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Factors contributing to the success of commercial printers

Diana Watkins

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Factors Contributing to the Success of Commercial Printers

By Diana Watkins

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for the degree of Master of Science

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Abstract

Printing had been the uncontested primary media format for over five hundred years—with the commercial printing industry also thriving—until the late 1990s, when abnormal cost patterns and disruptive new media technologies worked together to permanently change the world economy and media landscape. Romano (2010a) estimated that 20% of all print production in the US had disappeared between 1995 and 2010. Many different theories have been posited to commercial printers as to how best to survive, but the overall message has been relatively consistent: print companies cannot rely on economic growth to regain business. Instead, they must adapt to the changing media environment (Cummings & Chhita, 2004).

The purpose of this research study was to discover which strategies commercial printing companies have employed to remain successful, despite the shrinking and ever-changing print business market. To achieve this, the researcher conducted open-ended interviews with leadership in the businesses in question. Common themes or trends were identified amongst the studied companies through comparisons of their responses. In addition, this research explored how these companies defined success—as a combination of recognition, persistent growth, and sustained or improved profitability—and to what degree the leadership felt the company had achieved it.
This study found four primary categories of factors which had been the most influential in sustaining the participating companies’ success through the years 2001 to 2011. These changes and practices consisted of:

- Continually developing efficiencies through initiatives, training, and investment;
- Regularly investing in new technologies and capabilities to improve efficiencies and gain market share;
- Regular assessment and strategic repositioning of their marketing mix based on industry trends, emerging markets, and their existing customers’ needs;
- Business management practices to strategically evaluate and manage these investments and changes, with the goal of continually improving their operations.

Through a combination of these factors, the participants have positioned themselves to survive and thrive in the near future, despite the shrinking market and constantly evolving technologies. These factors are also readily applicable to other commercial printers, and reinforce the impact of the strategic business practices recommended by industry literature as explored in the literature review.
Chapter 1

Introduction and Statement of the Problem

The U.S. printing industry has been under immense pressure to adapt and transform in order to remain profitable during the past decade. The printing industry suffered greatly when the U.S. economy endured a stock market crash the early 2000s as well as a the onset of an economic recession in 2008. These economic difficulties led to multiple mergers and acquisitions as well as business closures, which cumulatively put roughly 20% of printers out of business between the years 2000 and 2009 (Bennett, 2010). As of 2010, many businesses are still struggling to recover. However, the printing industry has been in turmoil since the late 1990s, due to emergent technologies such as digital media, digital printing, and the Internet; fragmentation of media; and rapidly-changing business consumer preferences, among other factors. Companies are migrating to other media formats, competition has become fiercer as traditional print jobs have become scarcer, and, for some forms of print media, the biggest competition is no longer other printers, but digital media instead.

This leaves printers with significant questions about survival. Over the past 20 years there have been many industry debates about how to stay competitive, whether through increased efficiency, quality management, value-added services, disruptive technologies, and/or continuous improvement. The immediate impact these developments have is highly contested and difficult to quantify, as are the potential costs for failing to adopt them. But one thing is for certain: print service providers have been under immense
pressure to change their business models, due to a tumultuous economy with shifting consumer preferences, evolving media markets, and emergent technologies.

The researcher interviewed and toured several commercial printing companies in order to determine the following:

- How they have stayed in business,
- How their business models have changed over time,
- Which areas they have focused on for improvement,
- How they define being successful in business, and
- Whether or not they have attained their internal benchmarks for success.
Reasons for Interest

This study is useful for the printing industry because it can be used to help print service providers remain in business—and even thrive—in spite of the challenges they face. The end goal of this study was to contribute to industry efforts by answering several questions regarding the industry’s ability to survive and thrive as a whole. The key question answered by this study was: how can individual print service providers adapt in order to sustain their business?

The researcher was personally interested in this topic due to her academic background. Her studies for both the Bachelor of Science degree in Graphic Communication and the Master of Science degree in Print Media were focused on operations and production management, and had only recently begun to address the changed media landscape she has experienced for most of her life. The aches and pains of the industry’s transition were apparent both in the classroom and in industry publications. The researcher sought a better understanding of the industry trends and the work environment she will enter upon completion of her degree. The researcher also felt that this study would be valuable for both industry and educators alike, as it includes concrete examples of how several commercial printers are faring, as well as insight into how similar companies can thrive in the future.
Chapter 2

Literature Review

As of 2010, the U.S. printing industry was struggling to adapt and survive. According to Bennett (2010), only 20% of printing companies were profitable, and 80% were either breaking even or losing money. Between the years of 2000 to 2009, the number of operational print companies in the U.S. had dropped from 26,450 to approximately 21,000, a loss of roughly 5,380 businesses (Bennett, 2010). Many printers had closed due to increasing cyclical cost factors such as materials and distribution, environmental regulations and sustainability, and historical world events such as the economic recessions in 1997, 2001, and 2008. The biggest impact to date was caused by structural changes resulting from the Internet Boom in 1995, which was brought on by emergent digital technologies as they began to offer alternatives to what had been a relatively unchallenged dominant media format (Romano, 2010a; Pira International, 1994).

This literature review will provide an overview of cyclical cost factors, what affects them, and how they impact the printing industry, followed by a timeline of the events which impacted those cyclical cost factors from 1995 to 2010. Next, this literature review will cover an overview of structural change factors which have impacted the printing industry, followed by a summary detailing the cumulative overall impact of cyclical cost factors and structural change factors on the industry. Finally, this literature review will conclude with an analysis of the printing industry’s responses and industry experts’ suggestions as to the best ways to sustain business.
Cyclical Cost Factors

Cyclical cost factors are defined by Paparozzi and Vincenzino (2007) as “the ups and downs of the economy, paper prices, energy prices, interest rates, and everything else that is sensitive to the business cycle.” As these costs rise and fall, they impact the cost of doing business in the printing industry, reflected in the costs of materials used for production, the cost of distribution of supplies and products, and the cost of meeting new regulatory requirements.

Material Costs

Crude Oil

Commercial printers’ heavy usage of oil- or natural gas-based products makes the spot price of crude oil a key cost factor for their operations, as increases in oil prices lead to increases in production costs (First Research, 2011). Oil prices tend to be sensitive to geopolitical events, extreme weather, and other events which disrupt supply or cause uncertainty about future oil supplies (U.S. EIA, 2011). The spot price of crude oil has increased dramatically above the average inflation rate since the year 2000 (U.S. EIA, 2011), which has impacted the cost of inks, solvents, and many other chemicals used in the print production process, as well as distribution costs.

Paper Substrates

Commercial printers’ products are typically printed on paper substrates, and paper is the biggest individual material cost for printers (First Research, 2010). Thus, when the cost
of paper increases, the cost of print also increases, which leads to print customers being more likely to consider alternative media. The paper industry itself is one of the most energy-intensive industries in the world, and is very dependent on the cost of crude oil for distribution and operations (Brown & Atamturk, 2008). Over the past 25 years, the paper industry has experienced significant structural changes including mill shutdowns, layoffs and reduced hiring, slowed capacity growth, and significant loss of market share to foreign competitors (Urmanbetova, 2008).

**Distribution Costs**

The other major cost in print media is the cost of product distribution. According to Romano (2010a), logistics are critical for accessibility by the end consumer. The cost of distributing information was predicted to become increasingly important by Pira International (1994). In the traditional “print and distribute” workflow, materials are printed and bound before they are delivered to a warehousing facility for storage, from which they are sent out to the customer or end user (Cummings & LeMaire, 2006). The rising cost of distribution (due to increases in the price of crude oil) affects distributors such as long-haul truckers and the USPS, which in turn impacts shipping costs for supplies and finished products to internal storage locations, the customer, distribution centers, and the end user (Cummings & LeMaire, 2006).
Postage Rates

The United States Postal Service (USPS) is the most common delivery method for conventional printers’ products such as direct mail pieces, catalogs, and periodicals to the end consumer (Hardesty, 2002, as cited in Cummings & LeMaire, 2006), which PIA/GATF estimates to encompass 45% of total print volume (Cagle, 2005, as cited in Cummings & LeMaire, 2006), and comprises more than 54% of the mail delivered by the USPS (Romano, 2010a). By 2006, according to the former Banta Corporation (as cited in Cummings & LeMaire, 2006), postage was a significant proportion of print-related manufacturing costs, frequently exceeding all other costs combined. This means that the USPS’s delivery rates have a significant impact on printers’ costs, and thus their return on investment (ROI). The USPS is also heavily affected by the cost of oil. According to Jim Quirk of the Postal Rate Commission, every penny increase in fuel costs impacts the USPS by approximately eight million dollars in costs (as cited in Romano, 2010a).

