THE SILVER LINING

An Innovation Playbook for Uncertain Times

SCOTT D. ANTHONY

HARVARD BUSINESS PRESS

Printed in the United States of America

13 12 11 10 09 5 4 3 2 1

Library of Congress Cataloging-in-Publication Data
Anthony, Scott D.
The silver lining : an innovation playbook for uncertain times / Scott D. Anthony.
p. cm.
ISBN 978-1-4221-3901-1 (hardcover : alk. paper)
1. Technological innovations—Management—Case studies.
2. Disruptive technologies—Management—Case studies. 3. New products—Case studies. 4. Business planning. I. Title.
HD45.A68 2009
658.4'063—dc22 2009000466

CONTENTS

INTRODUCTION

I wasn't supposed to write this book.

I was supposed to be in the midst of my first semester as a doctoral student at the Harvard Business School, filling whatever idle hours I had with activities at Innosight. I had planned for the transition for almost two years and was confident in my decision. Until one weekend in July, when it became clear to me that continuing in my role at Innosight presented the best platform to help managers improve their ability to successfully innovate.

In the midst of the market meltdown in October, my mother asked me if I still thought I had made the right choice.

"How do you feel about walking away from a recession-proof industry?" she asked.

"I haven't even thought about it," I replied.

I wasn't focused on what could have been; I was focused on helping innovators figure out what the economic crisis meant to them. The media was filled with a steady drumbeat of negative news, but even a cursory glance at previous downturns suggested that there were clear rays of hope. Of course, realizing that hope required thinking and acting differently. Thus, the idea for a book providing practical assistance for innovation in uncertain times.

In Gratitude

The tools in this book all trace back to fieldwork with top-flight innovation practitioners. I am particularly grateful to my friends at Procter & Gamble, especially George Glackin, Terry Lynch, Mark Dawes, Karl Ronn, Bruce Brown, Beth Combs, Jessica Sams, John Leikhim, Greg Icenhower, Charlotte Otto, Mike Grieff, Joanna Zucker, Gil Cloyd, Marie Harris, Gary Coombe, Melanie Healey, Judy Miller, Marc Pritchard, Mike DiPaola, Sue Ede, Tom Dierking, Nancy McCarthy, Dave Caracci, Alan Goldstein, Anne Lilly Cone, Stephanie Connaughton, Karen Gallagher, David Dintenfass, Jill Boughton, Daisuke Otobe, and Dave Nichols. I hope I have taught them a fraction of what they have taught me. Special thanks also go to longtime friends Michael Putz from Cisco Systems (whose research into leadership development forms the backbone of chapter 8), Tyler England from Hewlett-Packard, Eleanor Cippel and Mark Contreras from Scripps, Dave Goulait, Clark Gilbert, Dick Foster, and Steve Kraus.

My colleagues at Innosight are a consistent source of inspiration. I owe particular thanks to Natalie Painchaud, who uncovered great historical stories; Tim Huse, who helped with key analyses; Steve Wunker, who made invaluable comments on the manuscript; Joe Sinfield, who provided key insights into the concepts in chapter 3; and Matt Eyring, who developed the conceptual underpinning of chapter 7. Of course, all of us at Innosight remain perpetually thankful that Clayton Christensen and Mark Johnson conspired to send us on this journey almost a decade ago.

Jacque Murphy and Kathleen Carr from Harvard Business Press have been critical thought partners throughout the book's development. They deserve praise for moving so quickly to make this book a reality. Stephani Finks came up with the creative idea for the shimmering cover, and Allison Peter helped to polish *The Silver Lining*.

I finished the second draft of the manuscript in late December at my parents' home in Maryland, surrounded by four siblings and their partners, seven nieces and nephews, my parents, three dogs, and five puppies. It was as wonderfully chaotic as it sounds. Mom, Dad, Tricia, John, Michelle, Scott, Mike, Jess, Pete, David, thanks as always.

To my children, Charlie and Holly: There's simply nothing more gratifying than seeing smiles break out on your faces when I return home from a long day at work. You make your father happier than you'll ever know.

Finally, to my wife Joanne: It is hard for me to believe it has been ten years since I coaxed you to move from your home in England to what has become our home in Boston. There isn't a day that goes by when I don't say a silent prayer for whatever it was that allowed life to unfold in a way that we ended up together. When my own dark clouds roll in, you are my silver lining. I continually strive to be as good a husband and father as you are a wife and mother.

To Joanne.

1

The Great Disruption

National Cash Register was formed in the midst of the "Semi-Panic" of 1884. Apple launched its iPod in 2001. Tough times don't stop innovation. Managing in the Great Disruption requires companies to master constant change—or suffer the consequences.

