 (191)	<b>365</b> <b>(443)</b>
Views on Democracy	2 (2)	2 (4)	9 (13)	132 (178)	<b>145</b> <b>(197)</b>
In Role as Historian of Economic Thought	3 (5)	8 (11)	38 (63)	69 (84)	<b>118</b> <b>(163)</b>
Long Cycles	18 (18)	3 (4)	10 (16)	19 (21)	<b>50</b> <b>(59)</b>
Prediction of Capitalism's Demise	5 (5)	4 (5)	12 (12)	22 (25)	<b>43</b> <b>(47)</b>
Theory of Imperialism	0 (0)	0 (0)	5 (5)	33 (42)	<b>38</b> <b>(47)</b>
Evolutionary Method in Economics	8 (9)	3 (3)	6 (7)	10 (11)	<b>27</b> <b>(30)</b>
Dynamic (Leapfrogging) Competition	10 (10)	2 (3)	8 (9)	7 (7)	<b>27</b> <b>(29)</b>
Hypothesis that Large Firms Innovate More	4 (4)	1 (1)	2 (2)	6 (6)	<b>13</b> <b>(13)</b>
Miscellaneous	121 (165)	31 (52)	115 (179)	341 (429)	<b>608</b> <b>(825)</b>
<b>Totals</b>	<b>304</b> <b>(386)</b>	<b>77</b> <b>(114)</b>	<b>250</b> <b>(359)</b>	<b>803</b> <b>(994)</b>	<b>1,434</b> <b>(1,853)</b>

\*The top numbers are “counts” (number of books making reference). The bottom numbers (in parentheses) are “sums” (number of references---there may be more than one reference from the same book, if the mentions of Schumpeter are separated by several pages).

**Table 4: Content Analysis of References to Schumpeter for 1,176 Books Analyzed\***

<b>Field of Book</b>	<b>Percent of All References that are to Creative Destruction</b>
Narrow Business	43.75
Broad Business	40.94
Narrow Economics	18.00
Broad Economics	20.80
Both Economics and Business	29.87
Neither Economics Nor Business	20.42
All	25.45

\*The percents are calculated from the Table 3 “counts” numbers.

## Footnotes

\*I appreciate useful comments from Charles McCann, Fred Foldvary, and an anonymous referee. I am grateful for excellent and substantial research assistance on this project from Angela Kuhlmann. More recently, I have also received substantial, able research assistance from Molly McGrath. Able assistance has also been provided by Miaomiao Yu. The current paper is a small part of a broader project arguing that creative destruction should be given increased attention in research, teaching and policy. Other components of the project can be found, and downloaded from [artdiamond.com](http://artdiamond.com).

## Bibliography

**Diamond, Arthur M., Jr.** 2007a. Fixing Ideas: How Research is Constrained by Mandated Formalism. Working draft..

**Diamond, Arthur M., Jr.** 2007b. The Neglect of Creative Destruction in Micro-Principles Texts. *History of Economic Ideas* (forthcoming).

**Diamond, Arthur M., Jr.** 2007c. Schumpeterian Labor Economics: The Labor Pains (and Labor Gains) from Creative Destruction. Working draft..

**Diamond, Arthur M., Jr.** 2006. Schumpeter's Creative Destruction: A Review of the Evidence. *Journal of Private Enterprise* 22(1): 120-146.

**Diamond, Arthur M., Jr.** 2007d. Schumpeter vs. Keynes: "In the Long Run Not All of Us Are Dead". Working draft..

**Foster, Richard and Sarah Kaplan.** 2001. *Creative Destruction: Why Companies that Are Built to Last Underperform the Market---and How to Successfully Transform Them.* New York: Currency Books.

**Heilbroner, Robert L.** 1999. *The Worldly Philosophers: The Lives, Times and Ideas of the Great Economic Thinkers*, 7<sup>th</sup> ed. New York: Touchstone Books..

**Jasco, Peter.** 2006. Google Book Search (A.K.A. Googleprint). On *Peter's Digital Reference Shelf* A Blog Hosted by Thomson Gale Publishing. Online: <http://www.gale.com/reference/peter/googlebooks.htm> (cited: April 24, 2007).

**Johansson, Dan.** 2004. Economics without Entrepreneurship or Institutions: A Vocabulary Analysis of Graduate Textbooks. *Econ Journal Watch* 1(3): 515-538. [Link](#)

**Muller, Jerry Z.** 2003. *The Mind and the Market: Capitalism in Modern European Thought*. New York: Anchor Books.

**Page, Max.** 2000. *The Creative Destruction of Manhattan, 1900-1940*. Chicago: University of Chicago Press.

**Schumpeter, Joseph A.** 1950. *Capitalism, Socialism and Democracy*. 3rd ed. New York: Harper and Row.

**Wolf, Gary.** 2003. The Great Library of Amazonia. *Wired News* Online: <http://www.wired.com/news/print/0,1294,60948,00.html> (cited: April 15, 2004).

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Arthur Diamond is a professor of economics at the University of Nebraska at Omaha. His past research has often been on the economics of science, history of economic thought, and labor economics. He recently has published articles on the contributions to the economics of science and technology of Edwin Mansfield, Zvi Griliches, and George Stigler. Currently, he is writing a book in which he argues that the process of creative destruction should be more central to economists' research, teaching, and policy advice. Entries in his blog, [artdiamondblog.com](http://artdiamondblog.com), often focus on free markets, creative destruction, or entrepreneurship. His email is: [adiamond@mail.unomaha.edu](mailto:adiamond@mail.unomaha.edu).