Long-Haul Trucking

The printing industry’s cost of doing business is also heavily affected by its reliance on long-haul trucking—which dominates the distribution industry—to deliver products from warehousing and internal storage to customers and end users. Several factors affect the cost of these distribution methods, including the cost of fuel and driver shortages, among others. In 2006, according to Tavio Headley, staff economist for the American Trucking Association, fuel represents roughly 10% to 20% of the cost of doing business in the trucking industry (as cited by Cummings & LeMaire, 2006). Thus, increases in the cost
of fuel result in increased fuel surcharges passed on to their customers, which include commercial printers and their customers by extension. In addition, driver shortages reduce available shipping capacity, increase distribution costs, and increase scheduling unpredictability for shipments, which are significant factors for commercial printers who deliver time-sensitive promotional products (Davidson, 2012).

Environmental Regulations and Sustainability

Both environmental regulations and the desire of the general public for sustainable practices affect the printing industry. According to interviews of New York State printers conducted by Coleman and Ramchandra (2010), a greater focus on the environmental impact of printing, paper consumption, and recycling has caused some customers to reduce their printing and work more with Internet-based marketing. Printers have acknowledged that there are more regulations on environmental issues than ever before, and these will only continue to increase in the future (Coleman & Ramchandra, 2010). Smaller printers have more difficulty in overcoming the economic and administrative requirements for sustainability policies, practices, and certifications (Coleman & Ramchandra, 2010).

In addition, many of the industries cited in these cyclical cost factors — who provide oil-based products, paper, and distribution services for the printing industry — are frequently affected by costly environmental and sustainability initiatives within their own industries, which increases their cost of providing those materials and services to the commercial printing industry (Davidson, 2012, Romano 2010a).
Historic World Events

Cyclical cost factors in the printing industry have been severely impacted by world events that disrupted their normal cycles, which led to greatly increased prices and unsteady markets at a time of critical structural change. Because these cyclical cost factors affected the costs and convenience of printed products, customers were driven away from print. In turn, printers had less awareness of the impact of their industry’s structural changes as they were preoccupied with containing their own costs in an effort to maintain or regain their customer base.

How Material Costs Were Affected By Recent World Events

Material costs are impacted by events which affect supply and demand or cause additional costs in managing operations. Government regulations, world conflicts, oversupply and shortages, economic crises, distribution costs, and environmental factors have all impacted the cost of materials used in print production.

Oil

Commercial printers’ heavy usage of oil- or natural gas-based products makes the spot price of crude oil a key cost factor for their operations (First Research, 2011). As the price of oil rises, so does the cost of materials and production in turn. Also, gas price hikes have frequently corresponded with depressions in the U.S. or world economies (InflationData.com, 2011; U.S. EIA, 2011), which negatively impacts printers’ business-to-business customers (First Research, 2010). When crude oil prices rise, the economy
falters, distribution and material costs increase, and financially-constrained businesses use printing services less, which in turn hurts the printing industry even more. Rising oil costs also impact the cost of distribution in various forms. Oil prices tend to be sensitive to geopolitical events, extreme weather, and other events which disrupt supply or cause uncertainty about future oil supplies (see Figure 1) (U.S. EIA, 2011).

**Figure 2-1. Inflation-adjusted prices of crude oil (per barrel) over time, with historical events marked that had impacted global oil supply (U.S. EIA, 2011).**

**Figure Legend**

1: US spare capacity exhausted  
2: Arab Oil Embargo  
3: Iranian Revolution  
4: Iran-Iraq War  
5: Saudis abandon swing producer role  
6: Iraq invades Kuwait  
7: Asian financial crisis  
8: OPEC cuts production targets 1.7 mmbpd  
9: 9-11 attacks  
10: Low spare capacity  
11: Global financial collapse  
12: OPEC cuts production targets 4.2 mmbpd

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1 Million barrels of oil per day
The Asian Financial Crisis in 1997 (see Figure 2-1, #7) caused a sharp decline in the demand for oil, forcing crude oil prices to drop from $30 a barrel down to $16, the lowest price since the early 1970s (U.S. EIA, 2011). As major oil corporations merged, including Exxon and Mobil and BP and ARCO, among others (U.S. EIA, 2011), oil prices began to level out in 1998 (see Figure 2-1, #8).

Crude oil prices continued to rise in early 2000, and, by the end of that year, new tensions between Iraq and Kuwait caused the price to rise to a new ten-year high (U.S. EIA, 2011). After terrorist attacks on September 11th (see Figure 2-1, #9), the resulting recession dropped the price of crude oil down to $19.92 per barrel in November of 2001 (U.S. EIA, 2011).

Oil prices slowly raised back up to $23.71 per barrel by April of 2002, but Iraqi tensions and various oil strikes severely impacted supply (U.S. EIA, 2011). By September, global oil stock levels had fallen uncomfortably low, resulting in increased prices (U.S. EIA, 2011). By March of 2003, the price of oil had climbed sharply to $37.83 (U.S. EIA, 2011). In 2004, OPEC cut production further despite pressures from oil-consuming countries (U.S. EIA, 2011). By June 1st, crude oil reached $42.33, and then continued to rise to a record high of $55.17 (U.S. EIA 2011). In late 2004, hurricanes, sabotage, and oil strikes further disrupted production in multiple oil-producing nations (U.S. EIA, 2011).

Oil prices continued to climb rapidly in 2005, and by 2006 prices had reached $75 per barrel, and then surged to over $125 by the summer of 2008, corresponding with world financial collapse (see Figure 2-1, #11; U.S. EIA, 2011). Demand flattened out and
oil prices tumbled (see Figure 2-1, #12; U.S. EIA, 2011). By 2010, due to production cuts by OPEC, prices were back up to $75 and continued to climb, reaching $100 again by the 2nd quarter of 2011 and leading to fears of a “double-dip” recession (U.S. EIA, 2011).

**Paper**

Commercial printers’ products are typically printed on paper substrates, and paper is the biggest individual material cost for printers (First Research, 2010a). Over the past 25 years, the paper industry has experienced significant structural changes, including mill shutdowns, layoffs and reduced hiring, slowed capacity growth, and significant loss of market share to foreign competitors (Urmanbetova, 2008). The paper industry is also one of the most energy-intensive industries in the world, dependent on the cost of crude oil for distribution and operations (Brown & Atamturk, 2008).

Between the 1980s and the year 2000, the supply and demand of paper shifted dramatically, leading to unstable prices in the early 2000s that were exacerbated by unstable overseas trade. Paper consumption peaked in the 1980s, causing producers to increase capacity which led to an accidental oversupply of the market (Urmanbetova, 2004). Sales prices plummeted below production costs between 1991 and 1994 (Romano, 2010b).

Older machines were eliminated to control inventory, but overseas markets then had a surge in consumption, leading to the ‘Great Paper Shortage of 1995’ (Romano 2010b). The unprecedented high prices of paper and delays in production, occurring after ten years of unstable prices and supply, began to drive marketers and consumers away
from print media towards emergent digital media (Romano, 2010b). It also triggered heightened consolidation activity as the paper industry sought to gain efficiencies, price stability, and the leverage to shut down less-profitable mills (Urmanbetova, 2004).

The price of paper fell dramatically in 1997 due to the Asian Financial Crisis, a recession which greatly reduced overseas demand (Urmanbetova, 2004). Further mergers, consolidations, and closures worked together to slow the decrease in paper prices (Brown & Atanturk, 2008), which were a major contributing factor to a 25% price hike from 1999 to 2000 (Rudder et al., 2002; as cited by Urmanbetova, 2004).

In the early 2000s, capacity growth shifted to Southeast Asia to meet the growing demand for lower cost products as opposed to importing from North America (Brown & Atanturk, 2008). The North American pulp and paper industry could no longer claim to be the low-cost producer in the global market. Despite both producing and consuming the largest volume of pulp and paper products, domestic demand also grew more quickly than production capacity, leading to a shift from exporting to importing with trade deficits (Brown & Atanturk, 2008).

Since 2007, over 20% of North American coated paper production has shut down in the face of decreasing demand (Hutchinson, 2009a). The 2008 Alternative Fuels Provision tax credit offset the cost of doing business at mills at an average rate of about 40% (Tierney, 2009). International Paper Co. reported a jump in net income of 93% during the 1st quarter of 2008, thanks to the tax credit (Tierney, 2009). However, because of this “loophole,” costs to the federal government increased from $61 million to between $3.3 and $6.6 billion. Therefore, the paper industry was excluded from the tax credit in
2010, leading to a compensatory increase in paper prices (Tierney, 2009). After the 2008 recession and throughout 2009, sawmills and paper mills continued to close or operate below 80% capacity in an attempt to bring up devastated paper prices (Hutchinson, 2009a). However, the drop in demand still outpaced the drop in supply, causing rapid price changes as paper mills competed on price while attempting to “corral and contain their own business” (Hutchinson, 2009a, p1, ¶ 9).

