

REGIONAL BUSINESS REVIEW

Booth College of Business and Professional Studies



ARTICLES:

Industry Financial Crisis: An Endemic Problem?

William G. Jens Jr., Michael E. Roach, Patricia O. Chisolm

State Tax Policy and Ethanol: The Case of Missouri

Mark Jelavich, Stephen Ludwig

The Economics of Cultural Heritage Events:

An Input/Output Analysis of the Economic Impact of Knights of Ak-Sar-Ben's River City Rodeo and Stock Show on the City of Omaha, Nebraska

Christopher S. Decker

Paid Tax Preparer Determinants Reexamined

Diamond Garner, Ramon P. Rodriguez Jr., and Juan Xu

BOOK REVIEWS:

Wannabe U: Inside the Corporate University

Gave Tuchman

Reviewed by Kori Hoffman

The Rational Optimist: How Prosperity Evolves

Matt Ridley

Reviewed by Janet Marta

Real Leaders Don't Do PowerPoint:

How to Sell Yourself and Your Ideas

Christopher Witt

Reviewed by Doug Russell

The Google Way: How One Company is

Revolutionizing Management as We Know It

Bernard Girard

Reviewed by Allison Hoffman

Blown to Bits: Your Life, Liberty, and

Happiness After the Digital Explosion

Hal Abelson, Ken Ledeen, and Harry Lewis

Reviewed by Joni Adkins

Available online at www.nwmissouri.edu

Regional Business Review

Volume 31 May 2012

ISSN 8755-1977

*Northwest Missouri State University
Booth College of Business and Professional Studies
660.562.1277*

Gregory Haddock, Acting Dean
Booth College of Business and Professional Studies

Stephen Ludwig, Chair
Department of Accounting/Economics/Finance

Arley Larson, Chair
Department of Agriculture

Phillip Heeler, Chair
Department of Computer Science/Information Systems

Chi Lo Lim, Chair
Department of Marketing/Management

Doug Sudhoff, Chair
Department of Mass Communication

Terry Coalter, Editor

CONTENTS

ARTICLES:

- Industry Financial Crisis: An Endemic Problem? 1
William G. Jens Jr., Michael E. Roach, Patricia O. Chisolm
- State Tax Policy and Ethanol: The Case of Missouri 25
Mark Jelavich, Stephen Ludwig
- The Economics of Cultural Heritage Events: An Input/Output Analysis
of the Economic Impact of Knights of Ak-Sar-Ben's River City Rodeo and
Stock Show on the City of Omaha, Nebraska 33
Christopher S. Decker
- Paid Tax Preparer Determinants Reexamined 49
Diamond Garner, Ramon P. Rodriguez Jr., Juan Xu

BOOK REVIEWS:

- Wannabe U: Inside the Corporate University 69
Gave Tuchman
Reviewed by Kori Hoffman
- The Rational Optimist: How Prosperity Evolves 71
Matt Ridley
Reviewed by Janet Marta
- Real Leaders Don't Do PowerPoint: How to Sell Yourself and Your Ideas 73
Christopher Witt
Reviewed by Doug Russell
- The Google Way: How One Company is
Revolutionalizing Management as We Know It 75
Bernard Girard
Reviewed by Allison Hoffman
- Blown to Bits: Your Life, Liberty, and Happiness After the Digital Explosion 78
Hal Abelson, Ken Ledeen, and Harry Lewis
Reviewed by Joni Adkins

Terry Coalter, Editor
Amanda Wahlenmaier, Editorial Assistant
Teresa Carter, Publications Coordinator

The editor gratefully acknowledges assistance from the following reviewers from Northwest Missouri State University:

John Baker	Deborah Toomey
Ben Blackford	James Walker
Allison Hoffmann	Jason White
Mark Jelavich	Rahnl Wood
Tiebing Shi	

from other institutions:

Stephen Allen, Truman State University
Christopher Decker, University of Nebraska-Omaha
Bruce Domazlicky, Southeast Missouri State University
Leslie Fletcher, Georgia Southern University
Konrad Gunderson, Missouri Western State University
Rebekah Heath, Pittsburg State University
Johndavid Kerr, Harris-Stowe State University
Janet L. Lear, University of Nebraska-Kearney
James Martin, Washburn University
Patrick McMurry, Missouri Western State University
Eric J. Munshower, University of Dubuque
Willie Redmond, Southeast Missouri State University
Lei Wen, Buena Vista University

Manuscript Submissions

The *Regional Business Review* welcomes manuscripts in the fields of management, marketing, finance, economics, accounting, management information systems, and other business-related fields. Interested authors should contact the editor for manuscript submission guidelines:

Terry Coalter, JD, PhD, Editor
Booth College of Business and Professional Studies
Northwest Missouri State University
800 University Drive
Maryville, MO 64468-6001
coalter@nwmissouri.edu

Industry Financial Crisis: An Endemic Problem?

William G. Jens, Jr.

Michael E. Roach

Patricia O. Chisolm

McNeese State University

ABSTRACT

Three significant industry crises (dubbed the S&L Crisis, the Dot.com Bust, and the Wall Street Meltdown) have occurred within the last 25 years. The cost to the public, both in terms of loss of market capital and government bailout monies spent, has been considerable. The crises were triggered by a variety of causes but had selected similarities including a lessening or cessation of regulation, “creative” or other unique financing or valuation vehicles that were not necessarily understood by the public, and a general lack of warning. In all three instances, the companies involved failed to receive a going-concern qualification in their audit opinion immediately preceding the event in more than 50% of the cases. This study looks specifically at the requirements of SAS No. 59, the certified public accountant’s guideline to the issuance of a going-concern qualification. It postulates that the guidelines offered are too vague to be effectively implemented and points out possible reasons therefor. The study addresses the feasibility of adding quantitative components to the evaluative process and the possibility of re-regulation as a means of both predicting future crises and stopping them. The study concludes that the nature of the work performed by the public accounting profession fails to serve as a realistic warning to the general investing public.

Keywords: S&L crisis, dot-com bust, Wall Street Meltdown, SAS No. 59, going concern qualification

INTRODUCTION

In 2008, the world was stunned to learn that huge financial giants such as Lehman Brothers, AIG, Bear Sterns, Merrill Lynch, and Wachovia were in a state of collapse. Over the next few years, hundreds of banks and financial institutions received federal money in the form of bailouts ostensibly to preserve the financial system and avoid sliding further into a growing recession. Finger pointing has frequently targeted the deregulation of derivatives, default credit swaps, and structured investment vehicles (SIVs) related to investments held off companies' balance sheets. What followed has been dubbed "The Great Recession." The economy shrank in five quarters, including four quarters in a row. Two quarters shrank more than 5%, and Q2 in 2008 shrank a whopping 8.9%. This is more than any other recession since the Great Depression. The recession officially ended in Q3 2009, when GDP turned positive, thanks in no small part to economic stimulus spending. The recession, which was the longest since the Depression, lasted 18 months.

The recovery in the last two years has been modest at best, and now economists are forecasting that we are about to enter a second or double dip recession. A protest group calling itself "Occupy Wall Street" has surfaced and, while the group's objectives are vague, it is a strong signal that the general populous is becoming increasingly unhappy with economic conditions and failed governmental policies. While history has shown that economic turndowns are cyclical and to be expected, the duration and severity of this one suggests that the underlying causes are more than just economics as usual. Worse, both domestic and foreign markets are unstable. At this juncture, the economic crisis has become global in nature. How did this happen and were there signs that were not heeded?

As bad as all of this may sound, it gets worse when considering that this latest incident of a major industry failure is not unique. Three times in the last 25 years there have been significant bankruptcies and bailouts within an entire, major industry. While this latest may be the most severe of the three failures, the fact that they continue to arise and that the general public appears to have been caught completely off guard each time, suggests a systemic problem with no obvious solution.

THE SAVINGS AND LOAN (S&L) CRISIS

The first of these recent industry meltdowns was the savings and loan (S&L) crisis of the late 1980s and early 1990s. A savings and loan is a financial institution that accepts savings deposits and makes mortgage, car, and other personal loans to individual members. During this period, almost a quarter of the over three thousand savings and loans in the United States failed.

In the two decades that followed the end of World War II, the industry flourished as the return of millions of servicemen and the resultant population explosion dubbed the "baby boom" caused a surge in new home construction. By the late

1980s however, the S&L industry faltered and these institutions began to fail. Causes of these failures included:

1. The S&Ls tried to capitalize on the real estate boom and outstanding US mortgage loans went from \$700 billion in 1976 to \$1.2 trillion by 1980, a 71% increase (Lewis, 1990). Because of the high interest rates and these institutions' resultant high rates of return of the late 1970s and early 1980s, many S&Ls lent far more money than was prudent. Worse, because of loosening of regulations, many of these loans were made to commercial real estate and other ventures, which many S&Ls were not qualified to assess as to their commercial viability. L. William Seidman, former chairman of both the Federal Deposit Insurance Corporation (FDIC) and the Resolution Trust Corporation, stated, "The banking problems of the '80s and '90s came primarily, but not exclusively, from unsound real estate lending" (Seidman, Litan, White, & Silverberg, 1997).
2. Another cause was the lessening of industry regulations on brokered deposits. Previously, only 5% of an S&L's deposits could be brokered deposits. Deposit brokers were paid a commission by the customer to find the best certificate of deposit (CD) rates and place their customers' money in those CDs. When the limits were lifted, S&Ls sought to attract deposits simply by offering the highest rates. This forced them to offset these costs by making even riskier investments (Strunk & Case, 1988).
3. Industry regulation also decreased with the passage in 1980 of the Depository Institutions Deregulation and Monetary Control Act, which allowed credit unions and savings and loans to offer checkable deposits. The passage of the Garn–St. Germain Depository Institutions Act in 1982 allowed banks to provide adjustable-rate mortgage loans. A number of states also passed legislation that similarly increased investment options. These introduced new risks and speculative opportunities that were difficult to administer. In many instances "management lacked the ability or experience to evaluate them, or to administer large volumes of nonresidential construction loans," (Strunk & Case, 1988).
4. During the early 1980s, the Federal Reserve sought to reduce inflation with a series of increases in short-term interest rates. This resulted in a period in which increases in the short-term cost of funding were higher than the return on portfolios of largely fixed rate mortgage loans. Interest rates continued to skyrocket, placing even more pressure on S&Ls (United States General Accounting Office, 1996).

5. Probably one of the main causes of the acceleration of the problems for Savings and Loans was the passage of the Tax Reform Act of 1986. In particular, this tax act added the concept of passive activity losses (PALs). Before PALs were introduced, losses from real estate ventures were fully deductible against ordinary income. The real estate could eventually be sold for profit that would result in capital gains. The 1986 Tax Act placed an immediate limitation on real estate as a tax advantaged business and thus eliminated many real estate tax shelters and significantly decreased the value of many such investments that had been held more for their tax-advantaged status than for their inherent profitability. This contributed to the end of the real estate boom of the early to mid-1980s and facilitated the savings and loan crisis (Cebula & Hung, 1992).

As the S&Ls began to fail, the Federal Savings and Loan Insurance Corporation (FSLIC), a federal government agency that insured S&L accounts in the same way the Federal Deposit Insurance Corporation insures commercial bank accounts, had to repay the depositors whose money was lost. From 1986 to 1989, the FSLIC closed or otherwise resolved 296 institutions with total assets of \$125 billion. As the industry continued to decline, a new agency, the Resolution Trust Corporation, was formed in 1989 to deal with the S&L crisis. That agency resolved issues of an additional 747 thrifts by 1995 (Curry & Shibus, 2000). The market share of S&Ls for single family mortgage loans went from 53% in 1975 to 30% in 1990 (Fannie Mae, 1992). The U.S. General Accounting Office estimated the cost of the crisis approximated \$160.1 billion, \$124.6 billion of which was directly paid for by the US government from 1986 to 1996 (United States General Accounting Office, 1996). That figure does not include thrift insurance funds used before 1986 or after 1996. It also does not include state run thrift insurance funds or state bailouts. The federal government ultimately appropriated \$105 billion to resolve the crisis. After banks repaid loans through various procedures, there was a net loss to taxpayers of approximately \$124 billion by the end of 1999 (Curry & Shibus, 2000). The slowdown in the finance industry and the real estate market that resulted may have been a contributing cause of the 1990–1991 economic recession. Between 1986 and 1991, the number of new homes constructed dropped 44% from 1.8 to 1.0 million, the lowest rate since World War II (Fannie Mae, 1992). “Some commentators believe that a taxpayer-funded government bailout related to mortgages during the savings and loan crisis may have created a moral hazard and acted as encouragement to lenders to make similar higher risk loans during the 2007 subprime mortgage financial crisis” (Weiner, 2007).

THE DOT.COM BUBBLE BURST

The dot-com bubble was a period spanning from the mid-1990s through 2000 during which stock markets in industrialized nations saw their equity value rise rapidly from growth in the Internet sector and related fields. Nineteen ninety-five marked the beginning of a major jump in growth of Internet users, who

were seen by companies as potential consumers. As a result, numerous Internet start-ups were formed in the mid to late 1990s. These companies came to be referred to as “dot-coms,” after the .com in many of their web addresses. During this period, companies often saw their stock prices shoot up if they simply added an “e-” prefix to their name or a “.com” to the end. This was referred to as “prefix investing” (Masnick, 2003). A combination of rapidly increasing stock prices, unwarranted market confidence, individual speculation in stocks, and widely available venture capital created an environment in which many investors were willing to overlook traditional metrics such as P/E ratios in favor of confidence in technological advancements (Lowenstein, 2004).

The standard “dot-com” company’s business model relied on harnessing network effects by offering its services for free with the expectation that it could build enough brand awareness to charge profitable rates for its services later. The motto “get big fast” reflected this strategy (Cassidy, 2002). During the initial loss phases of a start-up company, dot.com companies with little or no income sources relied on venture capital and initial public offerings of stock to pay their expenses. Owing to the difficulty of valuing these companies, the price of many dot.com stocks soared. Because this was a period of relative wealth, many “ordinary” people with spare cash began investing and day trading, which caused a lot of money to chase the available investment opportunities (Lowenstein, 2004).

Causes of the dot.com collapse were numerous, including:

- The dot.com bubble was a paradigm whose rise occurred when speculators, noting a rapid increase in market values of fledgling dot.com companies, decided to buy in anticipation of further rises rather than because the shares were undervalued (Willoughby, 2000).
- American news media, including respected business publications such as Forbes and the Wall Street Journal, encouraged the public to invest in risky companies, despite many of the companies’ disregard for basic financial and even legal principles (Lowenstein, 2004).
- As the dot.com era expanded, many people were reported to be making a living as day traders, which further added to the hype (Kadlec, 1999).
- During the bubble period, dot.com companies spearheaded a “growth over profits” mentality that gave rise to the presumption of a new economic model (Lowenstein, 2004).
- From 1999 through early 2000, the U.S. Federal Reserve increased interest rates six times and the economy began to lose speed (Lowenstein, 2004).
- On April 3, 2000, Microsoft was found to be a monopoly in Federal court and the NASDAQ fell dramatically (Willoughby, 2000).

It is difficult to estimate the cost of this financial turndown. Willoughby (2000) stated that “America’s 371 publicly traded Internet companies have grown to the point that they are collectively valued at \$1.3 trillion, which amounts to about 8% of the entire U.S. stock market.” At its peak in 2000, the NASDAQ composite index, where most of the dot.com companies were traded, was listed at over 5,000. In the ten plus years since the dot.com bubble burst, the index has never again achieved anything close to the heights achieved during this period. It is currently trading at around 2,700. The cause of this decline may also be attributable in part to other events like the terrorist attack on the World Trade Center’s twin towers and the scandals and financial misdeeds represented by Enron, WorldCom, and Tyco; the fact of the dramatic loss of market value cannot be ignored. While the overall financial impact of the dot.com bubble burst may not be directly estimable, its significance is obvious.

The question that will be asked throughout this analysis concerns warning. In hindsight, the signs were there but, for the average investor, the speed with which the market collapsed negated any chance for pull back. Weil (2001) reported that only three of ten publicly held dot-com companies that filed for bankruptcy received going concern opinions in the audit report issued immediately before filing.

The Wall Street Meltdown

The third, and arguably the most pervasive, of the three industry failures to occur in the last 25 years is also the most recent. Labeled the “Wall Street Meltdown,” it, like the S&L crisis, centered on the housing industry. Home ownership has always been touted as the American dream. Banks were eager to cash in on an existing mentality that centered on excess consumption through easy credit-driven debt. To do so, they created sub-prime and other creative mortgage options and began offering loans to buyers who, in more stringent times, would never have qualified for a mortgage. This created increased demand for houses and new home starts reached record levels. The dramatic rise in housing prices and housing starts peaked in approximately 2005–2006. High default rates on subprime and adjustable rate mortgages (ARM), began to increase quickly thereafter and many of these buyers were forced into foreclosure (Marquit, 2009). The reasons for this include the inability of homeowners to make their mortgage payments (due primarily to adjustable-rate mortgages resetting, lessening of equity requirements for initial purchases, borrowers overextending, predatory lending, and speculation), overbuilding during the boom period, risky mortgage products, high personal and corporate debt levels, financial products that distributed and perhaps concealed the risk of mortgage default, bad monetary and housing policies, international trade imbalances, and inappropriate government regulation (Marquit, 2009).

An increase in loan incentives like easy initial terms and a long-term trend of rising housing prices also encouraged borrowers to assume difficult mortgages in the belief they would be able to quickly refinance at more favorable terms. This coupled with increasing optimism about continuing increases in home values led to overconfidence in both the lenders and borrowers. Once interest rates began to rise and housing prices started to drop moderately in 2006–2007, refinancing became more difficult. Defaults and foreclosure activity increased dramatically as easy initial terms expired, home prices failed to go up as anticipated, and ARM interest rates reset higher. As a result of falling prices, by September 2010, 23% of all US homes were worth less than the mortgage loan against them (Federal Housing Finance Agency, 2012). This “upside down” situation provided a financial incentive for borrowers to enter foreclosure. The ongoing foreclosure epidemic—of which subprime loans are one part—that began in late 2006 in the US continues to be a key factor in the global economic crisis because it drains wealth from consumers and erodes the financial strength of banking institutions.

A summary of some of the major causes behind this meltdown is as follows:

1. In 1999, congress repealed the Glass-Steagell Act of 1933. The act, introduced in the wake of the stock market crash of 1929, was designed to ensure that banks followed reasonable banking practices. The act made it illegal for commercial banks to underwrite securities and investment banks to receive deposits from customers. In 2000, commercial banks began merging with investment banks. For example, Chase Manhattan merged with J. P. Morgan, an investment bank. Other Wall Street investment banks, faced with new competition in their traditional businesses, began making riskier investments as a means of remaining competitive and increasing their profitability (Moore & Baker, 2008).
2. Investment banks, which do not hold customer deposits as would a commercial bank, became heavily involved in the lending business, which necessitated raising large amounts of capital. They began financing long-term loans through the issuance of short-term commercial paper. As a result they were forced to “roll over” their short-term borrowings (Rothbort, 2008).
3. In an effort to increase their profitability, investment banks began to move into asset-backed securities. An asset-backed security is one whose value and income payments are derived from a specified pool of underlying assets. The pool of assets is typically a group of small and illiquid assets that, individually, are not marketable. Pooling the assets into financial instruments, a process called securitization, allows them to be sold to general investors. In theory, investing in the asset-backed securities of home mortgage loans diversified away

much of the risk because each mortgage only represented a fraction of the total value of the pool of underlying assets (Lewis, 2007).