My three-year-old son usually begins the day with boundless optimism. He bounces out of bed, gets his breakfast, and is ready to take on the world. As it brightens outside (yes, he's usually up before 6 a.m.), he inevitably goes to the window. If it is a gloomy day, he will turn around with a forlorn look on his face and say, "Daddy, the dark clouds have rolled in" (a phrase taught to him by Ms. Wendy at day care).

For companies passionate about growth and innovation, the dark clouds indeed rolled in last year. As financial titans fell, Wall Street trembled, Main Street froze, consumers and investors panicked, and everyone seemed to hesitate while waiting for stability to return, the notion that innovation must be entering a period of dormancy seemed inevitable.

Historians appropriately termed the economic wasteland of the 1930s the Great Depression. Output shrunk, unemployment rose, and people fought hard just to get a job. It wasn't a completely chaotic time, however. If you compare the list of companies that made up the Dow Jones Industrial Average in July 1930 to the July 1939 list, you would see that twenty-two of the thirty companies remained the same.

While the 2000s prior to 2008 have had economic and geopolitical shocks, just about everyone would agree that the economic situation was substantially more stable than that during the Great Depression. Yet, if you compared the companies that constituted the Dow Jones Industrial Average in July 1999 to the July 2008 list, you would see that twenty-two of the thirty companies remained the same.[1]

In other words, the past decade's stability was a mirage; there wasn't really much calm before the storm. Over the past decade, technological improvements and a stark increase in venture capital financing have made starting and scaling businesses easier than ever. The rise of Brazil, Russia, China, India, and other emerging markets mean market leaders have to deal with more sharp-elbowed competitors than ever before. Industries are frantically converging and colliding. These changes have made it harder for great companies to maintain greatness. Leaders in a range of industries can attest that they have been grappling with the effect of these forces for some time.

Consider Microsoft (which became a component of the Dow Jones average in November 1999). A decade ago, the only threat to the company seemed to be the prospect of a breakup orchestrated by the U.S. Justice Department. The company has grown steadily over the past decade, from $15 billion in revenues in 1998 to $60 billion in revenues in its most recently completed fiscal year. It has built big businesses in new markets like mobile phones, video gaming, and home entertainment. Its reward? A stock price that has decreased relative to the market among widespread concern that there is no way the company can counter the threat posed by Google.

Or think about beleaguered newspaper companies. The emergence of the Internet in the late 1990s seemed to be an obvious threat to most companies. Yet by 2002, most newspaper companies had launched successful Web sites and enjoyed operating margins approaching 30 percent. Today the industry is fighting for its very survival. Tribune Company, whose diversified media properties include the *Los Angeles Times,* the *Chicago Tribune,* and WGN America, went bankrupt in late 2008. In 2005, Lee Enterprises purchased Pulitzer Inc.—a company two-thirds its size—for roughly $1.5 billion. By the end of 2008, the combined entity was worth about $75 million.

An appropriate name for today's times is the Great Disruption. Change is ripping through markets at unprecedented pace. Competitive advantage that took decades to build disappears seemingly overnight. While output might shrink and unemployment is sure to rise, companies that master these forces still have a chance to thrive; those that don't are sure to struggle.

No one is certain yet how the malady facing the global economy will play out. The worst might be behind us; it might not. Regardless, many companies are going to face severe challenges. Does that mean that would-be innovators should go into deep hibernation? Instead of thinking of the next great thing, should innovators hide out in seemingly safe operating roles until the current storm passes? Not if history is any guide.

Historical Signs of Hope

Innovation can flourish, even in the toughest of economic climates. This section highlights new companies or innovations launched in past downturns and shows how the last few downturns didn't hold back "on the brink" attackers that were transforming current markets or creating new ones.

Businesses Forming, Innovations Launching

Step back to the early 1880s. The past decade had been chaotic. The Great Panic of 1873 resulted in a sixty-five-month downturn. The early 1880s featured economic expansion, but the country slipped back into recession in 1884. The 1883–1884 recession wasn't quite as severe as the contraction of the 1870s, but it was severe enough that some historians called 1884 the "Semi-Panic." A *New York Times* article in 1911 looking at past economic downturns noted, "The great activity existing from 1878 to 1882 began to cease in 1883, and by the early part of 1884 there was a curtailment in almost every branch of trade. Failures began to increase, several railroads went into receiverships, while the most striking feature of all was the drop in the price of securities, and especially of commodities. For example, the price of steel rails dropped from $71 in 1880 to $35 at the close of 1888."[2]

It would seem like a terrible time to introduce an expensive new product into the market. But brothers John and Frank Patterson sensed an opportunity. The country's transition from an agrarian economy was driving substantial growth in the retail industry. The Patterson brothers' experience running a general store in one of their coal yards exposed them to a long-term problem facing retailers across the country: managing cash. At the time, retailers' registers were nothing more than wooden drawers that held bills and coins. Employees could easily take a couple of bills from the till without the retail owner ever knowing about it. In fact, it was hard for store owners to really know with any degree of certainty whether they were operating at a profit or a loss.