How Distribution Costs Were Affected By Recent World Events

The cost of distribution—which is largely impacted by increases in the price of crude oil—affects distributors such as long-haul truckers and the USPS, which in turn impacts shipping costs for printers’ supplies and finished products to internal storage locations, the customer, distribution centers, and the end user (Cummings & LeMaire, 2006).

Postage

Postage rate adjustments from 1995 to 2006 kept pace with inflation, but the profitability of the USPS was severely hampered by soaring distribution costs (due to oil prices), and declining use of their services. The Postal Act of 2006 allowed the USPS to adjust rates without scrutiny from the Postal Regulatory Commission [PRC] (Schick, 2008; Montanye, 2007), but price-capped rates for direct mail, catalogs and publications as these products are reliant on the USPS for ROI and the USPS is in turn reliant on them for consistent revenues (Montanye, 2007).
Since the Postal Act of 2006, the USPS has increased its rates annually to keep up with the skyrocketing cost of fuel. Prices rose an average of 11.9% in 2007, with some periodicals impacted as high as 20% (Ambroz, 2009). As a result of these rate hikes and anticipated future increases, advertisers have been migrating to the Internet and other media channels. From 2007 through 2009, the USPS experienced a 17% decline in their mail volumes. This represented an approximate decrease of 36 billion pieces, which is the greatest decline in current U.S. history (Hosford, 2010).

As of 2010, postage rates had risen a cumulative 13.5% from 2000 (Romano, 2010a), rising to account for over half of the cost of catalog marketing. According to American Catalog Mailers Association executive director Hamilton Davidson, “this has fundamentally altered the business model and is forcing catalogers to migrate out of the mail” (Hosford, 2010, ¶ 4). Magazine Publishers of America threatened to file a lawsuit, with the aim of forcing the PRC to reject the USPS’s proposed rate increase for 2011 (Hosford 2010), and the Affordable Mail Alliance coalition also formed to resist the rate increases (Kapel, 2010). Leo Raymond, Vice President of Government Affairs for the Mailing & Fulfillment Service Association, argued that "the price sensitivity of hard-copy mail is particularly high. Advertisers — already looking at other media — will only be encouraged to look further if the cost of mail increases. As a result, there will be less demand for hard-copy mail, and for the services of commercial printers and mailing service companies" (Kapel, 2010, p. 2, ¶ 3).
Long-Haul Trucking

Printers in 2005 faced a 10-15% increase in fuel surcharge rates by transportation companies due to the rising cost of fuel (as cited from interviews by Cummings & LeMaire, 2006). By 2008, the price of diesel fuel had risen 50% over its value in 2007, surpassing the cost of labor for some trucking companies, and was claimed to have caused the bankruptcy of nearly 1,000 of those companies (Lavalle 2008). The long-haul trucking industry is also notorious for high turnover rates, and faces an increasing critical shortage of drivers of approximately 20,000 drivers in 2006, according to the American Trucking Association (as cited by Cummings & LeMaire, 2006). In 2006, American Trucking Association projected the shortage to increase to over 110,000 by 2014 (as cited by Cummings & LeMaire, 2006), but in 2010, Rosalyn Wilson, senior analyst at trucking industry consulting firm Delcan, revised those projections to a 400,000 driver shortage by 2012, and estimated a decrease of available drivers by 5-12% due to increased driver screenings (i.e., for safety; Davidson, 2010).
Structural Change Factors

Paparozzi and Vincenzino (2007) define structural change as a profound, transforming change that occurs independently of the business cycle and other cyclical changes, which does not go away, rewrites the rules, and redefines the industry with profound new opportunities and threats. Structural change often develops or occurs from a specific, historical point in time.

Figure 2-2. A chart of US commercial printing on a per capita basis, for the years 1972 through 2011, values adjusted for inflation. Super-imposed are events in the Digital Revolution which have been correlated with decreases in demand for commercial printing (WhatTheyThink, 2012).
The Digital Revolution

The Digital Revolution began before 1995 with the development of personal computers, digital file formats, authoring tools, and portable storage devices (Romano, 2010a). In 1995, several key improvements in digital technologies’ device connectivity and file compatibility launched a new era in the media (Clinkunbroomer, 2003; Romano, 2010a).

The Internet

The Internet was invented in 1969 by the U.S. Department of Defense for emergency communication in case of an attack, but its true potential was not seen until later in 1991 when the hypertext-based World Wide Web was established, allowing links between different web sites or text anywhere in the world. This was an unprecedented level of connectivity (Romano, 2010b). Netscape developed the first commercial graphic browser and web server in 1995, which made the Internet significantly easier and far less intimidating to use for the common consumer (Romano, 2010b). This sudden wide-spread accessibility of the Internet, or “Internet Boom” (see Figure 2-2), changed the world due to its nearly instant results, convenience, and negligible distribution costs. It was a disruptive technology due to the fact that it was not a revolutionary new kind of communication, such as TV, radio, or the written word had been; rather, it was a new way to distribute the audio, textual, and visual content consumers were already familiar with, resulting in significantly higher appeal to those already-established markets (Romano, 2010a). It also had relevancy as a direct marketing tool because Internet-based
marketing was faster, cheaper, and measurable in its effectiveness due to the ability to track consumer traffic on websites (Romano 2010a).

The Telecommunications Reformation Act of 1996 allowed Internet service providers to compete for market share. Personal computer ownership also doubled between 1995 and 1998 from 43 million users to well over 80 million (Romano, 2010a). This helped Internet-based communications to gain a firmer hold on the market, with an even wider audience and improved ROI for marketing activities.

As Internet-based advertising grew, traditional advertising media declined as revenues shifted to new digital media advertising. Newspaper advertising revenues were impacted particularly strongly from 2006 to 2009, dropping 48\% in value from $49,275 to $27,564 (Edmonds, Guskin, & Rosenstiel, 2011). In 2009, Outsell, a consulting and research group, surveyed over 1,000 marketers and advertisers to find that 32.5\% of the planned 2010 U.S. marketing spending was destined for digital media, while only 30.3\% of the spending was bound for print advertising (Romano, 2010b). In a similar timeframe, PDF

The Internet has an unprecedented ability to instantly access and send digital media over an unlimited distance for little to no cost. However, the advent of the Internet led to a need for standardized formats for digital media to ensure compatibility with file readers and printing devices for end users. Adobe’s PostScript, a standard programming language used by desktop printers, was the forerunner of their Portable Document Format (PDF) developed in 1991 as a universal standard for digital files for both output devices and
viewing programs such as Adobe Reader (Romano, 2010b). By 1995, Adobe started distributing their Adobe Reader software for free via their website in order to improve accessibility and standardization of the PDF file format. By 1995, 10 million readers had been downloaded, with 50 million by 1999, 300 million by 2001, and 750 million by 2004 (Romano, 2010b). Due to its popularity, full PDF specifications were released by Adobe to the International Organization for Standardization (ISO) in 2007. These specifications were formed into the ISO 32000-1 Document Management standard, and are now maintained and developed by an ISO subcommittee in 2008 (ISO, 2008).

**Digital Printing**

Digital printing is unique in that it is an opportunity for printers who adopt it, and a threat to printers who cannot readily afford to invest in this technology as it provides new opportunities to compete with conventional print production. It differs from conventional printing in several key ways, the first being the significant reduction in time and make-ready cost before the press is operated. The second key difference is digital printing’s relatively static cost per product produced, versus conventional printers’ large initial cost. This is significant because conventional printers’ costs are distributed over the number of products produced, requiring them to gain enough volume to reach a break-even point and, eventually, a profit.

These factors combined allow digital printers to profit on small production runs—since their costs are directly based on product volume—while conventional printers’ profits are based on economies of scale. This competency pairs well with the trend
towards smaller and faster print production, as digital printing is capable of meeting these marketplace demands far more effectively than conventional presses. Digital color page prices are also falling below offset printing prices (First Research, 2011), allowing digital printers to compete even more successfully with larger conventional print facilities on smaller print production runs.

Digital printing has also improved in terms of competitive print quality, the ability to customize each individual product produced with variable data, and the ability to print on-demand. What once would have been printed in large batches in a central facility, warehoused, and then used up slowly over time through the “print-and-distribute” model now can be electronically distributed to digital print facilities in order to be printed on-demand (“distribute-and-print”), greatly reducing storage, distribution and retrieval costs, and improving convenience for both the customer and/or the end user.