4. An incentive for banks to utilize the concept of securitized assets arose when they discovered a way to remove risky assets from their balance sheet by having a separate institution, called a special purpose vehicle (SPV) or sometimes called a special purpose entity (SPE), assume the credit risk in return for a cash return. This allows banks to invest more of their capital in new loans or other assets and even reflect lower capital requirements (Browning, 2007).
5. The SPVs created and sold the securities and used the proceeds of the sale to pay back the bank that originated the underlying mortgages. The SPV was responsible for “bundling” the underlying assets into a specified pool that fit the risk preferences and other needs of investors. They managed credit risk, often by transferring it to an insurance company, and distributed payments from the securities. As long as the credit risk of the underlying assets was transferred to another institution, the originating bank could remove the value of the underlying assets from its balance sheet while still receiving cash in return as the asset-backed securities were sold (Browning, 2007).
6. Banks were further incentivized to utilize SPVs when they realized that, by so doing, they could actually improve their credit rating. The credit ratings of the asset-backed securities were based only on the assets and liabilities of the special purpose vehicle that held them. These ratings were higher than if the originating bank issued the securities because the risk of the asset-backed securities would no longer be associated with other risks that the originating bank might bear. A higher credit rating could allow the special purpose vehicle and, by extension, the originating institution to pay a lower interest rate (that is, charge a higher price) on the asset-backed securities than if the originating institution borrowed funds or issued bonds (Simkovic, 2009).
7. Credit default swaps (CDS), an insurance-like contract, were originated to offer protection to bondholders from the risk of default by creditors (Moore & Baker, 2008). “Typically, the buyer of the contract made periodic payments to the seller of the swap. In the event of a default, the seller was obligated to purchase the defaulted securities at an agreed upon price” (Rothbort, 2008). Their effectiveness as a hedge against default risk was diminished by the incursion of speculators in a largely unregulated market. The AIG bailout arose largely owing to this issue (Rothbort, 2008).
8. As part of the housing and credit booms, a specific type of SPV called mortgage-backed securities (MBS), which derive their value

from mortgage payments and housing prices, arose. Included therein were an increasing number of subprime mortgages, which are mortgages offered to borrowers with lower credit ratings. Because these borrowers had a larger-than-average risk of defaulting on the loan, lending institutions often charged higher interest and only offered adjustable rate mortgages (ARM) to compensate for the increased risk (Simkovic, 2009).

These kinds of financial innovations enabled institutions and investors around the world to invest in the US housing market. In the years leading up to the crisis, significant amounts of foreign money flowed into the US from fast-growing economies in Asia and oil-producing countries. This inflow of funds combined with low US interest rates from 2002–2004 contributed to easy credit conditions, which fueled both housing and credit bubbles. Loans of all types were easy to obtain and consumers assumed an unprecedented debt load (Guha, 2007).

In marked contrast to the backlash caused by the financial misappropriations of companies like Enron, Worldcom, and Tyco a decade ago, there has been little if any penalty imposed on the leadership of the financial companies that were at the heart of the more recent issues. Given the highly significant and measurable cost of these issues, the contrast is surprising. In October 2008, under the Troubled Asset Relief Program (TARP), Congress passed the Emergency Economic Stabilization Act, which authorized the Treasury Department to spend \$700 billion to combat the financial crisis. In January 2009, an additional \$819 billion economic stimulus package was passed. While the criteria for receiving monies under these programs has been uneven and underpublicized, the fact is that the cost of the attempt to forestall or reverse this economic turndown has been enormous. According to Nankin, Umanski, Kjellman, and Klein, (2009), here is where just some of this \$1,519 billion went:

- JP Morgan Chase and the federal government bailed out Bear Stearns when the financial giant neared collapse. When JP Morgan purchased Bear Stearns for \$236 million the Federal Reserve provided a \$30 billion credit line to ensure the sale could move forward. All monies borrowed were subsequently repaid.
- On Sept. 7, 2008, Fannie Mae and Freddie Mac were essentially nationalized and placed under the conservatorship of the Federal Housing Finance Agency. Under the terms of the rescue, the treasury invested billions to cover the companies' losses. The total cost to date is estimated at around \$400 billion. None of these monies have been recovered to date.
- On four separate occasions, the government offered aid to AIG to keep it from collapsing, growing from an initial \$85 billion credit line from the Federal Reserve to a combined \$180 billion effort between the Treasury (\$70 billion) and the Fed (\$110 billion). (Note: \$40

billion of the Treasury's commitment is also included in the TARP total.) To date, \$18 billion has been repaid.

- In late September 2008, Congress approved a more than \$630 billion spending bill, which included a measure for \$25 billion in loans to the auto industry. These low-interest loans were intended to aid the industry in its push to build more fuel-efficient, environmentally-friendly vehicles. General Motors and Chrysler were the primary beneficiaries. General Motors has repaid its loans in full and Chrysler has repaid \$7 billion out of \$11 billion in loans.
- Citigroup received a \$25 billion investment through the TARP in October 2008 and another \$20 billion in November. (That \$45 billion is also included in the TARP total.) Additional aid came in the form of government guarantees to limit losses from a \$301 billion pool of toxic assets. In addition to the Treasury's \$5 billion commitment, the FDIC committed \$10 billion and the Federal Reserve up to about \$220 billion. All these loans have been repaid.
- Bank of America received \$45 billion through the TARP, which includes \$10 billion originally meant for Merrill Lynch. (That \$45 billion is also included in the TARP total.) In addition, the government made guarantees to limit losses from a \$118 billion pool of troubled assets. In addition to the Treasury's \$7.5 billion commitment, the FDIC committed \$2.5 billion and the Federal Reserve up to \$87.2 billion. These loans were repaid in full.

As with the other industry deterioration, it is difficult to get a handle on the total amount that has been spent as part of the bailout/stimulus packages, but it is safe to say that it was very substantial. It is certainly a fact that a significant portion went to the same financial sector that many feel were largely responsible for the economic tailspin. Some of these entities have repaid portions or all of their "loans" but that does not negate the reality that they required monies from the federal government to remain in business.

In retrospect, there were ample signs that a credit/housing crisis was coming. The Milken Institute and U.S. Census Bureau statistics shown below offer a compelling story, but again, only in hindsight (Moore & Baker, 2008).

1. From 1994 to 2007
 - a. the percentage of all mortgages bundled into securities increased 18.4%.
 - b. the percentage of mortgage originations that were subprime increased 15.6%.
 - c. the percentage of subprime mortgages packaged into securities increased 61.2%.
2. Household debt as a percentage of disposable income went from 74.9% in 1985 to 137% in 2006.

The concept of diversifying away risk through the securitization of mortgages through mortgage-backed securities (MBSs) ceased to work when the percentage of risky assets as a percentage of the total bundle increased. Without clear regulatory authority, consumer greed coupled with corporate desire to report ever-increasing profits argues that the outcome was inevitable. If the warning signs were tucked away in obscure data with little visibility, was there no way that an average person might have seen what was coming?

The Role of Certified Public Accountants

The American Institute of Certified Public Accountants (AICPA) states that CPAs are “public watchdogs that assure the investing public that financial statements are free of material misstatement” (American Institute of Certified Public Accountants, 1988). It also states that CPAs are required to “act in a way that will serve the public interest, honor the public trust, and demonstrate commitment to professionalism” (American Institute of Certified Professional Accountants, 1992). Even the U.S. Supreme Court, in *United States v. Arthur Young & Co.* (1984) ruled,

By certifying the public reports that collectively depict a corporation's financial status, the independent auditor assumes a public responsibility transcending any employment relationship with the client. The independent public accountant performing this special function owes ultimate allegiance to the corporation's creditors and stockholders, as well as to the investing public. This ‘public watchdog’ function demands that the accountant maintain total independence from the client at all times and requires complete fidelity to the public trust . . .

Despite the AICPA's statements and this ruling, there has been a continuing disconnect between what the audit profession sees as its role and the perception thereof on the part of the general public. The concept has been labeled the expectations gap and reflects the difference between an auditor's actual standard of performance and the more rigorous public expectation of what an auditor's performance should be. The general public seems to have the opinion that the audit is a guarantee of reliability and accuracy. Additionally, the perception seems to be that the audit is to insure that the financial statements represent a true financial picture of the company. In reality, audits are generally performed to determine the validity and reliability of the company's information (in particular the company's internal controls). This by necessity must be an examination that is based on statistical sampling, as the auditor cannot logically review every transaction within a company (alternatively, the company will not pay for such an audit). The goal for the accountant is to provide a reasonable assurance that the financial statements being audited are free from material error. The limitations placed on the audit function are even more stringent when the management of a company

actively attempts to move troublesome assets and liabilities from the balance sheet of the company by use of “off balance sheet” financing or by use of SPVs to obfuscate the company’s actual financial status.

Much of this gap exists because of the use of limited scopes in performing the audit, a process that, by its very nature, limits the absolute reliability of the result, namely an audit opinion in whatever form. Sikka, Puxty, Willmott, and Cooper (1998) argue that the profession is attempting to absolve itself from the conditions that give rise to the gap except for the need to educate the public as to the limitations between its expectations and the product that an auditor can deliver.

In whatever capacity the public accounting profession serves as a watchdog, the fact remains that, in the absence of general oversight, investors must rely upon information with regard to individual companies to provide them with insight as to the health of a particular industry. Audit opinions, or reports, are only one of the tools investors can use to assess the health of a firm and, in the aggregate, an industry. Rogers, Guiral, and Gonzalo (2009) describe the opinion as the “glue that enables various users of information to make credit and investing decisions.”

For those who follow the financial markets personally or through MSNBC or other media sites, the audit opinion of any public company that is other than unqualified is likely to receive immediate recognition and notoriety. If an investor was relying upon this source as an indication of the relative health of an industry, however, the outcome may be quite different.

SAS No. 59 and the Going Concern Qualification

The going-concern assumption is fundamental to the preparation of financial statements. In the absence thereof, the entire valuation process becomes invalid and the entity’s ability to meet its obligations without substantial disposition of assets or incursion of additional debt becomes questionable. Venuti (2004) points out “if the going-concern assumption fails, then the amount and classification of assets and liabilities in the balance sheet may need to be adjusted, with consequences to revenues, expenses, and equity.”

Statement of Auditing Standards (SAS) No. 59, issued by the Auditing Standards Board (ASB), the senior technical body of the AICPA designated to issue pronouncements on auditing matters applicable to the preparation and issuance of audits, became effective for audits beginning in 1989 (American Institute of Certified Public Accountants, 2006). It dealt with the auditor’s consideration of an entity’s ability to continue as a going concern. The specific guidelines to be used by the auditor to assess whether there is substantial doubt about the entity’s ability to continue as a going concern for a reasonable period of time are as follows:

- a. The auditor, as part of his/her procedure, gathered audit evidence indicates that there could be a substantial doubt about the entity’s

ability to continue as a going concern for a reasonable period of time (defined in SAS No. 59 as a maximum period of one year beyond the date of the financial statements being audited).

- b. If the auditors believe that such doubt exists, they should (1) obtain information about the management's plans that are intended to mitigate the effect of such conditions or event, and (2) assess the likelihood that such plans can be effectively implemented.
- c. If the auditor concludes that there is substantial doubt, he/she should (1) consider the adequacy of disclosure about the entity's possible inability to continue as a going concern for a reasonable period, and (2) include an explanatory paragraph (following the opinion paragraph) in his/her audit report to reflect that conclusion.

SAS No. 59 does point out that the auditor is not responsible for predicting future conditions or events and provides that the absence of auditor's comments as to the company's ability to continue as a going concern should not be construed as an assurance of the entity's ability to survive (American Institute of Certified Public Accountants, 2006). However, this out does not alleviate the auditor's responsibility to review, and if necessary, comment on the company's ability to survive.

Further, SAS No. 59 specifically excludes the necessity of designing audit procedures to identify conditions and events that, when considered in the aggregate, indicate there could be substantial doubt about the client's ability to continue as a going concern.

Older studies performed by Altman (1974), Altman (1982), Menon (1989), McKeown (1991), Chen (1992), Carmichael (1993), and Behn (1999) have consistently indicated that more than 50% of the companies that file for bankruptcy did not receive a going concern qualification in the prior year. Wertheim and Fowler (2005) found that, of the 696 companies that filed bankruptcy between 1997 and 2001, less than half (only 44.25%) received a going concern opinion from their auditor in the year preceding the bankruptcy filing.

In a more recent analysis, McKenna (2009) analyzed bankruptcy and going concern qualification data for publicly reported companies from 2000 through 2008. Its data does not reflect a significant increase in the relative going concern qualifications as a percentage of total auditor opinions beyond what might be expected from data in recession versus non-recession periods. Fargher and Jiang (2008) state that auditors issued more going-concern opinions to bankrupt firms following the start of congressional hearings in December 2001 as more conservatism followed this tumultuous period. Maingot and Zeghal (2010) concluded that auditors follow the guidelines of SAS No. 59 more closely when issuing a going concern qualification, but this does not imply that the guidelines provided offer any specific increase in the issuance of going concern qualifications.

While SAS No. 59 provides auditors with some guidance, the fact remains that the decision to include going concern language anywhere in the audit report remains largely judgmental. Auditors have been described as reluctant to include going concern issues in the report for fear of creating the “self-fulfilling prophesy effect,” which argues that the issuance of a going concern warning signal may precipitate a client’s failure because of its negative impact on current and potential investors, creditors, suppliers, and customers (Citron & Taffler, 2001). As stated previously, the auditor is considered the “public watchdog” and if this function questions a company’s ability to continue as a going concern, then most potential investors are not going to attempt to make their own independent determination of the company’s viability. A going-concern opinion may lower stockholders’ and creditors’ confidence in the company and rating agencies may then downgrade the debt. All of this could lead to an inability of the company to obtain new capital coupled with an increase in the cost of the existing capital (Venuti, 2004).

This creates a potential legal liability for the accountant as well. If the accountant renders a going concern opinion and this opinion results in compression of the company’s financial resources, decreases investor monetary involvement, and possibly leads to the demise of the company, the stockholders may bring an action questioning the accountant’s determination of the “going concern” opinion. If the company is gone, the investors may attempt to shift the blame to the accountant as being the “trigger” that caused the collapse. The accountant will have a substantial need to be able to document what formed the basis for the going concern opinion. Even if the accountant is completely vindicated, it may only be after years of costly litigation.

The inverse, however, is equally true. If a company fails, these same investors are going to be asking (quite often in the form of litigation) where was the “public watchdog” and why did this auditor not inform them that this entity was in financial trouble. Remember, the investors will have the benefit of hindsight, while the auditor must make the determination at the current time of rendering the financial statements.

While this may well describe a legitimate concern on the part of auditing firms, it is also possible that they are reluctant for less altruistic reasons. Public accounting firms, in whatever legal form, are for-profit operations. The loss of a client means the loss of revenue. Public reaction to the possibility of a going concern issue is unpredictable, but it is almost certainly not going to be positive. Likely outcomes include bankruptcy or acquisition, neither of which are desirable outcomes for the auditing firm. Wertheim and Fowler (2005), in a study looking at going concern qualifications by company size, concluded that audit firms seem to be more likely to issue going concern opinions for smaller clients, again suggesting that possible loss of large clients plays a role in the decision to issue a going concern qualification. Weiss and Larson (2008), in a report to the U.S. Senate,

stated, “The first and most important line of defense . . . the auditing firms should play the primary role in protecting the public against accounting manipulations, financial failures and the devastating investment losses that almost invariably result.” As desirable as these objectives are, it seems reasonable to challenge how realistic they are, particularly in light of the increased attention accounting firms have received on issues related to independence, audit versus non-audit services, and overall audit liability.

Selected studies have concluded that the going-concern qualification adds no valuable information to the decision making process. Lennox (1999) found that, in attempting to predict bankruptcy, the presence of a going-concern qualification had no significant impact. Elias and Johnson (2001) reached a similar conclusion. Without addressing the validity of their results, their studies were geared toward the predictive value of a going concern qualification on individual companies. As Koh and Killough (1990) point out, the problem with SAS 59 is that, in its present form, it does not answer the question that has been posed here, namely why businesses are failing shortly after receiving an audit report that does not indicate substantial doubt about an entity’s ability to continue as a going concern. While this might not be a concern on an individual company basis, this becomes very different with the assumption that the public can somehow fathom what is going on in an entire industry.

In looking at the audit opinions of Bank of America, Bear Stearns, Lehman Brothers, AIG, Merrill Lynch, and Citigroup in the year before they either collapsed, were bailed out, were bought out or failed, there was one constant. Every one of them received an unqualified audit opinion. Similarly, the so-called “Dot.com” bust of a decade ago reflected similar problems. It would appear then that there are two questions to address:

1. Is there a need to modify the requirements of SAS 59 to make it more responsive to the threat of bankruptcy in the short run?
2. Is there any measurement that would speak to the overall health of an industry or the bigger companies therein?

As the convergence between Generally Accepted Accounting Principles (GAAP) and International Accounting Standards (IAS) is now a very topical subject, is it possible that the IAS standards provide guidance as to the issue of SAS 59 issues? In other words does, does the international community have a better grasp of the issue of “going concern” and the reporting requirements as well as the relevant risk analysis, than do their contemporaries from the states?

The IAS approach is more management centered in that IAS (International Accounting Standard, 2009) requires that management must make the initial assessment of their entity’s ability to continue as a “going concern.” Management is required to make the determination and the accountant’s responsibility

is to inquire as to management's risk analysis of the potential lack of an ability to continue. This is further supported by the ISA 570 wherein it provides that "the auditor's responsibility is to obtain sufficient audit evidence about the appropriateness of management's use of the going concern assumption" (International Standard on Auditing, 2011).

This compares to the GAAP standards reinforced by both SAS 59 and further by AU 341, which requires the accountant's determination of "going concern." The emphasis in the US is on the accountant's determination of "substantial doubt" for a "reasonable time." Under international standards, having management make the determination as to their entity's ability to continue is the equivalent of asking the inmates to look after the jail. While softening the risk for accountants, it does nothing of any substantial nature to require the warning needed by investors.

In an attempt of convergence, the FASB has attempted to modify the GAAP definitions of the accountant's risk with a proposed Statement of Financial Accounting Standards concerning the issue of "going concern" but this standard has not yet been finalized. The proposed FASB is intended to move closer to the international standard. As the current application of SAS 59 has accomplished very little in protecting the investing public from corporations' failures, the proposed shift to management first will not address the issue of public warning.

The Securities and Exchange Commission seems even further behind in addressing these issues as they held their first financial reporting series conference on November 8, 2011. In this roundtable discussion the, importance of the going concern issue was addressed but no action was recommended or undertaken.

Quantifying Potential Bankruptcy

As outlined earlier, the three basic requirements of SAS 59 are qualitative in nature and the results subjective and subject to interpretation excluding any other influence. The standard requires "substantial doubt" about the entity's ability to continue as a going concern for a reasonable period of time. Since neither "substantial" nor "reasonable" are quantified, the very process of considering a going concern qualification is relegated to a subjective process. Since the other requirements are equally vague, it is not surprising that application has been uneven.

So why not modify the opinion to provide quantitative guidelines in the decision to address a client's possible going-concern issues? Numerous studies offer success in predicting future bankruptcies through the use of ratio analysis or other predictive models. Altman (1968) concluded that a multiple discriminant analysis (MDA) approach (the Z-score formula), a statistical technique that puts observations into groupings (basically five traditional financial ratios adjusted by several coefficients including bankrupt versus non-bankrupt), was very accurate in predicting bankruptcies. Iwan (2005) identified financial ratios that

differ between bankrupt and non-bankrupt companies. Bahiraie, Ibrahim, Mohd, and Azhar (2008) developed an empirical analysis of risk and bankruptcy using financial ratios in what they term a Share Risk measure. Aziz and Dar (2006) conclude that the predictive accuracies of different models seem to be generally comparable, with a slight edge to artificial intelligent expert system models. Most of these models have demonstrated an ability to have a greater than 50% probability of predicting the possibility of a company entering bankruptcy two years in advance of the company's demise. Even though SAS No. 59 does not require a prediction of bankruptcy and in particular, the auditor is not required to speculate whether a company will end up in bankruptcy, the auditor must still comment on the company's ability to be a viable going concern.