Here's how John Patterson described the problem: "At the end of three years, although we had sold annually about $50,000 worth of goods on which there was a large margin, we found ourselves worse off than nothing. . . One day I found several bread tickets lying around loose, and discovered that our oldest clerk was favoring his friends by selling below the regular prices. Another day I noticed a certain credit customer buying groceries. At night, on looking over the blotter, I found that the clerk had forgotten to make any entry of it. This set me to thinking that the goods might often go out of the store in this way—without our ever getting a cent for them."[3]

Some retailers developed complex systems to help minimize theft. For example, large retailers would physically separate clerks who dealt with customers from cordoned-off cashiers who handled money. They would employ "cash children" who would hand-deliver money to the cashier and bring the clerk change, a sales voucher, and the wrapped goods (the cashiers were often colocated with wrapping desks). More advanced retailers would use what was known as the "Lamson cash-basket system," which involved wire-pulley systems that brought money in steel cages to store owners or trusted employees.[4]

In 1878, James Ritty, a Dayton tavern keeper, was on an ocean liner bound for Europe.[5] Ritty noticed a device that made a notation every time the ship's propeller rotated. Intrigued by the concept, Ritty and his brother invented a mechanical device patented in 1879 as "Ritty's Incorruptible Cashier." Ritty's original device was fairly rudimental, with no cash drawer. Further versions added a cash drawer and paper rolls to record transactions, which would make theft more difficult and provide retailers much greater control over their operations. Ritty sold his business in 1882 to a local china and glassware salesman.

The Patterson brothers were early customers of Ritty's machines. The register sold for $100, which in today's terms is about $2,500. As John Patterson noted, "One day we received a circular from someone in Dayton, Ohio, advertising a machine which recorded money and sales in retail stores. The price was $100. We telegraphed for two of them, and when we saw them we were astonished at the cost. They were made mostly of wood, had no cash drawer, and were very crude. But we put them in the store, and, in spite of their deficiencies, at the end of twelve months we cleared \$6,000."[6] As their coal and railroad investments declined in 1884, the Patterson brothers decided to purchase Ritty's company for about \$6,500, rename it National Cash Register, and commercialize the mechanical cash register. NCR went on to dominate this new market, which helped to accelerate the modernization of the retailing industry. By 1911, it had sold more than 1 million machines and had 95 percent of the market. Thomas J. Watson Sr., who would go on to transform IBM into a technology powerhouse during his thirty-year reign as president, developed his legendary sales skills at NCR. Today, NCR has more than \$6 billion in annual revenue.

The story is timeless. A deep-seated customer problem coupled with a novel way to address that problem. Customer problems don't fade in tough economic times; in fact, tough economic times can highlight previously hidden problems or cause old problems to intensify. Petty theft that is a nagging problem in booming times becomes a make-or-break issue as money gets tighter. Companies might think that customers flee to safety and become uninterested in innovative ideas when times get tough. However, longitudinal research by market research company Nielsen suggests that is not the case. The research shows that U.K. and U.S. consumers stated intention to purchase innovative products, and the value they perceive in new products has remained remarkably stable over the past thirty years.[7]

NCR isn't an isolated example. Twenty-five of the companies that made up the Dow Jones Industrial Average in December 2008 were formed since the National Bureau of Economic Research (NBER) started tracking economic cycles in the United States. Thirteen of those twenty-five, including 3M, General Electric, Microsoft, and Walt Disney, were formed in a year that featured an economic downturn.[8]

Many other notable companies came into being in economically difficult years. A partial list of companies formed in the United States in a year featuring a recession includes Ann Taylor, Bain & Company, Black & Decker, Bridgestone Tire, Church & Dwight, Colgate-Palmolive, Compaq, ConAgra Foods, Cummins, Digital Equipment Corporation, Dow Chemical, Dow Jones, Electronic Arts, Eli Lilly, Enterprise Rent-A-Car, Harley-Davidson, iRobot, Johnson Controls, Marvel Entertainment, Mattel, McKinsey & Co., Merrill Lynch, Newell Rubbermaid, Post Cereals, Progressive, RCA, Scott Paper, Starwood Hotels & Resorts Worldwide, Texas Instruments, The Hershey Company, Toys "R" Us, and Whole Foods Market.