However, many printers were slow to adopt digital printing technology, especially smaller conventional printers who could not readily afford to invest in new equipment. This resulted in the loss of business to other printers who had successfully adopted and marketed digital printing’s capabilities (First Research, 2011) or to clients who began to perform the same services in-house (Paparozzi & Vincenzino, 2007). However, smaller printers can still compete with larger printers, due to the transition from high-volume printing jobs to smaller, highly variable printing jobs. High-volume printing such as magazines and catalogs are still handled more effectively by large printers, whose costs per product are lowered as the volume of printing increases (First Research, 2011).
Impact on the Printing Industry

Between 1995 and 2010, the U.S. commercial printing industry was dealt a devastating blow from which it never truly recovered its former strength as it had in prior recessions (Romano & Webb, 2010). It is estimated that U.S. printing activity declined 15% during the 2001 recession (First Research, 2011). Romano (2010a) estimated that 20% of all print disappeared from 1995 to 2010. According to WhatTheyThink’s Dr. Joe Webb, since 1987 the per capita consumption of print was cut in half (Webb, 2012). From 2001 through 2003, printing companies in the US dropped from 47,000 to 44,514, partially due to mergers and acquisitions (Kodey, 2004, as cited by Cummings & Chhita, 2004). In 2008-09 alone, 5,200 companies went out of business (Coleman & Ramchandra, 2010).

Although sales volume in December of 2006 had finally recovered enough to surpass December 2000 values, only 60% of the NAPL’s panel of 700 companies had seen sales growth, and only 34.4% reported increased profitability over their prior levels (Paparozzi & Vincenzino, 2007). Also, if the commercial printing industry’s relationship with U.S. GDP had been maintained since the year 2000, it would have been poised to reach $149 billion in shipments by 2010, which Romano and Webb (2010) considered an impossible leap from the roughly $89 billion in shipments during 2009.
Commercial Printing Industry’s Response

The commercial printing industry had several kinds of responses to its economic difficulties, and the ones most commonly identified by industry experts were mergers & acquisitions (M&A), value-added services, cross-media services, new technologies, and environmental/sustainability efforts. Controlling costs through Lean and other best business practices was also frequently mentioned; however the explored literature and theories regarding cost control had not changed significantly since the 1990s, so these topics were not included in this literature review.

Mergers & Acquisitions (M&A)

Coleman and Ramchandra (2010) found that consolidation is a continuing trend in the printing industry, driven by independent companies going under due to the economy, larger companies acquiring the assets of smaller niche companies, and a general discontinuation of operations as many family-operated printers go out of business. Khazanchi (2008) also found that print service providers are using M&A activity to increase their offerings, attempt to grow or enhance their product and service innovations, or reposition themselves as communications or marketing service providers. NAPL’s Business Advisory Team believes the printing industry is experiencing strong M&A activity because companies are seeking to increase their capabilities, gain consolidation savings, and increase market share (Hyde, 2011).
However, according to Cagle (2009), M&A activity has declined since the 90s due to economic recessions. Since sellers are skeptical when the value of their property declines, few buyers are willing to put their own survival in jeopardy by acquiring a struggling competitor. Additionally, printers without a specialty niche tend to have more difficulties (Cagle, 2009).

Value-Added Services (VAS)

Another response has been to expand or diversify sources of revenue through VAS. According to PIA (2008), ‘value-added’ refers to the actual worth added by a company’s own efforts to materials and outside services in order to create their products. Cummings and LeMaire (2006) differ slightly, defining VAS as chargeable services for which a customer relies on company expertise. However, they agree that printers offering VAS provide more value for customers and also bring more value into their operations, making VAS a valuable tool for improving company profits (PIA, 2008; Cummings & Chhita, 2004).

Paparozzi and Vincenzino (2007) found that surveyed companies’ ability to diversify into VAS was hampered by uncertainty about where to invest, which services to add, and their ability to afford the new services due to the economy, the market, and an uncertain future. Pira International (1994) suggests that, in order to determine how to best add value for all parties, firms would need to examine their products in the context of complete product or service offerings provided to the customer, and develop them based on their customers’ specific needs. In interviews by Paparozzi, Wang, and Vincenzino
(2008), more aggressive marketing of VAS was shown to be effective in bringing in new customers and prospects.

One of the ways in which printers expand their offered services is to form strategic partnerships with other companies who specialize in those services, which provides opportunities for cost reduction and increased profitability with the trade-off of less value-added as compared to bringing those services in-house (Cummings & LeMaire, 2006, 2008). Pira International (1994) recommended that firms develop their VAS in coordination with suppliers, contractors, customers, and business partners in order to offer value to all parties. Another option is to bring those services in-house through mergers and acquisitions, purchasing and hiring. According to Paparozzi and Vincenzino (2007), in-house VAS require expertise and integration, and the ability to manage costs to develop, market, and manage the new services while losing productivity due to employee training and integration of the new activities into the existing workflow (Paparozzi & Vincenzino, 2007).

Cummings and Chhita (2004) found that 42% of surveyed print service providers had expanded their in-house services to encompass pre-press through distribution. In a 2007 ranked-response survey, Paparozzi and Vincenzino found that 65.4% of surveyed printers preferred outsourcing initially with plans to bring services in-house later, and, while 21.4% considered acquiring a firm already offering the service, 60.1% ranked it as the least desirable option. Offering the service in-house from the beginning garnered 50.4% approval, and establishing a long-term partnership with a firm already offering the service received 46.7% approval (Paparozzi & Vincenzino, 2007).
Cross-Media

Cross-media is a value-added area of particular interest to the marketing and advertising industry, which is a key customer of the printing industry. Pira International (2004) defines cross-media publishing as the parallel production of a variety of media by adding value to a common digital core source. InfoTrends’ research indicates that marketers are now reaching across multiple media channels to engage customers, as shown in the results of an October 2010 study where surveyed marketers were using an average of three media types per marketing campaign (Cross, 2011).

According to Cross (2011), direct marketing is more effective when a marketing campaign uses multiple media formats in a coordinated fashion in order to reach customers. Cross (2011) suggests that print, when used as a core component of a campaign in concert with other marketing communication tools, increases customer engagement and improves results. Romano (2010a) agrees, saying that printed media can generate interest for further research on topics of interest, and therefore may be used as a gateway media to drive customers to other mediums. Mark Sucheki, author of Integrated Marketing: Making It Pay, claims that integrated advertising campaigns typically gross a response rate of over 12% while traditional direct mail pieces yield a 1.5% response rate, showing integrated cross-media campaigns to be more effective (as cited in Romano, 2010a).

Some print companies are attempting to capture more value from their customers by managing more of their customers’ media mix, thereby undergoing a transition from print service providers to communications service providers (Cummings & Chhita, 2004).
or cross-media marketing service providers (Cross, 2011). According to Romano (2010a), “[it is about understanding media choice and realizing that print is one communications medium among many, and that to be a true communications company one must be conversant in all media, strategically and holistically.” Pira International (1994) suggests that printers must become multimedia resource suppliers while improving their own operational efficiencies in digital information processing, automation, manufacturing technology and distribution logistics.

An InfoTrends research study showed that printing industry respondents’ top five new applications were cross-media related services (36%), online storefronts (29%), website development (27%), QR codes (26%), and social media (23%; Cross, 2011). In 2010, RR Donnelley used QR codes to demonstrate that printed materials could be used as a gateway for other media types in integrated communications (Cross, 2011). Quad Graphics listed its top strategic goal for 2010 as redefining print as the foundation of a coordinated multi-channel marketing campaign (Cross, 2011).

**New Technology**

New technology is another area of interest to printers attempting to improve their business. The latest advancements in printing technology enable faster processing times, lowered make-ready and finishing requirements, and reduced manual labor, thus contributing towards environmental sustainability, improved efficiencies, and reduced costs (Coleman & Ramchandra, 2010). Digital workflows can also minimize bottlenecks and inefficiencies (Paparozzi & Vincenzino, 2007).
In Coleman and Ramchandra’s (2010) study of New York State printers, the average age of equipment used by the respondents was 12.8 years; however, the vast majority of presses were around 18 years of age. Many of those printers were evaluating whether to spend money on new equipment in 2011 or wait a few months or years, since they did not have cash surpluses to buy new machines or modernize their facilities (Coleman & Ramchandra, 2010). According to the NAPL, this was a continuing trend, since capital investment in 2007 only grew 3.5%. This was less than half of the 7.8% gain in 2006, and the weakest since the summer of 2003 (Paparozzi & Vincenzino, 2007). In 2008, 39.1% of printers delayed or cancelled capital investment (Paparozzi, Wang, & Vincenzino, 2008). Paparozzi, Wang, and Vincenzino (2008) have found that printers were hesitant to invest in difficult economic times, due to market uncertainty making them cautious and conservative while their overall focus was on increasing sales and controlling costs. Printers have been wary of overextending to buy equipment and of increasing production capabilities in a shrinking market (Paparozzi & Vincenzino, 2007).

In a survey of printers conducted by Paparozzi, Vincenzino, and Wang (2008), 90.6% of respondents said that their top priorities with capital investments were to improve productivity and make workflows more efficient. Bindery and finishing systems were the most frequently cited priority, in order to keep up with improvements in other areas of production, avoid bottlenecks, and add automation to reduce labor costs (Paparozzi, Vincenzino, & Wang, 2008). The survey also showed a clear trend towards acquiring digital printing capabilities. Marketing and advertising customers are increasingly requesting short-run, personalized printing purchased just-in-time for their
direct marketing campaigns in order to improve their ROI and minimize costs (Paparozzi & Vincenzino, 2007). These type of print jobs require digital printing capabilities. In Coleman and Ramchandra’s (2010) study, 59% of New York printing companies reported that they planned to purchase new digital printing technologies in the next five years, and 46% of these respondents intended to purchase within the next 1-2 years.