If reasonably accurate predictive models for bankruptcy exist, why not use them as part of the evaluative process for going concern consideration? Studies have concluded that, because the financial ratios used as independent variables used in these models can be highly correlated (this is referred to as multicollinearity), the resulting estimates may be unstable and of little value in using them as a predictive model (Mapp, 2007). One way to reduce this issue is to employ a technique referred to as step-wise discriminant analysis, which basically excludes variables (ratios) over time. The problem here is that relationships among variables change over time and this will negate the reliability of the predictive results of the model. Other methods like artificial orthogonalization are not used because they make use of a reduced set of information (Mapp, 2007). Thus, while predictive models have a place in this discussion, use of them in a systematic way is not likely to result in consistent results that could be used across industries in augmenting qualitative approaches to assessing a firm's going-concern issues.

There are also issues with regard to the ratios used in these predictive models. As housing prices fall, loan-to-value ratios rise and underwater mortgages, defined as those where the value of the house is less than the remaining loan principal, increase. Loan-to-value (LTV) ratios currently exceed 100%. "The Home Affordable Refinance Program (HARP) began in 2009 to assist borrowers who are current in the mortgage [payments] but underwater relative to the value of their home" (Swanson, 2011). The original HARP sought to help only those whose mortgage LTV ratios had not exceeded 125%. This particular clause had to be modified because most LTV ratios were well beyond 125%. For one such case in Nevada, a home's original mortgage was \$210,000 and its current price on the market is now \$70,000. That is an LTV equal to 300%.

Bankruptcy prediction models have long concentrated on the in-house financial ratios of each firm. The use of off-balance sheet accounting changes these ratios, thus changing model outcomes. These models also do not incorporate the inherent risk in such assets as mortgage-backed securities, most likely because managers assumed the risk had been diversified away when it apparently was not. Some recent bankruptcy prediction models have been incorporating non-traditional

variables such as industry failure rate and abnormal stock returns, as well as adding a hazard model (Sun, 2007). This research suggests that the inclusion of such a bankruptcy prediction model could well improve auditors' outcomes as to whether to issue opinions of going concern (Sun, 2007).

Conclusion

The three industry collapses described in this paper happened at different times and, in some ways, for different reasons. That being said, however, there were definite similarities. First, all of them occurred due to a lessening or elimination of government regulations or changes in the tax code. Second, they all involved "creative" or other unique financing or valuation vehicles that were not necessarily understood by the general public. Third, they all resulted in significant losses, either to be absorbed by the investing public directly or indirectly through bail-outs and the resultant impact on the federal budget deficit. Finally, they all were triggered by turndowns in the economy after a significant bull period.

There are other circumstances surrounding these occurrences that merit attention. All three major industry failures happened within the very short span of 25 years. None of these failures has resulted in the passage of significant new legislation designed to protect the public. The Sarbanes-Oxley Act in 2002, which was designed to put more accountability into the system, was a reaction to a number of major corporate and accounting scandals including those affecting Enron, Tyco International, Adelphia, Peregrine Systems, and WorldCom. These scandals, which also cost investors billions of dollars when the share prices of affected companies collapsed, shook public confidence in the nation's securities markets. Confidence may have been restored but it did not stop the Wall Street Meltdown or preclude industry failures.

The questions to be addressed then are whether these industry failures are in fact endemic and, if so, what can be done to stop them? As for the former, the fact that there have been significant industry failures at a cost of billions of dollars each time (three times within a 25 year span) makes a fairly compelling argument that the issues are indeed endemic. Current literature suggests that another tech stock bust related to the social networking sites and related companies is lurking out there.

Since one of the issues predicating these industry collapses related to a loosening or changing of government controls, it appears reasonable to ask whether re-regulation could solve one of the significant causes. As outlined, repealing the Glass-Steagall Act of 1933 initiated the series of events that led to the Wall Street Meltdown. Similarly, the S&L crisis may have been precipitated by expanding the services they could offer as a result of the Depository Institutions Deregulation and Monetary Control Act and the Garn–St. Germain Depository Institutions Act. The lack of regulatory controls also gave rise to some of the creative financ-

ing options that were at the heart of the respective collapses. So why not simply reinstate the controls that existed?

While the need to increase government controls through additional regulation is arguably not without merit, accomplishing it offers a different set of challenges. The business structure of many of the firms involved in these collapses evolved over time in response to changes in the regulatory environment. Re-regulation would require these firms to go through significant restructuring up to and including spinning off operations that they could no longer operate under a more stringent regulatory environment. Ignoring whether the process of re-regulation is even possible in the current political environment, the reality is that the potential cost of these changes would almost certainly be abortive in what would currently have to be described as a struggling economy.

If the conditions that gave rise to these respective industry collapses cannot easily be modified, then is there a reporting structure that would facilitate general understanding of potential issues or the probability of industry distress? If the perception is that CPA firms should perform a “public watchdog” function, then implicit therein would be an assumption that this group should somehow signal to the public when an industry is in possible distress. Even ignoring the expectations gap, we fail to see how this is possible. Public accounting firms perform audits on individual clients. The nature of the profession largely precludes specialization within a single industry and, since the only tangible output of firms’ work product is an audit opinion and other largely internal reports on individual clients, there appears to be no way that they are in a position to report on the relative health of an entire industry.

If the only warnings that the general public receives with regard to industry health are individual company going-concern qualifications, then it would appear that the public’s ability to determine relative industry health is limited. As noted, audit reports on related companies in all three industries just prior to the collapse contained few going-concern qualifications. The guidelines for assessing firms’ ability to continue as a going concern under SAS No. 59 are general at best. Couple this with concerns over the “self-fulfilling prophecy effect” and the profit motivation on the part of the public accounting firms and we are left with considerable doubt about the value of the process, at least in its present form. We do not, however, believe that modifying SAS No. 59 or issuing a new opinion with a more quantitative approach is an answer either. Taking into consideration research that cites doubt over the predictive value of a going concern qualification along with concerns over the consistency of quantitative approaches, it does not seem warranted.

Is there an answer to the question of assessing industry health before it becomes a crisis or have we returned to a basic “caveat emptor” model? Public accounting firms, security analysts, and the financial community can all share in the

blame for the lack of appropriate, accurate, and effective evaluations of companies within failing industries. Given the diversity of structure, ownership, and control of these functions, however, it is hard to see how any one or even two of these can rise to the level of taking the lead in educating the general public or even alerting the government of a potential industry collapse. We believe that the need for such a centralized control/reporting function exists and, rather than suggest the formation of a new government agency to consolidate these functions, would recommend that the SEC be charged with this responsibility. While the additional cost that might be incurred in taking on this responsibility might be questioned in times of budget deficit and recession, the costs of bailing out or suffering through industry failure as outlined in this study would seemingly provide sufficient incentive for this program.

REFERENCES

- Altman, E. (1982). Accounting implications of failure prediction models. *Journal of Accounting, Auditing & Finance*, 6(1), 4–19.
- Altman, E. (1968). Financial ratios, discriminant analysis and the prediction of corporate bankruptcy. *The Journal of Finance*, 23(4), 589–609.
- Altman, E., & McGough, T. (1974). Evaluation of a company as a going concern. *Journal of Accountancy*, 183(6), 51–57.
- American Institute of Certified Professional Accountants. (1992). *Code of Professional conduct*. New York: AICPA.
- American Institute of Certified Public Accountants. (2006). *AU Section 341: The Auditor's Consideration of an Entity's Ability to Continue as a Going Concern, SAS No. 59*. New York: AICPA.
- American Institute of Certified Public Accountants. (1988). *Understanding Audits and the Auditor's Report: A Guide for Financial Statement Users*. New York: AICPA.
- Aziz, M., & Dar, H. (2006). Predicting corporate bankruptcy: Where we stand? *Corporate Governance*, 6(1), 18–33.
- Bahiraie, A., Ibrahim, N., Mohd, I., & Azhar, A. (2008). Financial ratios: A new geometric transformation. *International Research Journal of Finance and Economics*, 20, 164–171.
- Behn, B., Kaplan, S., & Krumweide, K. (1999). Further evidence on the auditors' going-concern report: The influence of management plans. *Auditing: A Journal of Practice & Theory*, 20, 13–28.
- Bellovary, J., Giacomino, D., & Akers, M. (2006). Weighing the public interest: Is the going concern opinion still relevant? *CPA Journal*, 76, 16–21.
- Carmichael, D., & Pacter, P. (1973). Unaudited financial statements and the going concern assumption. *Journal of Accountancy*, 135(6), 71–73.
- Curry, T., & Shibut, L. (2000). The cost of the savings and loan crisis: Truth and consequences. *FDIC Banking Review*, 13(2), 26–35.
- Browning, L. (2007, March 23). *The Subprime Loan Machine*. Retrieved January 25, 2012, from The New York Times: <http://www.nytimes.com/2007/03/23/business/23speed.html>
- Cassidy, J. (2002). *Dot.con: How America lost its mind and its money in the Internet era*. New York: Harper.
- Cebula, R., & Hung, C. (1992). *The savings and loan crisis*. Kendall Hunt Pub Co.
- Chen, K., & Church, B. (1992). Default on debt obligations and the issuance of going-concern opinions. *Auditing: A Journal of Practice & Theory*, 10, 30–49.

- Citron, D., & Taffler, R. (2001). Ethical behaviour in the U.K. audit profession: The case for the self-fulfilling prophecy under going-concern uncertainties. *Journal of Business Ethics*, 29(4), 353–363.
- Curry, T., & Shibut, L. (2000). The cost of the savings and loan crisis: Truth and consequences. *FDIC Banking Review*, 13(2), 26–35.
- Elias, R., & Johnston, J. (2001). Is there incremental information content in the going concern explanatory paragraph? *Advances in Accounting*, 18, 105–117.
- Fannie Mae. (1992). *Housing Finance in Developed Countries An International Comparison of Efficiency*. Fannie Mae.
- Fargher, N., & Jiang, L. (2008). Changes in the audit environment and auditors' propensity to issue going-concern opinions. *Auditing: A Journal of Practice & Theory*, 27(2), 55–77.
- Federal Housing Finance Agency. (2012, January 25). *House Price Index*. Retrieved February 1, 2012, from FHFA: http://www.fhfa.gov/Default.aspx?Page=85&ListNumber=0&ListYear=2010#Year_2010
- Grice, J., & Dugan, M. (2001). The limitation of bankruptcy prediction models: Some caution for researchers. *Review of Quantitative Finance and Accounting*, 17(2), 151–166.
- Guha, K. (2007, September 17). *A Global Outlook*. Retrieved January 25, 2012, from The Financial Times: <http://www.ft.com/intl/cms/s/0/976b7442-6486-11dc-90ea-0000779fd2ac.html#axzz1lqDkRA2X>
- International Accounting Standard 1 (2009), Presentation of Financial Statement, Paragraphs 25 and 26.
- International Standard on Auditing (ISA) 570 –“Going Concern” Paragraph 6.
- Iwan, M. (2005). Bankruptcy prediction model with zeta optimal cut-off score to correct Type I Errors. *Gadjah Mada International Journal of Business*, 7(1), 41–68.
- Kadlec, D. (1999, August 9). *Day Trading: It's a Brutal World*. Retrieved November 15, 2011, from Time magazine: <http://www.time.com/time/magazine/article/0,9171,991726,00.html>
- Koh, H., & Killough, L. (1990). The use of multiple discriminant analysis in the assessment of the going-concern status of an audit client. *Journal of Business Finance & Accounting*, 17(2), 179–192.
- Lennox, C. (1999). The accuracy and incremental information content of audit reports in predicting bankruptcy. *Journal of Business Finance & Accounting*, 26(5) & (6), 757–778.
- Lewis, H. (2007, April 18). “Moral Hazard” Helps Shape Mortgage Mess. Retrieved January 25, 2012, from Bankrate.com: http://www.bankrate.com/brm/news/mortgages/20070418_subprime_mortgage_morality_a1.asp?caret=3c

- Lewis, M. (1990). *Liar's poker, rising through the wreckage on Wall Street*. New York: Penguin Books.
- Lowenstein, R. (2004). *Origins of the crash: The Great Bubble and its undoing*. New York: Penguin Books.
- Maingot, M., & Zeghal, D. (2010). An analysis of the explanatory paragraphs of auditors' going-concern reports and footnotes of bankrupt companies under SAS No. 59. *The IUP Journal of Accounting Research & Auditing Practices*, 9(1) & (2), 84–102.
- Mapp, J. (2007). Biased discriminant analysis: An innovative approach to determining economic factors useful in identifying distressed firms. *International Journal of Business Research*. <http://www.highbeam.com>
- Marquit, M. (2009, May 14). *Causes of the Financial Crisis and Recession: Easy Money*. Retrieved November 15, 2011, from All Business: <http://www.allbusiness.com/banking-finance/financial-markets-investing-securities/12329574-1.html>
- Masnack, M. (2003, December 4). *Nanotech Excitement Boosts Wrong Stock*. Retrieved November 15, 2011, from techdirt: <http://www.techdirt.com/articles/20031204/0824235.shtml>
- McKenna, F. (2009). *Going Concern Audit Opinions: Why So Few Warning Flares?* Retrieved from reThe Auditors: <http://www.retheauditors.com/2009/09/18>
- McKeown, J. C., Mulchler, J., & Hopwood, W. (1991). Toward an explanation of auditor failure to modify the audit opinions of bankrupt companies. *Auditing*, 1991 Supplement, 10, 1–13.
- Menon, K., & Swartz, K. (1989). The auditor's report for companies facing bankruptcy. *The Journal of Commercial Bank Lending*, 1(68), 42–52.
- Moore, W. B., & Baker, C. A. (2008). The 2008 financial crisis: FAS 157 and SAS 59—did they reflect reality? *Journal of Finance and Accountancy*, 5, 1–9.
- Morris, R. (1998). Forecasting bankruptcy: How useful are predictive models? *Management Accounting*, 76(5), 22–25.
- Nankin, J., Umanski, E., Kjellman, K., & Klein, S. (2009). *History of US Gov't Bailouts*. Retrieved from <http://www.propublica.org/special/government-bailouts>.
- Rogers, W., Guiral, A., & Gonzalo, J. (2009). Different pathways that suggest whether auditors' going concern opinions are ethically based. *Journal of Business Ethics*, 86(3), 347–361.
- Rothbort, S. (2008, September 19). *Five Lessons from the Financial Crisis*. Retrieved November 15, 2011, from The Street: <http://www.thestreet.com/story/10438397/1/five-lessons-from-the-financial-crisis.html>
- Seidman, L., Litan, R., White, L., & Silverberg, S. (1997). Lessons of the eighties: What does the evidence show? *Symposium Proceedings* (pp. 55-85). St. Louis: FDIC.

- Sikka, P., Puxty, A., Willmott, H., & Cooper, C. (1998). The impossibility of eliminating the expectations gap: Some theory and evidence. *Critical Perspectives on Accounting*, 9(3), 299–330.
- Simkovic, M. (2009). Secret liens and the financial crisis of 2008. *American Bankruptcy Law Journal*, 83, 253–297.
- Strunk, N., & Case, F. (1988). *Where Deregulation Went Wrong: A Look at the Causes Behind Savings and Loan Failures in the 1980s*. Chicago: United States League of Savings Institutions.
- Sun, L. (2007). A re-evaluation of auditors' opinions versus statistical models in bankruptcy prediction. *Review of Quantitative Finance & Accounting*, 28(1), 55–78.
- Swanson, J. (2011, October 31). *Core Logic: HARP 2.0 Winners and Losers*. Retrieved November 1, 2011, from Mortgage News Daily: http://www.mortgage newsdaily.com/10312011_harp_harp2_0.asp
- United States General Accounting Office. (1996). *Financial Audit: Resolution Trust Corporation's 1995 and 1994 Financial Statements*. Washington D.C.: GAO.
- United States v. Arthur Young & Co., 465 U.S. 805 (U.S. Supreme Court March 21, 1984).
- Venuti, E. K. (2004). The going-concern assumption revisited: Assessing a company's future viability. *The CPA Journal*, 74(5), 40–43.
- Weil, J. (2001, February 9). Going concerns—did accountants fail to flag problems at dot-com casualties? *The Wall Street Journal*, pp. C1–C2.
- Weiner, E. (2007, November 29). *Subprime Bailout: Good Idea or 'Moral Hazard'?* Retrieved November 15, 2011, from NPR: <http://www.npr.org/templates/story/story.php?storyId=16734629>
- Weiss, G., & Larson, M. (2008). *Too Little Too Late to End the Debt Crisis: Too Much Too Soon for the US Bond Market*. New York: Weiss Research, Inc.
- Wertheim, P., & Fowler, W. (2005). Audit firm differences in the issuance of going concern opinions prior to client bankruptcy. *Journal of Accounting and Finance Research*, 13(5), 93–109.
- Willoughby, J. (2000, March 20). *Burning Up*. Retrieved November 15, 2011, from Barron's: <http://online.barrons.com/article/SB953335580704470544.html>

State Tax Policy and Ethanol: The Case of Missouri

Mark Jelavich

Stephen Ludwig

Northwest Missouri State University

Abstract

Along with federal programs, various Corn Belt states have enacted tax credits to foster ethanol production. Presumably, these state policies will increase farm income. Missouri farm income is specified to be a function of U.S. GDP, the parity index, average corn prices, and a dummy variable reflecting enactment of the Missouri state tax credit for ethanol production. OLS estimates for 1985-2008 show the tax credit to be insignificant in explaining Missouri farm income; similar conclusions are drawn for Iowa and Nebraska. Policy recommendations include ending the state tax credits.

Keywords: ethanol, corn, tax policy, subsidies

Acknowledgements: An earlier version of this paper was presented at the 2011 Missouri Valley Economic Association meetings, and it benefits from comments by Douglas Kinnear. Any errors remain those of the coauthors.

Introduction

Beginning in 2002 with the federal government's Renewable Fuels Standard, US corn growers have seen some of their production being used for ethanol (Anderson & Coble, 2010). Federal tax credits and tariffs (on imported ethanol) have increased US ethanol production (Whistance, Thompson, & Meyer, 2010). The *Wall Street Journal* reported that 40% of the US corn crop is turned into ethanol (Kilman, 2011); the US in turn is the world's largest ethanol producer (Theile, 2011), while Brazil ranks second, and also is the world's largest ethanol exporter (Fabiosa et al., 2010). Simultaneously, the Corn Belt states saw significant increases in the number of ethanol plants that process corn into that fuel (Haddad, Taylor, & Owusu, 2010). In addition to federal subsidies, state governments also began to create various incentives for ethanol production in their respective states. Cotti and Skidmore (2010) catalogue the various programs at the state level, noting that 30 of the 50 states have had some sort of tax credit, subsidy, grant and/or loan program in place since at least 2002. Feng and Babcock (2010) examine theoretically the impact of ethanol subsidies on cropland devoted to corn, arguing that increased ethanol demand leads to increased cropland in corn production.

One such state is Missouri, one of the twelve Corn Belt states (a list of such states is available in Blanco & Isenhouer, 2010). Enacted in 2002, the state offered a per gallon tax credit that reached a maximum of 23 cents per gallon; Iowa and Nebraska also enacted tax credits (Cotti & Skidmore, 2010, p. 1082). Despite this, ethanol production capacity in Missouri in 2007 stood at the low side, at 195 million gallons; by contrast, in bordering states, capacity stood at 1977 million gallons in Iowa, 1314 million gallons in Nebraska, 399 million gallons in Kansas, and 813 million gallons in Illinois (Cotti & Skidmore, 2010, p. 1082).