Further, a number of game-changing product, service, or business model innovations were developed or launched in tough economic climates. In 1876, Alexander Graham Bell developed the technology underpinning the modern telephone. Eastman Kodak launched its Brownie camera, which transformed the world of photography, in 1900. McDonald's pioneered its fast-food service technique under the name "Speedee Service System" in 1948 (discussed in more depth in chapter 7). Sony introduced its transistor radio in 1957.

Procter & Gamble introduced Pampers brand disposable diapers in 1961. IBM launched its first personal computer in 1981. Nokia introduced its first car phone in 1982. Apple launched the first version of the iPod in 2001.

On-the-Brink Disruptors Surging

Many of the developments detailed fit the pattern of "disruptive innovation" (see "Disruption Defined" for an overview). Disruptive innovators bring something completely different to a market. Instead of trying to play the innovation game *better* than existing competitors, the disruptor *changes the game*. Disruptors typically transform existing markets or create new ones by focusing on convenience, simplicity, accessibility, or affordability. Academic research and Innosight fieldwork show that disruptive innovation is the more reliable way to create new growth businesses.[9]

It's natural to assume that tough times would be particularly hard on up-and-coming disruptive companies that have had some early success but haven't broken through to the mainstream. After all, consumers and companies snapping collective wallets shut would surely take the wind out of the sails of still unfamiliar up-and-comers.

History suggests otherwise. Innosight analyzed how up-and-coming disruptors (defined as disruptive companies with revenues of less than $1 billion) did in the face of the last three economic downturns in the United States (as dated by the NBER to cover 1980–1982, 1990, and 2001).[10]

In 1979, eleven such companies, such as Intel, Home Depot, Nucor, and Southwest Airlines, fit the criteria. Revenues of

DISRUPTION DEFINED

Harvard Business School professor Clayton Christensen identified the pattern of disruptive innovation through research in the hard-disk industry. In that research, summarized in the 1997 book *The Innovator's Dilemma,* Christensen determined that market leaders almost always won when the battle involved bringing a product that offered improvement along traditional performance dimensions to leading customers.[11] Christensen termed these improvements *sustaining* innovations, because they sustained an incumbent's business model. Christensen found that market leaders almost always lost when the battle involved bringing a product that was worse along traditional performance dimensions (e.g., disk capacity), but better along different performance dimensions (e.g., size). These innovations tended to take root in different markets that uniquely valued the new performance dimensions. Christensen called these *disruptive* innovations because they disrupted and redefined what constituted quality.

Subsequent research and fieldwork have identified more than two hundred disruptive developments over the past fifty years across a range of industries. Some disruptions, like discount retailing (Wal-Mart), low-cost automobiles (Toyota), steel mini-mills (Nucor), and digital music (Apple), reshape existing markets. Other disruptions, like personal computers, online advertising (Google), and online auctions (eBay), create entirely new markets.

the eleven companies grew at a compound annual rate of 22 percent between 1979 and 1982. Between 1989 and 1991, the sample of eleven up-and-coming disruptors, which included Best Buy, Cisco, and Charles Schwab, grew revenues by 33 percent. Investors who spotted these companies earned hefty returns. Investing $10,000 in the nine companies in the sample that were publicly traded at the end of 1989 and another $10,000 in Cisco when it went public in early 1990, would turn $100,000 into almost $300,000 by the end of 1991 (a tidy 72 percent annual return). A similar investment in the S&P 500 would have turned $100,000 into about $120,000.

The pattern continued in the 2001 downturn. Between 2000 and 2002, twenty-three up-and-coming disruptors such as Google, Amazon.com, and Research In Motion (the manufacturer of the popular BlackBerry line of products) grew revenues by 32 percent.

Our sample is heavily biased, but still the directional results are interesting.[12] If you are an investor or analyst, it suggests paying careful attention to up-and-coming disruptors that have built a solid base from which to drive further growth, such as Alibaba.com, iRobot, EnerNOC, K12 Inc., First Solar, Facebook, and LinkedIn (some of these companies are highlighted in more depth in chapter 9). If you work for an operating company that is debating whether to postpone disruptive innovation efforts until better times arrive, be careful. You might be missing powerful growth opportunities and creating space for competitors to create substantial competitive advantages in tomorrow's great growth markets.