**Environmental Sustainability**

According to Coleman and Ramchandra’s (2010) study, 64% of respondents indicated that their customers are interested in sustainability, and note that customers have influenced their sustainable business practices. Their customers are requesting more options for environmental products and services, such as using papers with higher recycled content, or using “green” inks such as soy-based inks (Coleman & Ramchandra, 2010). Sustainability can also be marketed as a form of value-added services, if customers are willing to pay more for a more environmentally-friendly product.

Respondents indicated that one of their core concerns was maintaining a profitable business while meeting or exceeding their sustainability goals in order to satisfy customers and reduce their own waste and related costs (Coleman & Ramchandra, 2010). Investments in sustainability are a concern, but, during the 2008 economic recession, these took a backseat to improving productivity and making workflows more efficient (Paparozzi, Vincenzino, & Wang, 2008).

One of the other key components of sustainability is reducing energy and utilities consumption. Coleman and Ramchandra (2010) found that printers were constantly
looking to improve their utility rates and reduce their energy consumption footprint, despite these costs making up a mere 2-5% of the typical printer’s operating budget. However, printers tend to have small operating margins; thus, reduced energy consumption means reduced costs and increased profits in turn.
Conclusion

According to the literature, the printing industry today is no longer the same industry as it was 20 years ago, having lost its dominance as the primary media format. The commercial printing industry has been permanently changed due to disruptive technologies such as the Internet, digital printing, and PDF; changing marketplace and media landscapes; upsets in normal cost trends in distribution and materials; and devastating economic recessions from which it has never fully recovered. Some print business has been lost forever. Specific advice has varied, but the overall message has been clear and consistent: print companies cannot rely on economic growth to regain business—they have to adapt to the changing environment (Cummings & Chhita, 2004).

Despite finding numerous case studies as to how digital printing’s products have helped print customers improve their businesses, the researcher was unable to find case studies exploring factors which potentially enabled commercial print providers to sustain their own businesses. Therefore, this research will identify companies that have managed to remain in business despite the changes in the industry, will seek to understand how their business models have changed, and will shed light on what they feel defines success in the new era of printing as well as whether they feel they have achieved this or not.
Chapter 3

Research Questions

This study sought to shed light on how successful print companies have managed to stay in business from the year 2001 to the year 2011. The researcher analyzed three pre-screened commercial printing companies in detailed studies, in order to determine how they have managed to sustain their business, what their challenges have been and currently are, and what they feel will help the printing industry compete in the near future. This research also explored what commonalities exist amongst these printers that contributed to their success in the marketplace.

These analyses answer the following questions:

- How has their business model changed from 2001 to 2011?
- Which specific areas of their businesses have they improved most?
- How do they define being successful in business, and have they been able to attain their personal benchmark for success?

As this was a qualitative exploratory study, there is no specific hypothesis to be accepted or rejected using statistical data analysis.
Chapter 4

Methodology

This study compared three commercial print service providers who were selected for the study based on various qualifying criteria, as detailed under company selection criteria and process below. The researcher conducted individual and group interviews on-site at the participating companies’ printing facilities, and then compared the participating companies’ responses to find commonalities amongst their strategies.

The objective of the data analysis was to categorize the data and interpret findings for each company to discover the changes, behaviors and attitudes which had contributed to the companies’ ability to stay in business. The researcher then compared and interpreted the findings amongst the companies in order to find similarities and differences through the identification of patterns.

Companies’ participation in this study may have led to a loss of some competitive advantage by revealing details of their operations to competitors. Therefore, measures were offered to prevent the identification of the actual companies studied in this research, such as being labeled by pseudonym and excluding specific details of their operations and employed strategies. All of these measures were rejected by the participating companies. However, all companies were given access to the final report before publication to dictate omission of data or addition of details through phone interview, in order to alleviate worries that may have interfered with their desire to share information.
Study Limitations

Most of this study’s limitations were related to accessibility of the companies being interviewed, since travel can be both expensive and time-consuming. Therefore, the companies had to meet a certain criterion of distance from the Rochester Institute of Technology or proximity to other selected companies in order to be selected for analysis. Also, for the sake of accessibility and the reduction of variability (such as operations personnel and management membership, different equipment, and regional market variables), companies with only one printing facility were considered for this study.

Another area of limitation was access to the financial performance data of companies; since many are privately owned, their information is not readily available. This unfortunately eliminated most financial performance variables from the qualification criteria, such as profitability.

Finally, due to time constraints and logistical limitations, only three companies could be interviewed for this study. Therefore, several other successful commercial printing companies were unable to be interviewed during the time frame of this study. There also was a relatively small time frame for the interviews themselves, which limited the depth and duration of the study. In addition, some details were withheld in this study to avoid compromising the participating companies’ competitive advantage within their markets. It is possible that other significant factors exist which influenced these companies’ success, but were not divulged due to their sensitive nature.
**Company Selection Criteria & Process**

The Printing Impressions 400 list, “the industry’s most comprehensive ranking of the leading printing companies in the United States and Canada,” (Greenbaum, 2010, ¶1) was used to select companies for this study due to the ease of accessibility and the ready availability of prior editions. Company qualifying criteria could be verified and met solely through the information provided by the Printing Impressions 400 list. Information provided by the list included company name and headquarters location, current and previous years’ ranking based upon self-reported sales data, most recent and previous years’ fiscal sales and percentage change, primary production specialty, number of employees, manufacturing plants, and total press units (Greenbaum, 2010).

Along with previously mentioned criteria of company location and number of facilities, the length of time these companies had been in business was also a factor of consideration. Companies were required to have been in business since the year 2000, though preferably longer. The final variable for consideration was the type of print business these companies were engaged in at the time of study, since different forms of media output are affected differently by their respective marketplaces, competition, and other historic factors. Thus, this study was limited to printers for whom commercial printing comprised over 50% of their total work volume, who also had less than 15% of their work volume from books, newspapers, or packaging.

With these criteria, three companies were selected based upon their longevity in business, whether their business had been growing or shrinking, their production
specialty areas, number of print facilities, and location of their primary print facility. Those three companies were JS McCarthy, The John Roberts Co., and Kay Printing.

**Interview Topics**

While the interviews were open-ended, which complicated transcriptions but ensured accuracy of emphasis in company responses, the researcher used an outline list of questions as a guideline (see below), with sub-questions (detailed in Appendix A) to ensure thoroughness of responses in each category from each company. Each of these categories and sub-categories was addressed by the companies, as detailed in the results and compared in the discussion.

**Company Demographics**

1. Size – Employees, Sales
2. Financial Stability
3. Location
4. Core Markets and Customers
5. Years in Business
6. Years at Current Location

**Study Questions**

1. Describe the competitive environment. How has it influenced them?
2. What has changed strategically within their business over the past 10 years?
a. Workplace Environment

b. Operations
   i. Technology
   ii. Services
   iii. Efficiency
   iv. Sustainability
   v. Supply Chain Management

c. Marketing Strategy

d. Change Management

3. What have been their two primary strengths, weaknesses, opportunities, and threats?

4. Which improvements have helped their business the most in the past ten years?

5. What would they have done differently, in hindsight?

6. How do they personally define success in this industry, and have they attained it?

7. What are their thoughts and feelings about the printing industry in general?

8. What advice do they have for other commercial printers?
Chapter 5

Results

While the interviews were conducted in an open-ended manner, each of the participating companies had thorough responses which addressed all of the outlined questions from the methodology section. Demographics are represented in a comparative table (see Table 5-1 below). The responses to the interview questions are organized by participating company, starting with JS McCarthy, followed by The John Roberts Co., and concluding with Kay Printing. Within each company’s section, responses are organized according to the interview questions (see Chapter 4 and/or Appendix A).

The responses were summarized for readability considerations in this chapter.

These results are then compared and discussed in further detail in Chapter 6.

Table 5-1. Comparative Demographics of Participating Companies.