One could ask whether the Missouri tax credit had a significant impact on farm income in Missouri. The creation of nearby ethanol plants (and thus low transport costs) might encourage farmers currently not growing corn to switch to that crop. One complication is that rising ethanol production has been cited as a major reason for significant increases in corn prices; Hochman, Rajagopal and Zilberman (2010) conclude that rising world demand for food had more of an impact on corn and other prices, rather than biofuels production, such as for ethanol. Blanco and Isenhouer (2010) used county-level data for 2005 and 2006 to examine the impact of ethanol production in corn belt states; they concluded, "... the results show[ed] the small effect of increases in ethanol production on employment and wages" (p. 1233). In any case, to the extent that rising corn prices raise farm incomes, the significance of any state program might be statistically washed aside.

Theory and Model

Farm income—that is, farm profit—can be measured as the difference between revenue and cost. Revenue is driven by farm prices (as well as crop subsidies). In particular, rising corn prices should be reflected in rising farm revenues, assuming the demand for corn is price-inelastic. In addition, overall economic activity in the US will positively impact the demand for farm products in America, and thus farm income.

Recently, de Gorter and Just (2009) analyzed the impact of tax credits to producers in the ethanol market. In particular, they identify situations where corn farmers do not benefit from tax credits, or only partially benefit from such. Furthermore, they conclude that corn prices are very sensitive to changes in ethanol prices.

Rising corn prices also contribute to rising costs for livestock producers, as feed prices rise (Fabiosa et al., 2010). One measure of farm profitability is the so-called “parity ratio.” U.S. Department of Agriculture’s *Agricultural Statistics* defined parity ratio as the “Ratio of Index of Prices Received to the Index of Prices Paid by Farmers for Commodities and Services, Interest, Taxes and Farm Wage Rates.” Schluter and Lee (1994) state that the ratio has long served as a “commonly used measure of... relative price changes” in agriculture (p. 147). Recently, it has been shown to be a significant explanatory variable of US rural income (Jelavich, 2010). Thus, the parity ratio can be seen as a revenue/cost ratio.

As such, the following Equation 1 is specified:

$$\text{MOFARM} = f(\text{USGDP}, \text{PARITY}, \text{CORNPR}, \text{MOTAXCR}) \quad (1)$$

Where the following annual data for the 1985–2008 period are used:

MOFARM = Missouri farm income, in billions of current dollars;

USGDP = U.S. Gross Domestic Product, measured in trillions of current dollars;

PARITY = the U.S. Parity Ratio (where 1910–1914=100);

CORNPR = the average price per bushel of number 2 yellow corn at Kansas City, Missouri; and

MOTAXCR = a binary variable, equal to zero for the years 1985 through 2001, and to one for the years 2002 to 2008.

Means and averages for the variables are presented in Table 1; the “Data Sources” section below identifies sources for the numbers.

Table 1.
Descriptive Statistics

Variable	Mean	Standard Deviation
CORNPR	\$2.587500 per bushel	0.847022
MOFARM	\$0.904042 billion	0.534539
MOTAXCR	0.291667 (dummy variable)	0.464306
PARITY	44.62500	4.753145
USGDP	\$8.582292 trillion	3.162942
KSFARM	\$1.276833 billion	0.418154
NEFARM	\$1.988583 billion	0.624891
KSTAXCR	0.333333 (dummy variable)	0.481543
NETAXCR	0.375000 (dummy variable)	0.494535

As USGDP rises, so should the demand for farm products (including crops and livestock) and thus for farm income. One omission in this specification would be world (rather than just domestic) economic activity. As the parity ratio rises, so should farm income. While rising corn prices raise revenue for crop farmers but raise costs for livestock producers, it is assumed that the net effect of an increase in CORNPR is to increase MOFARM. Finally, it is assumed that enactment of the Missouri ethanol tax credit should have increased production of ethanol, raising the demand for corn in Missouri and thus MOFARM.

Equation 1 was estimated via ordinary least squares (OLS) regression, using eViews; the White heteroskedasticity correction method was used in the estimations. Column 1(a) in Table 2 reports the OLS estimates using all the independent variables; the remaining columns delete one or more independent variables to check for robustness as well as multicollinearity problems (discussed on the next page).

In Equation 1(a), all the independent variables' coefficients have their expected (positive) signs. However, both the MOTAXCR and CORNPR parameters are insignificant. Part of the "problem" may be multicollinearity: The correlation between USGDP and PARITY is -0.824 , while the correlation between USGDP and MOTAXCR is 0.830 . Based on the Durbin-Watson statistic, serial correlation does not appear to be a problem in Equation 1(a).

Equations 1(b) through 1(d) drop CORNPR or PARITY or both. Coefficient signs do not change (except for the constant term); however, the coefficient magnitudes do change noticeably (except possibly for PARITY). In all four specifications the MOTAXCR coefficient remains insignificant, implying that Missouri's ethanol tax credit had no significant impact on state agricultural profitability. Serial correlation does not appear to be a problem in these three regressions.

Table 2.
Missouri Farm Income OLS Regressions

VARIABLE	1(a)	1(b)	1 (c)	1 (d)
Constant	-4.540011 (-2.138981)**	0.033569 (0.086958)	-5.223673 (-2.592378)**	0.396933 (1.273768)
USGDP	0.176807 (2.198989)**	0.012758 (0.364296)	0.209216 (2.733395)**	0.041306 (0.885941)
PARITY	0.082664 (2.267072)**		0.096266 (2.935776)**	
MOTAXCR	0.190143 (0.562738)	0.553993 (1.437429)	0.124436 (0.388501)	0.523224 (1.256190)
CORNPR	0.070461 (0.607693)	0.231652 (2.162831)**		
<i>R</i> -squared	0.654353	0.563730	0.647834	0.450741
<i>F</i>	8.992329**	8.614392**	12.263820**	8.616667**
DW	2.272782	2.059440	2.277185	1.814289
(* <i>p</i> < .10; ** <i>p</i> < .05)				

Interestingly, looking at all four regressions, deleting PARITY noticeably reduces the coefficients of determination (*R*-squareds), an indication of the importance of that variable in describing farm income.

Neighboring State Tax Credit Impacts

Two states neighboring Missouri—Kansas and Nebraska—also enacted tax credits. While Missouri’s credits started in 2002, Iowa’s tax credits began in 2001, and Nebraska’s in 2000. Equations 2 and 3 are similar in specification to Missouri’s Equation 1:

$$\text{KSFARM} = g(\text{USGDP}, \text{PARITY}, \text{KSTAXCR}, \text{CORNPR}) \quad (2)$$

$$\text{NEFARM} = h(\text{USGDP}, \text{PARITY}, \text{NETAXCR}, \text{CORNPR}) \quad (3)$$

Where:

KSFARM = Kansas farm income, in billions of dollars;

NEFARM = Nebraska farm income, in billions of dollars;

KSTAXCR = dummy variable, equal to zero for the years 1985 to 2000, and to one for the years 2001 to 2008; and

NETAXCR = dummy variable, equal to zero the years 1985 to 1999, and to one for the years 2000 to 2008.

Table 3.
OLS Estimates for Kansas and Nebraska

VARIABLE	Dependent: KSFARM	Dependent: NEFARM
Constant	-2.884671 (-1.145141)	-5.601143 (-2.558610)**
USGDP	0.182630 (1.763249)*	0.228344 (2.267188)**
PARITY	0.057142 (1.285425)	0.116044 (2.987958)**
KSTAXCR	-0.372927 (-1.059263)	
NETAXCR		0.015999 (0.053988)
CORNPR	0.065113 (0.463989)	0.0172200 (1.070205)
<i>R</i> -squared	0.506878	0.692816
<i>F</i>	4.882504	10.713020
DW	2.341733	1.922852
(* $p < .10$; ** $p < .05$)		

Table 1 lists means and standard deviations for the four variables. The other variables remain the same as defined for Equation 1. The expected signs are the same as for Equation 1, in particular, the KSTAXCR and NETAXCR coefficients are both expected to be positive. OLS estimates for Equations 2 and 3 are given in Table 3.

The Kansas results are surprisingly poor, compared to Missouri's estimations. The coefficient of determination (*R*-squared) is considerably lower, at 0.507. Only the USGDP coefficient is significant; the tax credit coefficient is (insignificantly) negative. In contrast, the Nebraska results show both the USGDP and PARITY coefficients to be significantly positive; the Nebraska tax credit parameter is insignificantly positive. As with Equation 1, multicollinearity may be a problem: the correlation between KSTAXCR and USGDP is 0.849, while that between NETAXCR and USGDP is 0.865.

Policy Conclusions

State governments in 2012 generally faces very tight fiscal situations. As such, state legislatures and governors, including Missouri's, need to look carefully at the impact of existing tax credits, and eliminate those that do not appear to enhance state economies. Missouri's ethanol tax credit appears to be an example of

an ineffective fiscal tool, at least in terms of raising farm income, and so should be repealed. This may be in line with de Gorter and Just's conclusions. Blanco and Isenhouer's (2010) results seem to extend this to the rest of the rural economy. Furthermore, 2011 forecasts for Missouri farm income suggest improving farm profits over 2010 (Gustin, 2010). The same recommendation could be made in the cases of Kansas and Nebraska. As an aside, the difference in estimations between Kansas, on the one hand, and Missouri and Nebraska on the other, reflect the diversity in farm economies among the states, and the need to focus on regional (state) economies, not just the national one.

Data Sources

Data on MOFARM, KSFARM, and NEFARM and USGDP came from the U.S. Bureau of Economic Analysis's web site (www.bea.gov); farm income is from Table SA-04 ("State Income and Employment Summary"). CORNPR and PARITY are from the U.S. Department of Agriculture's *Agricultural Statistics*, various years (available at www.usda.gov). MOTAXCR, KSTAXCR, and NETAXCR are based on dates identified in Cotti and Skidmore (2010), Table 1.

REFERENCES

- Anderson, J. D., & Coble, K. H. (2010). Impact of renewable fuels standard ethanol mandates on the corn market. *Agribusiness*, 26(1), 49–63.
- Blanco, L., & Isenbauer, M. (2010). Powering America: The impact of ethanol production in the corn belt states. *Energy Economics*, 32, 1228–1234.
- Cotti, C., & Skidmore, M. (2010). The impact of state government subsidies and tax credits in an emerging industry: Ethanol production 1980–2007. *Southern Economic Journal*, 76(4), 1076–1093.
- de Gorter, H., & Just, D. R. (2009). The welfare economics of a biofuel tax credit and the interaction effects with price contingent farm subsidies. *American Journal of Agricultural Economics*, 91(2); May), 477–488.
- Fabiosa, J. F., Beghin, J. C., Dong, F., Eloheid, A., Tokgoz, S., & Yu, T. (2010, November). Land allocation effects of the global ethanol surge: Predictions from the international FAPRI model. *Land Economics*, 86(4), 687–706.
- Feng, H., & Babcock, B. A. (2010). Impacts of ethanol on planted acreage in market equilibrium. *American Journal of Agricultural Economics*, 92(3), 789–802.
- Gustin, G. (2010). Bright future is seen for farm incomes. *St. Louis Post-Dispatch*, December 31, 2010, pp. B1–B2.
- Haddad, M., Taylor, G., & Owusu, F. (2010). Locational choices of the ethanol industry in the midwest corn belt. *Economic Development Quarterly*, 24(1), 74–86.
- Hochman, G., Rajagopal, D., & Zilberman, D. (2010). Are biofuels the culprit? OPEC, food, and fuel. *American Economic Review*, 100(2), 183–187.
- Jelavich, M. (2010). Farm prices, energy prices and rural income in the U.S. *Journal of Economics* (Missouri Valley Economics Association), 36(1), 1–7.
- Kilman, S. (2011). US farmers head into key stretch for harvests. *Wall Street Journal*, March 7, p. A2.
- Schluter, G., & Lee, G. K. (1994). Effects of relative price changes on U.S. food sectors, 1967–1978. *Journal of Agricultural Economics Research*, 45(4), 147–158.
- Theile, C. (2011). Die Ethanol-Weltmacht. *Süddeutsche Zeitung*, March 8.
- Whistance, J., Thompson, W. W., & Meyer, S. D. (2010). Ethanol production effects on U.S. natural gas prices and quantities. *American Economic Review*, 100(2), 178–182.

The Economics of Cultural Heritage Events: An Input/Output Analysis of the Economic Impact of Knights of Ak-Sar-Ben's River City Rodeo and Stock Show on the City of Omaha, Nebraska

Christopher S. Decker
University of Nebraska at Omaha

Abstract

While much attention has been given to measuring the economic impact of cultural and historic sites, relatively little attention has been paid to the impact of cultural and historically-based events. In this paper, we measure the economic impact of the Knights of Ak-Sar-Ben's annual River City Rodeo and Stock Show on the city of Omaha, Nebraska. The results demonstrate that this four-day annual event has a measurable impact on the city, drawing many visitors from outside the city, thus generating revenue for local area businesses and increasing tax revenue for both the city and the state. Indeed, research demonstrates that this event generates comparable impact to other much larger events like the annual NCAA College World Series, also held in Omaha. The study demonstrates that local cultural heritage events can have a substantial impact on regional economies, beneficial to both locally based businesses and government.

Keywords: economic impact analysis, input output, cultural heritage events

Acknowledgements: The author would like to thank the Knights of Ak-Sar-Ben for their helpful commentary.

Introduction

In recent years, there has been increased interest among economists, regional planners, and local government officials on the economic impact of sporting events, cultural events, local heritage activities, and historic preservation sites. Interest among event organizers and local government officials is strong given the costs involved. Consider a sporting or cultural event for example. Between the costs of promotion, event staffing, and rental rates of venue sites, the cost of executing a sporting or cultural event can be substantial for event organizers. For local governments hosting such events, costs such as increased security and traffic control can add up as well. Historical preservation activities, such as historic building rehabilitation, can also be costly for local governments since in many instances restoration and maintenance costs of such sites are publicly subsidized.

While the costs of such activities are generally quantifiable, measuring benefits can be more elusive. Clearly, there are potential benefits as sporting and cultural events, as well as historic sites, can pump direct monetary injections into a local economy through tourism. However, measuring these benefits requires a fair amount of research and the methodologies for assessing benefits vary substantially.

There has been a great deal of attention paid to assessing the economic impact of sporting events such as motor sports, golf tournaments, and the Olympic games (Dick & Wang, 2010; Connaughton & Madsen, 2007; Hotchkiss, Moore, & Zobay, 2003; Fayos-Sola, 1997; Gelan, 2003). Many different techniques have been employed to measure these impacts but most of these studies have employed input/output methodologies.

With respect to historical and cultural sites, most of the work to date has been on assessing the impact of historical sites using a variety of different techniques. Some authors use contingent valuation to measure both use and nonuse value of historical and cultural sites (Noonan, 2003). Other studies, such as Noonan (2007); Clark and Herrin (1997); and Thompson, Rosenbaum, and Schmitz (2011), have employed hedonic pricing methodologies applied to home sales to measure the market value of historic landmarks and preservation activities. Still other studies have employed travel cost methodologies to measure value (see, e.g., Poor & Smith, 2004).

While much attention has been given to cultural and historical sites, relatively little attention has been paid to cultural and historically-based events. Moreover, despite its widespread use and application, published research has employed input/output modeling to measure economic impact of such events (notable exceptions include Getz, 1991, and Saayman & Saayman, 2004).

This paper adds to this small literature by employing input/output analysis to measure the economic impact of a prominent cultural heritage event on a mid-

sized metropolitan midwestern city. Specifically, the economic impact of the Knights of Ak-Sar-Ben's annual River City Rodeo and Stock Show on the city of Omaha, Nebraska, is assessed. The results are then compared with available estimates of another major event that takes place in Omaha—the NCAA College World Series (CWS).

The River City Rodeo and Stock Show: A Brief History

Farming and ranching activities were integral to the culture and economy of the American West in the nineteenth and early twentieth century, and as both vocations grew in number and importance, communities developed. As an outgrowth of these communities, events celebrating farming and ranching occurred, from competitive livestock shows where farmers and ranchers could bid on cattle to contests involving traditional rodeo activities, such as bull riding and steer-roping skills.

Such rodeo and stock show activities grew both in number and in popularity throughout the twentieth century and are still integral to the cultural heritage of the mid-western and plains regions of the United States. One such rodeo event is The Knights of Ak-Sar-Ben's River City Rodeo & Stock Show.

Since its inception in 1982, this event, formally known as the River City Roundup, has been one of the largest and most prominent cultural events in the American Midwest, and for over two decades, the city of Omaha, Nebraska, has hosted the event designated in 2010 by Omaha Mayor Jim Suttle as the “Official Community Celebration” of the city of Omaha. The River City Rodeo & Stock Show is a four-day event that showcases American western culture and heritage. Rodeos, livestock shows, and county fair activities are some of the activities held during the four-day event.

Historically, the event has been quite popular. Annually, it will draw between 95,000 to 110,000 attendees and, based on survey evidence, draws people in from many other regions, states, and countries. The event draws residents from not only neighboring states such as South Dakota, Iowa, and Minnesota, but also from California, Florida, and New York, traveling to Omaha for the main purpose of attending the rodeo and stock show.

The event typically takes place in the fall, usually the end of September or early October. This is important from the perspective of isolating the impact of the event on the city because it takes place during a time of the year that is both past the peak of the traditional summer tourist season, when schools are in session and family travel is limited, and before holiday travel begins. Therefore, the likelihood that attendees are visiting this event only as part of a larger vacation trip is low. It is rather more likely that attendees are traveling to Omaha primarily because of the rodeo and stock show event.

The Methodology

Since the event draws a large number of visitors to Omaha, it seems reasonable to presume that this event does have a measurable impact on the city's economy. To measure this impact, we gather sample data from a survey administered during the event and introduce it into an input/output model of the city of Omaha to measure the overall effect in terms of economic activity generated and jobs created.

The Survey

To measure the impact of any given activity or event, survey data are often collected. These data provide a measure of *direct* monetary expenditures, or *injections*, as the result of a specific event. Once these estimates are obtained, they are typically applied to an input-output (IO) model containing specific information on the structural characteristics of a given local economy.

Under the direction of the Knights of Ak-Sar-Ben, the survey used in this study was administered directly to attendees during the four-day event in the years 2006, 2008, and 2010. Respondents were asked a number of questions, including an assessment of the various venues offered during the event (e.g., the rodeo, stock show, heritage parade, and concerts), duration of stay, model of transportation and lodging, and a variety of socio-economic and demographic data. (See "Economic Event," 2012 for a copy of the survey.) Most importantly, the survey asks respondents to estimate their per-day off-site expenditures (i.e., money spent in the city but not on the event grounds) on seven different consumer groups: food and drink at local restaurants and bars, entertainment, retail purchases (e.g., clothing and souvenirs), lodging, public transportation, gasoline/diesel purchases, and miscellaneous items and services.¹ These estimates were then used, in conjunction with data from respondents on length of stay and total estimated attendees, to estimate total expenditures on all seven items generated by the rodeo and stock show event for each year. These expenditure values were then inflation-adjusted (using 2006 as the base year) and averaged to provide an estimate of typical spending generated by the event.² The following impact estimates represent real 2006 dollar value estimates.³

Local Versus Non-Local Spending

Economic impact studies are usually designed to measure the injection of *new money* from outside a local economy as the result of some event. Some argue that

¹ This approach contrasts with Connaughton and Madsen (2007) who surveyed businesses to obtain estimates of increased business activity as the result of a special event. It can be debated which approach is superior. Businesses have a good sense as to expectations regarding specific events but consumers generally know to some degree how much they are spending, particularly during vacations and other special trips that are often budgeted for. While the debate cannot be settled here, it would be an avenue for future research to explore relative impact measures depending on who is being surveyed.

spending by local residents should not be included under the assumption that local expenditures merely represent a redistribution of existing money already within the community itself. That is, a dollar spent by a local resident at Ak-Sar-Ben's River City Rodeo & Stock Show is simply a dollar that would have been spent somewhere else in the local economy and therefore local spending during the event is simply a transfer of expenditure.

While this is not an unreasonable presumption (and, indeed, the analysis below emphasizes the estimated dollar impact of non-local area residents), it may very well be that not including the effect of events like the one addressed here, which according to the data do have substantial local appeal, may underestimate the overall impact of the event on the local economy. Including some local resident expenditure may be reasonable in this case for at least four reasons. (See Towse, 2010 for a review of this debate.)

First, survey data show that a proportion of respondents live sufficiently far away from the downtown area where the event takes place. Hence, they may be drawn to this area largely due to certain "special" events, such as the River City Rodeo & Stock Show. If one reasonably assumes that any off-event grounds spending (e.g., fuel costs and restaurant spending) would not have occurred was it not for the local respondents being drawn to this event, then this is an expenditure that is, in fact, being injected into the local economy as a direct result of the event.

Second, given the special appeal of the event to local residents, it is not unreasonable to assume that, as local citizens consider their family recreational activities, they planned to attend this particular event instead of spending their money at amusement parks or other cultural events, in other nearby cities like Kansas City, Missouri, or Des Moines, Iowa. Hence, without the River City Rodeo & Stock Show, these locally spent dollars may have been spent outside the Omaha economy. The event may have kept some local money from "leaking" outside of the Omaha metropolitan area.

² This averaging is done so as to provide a better picture of the overall impact the rodeo and stock show generate. For example, 2006 was a very strong year from the perspective of the overall economy. However, in 2008, the economy began to slip into recession and by 2010 a modest recovery had begun. The concern then in measuring an event's dollar impact is that it may very well be sensitive to cyclical movements in the economy. Other impact studies that are based solely on one administered survey in a particular year may run the risk of either over or under-stating the impact. By looking at an average expenditure measure, potential cyclical bias can be, to some degree, smoothed out.

³ As referenced below, that computer program IMPLAN 2.0 was used to estimate the overall economic impact. Within this program, deflators are available by sector. Hence, the deflators used to adjust the 2008 and 2010 data were unique to each of the seven different consumer groups mentioned above. The year 2006 was chosen as the base year for this analysis because the IMPLAN program used here was based upon 2006 data.

Third, even if the above argument is not true, it is not necessarily the case that dollars spent by Omaha-resident attendees are dollars that simply would have been spent somewhere else. It may be that the event was anticipated and families budgeted sufficient funds in anticipation of attendance. Therefore, this expenditure may not have necessarily occurred; in fact, some or all of the planned expenditure on event-related activities might simply have been saved had it not been for the River City Rodeo & Stock Show.

Fourth, it is not clear that local spending is a net expenditure wash since spending in different sectors impacts the economy differently. For instance, if local attendees spend an average of \$100 on some general merchandise items in a nearby store (which has a specific multiplier), it is not necessarily the case that this same \$100 would be spent on \$100 of general merchandise elsewhere in the local economy. It might be that had this money not been spent at these retailers, it might have been spent on, for example, movies and restaurants in south Omaha, sectors that have impacts that differ from that of retail. Hence, part of our analysis attempts to estimate this injection from local area attendees.

That said, it is, as a matter of complete accuracy, not advisable to simply include all local expenditure. It would be better, for instance, to only count expenditures by those individuals who are very infrequent attendees of such special events (such as the River City Rodeo & Stock Show) and infrequent visitors to downtown Omaha. These individuals are more likely to plan for such events, save for such events, and only offer injections into a local economy when such events are taking place. The survey asked respondents to indicate the frequency with which they visit downtown Omaha. Spending by individuals who were infrequent visitors to the downtown Omaha area was then included as a direct injection into the economy as it likely represents spending prompted by the River City Rodeo & Stock Show itself.

The Input/Output (IO) Model

An IO model, originally developed by Wassily Leontief (1936) and therefore often called the Leontief model, describes an economy as a series of industries or sectors that are interrelated through forward (i.e., end-user demand) and backward (i.e., supply) linkages. A stimulus to one sector, say an increased wage earning labor force, then impacts all other sectors in the economy, to varying degrees, through a “multiplier effect.” IO models have been in existence for a number of years and, due to the inter-industry linkage construction, there is a rich history of their application in economic impact analysis. What follows is a brief review of the basic IO model structure. (For a more complete overview of IO models and their various strengths and weaknesses, see Chiang, 1984; Raa, 2005; Yan, 1969; and Hewings, 1985.)

Gross output in a given sector is defined as output from an industrial sector that is sold to all other industrial sectors who use that output in production (re-

ferred to as intermediate demand), and to final consumers (referred to as final demand). (For instance, some portion of steel production is used to make final consumer goods such as cutlery, i.e., final demand, and some steel is used by the automobile industry to manufacture cars, i.e., intermediate demand.) Let g be an $m \times 1$ vector describing gross output in each of an economy's m sectors. The IO model can be mathematically described, then, as:

$$g = Ag + f \quad (1)$$

where A is an $m \times m$ matrix containing “technological coefficients” describing a Leontief fixed proportions production function, and f represents final demand. (See Leontief, 1936 for an extended explanation). Solving for g , the following expression is obtained:

$$g = (I - A)^{-1} f \quad (2)$$

where I is an $m \times m$ identity matrix. The matrix $(I - A)^{-1}$ is often referred to as the “Leontief inverse” matrix, from which multiplier values are derived. For instance, if one were to select a given column of values from the Leontief inverse matrix (i.e., selecting a particular industrial sector i), and added those values together, one would obtain the total multiplier for that given sector i . From this, we can determine the “multiplier effect.” This effect arises from a direct injection of expenditure in one sector of the economy that “ripples” through all other sectors to varying degrees. For instance, suppose the multiplier for “hotel services” was 1.55. This would imply that a \$100 increase in final demand for hotel rooms by consumers would generate an additional \$55 in total spending in the economy.

To see where this additional spending comes from, it is helpful to understand that multipliers derived from $(I - A)^{-1}$ can be decomposed into two effects, an “indirect” effect, and an “induced” effect of a direct injection. “Indirect” effects are those re-spending effects that filter through other industries in an economy as a result of the direct injection. For instance, in our hotel example above, a stimulus to hotel services demand increases demand for cleaning services at these hotels (a first indirect effect). This stimulates demand for cleaning capital and cleaning products (a second indirect effect). This second indirect effect stimulates demand in other sectors, and so on. The sum of these effects on other industries is the “indirect” effect. So of the \$55 above, suppose \$35 measures this indirect effect. The “induced” effect is the effect on final demand in an economy. Final demand can be characterized in the following way. All of these sectors employ people locally. Increased demand for output from these sectors induces additional labor inputs paid for via wages and salaries. The resulting increase in employee incomes induces additional spending locally. This additional spending is the “induced” effect. The continual “re-spending” of the original direct injection accumulates through to the local economy. In our example, then, \$20 of the \$55 would be the induced effect.

The total multiplier effect is then the sum of the direct, indirect, and induced effects ($\$155 = \$100 + \$35 + \20).

The key to a complete impact study is to measure both direct injections and the resulting indirect and induced effects that result from the multiplier effect. Creating multipliers requires an IO model and can be costly and data-intensive. Fortunately, there are many sources of such models and multipliers. One of the most common models used is IMPLAN, developed by the Minnesota IMPLAN Group, Inc. (MIG, Inc.). The IMPLAN model provides substantial industry detail (a desirable characteristic as multipliers will vary from industry to industry), provides substantial detail on direct injections and indirect effects, and is quite flexible as it allows users to input a variety of market characteristics that may be unique to a particular area of the country. IMPLAN version 2.0 was used in this analysis.

Regional Market Definition

A final consideration involves defining the local economy of interest. Some care needs to be taken here. The power of an IO model is that it captures inter-linkages between industries present in an economy. If a demand stimulus to a given local industry prompts that industry to obtain inputs from industries within the same local economy, then that spending generates a multiplier effect within that local economy. However, if a demand stimulus to a local industry prompts it to buy inputs from industries outside the local economy, that spending represents a leakage from that local economy and thus does not figure into the multiplier. So, if we define the local economy too narrowly, there will be too few industrial inter-linkages and an understated multiplier effect. If we define the economy too broadly, we run the risk of counting spending that is well outside the local economy, overstating the multiplier effect. (See Raa, 2005 for additional detail on this point.)

For our purposes here, we focus on Douglas County, Nebraska, as our measure of the local economy. The principle purpose of the analysis is to measure the impact of a cultural event on the City of Omaha itself (that is, the region over which the city government has jurisdiction). One may be concerned that the county-level delineation is too large, leading to an upward bias in the indirect and induced effects. While it could be argued that the local economy should be the city itself, county-level analysis tends to be favored over sub-county analysis in most cases. The IMPLAN model can incorporate sub-county level data (specifically at the zip-code level), but it is generally accepted that the county-level data supporting IMPLAN (which comes from a variety of sources such as the U.S. Bureau of Economic Analysis) is more complete and based on estimates from larger sample sizes than is the more localized data.

Moreover, it is also the case that the City of Omaha is not only subsumed within Douglas County, it accounts for most of the economic activity within the county.

According to the 2010 U.S. Census, of the 263,173 civilian jobs in Douglas County, the city accounted for 208,489 jobs, roughly 80% of the county total. (These data are available at [http://quickfacts.census.gov/qfd/states/.](http://quickfacts.census.gov/qfd/states/)) Therefore, it is reasonable to assume that the county-level delineation will provide impact results that would closely track with a city-level delineation.

Additionally, one might suggest that the county delineation is too narrow. The Omaha Metropolitan Statistical Area (MSA) is comprised of eight counties, including Douglas. It also includes Pottawattamie County in Iowa, the location of Council Bluffs, which is a small city adjacent to Omaha on the eastern shore of the Missouri River. One could argue that excluding Council Bluffs' economy might influence the overall impact of the River City Rodeo and Stock Show. While this is possible, according to employment data from the U.S. Bureau of Economic Analysis, nonfarm employment in Douglas County accounts for 71% of total Omaha MSA nonfarm employment, Pottawattamie County's nonfarm payrolls account for less than 9% of the total. (The statistics used are from 2009 data available from the Bureau of Economic Analysis: [http://www.bea.gov.](http://www.bea.gov)) Any bias, then, from excluding Pottawattamie County is likely to be relatively small.

Most of the city's population resides in this county as well as most of its industrial activity. Thus, there are a sufficient number of industrial inter-linkages. Moreover, it is a relatively small geographic region as well so measurements of induced spending are more reliable.

Summary Statistics and Impact Results

As indicated above, survey-based data have been gathered for the 2006, 2008, and 2010 River City Rodeo and Stock Show events. The results discussed here represent the weighted average of each year's data on residency, distance traveled, and spending on the seven categories listed earlier.⁴ Again, the data are inflation-adjusted to reflect real 2006 dollar values.

In order to obtain a reasonable set of statistical results, a sufficient number of surveys must be administered to offer a reasonable picture of the economic makeup of the entire population attending the event. The total number of (usable and reasonably complete) surveys collected over the three years in question was 1,498. Statistically speaking, this implies that the answers supplied by the survey respondents reflect the characteristics of the population of event attendees, with a margin of error of 2.5% evaluated at a 95% confidence level. As a result, estimates obtained from the survey results are reasonably representative of the population of attendees.

⁴ The weights were calculated as the total attendance in a given year to total attendance over the period 2006, 2008, and 2010. Total attendance in 2006, 2008 and 2010 was estimated at 102,000, 100,000, and 95,000, respectively, indicating total attendance at 297,000. The weights therefore are 0.343, 0.337, 0.320, for 2006, 2008, and 2010, respectively.

Survey Data on Local Versus Non-Local Spending

The survey included items used to determine estimates measuring the number of local versus non-local visitors, vital information for ascertaining non-local and local direct expenditures. Determining the number of non-local visitors was based on respondents' answers to residency questions, expenditures on lodging, and distance traveled. First, visitors who indicated residency outside of Nebraska and Iowa were counted as non-local. Approximately 21.4% of respondents indicated residing in states like Minnesota, South Dakota, and Missouri, as well as places like California, Colorado, Florida, and Texas in addition to several international locations (including Canada, Great Britain, Australia, and Japan). Determining non-local Nebraska and Iowa residents was based on sub-city (i.e., suburban) and/or zip code location. Any respondent indicating residency outside of Council Bluffs, Iowa (a city just east of Omaha across the Missouri River), and outside of Omaha suburban areas were counted as non-local as well. There were a number of surveys that did not give state, city, or zip code residency information but miles traveled instead; therefore, respondents who traveled 50 miles or more to downtown Omaha to attend the event were added to the non-local count. Where survey observations containing residency information was provided, about 56.2% of total respondents traveled more than 50 miles to the event. Of this, only those surveys not already counted as non-local were used to add to the non-local count. Any remaining surveys not yet counted as non-local were then investigated to see if respondents indicated expenditure on hotel lodging. If so, these too were counted as non-local. The overall percent of respondents counted as non-local was roughly 65%.

As far as local spending is concerned, care was taken to include only spending that could be reasonably linked to the River City Rodeo and Stock Show event. The survey asked respondents to indicate how frequently they visit the downtown Omaha area. The possible responses ranged from "very infrequent" (specifically indicating on the survey either "just for the River city Rodeo and Stock Show" or "once per year") to "very frequent" (specifically indicating "at least once per week"). Focusing only on the 35% of surveys classified as local, respondents who indicated very infrequent visits were counted as local spending linked to the event. This amounted to 10.5% of the 35% of surveys classified as local. Overall, the portion of respondents counted as local whose spending could be reasonably linked to the rodeo and stock show event was 11.6%.

Direct Injection Spending

Table 1 shows estimates of total direct spending injections in seven sectors of the local economy (figures are reported in \$1000s). These figures, broken down between local and non-local spending, are based on survey respondents' answers to estimated daily spending levels, indicated length of stay, and total estimated event attendees.

Non-local spending generated by the River City Rodeo and Stock Show averages about \$10.53 million. The largest amount of spending is in the hotel and lodging sector where \$4.16 million (39.5%) is generated, followed by spending at local area restaurants and bars, where the event prompts some \$2.34 million (22.2%) in spending. The other major spending categories are fuel purchases by visitors while in the city, at \$1.78 million (16.9%), and retail purchases (not at the event itself), at \$1.28 million (12.2%).

Local resident spending linked to the event average \$153,440, which is, not surprisingly, much smaller than non-resident spending. Most of this is spent at local restaurants and bars (approximately \$67,000), retail purchases (approximately \$29,000), and fuel costs (about \$20,400).

Table 1.
Three Year Average of Direct Injections
Due to the River City Rodeo & Stock Show (\$1000s)

	Direct Injections
Non-local Residents	
Food and drink restaurants	2,337.38
Non-event entertainment	163.85
Retail purchases	1,281.50
Hotel and other lodging	4,157.39
Ground transportation (taxi, car rental, etc.)	231.51
Gasoline/diesel purchases	1,777.44
Miscellaneous*	582.86
Total	10,531.94
 Local Residents	
Food and drink restaurants	67.18
Non-event entertainment	15.34
Retail purchases	28.97
Hotel and other lodging	-----
Ground transportation (taxi, car rental, etc.)	9.97
Gasoline/diesel purchases	20.40
Miscellaneous*	11.58
Total	153.44

*Since there is no "miscellaneous" sector in IMPLAN, the retail sales multiplier was used.

Total Economic Impact

As indicated above, the total impact of an event represents the sum of the direct injections plus the resulting indirect and induced effects generated through each industry's multiplier within our local economy. There are three common ways of measuring impact: total gross output impact, value added impact, and employment impact. The total gross impact measures the total dollar impact on an economy. This is the most common measure of impact as it includes intermediate input demand as well as final demand. It is this measure that is represented in the mathematical presentation of the model presented earlier.

The value-added impact measures the direct, indirect, and induced economic impact of an initial injection on four components: employee compensation (i.e., salaries and benefits), proprietor income (incomes of private owners and self-employed persons), other property income (payments from interest, rents, royalties, dividends, and profits), and indirect business taxes (excise and sales taxes paid by individuals and businesses). As a measure of impact, it in effect removes the demand generated by industries in the intermediate stages of production. As such, it reflects typical measures of economic activity. For instance, at the state level, measures of gross state product are value-added measures. The employment impact measures the total number of jobs created by the direct, indirect, and induced effects, respectively.

Table 2 summarizes the impact of the River City Rodeo and Stock Show on the Omaha economy. Based on total gross output, the event generated \$17.1 million in economic activity. This implies a multiplier of about 1.6 indicating that one dollar of direct injection results in an additional sixty cents in indirect spending (accounting for about thirty-one of the sixty cents) and induced spending (accounting for twenty-nine of the sixty cents). To put this figure in context, net taxable sales in the city of Omaha averaged \$721.5 million over the years, 2006, 2008, and 2010. This relatively short four-day event, accounts for 2.4% of net taxable sales.⁵

As another point of comparison, consider that Omaha is the home of the annual College World Series (CWS) baseball tournament held in June. This event attracts some 300,000 visitors to the city and is spread over a period of about 10 days. Estimates suggest that this much larger sporting event generates an estimated impact of \$39.9 million (adjusted for 2006 dollar values), or about 5.5% of average net taxable sales in the city (Goss & Associates Economic Solutions study, 2008). The fact that the River City Rodeo and Stock Show has a smaller impact relative to the CWS is far from surprising. However, it is noteworthy that while the CWS is three times as large as the rodeo and stock show, its impact is only 2.3 times as large. The implication is that cultural events can indeed have meaningful impacts on local economies, both in absolute terms as well as comparative ones.

⁵The 2008 and 2010 sales figures were adjusted to reflect 2006 dollars using the Bureau of Labor Statistics' broad Consumer Price Index measure.

Table 2.
Economic Impact of the River City Rodeo & Stock Show

Non-Local				
	Direct	Indirect	Induced	Total
Output (\$1000s)	10,531.94	3,314.28	3,021.15	16,867.38
Value added (\$1000s)	6,243.59	1,759.57	1,822.17	9,825.33
Employment (#)	175.2	26.9	28.9	231.0
Local				
	Direct	Indirect	Induced	Total
Output (\$1000s)	153.45	50.70	44.00	248.14
Value added (\$1000s)	82.32	26.72	26.54	135.57
Employment (#)	2.9	0.4	0.4	3.8
Non-local + Local				
	Direct	Indirect	Induced	Total
Output (\$1000s)	10,685.39	3,364.98	3,065.15	17,115.52
Value added (\$1000s)	6,325.90	1,786.29	1,848.71	9,960.90
Employment (#)	178.1	27.3	29.3	234.8

Estimates generated by IMPLAN 2.0

As is shown in Table 2, most of the impact comes from non-local resident spending, accounting for \$16.9 million of the total gross output impact. The value-added and employment figures also demonstrate impact. In terms of total employment generated, the rodeo and stock show event accounts for 235 additional jobs to the local economy, 231 due to non-local spending. This represents both permanent and temporary employment. While it would be useful for future research, only the total employment impact is measured. It is not possible within IMPLAN to determine how many of the total jobs created are temporary or permanent. This amounts to an employment multiplier of about 1.32. For every 10 jobs created due to direct injection, an additional three jobs are created due to indirect and induced spending. Again, by way of comparison, according to a recent estimate, the CWS generates approximately 537 jobs. Again, this is a larger impact because the CWS is a larger draw than the rodeo and stock show event. However, again, the rodeo and stock show is one-third the size but the employment impact is almost half the size of the CWS, suggesting that the employment impact for cultural events is significant.