<table>
<thead>
<tr>
<th></th>
<th>JS McCarthy</th>
<th>John Roberts</th>
<th>Kay Printing</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Company/Year -</strong></td>
<td><strong>(Employees, Sales)</strong></td>
<td><strong>(Employees, Sales)</strong></td>
<td><strong>(Employees, Sales)</strong></td>
</tr>
<tr>
<td><strong>2010</strong></td>
<td>129, $23m</td>
<td>280, $60m</td>
<td>55, $14.5m</td>
</tr>
<tr>
<td><strong>2011</strong></td>
<td>129, $30m</td>
<td>300, $60m</td>
<td>72, $16m</td>
</tr>
<tr>
<td><strong>Location</strong></td>
<td>Augusta, ME</td>
<td>Minneapolis, MN</td>
<td>Newark, NJ (NYC)</td>
</tr>
<tr>
<td><strong>Niche Market?</strong></td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td><strong>Years in Business</strong></td>
<td>65</td>
<td>61</td>
<td>38</td>
</tr>
<tr>
<td><strong>Years at Location</strong></td>
<td>25</td>
<td>38</td>
<td>7</td>
</tr>
</tbody>
</table>
JS McCarthy

Figure 5-1. About JS McCarthy (JS McCarthy, 2012).

JS McCarthy is a commercial printer located in Augusta, Maine, with niche markets in college mailers, greeting cards, and fine art. They also have sizeable markets in general commercial printing and digital printing, and have a newly-established (as of 2005) market in folding cartons. They handle roughly $23 to $30 million in business annually as of 2010, and have been expanding their facilities to handle more business. Their primary emphasis is production efficiency, aiming to be the low cost producer in their markets while maintaining high quality and good customer service.
1) Competitive Environment

a) How has their competition affected them?

They use competition as an incentive to constantly improve. At meetings, they regularly compare themselves to the competition to inspire competitiveness and pride. They are also a member of a peer group of eight U.S. printing companies. They discuss best business practices, critique operations, and exchange production teams for brief periods, with the goal of learning how other companies are profitable.

b) How do they feel they are managing to remain competitive?

JS McCarthy president Rick Tardiff credits their efficiencies and productivity for allowing them to produce jobs at a lower cost than their competitors through Lean, continuous improvement, and investing in efficient technologies. For example, one of their acquired competitor’s jobs formerly took 25 hours to produce, but JS McCarthy was able to produce it in eight.

2) What has changed strategically within their business over the past 10 years?

a) Workplace Environment

i) Company Culture

Mr. Tardiff describes their company as having a strong Lean culture that has been instilled through training initiatives and business practices. JS McCarthy also fosters intra-company competitiveness by posting the productivity data of salespeople and operators from all shifts. Employees are provided good equipment and tools, and are
taught to tackle their Lean initiatives 50% at a time, so progress is continuous on the job.

ii) Hiring and Staffing

JS McCarthy started hiring temporary workers for more flexibility in staffing. They also have consolidated the customer service area by using an automated estimating system and combining positions to streamline the process.

iii) How do they keep workers flexible and efficient?

JS McCarthy trained their employees and management in Lean, and has instilled its methods of continuously improving efficiency into their workplace culture. They also have high-quality equipment and well-maintained tools. In addition, they send their production workers to their peer groups’ plants to learn how they run operations and to bring new ideas into their home plant.

They have improved their customer service area by using automated estimation and consolidating positions to reduce the number of contact points with customers.

Sales team meetings showcase successful products, and they always end with a positive story from each salesperson. It helps the team members learn from each other’s successes, and ends the meeting on a positive note that keeps them motivated.

They also use temporary workers from a local agency, depending on their workload. That way, they are appropriately staffed to control labor costs.
iv) How do they benefit from their workers’ expertise?

Suggestions are regularly offered and implemented at JS McCarthy. To foster competitive improvement, they measure and post performance metrics for people to see and compare. Mr. Tardiff claims, “[i]t is [human] nature. You’ve got to have competition. People do not want to be last, they want to improve, and they want to know how the number one guy did it.” Employees also feel encouraged when they are acknowledged and when their suggestions are implemented.

JS McCarthy also uses electronic job ticketing systems, which enable employees to make notes on jobs in production for future reference and improvement.

b) Operations

i) Technology

(1) Equipment acquisitions or purchases

(a) Overall attitude

JS McCarthy’s purchases are based on marketplace demand and related markets they want to add. They regularly increase capacity through equipment investment as demand grows further. Mr. Tardiff explains, “[i]t goes hand in hand, like climbing stairs. You get your infrastructure up to a point and then bring sales up along with it, to fill the infrastructure you just put in.”

However, JS McCarthy’s efficiencies are superior to those of their acquisitions, so they bring in these companies’ sales but divest their equipment.
(b) What did they acquire, why, and how does it add value?

They recently purchased three Komori 40-inch 8-color presses. They have also acquired new bindery equipment, an automated plate maker, a high-speed gluer for folding cartons, and new equipment for greeting card glitter.

(i) Komori Presses

They wanted to concentrate on being efficient in production, so two custom-made 40-inch 8-color Komori presses were purchased in the late 2000s. They have recently invested in a third identical press with UV ink capabilities.

According to Mr. Tardiff, the presses have “all of the automation and efficiency improvements possible to put on a press.” They were able to directly replace their nine presses and their acquisitions’ presses.

The presses also allowed JS McCarthy to standardize their pre-press and bindery equipment, including a 90-second automated plate maker. They have greatly improved efficiency by reducing variability through standardization.

(ii) High-Speed Gluer and Glitter Equipment

JS McCarthy’s high speed gluer and glitter equipment were purchased in response to customer suggestions and new market opportunities. The gluer allowed them to enter the folding carton market because they already had the equipment to print and die-cut. This has become their facility’s fastest growing department.
Their glitter equipment purchase was inspired by a greeting card customer who could not find printers to produce their glitter cards quickly or cheaply enough. It grew into a multi-shift department that they are investing in further.

Each of these opportunities allowed JS McCarthy to add to their core business and fill existing capacity through expansions in related markets, increased appeal for new customers, and improved profits on jobs using these capabilities.

(iii) Proofing Printers

Identical proofing printers were installed in the facility and in their major customers’ offices so that a proof produced on the client’s printers will exactly match a proof created on JS McCarthy’s. Therefore, the client has access to proofs at any time. This has greatly reduced the frequency of design-related errors, and helps JS McCarthy save money, provide shorter turnaround times, and improve the level of convenience to their customers.

(iv) PMS Ink Mixer

JS McCarthy has also installed an automated PMS Ink Mixing System so that they can mix their own PMS spot colors. Since the system is automated, it does not require a trained specialist to operate, which provides a saving on labor costs. Also, since the system can top off the ink purchased from a vendor, it frees up storage space from leftover PMS inks while reducing JS
McCarthy’s ink waste. An additional benefit is that the free space can be used for other income-generating equipment.

(2) Software purchases or software-reliant capabilities

JS McCarthy uses production scheduling software that utilizes real-time shop floor information to track jobs. It also allows workers to make notes on repeat jobs for future reference, to improve performance, or learn from mistakes.

JS McCarthy also implemented a new inventory management system using the same electronic tickets. It gives JS McCarthy and its customers real-time updates to a digital catalog for inventory count and easy re-ordering.

(3) Digital Printing

JS McCarthy has an HP Indigo for digital printing jobs. The Indigo is also used to personalize pre-staged samples for prospective customers. They also have several proofing printers, which are calibrated to match their customers’ printers for proofs on-demand.

(4) 3D Printing/Printed Electronics

RFID is of interest to JS McCarthy, although they are exploring it at this phase. Mr. Tardiff believes that RFID would work well as an ancillary service or additional feature to their packaging production.
ii) Services

(1) What services have they added or removed?

*JS McCarthy* offers training and live support to their customers for Adobe products, promotes a PDF-based workflow, color-calibrates their monitors, and produces print support guides. They also have calibrated their proofing printers to match those of their customers so that they can print matching proofs at any time. In addition, *JS McCarthy*’s digital catalog shows real-time job tracking and inventory, and is accessible by their customers through a secure website.

(2) How have those services brought value into their business?

Customer support has improved the quality of customer work, saving valuable reworking and processing time. As an example, one customer’s 200-page catalog file used to take 30 hours to process, but now takes just under one hour with their new PDF workflow. The live support helps catch problems early on, thereby reducing designers’ stress and increasing their confidence in *JS McCarthy*.

The proofing systems, online catalogs, and electronic ticketing automate many labor- and time-intensive dialogues between *JS McCarthy* and their customers, including press checks and re-ordering repeat jobs. This improved level of support and convenience helps *JS McCarthy* retain existing customers and develop long-term relationships with new ones.
(3) How are they improving the efficiency and profitability of their services?

JS McCarthy improves efficiency through Lean initiatives, continuous improvement from focused group efforts and employee suggestions, and regular reviews to ensure their infrastructure matches their markets’ demand.

iii) Efficiency

(1) What are their thoughts about efficiency?

Mr. Tardiff firmly believes that “the customer or the market dictates how much you are going to charge, and the low cost producer is in a position to command the job. So, how efficiently you can produce it in manufacturing is the key to profit.”

(a) How have they systematically improved efficiency?