Conclusion

While much attention has been given to measuring the economic impact of cultural and historic sites, relatively little attention has been paid to the impact of cultural and historically-based events. In this paper, the economic impact of the Knights of Ak-Sar-Ben's annual River City Rodeo and Stock Show on the city of Omaha, Nebraska, was measured.

The results demonstrated that this four-day, annual event has a measurable impact on the city, generating \$17.1 million in economic activity and 235 jobs. On a comparison basis, while the heritage event analyzed here is much smaller than other events, such as major sporting tournaments like the CWS, the data suggest that cultural and heritage events can hold their own. Indeed, the results here show that even though the River City Rodeo and Stock Show is one-third the size of the CWS, the employment impact is almost half the size of the CWS. Cultural and heritage events can be quite effective at generating economic activity and employment opportunities. The study demonstrates that local cultural and heritage events can have a substantial impact on regional economies.

REFERENCES

- Chiang, A. C. (1984). *Fundamental methods of mathematical economics*, 3rd ed. New York: McGraw-Hill.
- Clark, D. E., & Herrin, W. E. (1997). Historical preservation districts and home sale prices: Evidence from the Sacramento housing market. *The Review of Regional Studies*, 27(1), 29–48.
- Connaughton, J. E., & Madsen, R. A. (2007). The economic impacts of the North Carolina motorsports industry. *Economic Development Quarterly*, 21(2), 185–197.
- Economic Event. (2012). Retrived from <http://www.rivercityrodeo.com/more-info/economic-impact>.
- Dick, C. D., & Wang, Q. (2010). The economic impact of the Olympic games: Evidence from stock markets. *Applied Economics Letters*, 17(7–9), 861–864.
- Fayos-Sola, E. (1997). The impact of mega events. *Annals of Tourism Research*, 25(1), 241–244.
- Gelan, A. (2003). Local economic impact: The British Open. *Annals of Tourism Research*, 30(2), 406–425.
- Getz, D. (1991). Assessing the economic impacts of festivals and events: Research issues. *Journal of Applied Recreation Research*, 16(1), 61–77.
- Goss & Associates Economic Solutions. (2008). *The Impact of the College Works Series on the City of Omaha, 2007-2018*. Prepared for Heritage Services, February. http://www.ernestgoss.com/CWS_OpOnly021308.pdf
- Hewings, G. J. D. (1985). *Regional input-output analysis*. Thousand Oaks, CA: Sage Publications.
- Hotchkiss, J. L., Moore, R. E., & Zobay, S. M. (2003). Impact of the 1996 summer Olympic games on employment and wages in Georgia. *Southern Economic Journal*, 69(3), 691–704.
- Leontief, W. (1936). Quantitative input and output relations in the economic system of the United States. *Review of Economics and Statistics*, 18, 105–125.
- Noonan, D. S. (2007). Finding an impact of preservation policies: Price effects of historic landmarks on attached homes in Chicago, 1990–1999. *Economic Development Quarterly*, 21(1), 17–33.
- Noonan, D. (2003). Contingent valuation and cultural resources: A meta-analytic review of the literature. *Journal of Cultural Economics*, 27, 159–176.
- Poor, P. J., & Smith, J. M. (2004). Travel cost analysis of a cultural heritage site: The case of historic St. Mary's city of Maryland. *Journal of Cultural Economics*, 28, 217–229.
- Raa, T. T. (2005). *The economics of input-output analysis*. Cambridge University Press.

- Saayman, M., & Saayman, A. (2004). Economic impact of cultural events. *South African Journal of Economic and Management Sciences*, 7(4), 629–642.
- Thompson, E., Rosenbaum, D., & Schmitz, B. (2011). Property values on the Plains: The impact of historic preservation. *Annals of Regional Science*, 47(2), 477–491.
- Towse, R. (2010). *A textbook of cultural economics*. Cambridge University Press.
- Yan, C. (1969). *Introduction to input-output economics*. Holt, Rinehart, and Winston, Inc.

Paid Tax Preparer Determinants Reexamined

Diamond Garner
Ramon P. Rodriguez, Jr.
Juan Xu

Southern Illinois University Carbondale

Abstract

This paper uses individual taxpayer data from tax years 2004 to 2008 to examine the factors that determine the use of paid tax preparers by individual taxpayers. Our findings generally confirm prior research, such as marital status, self-employment, and age; however, we add to the literature in two important ways. First, we find paid preparer use is positively related to a taxpayer's receipt of the Earned Income Tax Credit. This relationship was previously unreported. Second, while previous research concludes that paid preparer use is positively related to income, our examination reveals that paid preparer use and income actually have a curvilinear bathtub-shaped relationship. More specifically, taxpayers with either low-income or high-income are more likely to use paid preparers.

Keywords: paid preparer determinants, EITC, AGI, individual income taxes

All data are publically available.

Introduction

In 1983, paid tax return preparers prepared an estimated 45% of all federal individual income returns (Long & Caudill, 1987; Christian, Gupta, & Lin, 1993). In 1992, almost half of taxpayers chose to use paid preparers to file tax return (IRS, 1992). According to data released by the IRS (2011a), about 58% of all tax returns filed for 2008 were prepared by paid tax return preparers. This steady and significant increase in paid preparer use underscores the importance of a reexamination of this issue. Which factors influence a taxpayer's decision to hire a paid preparer? Can we predict a taxpayer's use of a paid preparer by looking at certain traits of a taxpayer's tax situation? The purpose of this study is to reexamine the determinants of paid tax preparer use and explore other potential factors.

Literature Review and Hypothesis Development

The research in this stream began with examinations of tax return variables in order to identify the determinants of paid tax preparer use (e.g., Slemrod & Sorum, 1984; Long & Caudill, 1987). The research stream then switched the focus to behavioral determinants, such as taxpayer objective, audit anxiety, and effort minimization. For example, Collins, Milliron, and Toy (1990) found that factors associated with demand for preparer services in Oklahoma and Pennsylvania differed by the taxpayer's objective in hiring a preparer. For taxpayers with a tax minimization objective, income and age were positively associated with preparer usage. For those taxpayers with an objective of filing a correct return, paid preparer use was positively associated with tax return complexity and the taxpayers' feeling of social responsibility. Low tax knowledge was positively associated with usage for both groups. Their study did not find audit anxiety or effort minimization (i.e., time savings) to be associated with preparer use in either group. Generally, previous archival and behavioral research has found that paid preparer use increases with marginal tax rate, age, and complexity of tax return, as well as for self-employed and married taxpayers. Our study returns to a focus on archival tax return variables to identify the determinants of paid tax preparer.

Slemrod and Sorum (1984) found expenditure on professional tax assistance by Minnesota taxpayers to be positively associated with older, self-employed, and less educated taxpayers. Based on unaudited data from 1983 tax returns, Long and Caudill (1987) found preparer usage positively related to marginal tax rate, income level, source of income, complexity, and self-employment. The probability of using a preparer also was significantly higher for taxpayers age 65 or over and the effect of other demographic variables depended on itemization status. Erard (1990) found preparer usage to be positively associated with tax complexity, age, marital status, and high-profile occupation (chief executive, elected official, etc.). However, unlike Long and Caudill (1987), Erard (1990) did not find that income and marginal tax rate were associated with preparer usage.

Another non-tax return variable examined in previous research is the IRS ratio of tax returns audited. Dubin et al. (1992) found a significant positive relation-

ship between paid tax preparer use and the IRS' individual tax return audit rate, as well as IRS tax penalties. Long and Caudill (1993) confirmed this finding. Their study also confirmed prior findings of a positive relationship between the marginal tax rate and usage of a professional tax return preparer. IRS audit rates and penalties are not available in our data and, therefore, not examined in our study.

Christian, Gupta, and Lin (1993) used a balanced panel of micro-level tax return data for 1982–1984 to control for the unobserved individual-specific characteristics that are likely to affect preparation mode choice, but are constant over time. In their fixed-effects models, the taxpayers' characteristics, such as tax knowledge, education, and social responsibility are controlled since they are likely to be constant over a short time period. Their study indicates that tax return complexity and age are positively associated with paid preparer use. They also found that married and self-employed taxpayers are more likely to use a paid preparer. However, they did not find that income is a determinant of paid preparer use.

Ashley and Segal (1997) introduced absolute positive income (API) as an independent variable in their study of factors influencing paid preparer use. API is the sum of all positive income and the absolute value of all expense or deduction amounts associated with attached schedules. API differs from total positive income in that it is not a true measure of income but a measure of all relevant dollars believed to impact taxpayer's decision to use paid preparer. Their study found that income-related dollars, as represented by API, are significantly and positively correlated to the likelihood of using a paid preparer, but only when the taxpayers are filing Schedule B (interest and dividend income) and/or Schedule E (rent, royalty, and partnership income).

This study seeks to contribute to the literature in two ways. First, we introduce the Earned Income Tax Credit (EITC) as a possible determining factor of paid preparer use. Second, we attempt to address the inconsistent findings in previous research concerning the empirical relationship between income and paid preparer use.

The Earned Income Tax Credit (EITC) is a refundable tax credit for low- and middle-income persons and couples, primarily for those with children. EITC was first enacted in 1975 as an antipoverty tax policy. It was originally adopted to offset the Social Security taxes of low-income workers with children and to provide those taxpayers with an increased incentive to work. EITC has been expanded over the past decades. Now, EITC is one of the most important cash assistance programs in the US, providing a refundable tax credit for low-income workers, especially working people with children. EITC follows a pattern of going up a hill, traveling along a plateau, and then going back down the hill more slowly than it went up. In other words, EITC increases with the earned income during the phase-in stage. It stays the same during the plateau stage and then decreases during the phase-out stage as the income increases. For tax year 2007, the maxi-

mum EITC for a person or couple without qualifying children is \$428, with one qualifying child is \$2853, and with two or more qualifying children is \$4716. To receive any EITC, earned income and Adjusted Gross Income (AGI) must each be less than \$37,783 (\$39,783 married filing jointly) with two or more qualifying children, \$33,241 (\$35,241 married filing jointly) with one qualifying child, or \$12,590 (\$14,590 married filing jointly) with no qualifying children (IRS, 2011b).

A relatively small amount of research has been done on the relationship between EITC and paid preparer use. Maag (2005) used the 2002 National Survey of America's Families to analyze the use of paid preparers by low-income parents. Her study revealed that low-income parents who know about the EITC and receive help with their tax returns are more likely to receive the credit than those who prepare their tax returns by themselves. However, no research has been conducted to find if EITC recipients are more or less likely to use paid preparer. EITC targets low-income workers, but increases the complexity of the tax return. Previous research generally shows a linear positive relationship between income and paid preparer use (Long & Caudill, 1987; Collins, Milliron, & Toy, 1990), as well as a positive relationship between complexity and paid preparer use (Christian, Gupta, & Lin, 1993). The systemic negative relationship between EITC and income combined with the prior empirical findings of a positive relationship between income and paid preparer use would lead to a hypothesized negative relationship between EITC and paid preparer use; however, the increased complexity caused by the EITC combined with the prior empirical positive relationship between complexity and paid preparer use would lead to a hypothesized positive relationship between EITC and paid preparer use. These conflicting hypothesized relationships lead to the following null hypothesis:

H: Taxpayer receipt of the Earned Income Tax Credit is not associated with paid preparer use.

If the null hypothesis is rejected and the data analysis shows a positive relationship between EITC and paid preparer use, this would suggest a curvilinear relationship between income and paid preparer use. This curvilinear relationship would be caused by the high level of paid preparer use at low-income levels due to the EITC and high levels of paid preparer use at high-income levels based on prior empirical findings with relatively lower levels of paid preparer use at moderate income levels. In the event of this finding, we offer the following proposition and will attempt an exploratory analysis based upon it:

P: The relationship between income and paid preparer use is not linear as portrayed in previous studies. Instead, the relationship follows a bathtub curve with high preparer use at low and high-income levels, and lower preparer use at moderate income levels.

Methodology

This paper reexamines the determinants of paid preparer use by using paid tax preparer data released by IRS. The IRS has released Tax Professionals e-file Market Research Data (IRS, 2011a) for tax years 2004 through 2008. Unlike the previous research, data used in this study is represented by U.S. Zip Code instead of by individual taxpayer. Each Zip Code contains information on county, town, total number of returns, paid preparer returns, percentage of paid preparers, average Adjusted Gross Income (AGI), total number of refunds, average amount of refunds, number of returns receiving EITC, number of returns filed as single, married filing joint or head of household, number of returns with a Schedule C (business income), and number of returns filed by different age groups. We augmented this data with population density and minority percentage for each Zip Code from the 2000 U.S. Census data. Descriptive statistics for our variables are discussed in the results section of this paper.

Paid preparer use and tax return information for each Zip Code are analyzed with multivariate linear regression incorporating the 2000 census data as Zip Code control variables. Although the demographic characteristics of each Zip Code are not updated yearly, they are not likely to change significantly over our window of time. They are similar to the unobserved individual-specific characteristics in Christian et al. (1993), which are likely to affect preparation mode choice but are constant over time.

Based on prior research and our hypothesis, a conceptual model of paid preparer use may be expressed as follows:

$$\text{Paid Preparer Use} = f(\text{EITC, income, marital status, self-employed, higher age}).$$

Earned Income Tax Credit (EITC) is our independent variable of interest in the conceptual model. We represent this in our empirical model with Percent_EITC. Percent_EITC is calculated as the number of returns receiving EITC divided by the total number of returns filed in that Zip Code. The null hypothesis will be rejected with either a positive or negative statistically significant coefficient on this variable. A positive statistically significant coefficient on this variable will help provide conceptual justification for our proposition, which will lead us to engage in initial exploratory empirical analysis of our proposition.

The second independent variable in the conceptual model is income. We represent this in our empirical model with Avg_AGI. Avg_AGI is the average Adjusted Gross Income (AGI) for the Zip Code. AGI is gross income subtracted by certain specific deductions allowed by the income tax code and is an important benchmark for determining certain other allowed benefits. AGI is key in determining the taxpayer's marginal tax rate. When the purpose of paid preparer use is

minimizing tax liability, professional tax assistance is more valuable for taxpayers with higher AGI. Since tax return preparation expenditures are deductible for itemizers, the effective price of paid preparer decreases as marginal tax rate increases. Although some studies have not found a relationship between income or marginal tax rate and paid preparer use (Erard, 1990; Christian et al., 1993), generally income or marginal tax rate have been found positively related to paid preparer use (Long & Caudill, 1987, 1993; Collins et al., 1990; Ashley & Segal, 1997); therefore, we expect Avg_AGI to have a positive and statistically significant coefficient.

Marital status is the third independent variable in our conceptual model. Prior research has found that married couples are more likely to hire professionals to file their tax returns (Long & Caudill, 1987, 1993; Erard, 1990; Christian et al., 1993). We represent this in our empirical model with two variables. The third independent variable in our empirical model is Percent_FS_Single—the percentage of tax returns filed by singles. The fourth independent variable in our empirical model is Percent_FS_Married—the percentage of tax returns filed by married couples. We expect Percent_FS_Single to have a negative and statistically significant coefficient. We expect Percent_FS_Married to have a positive and statistically significant coefficient.

The fifth independent variable in our conceptual model is whether a taxpayer has self-employment income. We represent this in our empirical model with Percent_Sch_C. Percent_Sch_C is the percentage of returns with Schedule C filed in the Zip Code. Schedule C is the tax form where business income and expense are reported. Attachment of Schedule C indicates the presence of a sole proprietor business. Previous research agrees that self-employment increases the likelihood of paid preparer use. Specifically, Slemrod and Sorum (1984) found that self-employed taxpayers were more than twice as likely to use a paid preparer than were employees. Long and Caudill (1987) and Christian et al. (1993) also found self-employed taxpayers were significantly more likely to use professional tax return preparers. We expect Percent_Sch_C to have a positive and statistically significant coefficient.

The final independent variable in our conceptual model is higher age. Paid preparer use has been found to rise with age (Slemrod & Sorum, 1984). Taxpayers over age 65 were significantly more likely to hire professional tax preparers (Long & Caudill, 1987). Christian et al. (1993) did not find that taxpayers age 65 or older differed from other taxpayers in the use of a paid preparer. However, they found as the number of dependents increased, taxpayers were unwilling or unable to hire professional tax preparers. As the number of dependents declined with age, their findings conform to Slemrod and Sorum's (1984). Both Collins et al. (1990) and Erard (1990) found higher levels of paid preparer use by older taxpayers. The sixth independent variable in our empirical model is Percent_over60, which is calculated as the number of returns filed by taxpayers who are over age

60 divided by total number of returns. We expect Percent_over60 to have a positive and statistically significant coefficient.

The dependent variable in our empirical model is Pct_Paid_Preparer>Returns. This is the percentage of taxpayers who use a paid preparer in each Zip Code. The Zip Code control variables in our empirical model are Pop_Density and Minority. Pop_Density is the population per square mile within each Zip Code. Minority is the percent of the population within a Zip Code of ethnic and racial minorities. Prior research has used individual observations rather than observations aggregated by Zip Code. We use Zip Code observations because it is the only data format available to us. To control for variability in paid preparer use due to non-tax-related differences in Zip Codes, we have included these demographic variables. To control for variability in paid preparer use between the tax years, we have included tax year control variables. The tax year control variables in our empirical models are categorical variables for years 2004 through 2007. We have no expectations about the results concerning these six control variables.

To statistically test our hypothesis, we use the following empirical model:

$$\begin{aligned} \text{Pct_Paid_Preparer_Returns} = & \alpha + \beta_1 \text{Percent_EITC} + \beta_2 \text{Avg_AGI} + \\ & \beta_3 \text{Percent_FS_Single} + \beta_4 \text{Percent_FS_} \\ & \text{Married} + \beta_5 \text{Percent_Sch_C} + \\ & \beta_6 \text{Percent_over60} + \beta_7 \text{Pop_Density} + \\ & \beta_8 \text{Minority} + \beta_9 2004 + \beta_{10} 2005 + \\ & \beta_{11} 2006 + \beta_{12} 2007 + \varepsilon; \end{aligned}$$

where:

- Pct_Paid_Preparer>Returns = the number of returns prepared by a paid preparer in the Zip Code divided by the total number of returns in the Zip Code;
- Percent_EITC = the number of returns receiving EITC in the Zip Code divided by the total number of returns in the Zip Code;
- Avg_AGI = average Adjusted Gross Income in dollars for the Zip Code;
- Percent_FS_Single = the number of returns with the Single filing status in the Zip Code divided by the total number of returns in the Zip Code;
- Percent_FS_Married = the number of returns with the Married Filing Joint filing status in the Zip Code divided by the total number of returns in the Zip Code;

- Percent_Sch_C = the number of returns with a Schedule C in the Zip Code divided by the total number of returns in the Zip Code;
- Percent_over60 = the number of returns filed by taxpayers who are over age 60 in the Zip Code divided by total number of returns in the Zip Code;
- Pop_Density = the number of people per square mile within the Zip Code;
- Minority = the percentage of people within the Zip Code who are nonwhite;
- 2004 = 1 for tax year 2004, 0 otherwise;
- 2005 = 1 for tax year 2005, 0 otherwise;
- 2006 = 1 for tax year 2006, 0 otherwise; and
- 2007 = 1 for tax year 2007, 0 otherwise.

Table 1.
Descriptive Statistics for Empirical Model Variables

	Minimum	Maximum	Mean	Standard Deviation
Pct. Paid Preparer Returns	0.06818	1	0.63223	0.009747
Pct EITC	0.00711	0.79237	0.17903	0.09969
Avg AGI	595	1,225,710	47,650.74	34,541.37
Pct FS Single	0.08952	0.91779	0.42344	0.07413
Pct FS Married	0.00483	0.80138	0.43061	0.09831
Pct Sch C	0.01077	0.69822	0.16324	0.04872
Pct Age over 60	0	0.91837	0.22728	0.07348
Pop Density	0	153,867.73	1,210.21	4,434.23
Minority	0	0.99880	0.18625	0.23421

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

N = 144,940

Empirical Results

Tables 1 and 2 report the descriptive statistics and Pearson correlations of our variables. Our dependent variable, Pct_Paid_Preparer_Returns, has an average

**Table 2.
Pearson Correlations for Empirical Model Variables**

	1	2	3	4	5	6	7	8
Pct. Paid Preparer Returns Sig.								
Pct. EITC Sig.	.264** (0.00)							
Avg AGI Sig.	-.076** (0.00)	-.433** (0.00)						
Pct FS Single Sig.	-.349** (0.00)	-.396** (0.00)	.232** (0.00)					
Pct FS Married Sig.	.184** (0.00)	-.446** (0.00)	.067** (0.00)	-.508** (0.00)				
Pct. Sch C Sig.	.214** (0.00)	-.210** (0.00)	.221** (0.00)	-.051** (0.00)	.340** (0.00)			
Pct Age over 60 Sig.	.147** (0.00)	-.326** (0.00)	.086** (0.00)	.106** (0.00)	.298** (0.00)	.225** (0.00)		
Pop Density Sig.	-.024** (0.00)	.047** (0.00)	.114** (0.00)	.313** (0.00)	-.384** (0.00)	-.022** (0.00)	-.165** (0.00)	
Minority Sig.	.024** (0.00)	.606** (0.00)	-.085** (0.00)	-.006* (0.03)	-.672** (0.00)	-.184** (0.00)	-.376** (0.00)	.311* (0.00)

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

N = 144,940

by Zip Code of 63.2% and minimum and maximum by Zip Codes of 6.8% and 100%, respectively. Our independent variable of interest, Percent_EITC, has an average by Zip Code of 17.9% and minimum and maximum by Zip Codes of 0.7% and 79.2%, respectively. Avg_AGI per Zip Code runs from \$595 to \$1,225,710 with an average of \$47,651. The strongest correlation between our variables is the negative relationship between Minority and Percent_FS_Married ($R = -0.672, p = 0.00$) and the positive relationship between Minority and Percent_EITC ($R = 0.606, p = 0.00$). This suggests that Zip Codes with higher minority populations have lower use of the Married Filing Joint filing status and higher receipt of the Earned Income Tax Credit than those Zip Codes with lower minority populations. Also of interest in Table 2 are the relationships between our dependent variable and independent variables. All of these bivariate relationships are in the expected directions with the exception of the negative relationship between Pct_Paid_Preparer>Returns and Avg_AGI ($R = -0.076, p = 0.00$). The more robust test of these relationships is the multivariate relationships reported in Table 3 and discussed next.

The results of our linear regression analysis are presented in Table 3. Our regression analysis shows statistically significant coefficients for all of the tax year categorical variables ($\beta_9 = 0.022, p = 0.00$; $\beta_{10} = 0.059, p = 0.00$; $\beta_{11} = 0.045, p = 0.00$; $\beta_{12} = -0.072, p = 0.00$). This suggests that the independent variable relationships vary by year. For this reason, we have split the data by year and run the regression analysis separately by year, as well as for all years together. All of these results are reported in Table 3.

As shown in Table 3, our independent variable of interest, Percent_EITC, has a statistically significant relationship to Pct_Paid_Preparer>Returns ($\beta_1 = 0.495, p = 0.00$) for all years and similar results in each of the individual years (2008 $\beta_1 = 0.508, p = 0.00$; 2007 $\beta_1 = 0.366, p = 0.00$; 2006 $\beta_1 = 0.544, p = 0.00$; 2005 $\beta_1 = 0.554, p = 0.00$; 2004 $\beta_1 = 0.528, p = 0.00$). This result rejects our null hypothesis and, further, the positive relationship provides conceptual justification to empirically explore our proposition.

By reporting the standardized coefficients, or Betas, in Table 3, we are able to observe the effect that our independent variables have on our dependent variable relative to each other (Hair et al., 2006, p. 238). In our all-years' analysis ($\beta_1 = 0.495, p = 0.00$), as well as in each of the individual years (2008 $\beta_1 = 0.508, p = 0.00$; 2007 $\beta_1 = 0.366, p = 0.00$; 2006 $\beta_1 = 0.544, p = 0.00$; 2005 $\beta_1 = 0.554, p = 0.00$; 2004 $\beta_1 = 0.528, p = 0.00$), Percent_EITC has the strongest relationship with Pct_Paid_Preparer>Returns. This suggests that, while controlling for other determinants of paid preparer use, a taxpayer's receipt of the Earned Income Tax Credit is the largest single determinant of paid preparer use. This finding is significant to the research stream because this important variable has been left out of virtually all of the prior studies on determinants of paid preparer use.

Table 3.
OLS Regression Results for Test of Hypothesis

	Pred. Sign	All Years	2008	2007	2006	2005	2004
Pct. EITC	(?)	0.495	0.508	0.366	0.544	0.554	0.528
Sig.		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Avg AGI	(+)	0.072	0.070	0.086	0.075	0.057	0.060
Sig.		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Pct FS Single	(-)	-0.053	-0.071	-0.059	-0.059	0.000	-0.050
Sig.		(0.00)	(0.00)	(0.00)	(0.00)	(0.48)	(0.00)
Pct FS Married	(+)	0.287	0.286	0.326	0.269	0.320	0.245
Sig.		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Pct. Sch C	(+)	0.139	0.127	0.161	0.113	0.114	0.142
Sig.		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Pct Age over 60	(+)	0.243	0.221	0.199	0.256	0.270	0.260
Sig.		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Pop Density	(?)	.0112	0.116	0.113	0.112	0.110	0.112
Sig.		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Minority	(?)	0.005	0.008	0.050	0.016	-0.002	-0.035
Sig.		(0.17)	(0.38)	(0.00)	(0.06)	(0.85)	(0.00)
2004	(?)	0.022					
Sig.		(0.00)					
2005	(?)	0.059					
Sig.		(0.00)					
2006	(?)	0.045					
Sig.		(0.00)					
2007	(?)	-0.072					
Sig.		(0.00)					
Observations		144,940	28,398	29,808	28,450	29,889	28,395
R ²		0.28	0.26	0.21	0.29	0.29	0.28
Adj R ²		0.28	0.26	0.21	0.28	0.29	0.28
F		4,586.627	1,244.814	933.491	1,414.634	1,496.910	1,357.485
Sig. (F)		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)

Reported coefficients are standardized (Betas).
 Tests of significance on variables with a predicted sign are one-tailed.
 Tests of significance on variables with no predicted sign are two-tailed.
 All model tests of significance are two-tailed.
 Statistically significant tests are bolded.

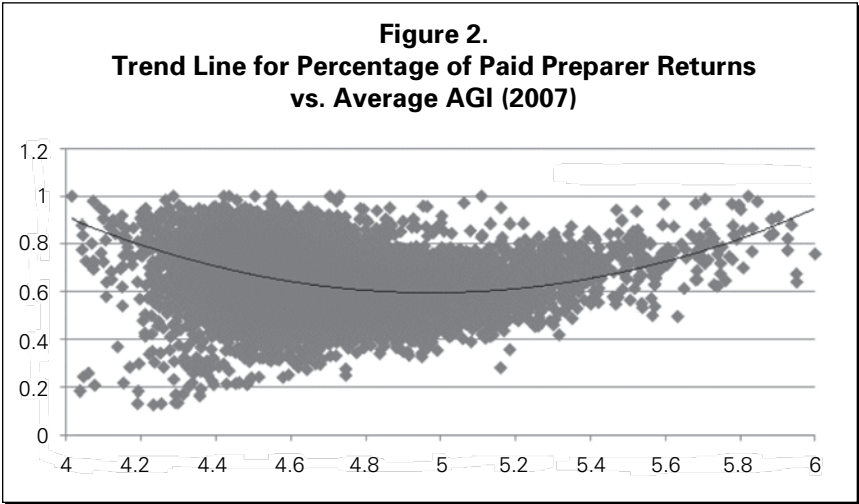
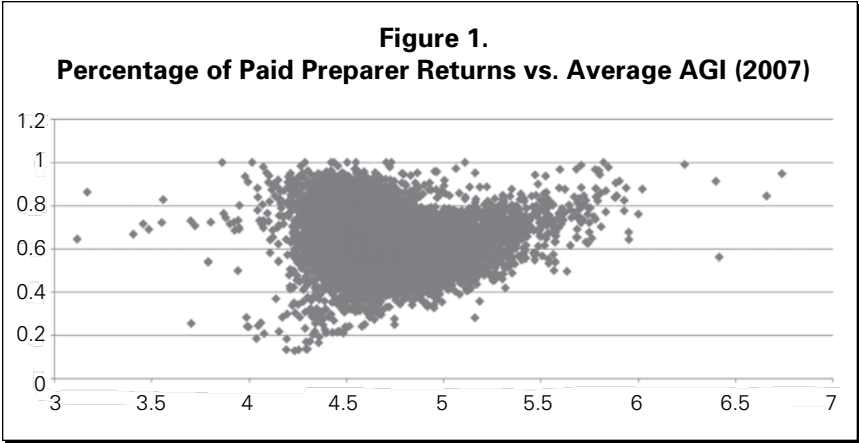
The next largest influence on a taxpayer's use of a paid preparer is Percent_FS_Married ($\beta_4 = 0.287, p = 0.00$; 2008 $\beta_4 = 0.286, p = 0.00$; 2007 $\beta_4 = 0.326, p = 0.00$; 2006 $\beta_4 = 0.269, p = 0.00$; 2005 $\beta_4 = 0.320, p = 0.00$; 2004 $\beta_4 = 0.245, p = 0.00$). Since the data available in the study do not differentiate married filers who itemize their deductions from married couples who do not itemize, the results are not exactly comparable to Long and Caudill's (1987,1993) and Christian et al.'s (1993); however, our finding generally matches their findings and matches the findings in Erard (1990).

Percent_over60 is the next most influential factor in determining paid preparer use ($\beta_6 = 0.243, p = 0.00$; 2008 $\beta_6 = 0.221, p = 0.00$; 2007 $\beta_6 = 0.199, p = 0.00$; 2006 $\beta_6 = 0.256, p = 0.00$; 2005 $\beta_6 = 0.270, p = 0.00$; 2004 $\beta_6 = 0.260, p = 0.00$). This result conforms to the previous research findings that older taxpayers are more likely to use professional tax assistance (Slemrod & Sorum, 1984; Long & Caudill, 1987; Erard, 1990; Collins et al., 1990; Christian et al., 1993).

Percent_Sch_C is the fourth strongest determinant of paid preparer use in our analysis ($\beta_5 = 0.139, p = 0.00$; 2008 $\beta_5 = 0.127, p = 0.00$; 2007 $\beta_5 = 0.161, p = 0.00$; 2006 $\beta_5 = 0.113, p = 0.00$; 2005 $\beta_5 = 0.114, p = 0.00$; 2004 $\beta_5 = 0.142, p = 0.00$). This result follows the previous research findings that self-employed taxpayers are more likely to use professional tax assistance (Slemrod & Sorum, 1984; Long & Caudill, 1987; Christian et al., 1993).

Percent_FS_Single ($\beta_3 = -0.053, p = 0.00$), Pop_Density ($\beta_7 = 0.112, p = 0.00$), and Minority ($\beta_8 = 0.005, p = 0.17$) all have minimal or no statistically significant relationship with our dependent variable, Pct_Paid_Preparer_Returns.

The coefficient on our final independent variable, Avg_AGI, matches our predicted sign; however, its relationship with Pct_Paid_Preparer_Returns is minimal ($\beta_2 = 0.072, p = 0.00$). This is not surprising as prior studies have found both a positive (Long & Caudill, 1987, 1993; Collins et al., 1990; Ashley & Segal, 1997) and no (Erard, 1990; Christian et al., 1993) relationship between income and paid preparer use. However, the weak empirical relationship could be due to inaccurate modeling, as we suggest in our proposition. Our proposition is strengthened by our finding of a positive relationship between the receipt of the Earned Income Tax Credit and paid preparer use. While taxpayers with high AGI are likely to use paid preparers, linear modeling may not truly reflect the relationship between AGI and paid preparer use. The concentration of paid preparer use among Earned Income Tax Credit recipients suggests that the relationship between paid preparer use and AGI may be more like a bathtub curve. Taxpayers are more likely to use paid preparer when their income is either very low or very high. People whose income falls in the middle tend to file their own tax returns. We examine this further in the following section.



Further Examination of Proposition

To test if paid preparer use versus AGI follows a curvilinear trend, we drew a scatter plot with Excel using the 2007 tax data. Average AGI has a wide range, from \$718 to \$1,225,710. Average AGI is presented in logarithmic scale, ranging from 3 to 7. The graph is presented in Figure 1. In Figure 2, the Zip Codes whose average AGI is below \$10,000 ($\log(10,000)=4$) or above \$1,000,000 ($\log(1,000,000)=6$) are discarded as outliers and we draw a trend line to better display the AGI vs. paid preparer use relationship. As shown in Figure 2, the trend line follows a bathtub curve and suggests that paid preparer use is relatively high when AGI is either very low or very high. The trend line equation is expressed as $y = 0.3339x^2 - 3.3231x + 8.88637$. When AGI is low, it appears that a large portion of taxpayers rely on paid tax preparers to help them receive their

Table 4.
OLS Regression Results for Explanatory Analysis of Proposition

	Pred. Sign	All Years	2008	2007	2006	2005	2004
Pct. EITC	(+)	0.454	0.436	0.334	0.492	0.504	0.488
Sig.		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Avg AGI	(-)	-0.020	-0.099	0.011	-0.047	-0.054	-0.024
Sig.		(0.00)	(0.00)	(0.17)	(0.00)	(0.00)	(0.01)
Sq. Avg AGI	(+)	0.094	0.163	0.075	0.123	0.114	0.088
Sig.		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Pct FS Single	(-)	-0.065	-0.091	-0.068	-0.074	-0.016	-0.062
Sig.		(0.00)	(0.00)	(0.00)	(0.00)	(0.06)	(0.00)
Pct. FS Married	(+)	0.273	0.264	0.314	0.252	0.302	0.232
Sig		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Pct Sch C	(+)	0.147	0.139	0.169	0.144	0.123	0.149
Sig.		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Pct Age over 60	(+)	.0240	0.214	0.195	0.252	0.267	0.258
Sig		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Pop Density	(?)	0.113	0.117	0.113	0.113	0.112	0.113
Sig		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Minority	(?)	0.014	0.021	0.057	0.027	0.009	-0.025
Sig		(0.00)	(0.02)	(0.00)	(0.00)	(0.27)	(0.00)
2004	(?)	0.016					
Sig.		(0.00)					
2005	(?)	0.055					
Sig.		(0.00)					
2006	(?)	0.043					
Sig.		(0.00)					
2007	(?)	-0.076					
Sig.		(0.00)					
Observations		144,940	28,398	29,808	28,450	29,889	28,395
R ²		0.28	0.27	0.21	0.29	0.29	0.28
Adj R ²		0.28	0.27	0.21	0.29	0.29	0.28
F		4,283.095	1,135.929	890.624	1,278.782	1,353.173	1,220.856
Sig. (F)		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)

Reported coefficients are standardized (Betas).

Tests of significance on variables with a predicted sign are one-tailed.

Tests of significance on variables with no predicted sign are two-tailed.

All model tests of significance are two-tailed.

Statistically significant tests are bolded.

Earned Income Tax Credit. High-income taxpayers also use tax professionals to file their return due to increasingly complicated tax returns and the higher amount of tax dollars at stake.

The trend line in Figure 2 suggests a parabolic relationship between Pct_Paid_Preparer_Returns and Avg_AGI with a negative coefficient on Avg_AGI and a positive coefficient on Squared Avg_AGI (represented in our new model at Sq_Avg_AGI). We reran our regression analysis with this additional independent variable and present the results in Table 4. Note that, although we performed a logarithmic transformation for the scatter plot illustration in Figure 2, we did not transform the data in this additional regression analysis beyond squaring Avg_AGI.

The results in Table 4 provide some empirical support for our proposition. The coefficients on both Avg_AGI ($\beta_{\text{Avg_AGI}} = -0.020, p = 0.00$) and Sq_Avg_AGI ($\beta_{\text{Sq_Avg_AGI}} = 0.094, p = 0.00$) match the predictions of our proposition. Additionally, the signs on the other independent variables match our previous predictions and are similar to the results reported in Table 3. However, the impact of the relationship between average AGI and paid preparer use remains minimal.

Conclusion

By analyzing national data of federal individual income tax returns from tax years 2004 through 2008, we found that several factors are important determinants of paid tax preparer use. Most of the findings confirm the previous research that paid tax preparer usage increases with tax return complexity, taxpayer's age, and that married couples are more likely to use professional tax preparers. Attachment of Schedule C makes the tax return more complicated and, thus, increases the likelihood of paid tax preparer usage.

The novel contribution of our paper is that we test the Earned Income Tax Credit as a determinant of paid preparer use and find a strong relationship between them. This finding highlights an important missing variable in most previous research about the determinants of paid preparer use.

Additionally, the relationship between paid preparer use and income has been traditionally presented as a linear. This paper demonstrates that the relationship is not linear. Instead, both low-income taxpayers (who are most likely to be EITC recipients) and high-income taxpayers have higher instances of paid preparer use. We show that the relationship between paid preparer use and income is more accurately modeled as a U-curve.

The strong positive relationship we found between EITC and paid preparer use indicates low-income taxpayers who are eligible for EITC often choose tax professionals to file their tax returns. IRS data provides support for our findings; in spite of the free tax assistance programs, such as VITA, almost all filers

who receive assistance receive it from paid preparers, including 98% of families with income below \$30,000 (IRS, 2011c). The relationship between EITC and paid preparer use poses a concern that low-income families will receive less net benefit from the tax credit due to the tax preparation fees, which likely will not be deductible because low-income taxpayers do not usually itemize their deductions.

EITC recipients' heavy reliance on paid preparers could be driven by the complexity of EITC, which includes 14 pages of instructions in the overall tax guide, and 56 pages in the EITC instruction booklet. To maximize the EITC benefit, policy makers should consider simplifying tax codes concerning EITC qualification and effort should be made to increase the awareness of EITC, especially among low-income and uneducated workers. Simplifying EITC tax code can also help reduce the high noncompliance rate, which is costing billions of tax dollars. In Fiscal Year 2004, the EITC accounted for 48% of individual income tax return audits. Additionally, the fact that a large proportion of low-income taxpayers who receive tax assistance are paying tax preparation fees indicates that free tax service should be expanded to enable more low-income taxpayers to file their tax returns without paying preparation fees.

We acknowledge the limitations in the data and empirical method employed. First, the data used in this study is represented by U.S. Zip Code instead of by individual taxpayer. The characteristics of individual taxpayers, such as education and occupation, which have been previously identified as determinants of paid tax preparer use, are not available in our data. Furthermore, if aggregated data are used, aggregation by Zip Code is an arbitrary method and could have unintended and unknown effects on the results. We have included two control variables in an attempt to address this shortcoming, but we have no way of knowing if these control variables are effective or whether others could be more effective. Second, our models are explaining only 21% to 29% of the variation in Pct_Paid_Preparer>Returns, as evidenced by the reported R^2 in Tables 3 and 4. This leaves a large portion of the variation in our dependent variable unexplained. This could be due to an incomplete model (i.e., missing variables) or an effect of the data aggregation, or both.