JS McCarthy has been aggressively implementing Lean into their culture and business practices, including extensive training for employees and management. Employees actively improve their workplace by offering suggestions, and are motivated to improve through friendly competition. JS McCarthy has also:

- Standardized their presses and workflow,
- Used automation wherever possible to reduce variability and labor costs,
- Organized their workspace to minimize travel;
- Upgraded to more efficient equipment when needed,
- Modified equipment based on on-the-floor suggestions,
- Used well-maintained equipment and tools,
- Improved communication and work quality with their online catalog, proofing, training, and support, and
- Managed production in one centralized facility.

iv) Sustainability

(1) How have sustainability concerns impacted their business?
Customers have been asking for it, so they have made investments. They have also found that reducing their waste and utilities reduces their operating costs.

(2) Has sustainability been a value proposition for them? If so, how and why?
JS McCarthy has found sustainability to be a good source of differentiation from their competition, especially since they are wind-powered. They also save money by reducing their utilities, waste, and inefficiencies with Lean practices.

(3) What certifications do they have?
JS McCarthy’s operations are 100% wind-powered, and they are recognized as a Green-E Partner and Green Power Partner. They are also Rainforest Alliance certified, Forest Stewardship Council (FSC) certified, and G7 Master’s certified.

(4) What has been their biggest emphasis or development in sustainability?
The biggest emphasis has been reducing costs by reducing waste in all shapes and forms while reusing as much as possible. New initiatives are regularly developed
and implemented through continuous improvement efforts and worker suggestions.

(5) How are they reducing costs, such as utilities, transportation, and materials? JS McCarthy reduces utilities and material costs through reuse of containers and recycling, their PMS ink mixing system, digital workflow, new HVAC system, converted lighting, and production efficiencies. By consolidating production into three new, highly-efficient presses, they greatly reduced their utility and material costs, and reduced the variety of supplies they need to purchase. Transportation, however, is a costly issue due to their location in the state of Maine, which is relatively isolated from the markets outside the state that comprise 65% of their business, and thus they require fuel-intensive long distance shipping for their product deliveries.

v) Supply Chain Management
   (1) Working with Vendors

JS McCarthy relies on their vendors heavily, and consider them an important part of their own operations. They learn about new technologies and marketplace trends from their vendors, and work with them to support JS McCarthy’s new technologies. JS McCarthy in turn frequently beta tests for suppliers. Due to their industry reputation as an innovator, vendors view it as a benefit to have JS McCarthy using their technology as opposed to the competition.
JS McCarthy’s streamlined workflow and purchasing simplifies their proprietary inventory management system, which tracks supplies in real-time and automatically re-orders when stock gets down to a certain level.

(2) Warehousing Time & Capacity
JS McCarthy only orders and stocks what they need for the upcoming 2-3 weeks. They do not need to stock PMS inks because of their PMS ink mixer, and their inventory management and digital catalog system allows JS McCarthy to maintain minimum stock levels of finished product or material at any given time. Their production efficiencies also hasten their turnaround, so customers can safely order fewer products more frequently.

c) Marketing Strategy
i) Marketing and Sales
(1) How have their value propositions changed?
JS McCarthy’s new production efficiencies have helped them compete on price while still maintaining high-quality, and they have developed new measures of convenience, good service, and capabilities that match market demand. They are also able to leverage their existing customers by showing work samples at tradeshows, which has helped them to develop a reputation as printing experts.
(2) How are they maintaining sales volume?

JS McCarthy is growing sales organically and through competitor acquisitions. They carefully manage their capacity to match their sales, and adjust their labor and equipment as necessary. They prioritize maintenance to avoid missing sales opportunities or losing customers due to poor quality or job failures.

(3) What are their thoughts about their sales margins?

According to Mr. Tardiff, their markets dictate their price, so profits have to be made through efficiencies in production. They have added services and capabilities to have more points of profitability in their workflow as well.

ii) Customer Service

(1) How are they interacting with their customers, and is this similar to or different than it was prior to the economic crisis?

JS McCarthy has added several new services to improve their convenience and capabilities for their customers:

- A digital catalog for easy re-ordering and tracking inventory and jobs in progress,
- Live support and support guides for designing for print using PDF workflow,
- Streamlining their customer service through automated estimating and consolidated departments,
• Pre-staging personalized samples for reaching new customers more effectively,

• Calibrating their customers’ proofing printers for matching proofs on demand,

• Reusing product crates to reduce waste and simplify re-ordering,

• Positioning themselves as expert solutions providers at trade shows,

• Regularly implementing customer queries, comments, and suggestions, and

• Growing their services according to marketplace demands.

(2) Have customers’ demands changed, and, if so, how have they responded? According to Mr. Tardiff, “[q]uality has been one of our hallmarks, but, back in the old days you could tell your customer, pick any two of quality, service, and price that you want. But these days you have to offer all three, and customers are also demanding to know what you are doing environmentally.”

JS McCarthy supports their customers’ workflow and reduces their errors through Adobe software training, live support and support guides; provides samples for customers’ sales demos; leverages their industry reputation; and regularly listens to and implements changes based on customer queries, comments, and suggestions.
d) Change Management

i) How do they manage change in their business?

JS McCarthy is an aggressive first adopter, which is a key differentiator from their competition. They constantly monitor industry and market trends, keep an eye on their competitors, learn from their peer group, and listen to their customers.

According to Mr. Tardiff, JS McCarthy invests hundreds of thousands of dollars in training, equipment, and workplace improvement initiatives, even in down years.

ii) How do they keep in touch with industry trends, and seek new opportunities?

They seek and explore new opportunities through regular implementation of suggestions from peer groups and individual workers; peer group evaluations; rotating production personnel to peer group plants to gain new ideas and perspective; and working with vendors and customers to beta test new products. They also attend industry conferences and regularly read various industry publications.

3) What are their two primary strengths, weaknesses, opportunities, and threats?

Their most potent strengths are, first, their productivity gains through Lean and new technologies, and, second, their willingness to embrace change, which has enabled them to pursue opportunities to improve their business.

Their weaknesses are their remote location, which complicates distribution and raises costs, and their lack of focused marketing efforts.
To find opportunities, they talk with their customers, vendors, and peer group, attend conferences, and read industry publications. Their most prominent new opportunities have been their folding carton and glitter greeting card markets.

Their two most prominent threats are the shrinking of the printing industry and other efficient printers who can compete at low cost.

4) Which improvements have helped their business the most in the past ten years?

They have seen the biggest benefits from their huge gains in productivity and efficiency, thanks to developments in Lean, their new presses, and their streamlined workflow. Their new markets and added capabilities have also helped them grow their business.

5) In hindsight, what would they have done differently?

Other than a few less than ideal acquisitions, they wish they had reacted to the marketplace and economy sooner, adopted Lean sooner, and right-sized their company before investing so heavily in their efficiencies.

6) How do they personally define success in this industry, and have they attained it by their definition?

Mr. Tardiff feels that they have absolutely attained success because they have double-digit profitability, have achieved levels of performance far beyond many of their peers, and are regularly acknowledged and recognized throughout the industry for
their accomplishments. They are able to leverage their reputation with new and existing customers, suppliers, and anyone else that is involved in their business.

7) What are their thoughts and feelings about the printing industry in general?

Traditional printing is going to shrink, but it will not go away entirely. The efficient printers will be the ones who survive. Digital markets are growing rapidly, but only because they were so small to begin with. The percentages have been huge but actual values are only starting to become significant.

8) What advice do they have for other commercial printers?

Printers should focus on improving their core print business; add ancillary services that drive more business into the existing infrastructure; offer better quality, service, and price; and implement sustainability measures/initiatives. Mr. Tardiff also added that money is made by lowering costs through improving efficiencies in production rather than “playing games” with pricing, having the appropriate levels of infrastructure, embracing change and new technology, and maintaining a good credit history.
The John Roberts Co.

John Roberts is located in Minneapolis, Minnesota, with roughly $60 million in sales in 2010 and 2011. They offer a varied mix of products and services, and have sustained profitability for the majority of their time in business. They have a strong cultural emphasis on environmental responsibility, and have been internationally recognized for their company-wide environmental policies, efforts, and achievements.
1) Competitive Environment

a) How has their competition affected them?

According to John Roberts’ President Mr. Keene, their location in Minneapolis is one of the 4th most vibrant, competitive print markets in the US, and they compete with highly efficient niche printers for packaging and direct mail markets. However, according to Mr. Keene, that marketplace competitiveness motivates them to succeed as there is not a lot of room for error.

John Roberts is negatively affected by printers who bid below cost and upset market pricing. They are also affected by print buying companies who count on those printers in order to improve their own profits.

b) How do they feel they are managing to remain competitive?