Our study opens avenues for future research. One future study could focus on developing and testing hypotheses based on our proposition. Some measure of income is used in every prior study of paid preparer determinants and income is always modeled linearly. We have provided evidence that this is not accurate. Although properly modeling income in our study did not substantially change the relationships between the other independent variables and the dependent variable, this may not be the case in all of the prior studies in this research stream.

A second line of future research could reexamine prior studies on paid preparer determinants and include a measure representing the Earned Income Tax Credit.

This variable showed the strongest relationship with paid preparer use in our study, yet is missing from virtually all prior research on paid preparer determinants.

Another possible future study lies in the positive bivariate relationship between Minority and Percent_EITC and the negative bivariate relationship between Minority and Percent_FS_Married. These interesting findings suggest that Zip Codes with higher minority populations have lower use of the Married Filing Joint filing status and higher receipt of the Earned Income Tax Credit than those Zip Codes with lower minority populations. A prior study's look at the demographic characteristics of EITC recipients shows that the vast majority of EITC recipients are white with an average age of 36 (Meyer, 2007). Future research can further explore these disparate findings concerning the link between minority taxpayers and the Earned Income Tax Credit.

REFERENCES

- Ashley, T., & Segal, M. A. (1997). Paid tax preparer determinants extended and reexamined. *Public Finance Review*, 25(3), 267–284.
- Christian, C. W., Gupta, S., & Lin., S. (1993). Determinants of tax preparer usage: Evidence from panel data. *National Tax Journal*, 46, 487–503.
- Collins, J. H., Milliron, V. C., & Toy, D. R. (1990). Factors associated with household demand for tax preparers. *The Journal of American Taxation Association*, 12, 9–25.
- Dubin, J. A., Graetz, M. J., Udell, M. A., & Wilde, L. L. (1992). The demand for tax return preparation services. *The Review of Economics and Statistics*, 74, 75–82.
- Erard, B. (1990). *Tax Practitioners and Tax Compliance: A Microeconomic Analysis of the Decision to Engage a Tax Preparer and its Consequences*. (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses. (Accession Order No. AAT 9023544).
- Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2006). *Multivariate data analysis*. 6th edition. Upper Saddle River, NJ: Pearson Prentice Hall.
- Internal Revenue Service (IRS). (1992). Selected historical and other data. *Statistics of Income Bulletin*, Winter 1991–2, 130.
- Internal Revenue Service (IRS). (2011a). *Tax Professionals e-file Market Research Data*. Retrieved from <http://www.irs.gov/efile/article/0,,id=118376,00.html>
- Internal Revenue Service (IRS). (2011b). *2007 EITC Income Limits, Maximum Credit Amounts and Tax Law Changes*. Retrieved from <http://www.irs.gov/individuals/article/0,,id=215764,00.html>
- Internal Revenue Service (IRS). (2011c). *SOI Tax Stats—Individual Income Tax Returns Publication 1304*. Retrieved from <http://www.irs.gov/taxstats/indtaxstats/article/0,,id=134951,00.html>
- Long, J. E., & Caudill, S. B. (1987). The usage and benefits of paid tax return preparation. *National Tax Journal*, 40, 35–46.
- Long, J. E., & Caudill, S. B. (1993). Tax rates and professional tax return preparation: Reexamination and new evidence. *National Tax Journal*, 46(4), 511–518.
- Maag, E. (2005). Paying the price? Low-income parents and the use of paid tax preparers. *Assessing the New Federalism Policy Brief B-64*. Washington, D.C.: The Urban Institute.
- Meyer, B. D. (2007). The U.S. earned income tax credit: Its effects and possible reforms. *Swedish Economic Policy Review*, 14(2), 55–80.
- Slemrod, J. B., & Sorum, N. 1984. The compliance cost of the U.S. individual income tax system. *National Tax Journal*, 37, 461–474.

Book Reviews

Wannabe U: Inside the Corporate University

By **Gave Tuchman**

University of Chicago Press Chicago Copyright 2009

Reviewed by Kori Hoffmann

At first glance, *Wannabe U* appears to be an examination of the higher education system. Upon deeper inspection, the book reveals it is more of an examination into how the business culture has crept into both the higher education system—specifically in leadership—and our society in general. Tuchman analyzes the ways in which the higher education system has gradually transformed from being arenas used to search for knowledge into a business model, specifically in regard to accountability and the audit culture.

Wannabe U is a qualitative ethnography of a major research university undergoing a transformation through the current leadership. The current leadership views education as a commodity that is bought and paid for by the consumers, in this case the students, and is viewed as a market transaction. To be competitive, the leadership believes the university must improve its reputation through an improved ranking in the annual college rankings published by *U.S. News & World Report*. Improved rankings can be seen as a financial benefit for most institutions. While many public universities are not-for-profit, the change toward a business model has made leaders more aware of issues such as financial streams. This “market ethos” is the idea that the university is moving away from educational values and beginning to focus more and more on business values, such as increasing revenues.

It is difficult for this transformation to take place within the traditional setting of higher education due to the power held by faculty; therefore, the leadership takes actions to regain power from faculty and influence the decisions being made at

the university. There are numerous examples of this power struggle throughout the book. Some of these include branding the university, borrowing best practices from other universities, commodification of knowledge and research, reorganization of departments and colleges, and auditing of faculty work, just to name a few.

I believe the author would like for the reader to believe that this transformation ultimately has a negative impact on the university. Throughout the book we see costs and overhead decline through reorganization, revenues increase through new ideas, and the quality of education improve through auditing of teaching ability and making instructors accountable for their work. The university also sees an improvement in its ranking by *U.S. News & World Report*. With that in mind, it is hard to question how this move to a business model has not been a positive.

With funding on the decline for many higher education institutions, it is only a matter of time before we see these ideas become more prevalent throughout the country. Higher education institutions all across the country are surely but slowly making transformations similar to these. With that in mind, it is imperative that all leaders are well-versed in business concepts to help lead various organizations in the coming years, especially educational leaders.

The Rational Optimist: How Prosperity Evolves

By **Matt Ridley**

HarperCollins Publishers New York, New York Copyright 2011

Reviewed by Janet Marta

Matt Ridley believes that it is irrational to be pessimistic about the future of the world. He has the right to his opinion, having studied the evolution of human-kind since the Stone Age, specifically focusing on how we attack our problems. Mainly, he believes, progress comes from trade and specialization, as opposed to being the result of political manipulations. In the Stone Age, for example, people killed people from other tribes, until they began to perceive that they could both benefit from trading with each other. And today “ingenuity is rampant as never before in this massively networked world and the rate of innovation is accelerating, through serendipitous searching, not deliberate planning” (Kindle location 4806). In other words, more people in the world means more ideas. Because of the growth of communication technologies, all those ideas can “have sex” (Ridley’s favorite phrase) and solve the problems of the world.

How is it that we are so worried about the future, when the recent past is the story of solving problems? The “crisis” in the 1960s, according to Ridley (and verified by my memory), was population explosion and global famine. What happened? We produce more food now than ever before, with fewer labor hours and on less land. Population, in every country, is either declining or increasing at a slower rate.

“There is no country in the world that has a higher birth rate than it had in 1960, and in the less developed world as a whole the birth rate has approximately halved” (2872).

“Now that even the United Nations’ best estimate is that world population will probably start falling once it peaks at 9.2 billion in 2075, there is every prospect of feeding the world forever” (2888).

“If price signals drive the world’s farmers to take these measures it is quite conceivable that in 2050 there will be nine billion people feeding more comfortably than today off a smaller acreage of cropland, releasing large tracts of land for nature reserves” (2079).

In the ’70s, the crisis was exhaustion of resources, but Ridley notes that we have not yet run out of a SINGLE nonrenewable resource: “not coal, oil, gas, copper, iron, uranium, silicon, or stone” (4200). “Oil, coal and gas are finite. But between them they will last decades, perhaps centuries, and people will find alternatives long before they run out” (3338). In the ’80s, it was acid rain, in the ’90s, pandemics (e.g., AIDS, mad cow, bird flu), and now the crisis is global warming.

Ridley does not take a specific position on global warming, but he does warn about overreacting, especially if governments are making the decisions. He surveys the data on government foreign aid and R&D spending and finds failures that would not have happened under a functioning market system. “The aid that Zambia has received since 1960, if invested instead in assets giving a reasonable rate of return, would by now have given Zambians the income per head of the Portuguese—\$20,000 instead of \$500” (4390). In fact, if Ridley is pessimistic about anything, it is government activity:

“Each empire [throughout history] was the product of trading wealth and was itself the eventual cause of that wealth’s destruction” (2249).

“Economists are quick to speak of ‘market failure,’ and rightly so, but a greater threat comes from ‘government failure’ (2557).

Anyone’s natural instinct, reading this review, will be to try to find flaws and exceptions, but you will likely find, if you read his book, that Matt Ridley has addressed all your objections. He turns “common knowledge” on its head dozens of times (e.g., he quotes an economist who wrote that “capitalism exterminated slavery” 2994), but I have learned to think that is almost a definition of education. In other words, the more closely you study something, the more of your assumptions you discover to be false. Ridley believes that trade and specialization result in prosperity, and that more ideas meeting and “having sex” is the best hope for all of us, and especially the poor, in the future. Optimism about the future may not be fashionable, but it is reasonable.

Real Leaders Don't Do PowerPoint: How to Sell Yourself and Your Ideas

By Christopher Witt

Crown Publishing Group New York Copyright 2009

Reviewed by Doug Russell

Think about a very powerful speech or lecture you have heard presented by a leader. Have you thought to yourself, “Wow, it was the PowerPoint that made the speech so powerful?” All too often, speakers rely on technologies such as PowerPoint to get them through a presentation. *Real Leaders Don't Do PowerPoint*, by Christopher Witt, makes the point that real leaders speak to make a difference, to promote a mission or vision, to change the way people think, or to move them to act. Witt shows not just how to make a commanding speech, but also how to sell yourself and ideas.

The book begins with the fact that all great leaders' presentations have four essential elements: a great person, a noteworthy cause, a compelling message, and a masterful delivery. Witt explains that the average person may settle for having one or two of these elements in place, but if someone genuinely aspires to give more presentations like a leader, one must have all four elements.

The leader speaking needs to be a great person, but one does not have to be a war hero or even a company executive to be a great person. Instead, a great person has passion, character, and sense of humor; you are the message because you are that great person. Great leaders do not accept all speaking engagements. In fact, leaders turn down speaking opportunities not noteworthy of their time. Compelling messages are powerful enough to change the listeners' lives. Preparation and knowing the audience are the keys to delivering a compelling message. Finally, a masterful delivery is the final element in a leader's speech. Let your passion shine

through, speaking with clarity and confidence. Being able to present a speech without note cards or PowerPoints is the key to a masterful delivery.

The next important points of presenting like a leader, and selling yourself and your ideas, are the three reasons leaders give speeches: to identify—to tell the audience who they are or who they can become; to influence—to shape the way audiences think and feel; and to inspire—to make audiences want to act.

Witt continues by explaining that real leaders take one of three stands in their speeches. Leaders have strong points of view. Leaders capture the minds and hearts of their audiences by stating the truths they need and want to hear. The first position is to *stand with*—molding a clear identity. Who you align yourself with says a lot about you as a leader. Next, leaders *stand for*—take clear positions on issues. There is never any confusion about what a leader believes regarding worthy issues, causes, and policies. The final position is to *stand against*—take a strong stance against what the leader cannot tolerate. By opposing various policies, rules, or regulations, leaders shape their audiences' identities and influence the way they will think in the future. Witt uses a quote from the Reverend Billy Graham, to show the importance of taking a stand, “When a brave person takes a stand, the spines of others are often stiffened.”

Finally, the book describes the best ways to start, and how not to start, a presentation. Witt believes a leader/speaker should start a speech with a personal story, provocative question, startling fact, bold assertion, penetrating quote, or reference to a current event. Knowing one's audience will help decide which opening to use. Ways *not* to start a speech are with a joke, or with pleasantries (e.g., “I am happy to be here today with such wonderful people”).

Christopher Witt's book, *Real Leader's Don't Do PowerPoint*, provides some excellent general rules-of-thumb for delivering speeches like a leader, which will help speakers sell themselves and their ideas. If you have the desire to speak in a way that grabs the audience and gets their attention—like a leader does— then this book is a must read for accomplishing that goal. Leaders do not just present facts, they provide a frame of reference for listeners that help them understand what those facts mean from a big picture perspective. This is why real leaders never use PowerPoint. PowerPoint is ideal for conveying information, but real leaders build understanding and stir their audience to action with their presentations.

The Google Way: How One Company is Revolutionizing Management as We Know It

By **Bernard Girard**

No Starch Press San Francisco, CA Copyright 2009

Reviewed by Allison Hoffmann

Google is a world-renowned company and a noun that has found its way into the dictionary. Yet few know the real story behind the name. *The Google Way* provides a detailed look at Google's economic model and unorthodox corporate structure, while also honing in on challenges and business threats that Google faces currently and strategically. Bernard Girard discusses Google's early years, risks taken by its co-founders, and highlights Google's unique elements that are not usually discussed in articles.

The Google Way begins by comparing Google's current reinvention of management methods to Toyota's focus on product quality in the 1980s. Google co-founders Larry Page and Sergey Brin used knowledge, intelligence, idea exchange, and credibility from "serial entrepreneurs" in the early years. Girard showcases Google's unique economic model including the "cost-per-click" advertising model and bidding for keywords, which keeps services free for users.

After the addition of successful industry executive Eric Schmidt, Page and Brin created a triumvirate. Success and triumvirate rarely go together, yet *The Google Way* showcases how this power-sharing relationship creates another competitive advantage for Google. An abundance of talented human resources are available in the Silicon Valley. These resources allow Google to achieve its "Google only hires the best" mantra, which is done through a lengthy hiring process. With

a focus on recruiting the best to work at Google, *The Google Way* details how Google uses temporary staffers to handle human resource functions when the need arises.

Once Google hires top talent, it works hard to keep them. Google's 20% rule drives intrinsic motivation of employees while top salaries and generous perks fulfill extrinsic motivation needs. Often left out of articles on Google is its peer review process. *The Google Way* showcases the peer review process where committees of employees determine which individual projects Google should consider for continued development. This competitiveness between employees drives productivity and promotes innovation. That coupled with a lax legal climate regarding non-compete clauses in California make Google a true "innovation machine." Google maintains close ties with top academic institutions and industry executives to keep innovation at the forefront. Bloggers and loyal Google followers beta-test products during Google's development phase. Girard discusses the importance of this "free" feedback from Google enthusiasts, which allows Google to focus on user wants and needs.

The Google Way throws another management rule out the window when it highlights Google managers supervising anywhere from 20–40 employees. This decision reduces bureaucratic tendencies and spreads pay more equitably throughout employees at Google. The coordination and communication between employees is possible through Moma, the Google intranet.

What makes *The Google Way* especially unique is the focus on the challenges and risks that Google is facing today and will likely face for years to come. Many of these challenges seem present due to the economic downturn. Leading research shows that the Internet's advertising market is mature but room for growth still exists in Europe and Asia. While Google may be the industry leader in the United States, Google will likely face an uphill battle to gain market shares in foreign countries such as China where national search engines are present, the use of Google is prohibited, and censorship remains a concern.

Google's Internet searches remain free, but one must wonder when Americans will get sick of Google collecting personal information and preferences. While other search engines are present, *The Google Way* points out Google must continue with additional products and a focus on innovation. This will ensure Google has products that Americans must use daily to compete with companies like Microsoft, which are well funded and have strong market positions.

Google's unorthodox corporate structure, focus on individual employee projects, and use of volunteer bloggers/Google enthusiasts to speed up development are part of Google's revolutionary management model that organizations will continue to try to emulate for years to come. This revolutionary management model

is highly successful at Google today and can continue to be for years to come. If Google hopes to continue its current success moving forward, it must remain aware of its threats and find a way to gain additional markets shares internationally. Business leaders should take two important concepts away from *The Google Way*—even if emulating the corporate structure is not possible, focusing on hiring and retaining top talent while involving and focusing on users will generally lead to business success.

Blown to Bits: Your Life, Liberty, and Happiness After the Digital Explosion

*By Hal Abelson, Ken Ledeem, and Harry Lewis
Addison-Wesley Upper Saddle River, NJ Copyright 2008*

Reviewed by Joni Adkins

We all know technology has changed the way we work, consume, play, and communicate. In *Blown to Bits*, the authors demonstrate how digital data have impacted society's fundamental laws and ideas. The book is based on bits, the 0s and 1s that represent all a digital computer can process. What we see as electronic documents, web pages, pictures, and music recordings are essentially just combinations of bits. The ease and perfect quality of copied bits along with the consistently increasing processing power of computers challenges established norms and laws regarding privacy, copyright, and free speech. Digital data means that data can last forever and move more quickly than ever before. Throughout the book, the authors include several stories about people who have been impacted both positively and negatively through the use of digital data. The impact of bits on privacy, electronic documents, web searching, encryption, digital rights, and free speech are all covered.

Privacy is the right to be left alone, but few really want to be left alone. Most people want to be connected with others through social media. Web 2.0 has changed the way people use the Internet on a daily basis and has altered our perception about privacy. We post about our personal lives on Facebook, build our professional network on LinkedIn, and read/post comments to blogs or other news articles. The authors point out that we leave digital footprints and fingerprints everywhere we go, and people are willing to exchange privacy for the convenience of not having to type login or shipping information on a return web site visit or for the savings associated with loyalty cards.

The increase in digital data has produced incredible amounts of data scattered all over the world. People rely on search engines to discover answers to their queries. Companies such as Yahoo!, Google, and Microsoft have incredible power to influence the public's view of reality. The authors argue that if you rely on a search engine for discovery, you are letting others determine what you will be shown. In addition, the use of Google's AdWords and other websites' sponsored links has changed the advertising industry as companies can capitalize on targeted advertising.

If you have ever purchased an item online, your credit card information was probably protected through the use of encryption. The increase of e-commerce has been possible due to the use of encryption, and this process is described in the book. While financial data is encrypted, most other digital communication (including email) is not encrypted and the public is not overly concerned about it. Digital rights, especially related to books and music, are explained to show there are still many questions about boundaries of property and protecting digital files while also making them convenient and easy for the consumer to buy and use.

Since there is no central control for the Internet, legislatures have attempted to control content by restricting technology. While these efforts, such as COPA (Child Online Protection Act) seem worthwhile, technology changes quickly and laws cannot keep up. Information freedom on the Internet is complicated. For example, the government has controlled the spectrum and treated it as a scarce resource. A small piece of the spectrum was deregulated and led to the development of WiFi. The authors contend that regulation stifles the potential innovation and efficiencies of digital communications.

Not surprising, the authors conclude that technology is not inherently good or bad; its value is in how it's used. Once we begin using new technologies, society changes as we can "think, reason, create, express, debate, compromise, learn, and teach in ways never before possible" (Chapter 8). The aspects of human culture affected are our sense of privacy, our scope of free speech, and the creativity that encourages human progress.

The authors have each been in the computing field for more than 40 years and share what they have learned through their experiences. While the authors believe "of all the dislocations of the digital explosion, the loss of copyright balance is the most rancorous" (Chapter 6), they have made their book available free online as a PDF download. Readers can choose to download the entire book or just chapters of interest from <http://www.bitsbooks.com>. Anyone interested in learning more about how their use of technology impacts the digital footprint they leave or about legal issues related to digital files should read this book.