John Roberts’ Lean and sustainability initiatives have helped them reduce costs by greatly reducing waste and consumption in their operations. Their environmental management system and their employee rewards system ensure constant improvement in production efficiencies. They also regularly invest in efficient technologies, and have a wide variety of equipment to produce many kinds of jobs at reasonable costs. They use temporary workers to control labor costs as well.
2) What has changed strategically within their business over the past 10 years?

a) Workplace Environment

i) Company Culture

They have a strong cultural emphasis on environmental sustainability and conscientious business practices, and their employee recognition program rewards employees for noticing problems and suggesting improvements within the workplace. It drives their positive, cooperative continuous improvement efforts. They also have a free fitness room on-site, which helps to boost employee morale as this is a benefit most other companies do not provide.

ii) Hiring and Staffing

Emerging technologies have affected which new capabilities are useful in industry and in demand in the marketplace, so John Roberts tries to find workers with the necessary skills for the new services and capabilities they are offering.

iii) How do they keep workers flexible and efficient?

John Roberts uses extensive training programs for their environmental and safety initiatives. They value training as a tool to keep their workforce competitive and effective. They combined training programs and use an integrated approach to save time and money by reducing duplication between regulatory compliance programs. John Roberts has also worked on improving worker flexibility and efficiency through Lean initiatives, as well as through their employee rewards system. They also
keep their employees aware of the marketplace and their business with regular meetings addressing industry issues and marketplace trends.

iv) How do they benefit from workers’ expertise?

They regularly gather and implement suggestions, and reward workers through their employee management system. As an example, employees are rewarded points for suggestions concerning environmental or safety problems and opportunities. Points are redeemable for gift cards or vacation days.

b) Operations

i) Technology

(1) Equipment acquisitions or purchases

(a) Overall Attitude

They are regularly improving their sustainability and efficiency, but are wary of over-investing in capacity that they may be unable to fully utilize on a regular basis. It is a constant challenge to bring in enough sales to fully utilize their current capacity—especially for their half-web presses—so they are wary of investing beyond their means.

They are also expanding their capabilities and services to become a “one-stop shop” for their customers’ marketing campaigns and print workflows.
(b) What did they acquire, why, and how does it add value?

John Roberts added mailing and fulfillment services for their print production value chain. They replaced an older half-web press, and also added digital printing.

Mailing and fulfillment services increased the volume of business John Roberts could bid on, since they do not outsource services. Despite the presence of a niche direct mail competitor, the mailing service has brought in enough business to pay for itself.

Digital printing pairs well with mailing and fulfillment services (i.e., by adding personalization for direct mailings). It also gives John Roberts more options through their cross-media marketing subsidiary, JRX-Media.

Their new half-web press, however, is struggling to pay for itself due to the down market. They have five total half-web presses but only three are running full-time. However, the mailing and fulfillment operations are bringing in some new business to help utilize the half-web capacity.

3) Software purchases or improved technical capabilities

They have been using a management information software system for planning and scheduling their operations, but are considering looking at a new system that would be easier to use, help them track discounts and profitability in their services, and have higher acceptance by their employees. They have also added cross-media marketing capabilities with their subsidiary, JRX-Media.
4) Digital Printing

John Roberts has several digital presses, and is looking into acquiring an HP Indigo.

5) 3D Printing/Printed Electronics

Mr. Keene is very interested in new technology and seeing what is on the horizon, but does not currently see 3D printing or printed electronics as being feasible for added capabilities and services in their existing markets.

i) Services

(1) What services have they added or removed?

To augment their existing print production value chain, they have added mailing, digital printing, and some fulfillment, which they had previously handled through strategic partnerships. Through their new subsidiary company, JRX-Media, they handle more of their customers’ cross-media marketing.

(2) How have those services brought value into their company?

Mailing, digital printing, and fulfillment have helped John Roberts become a one-stop shop for their print customers. Through JRX-Media, they develop cross-media marketing campaigns, and have also enabled customers to use information obtained from those campaigns to improve their own advertising efforts. These added services bring more business into their presses while augmenting what John Roberts can offer to help their customers’ businesses.
(3) How are they improving the efficiency and profitability of their services?

On the sales side, they are trying to improve their margins, while on the production side they are working on efficiencies and cost reduction through Lean and sustainability initiatives. With their new management information system, they will be able to track the cost-benefit of specific areas more readily, and thus more effectively focus their efforts to improve efficiency and profitability.

ii) Efficiency

(1) What are their thoughts about efficiency?
They have been interested in Lean since the 1980s—when Deming’s philosophies were popular—in order to improve efficiencies with a systematic approach.

(2) How have they systematically improved efficiency?
They have adapted Lean since the 1980s with team-based operations, as well as 5S philosophies of workspace orderliness and management in their mailing department. They are working on expanding 5S to their fulfillment. They now use ISO 9001 Quality Management Systems as a backbone architecture for their improvements. They have laid out their plant for minimal motion; regularly implement worker suggestions; replace older equipment with newer, more efficient equipment; hire temporary workers; and manage production in one centralized facility.
iii) Sustainability

(1) How have sustainability concerns impacted their business?

Sustainability is a core component of how John Roberts does business. According to President Michael Keene, “conducting business at the expense of the environment around us is simply unacceptable.” They consider sustainability to be a mindful balance between the environment, people, and the company’s interests, and have developed a culture of continuous improvement.

(2) Has sustainability been a value proposition for them? If so, how and why?

Sustainability was a value proposition more in the past than it is today, due to the recession. Mr. Keene says that customers these days are interested in sustainability, but are not willing to pay more for it. However, their sustainable efforts—such as their ink vapor reduction system and their solvent recovery centrifuge—have each created real cost savings that paid for themselves within a few years.

(3) What certifications do they have?

John Roberts has numerous certifications and awards in recognition of their sustainability efforts, including their material sourcing, waste and pollution reduction, green power, and environmental initiatives and achievements. They also are G7 Master’s certified, are no longer required to obtain an industrial discharge permit, and are carbon neutral.
(4) What has been their biggest emphasis or development in sustainability?
They systematically identify, control, and correct products and processes that have a significant impact on the environment through their environmental management plan. They continuously improve processes using ISO 9001 Quality Management Systems.

(5) How are they reducing costs, such as utilities, transportation, and materials?
Through various efficiency initiatives and recovery systems, they have continuously reduced consumption, waste, and emissions, with significant cost savings resulting from their efforts. They have invested in efficient equipment which also reduces utility and material usage and thus operational cost. Distribution is also more manageable due to their proximity to their customers.

iv) Supply Chain Management
(1) Working with Vendors
They always pay their bills on time and have never missed discounts for early payments. They also actively partner with their ink and paper suppliers, with several of their staff in-house to manage their ink and paper supplies while learning about their business and beta testing new products.
(2) Warehousing Time & Capacity
They produce many different kinds of products, making it challenging to keep such a wide variety of materials in stock or to predict future needs. They do have paper and ink merchant representatives actively involved in their business who assist with procurement and operating their PMS ink mixer.

b) Marketing Strategy
i) Marketing and Sales
(1) How have their value propositions changed?
They distinguish themselves through the quality of service they provide. They have a strong sustainability value proposition, have also worked on improving their relationships and customer experience, and are becoming a “one-stop shop” through their added capabilities and cross-media marketing services subsidiary, JRX-Media. They are also working to market the fact that printing provides tangible products, whereas digital media can only provide information.

(2) How are they maintaining sales volume?
They are maintaining sales volume through a strong sales force that brings in organic growth, and they also perform continual evaluation of their compensation plan to better reward desired sales margins and behavior. However, it is a constant struggle between their peak months and their low months, and industry reports predict the differences will only get worse. This is negatively impacting their
profitability due to the costs of idle equipment and labor. They are using temporary workers wherever possible to help with the fluctuating demand.

(3) What are their thoughts about their sales margins?
This has been a constant struggle in their business due to the fact that their sales people are paid on sales commission, as are most sales people in the printing industry. This system rewards sales volume, sometimes at the expense of profitability. John Roberts would like to have a way to incentivize their sales people towards higher profit margin or higher value sales, or to target certain jobs over others.

ii) Customer Service

(1) How are they interacting with their customers, and is this similar to or different than it was prior to the economic crisis?
They feel that their business is to help their customers grow their business. They have found that price, customer relationships, and customer experience are more valuable to their customers post-recession, with price being the most important factor by far. They intend to distinguish themselves by the service they provide and by how they can help manage their customers’ marketing, rather than just by their products.

John Roberts is adding more services that their customers are interested in to become a “one-stop shop” to help their customers remain competitive in turn, but
they recognize that not every printer is going to be able to do everything well. This awareness is reflected in their methodical efforts to bring in and support more fulfillment services in-house in order to attract certain kinds of customers.

(a) Have customers’ demands changed, and if so, how have they responded? Their customers are not as interested in paying more for green energy or sustainability, so John Roberts has used their sustainability efforts to reduce costs instead. Their customers are also looking for more fulfillment services, which John Roberts is adding to their business.

They are also providing new services and capabilities for their customers, including digital printing, cross-media, mailing and fulfillment services, and security and healthcare printing certifications. They also help their customers actively manage their advertising through cross-media marketing campaigns which use customer information to further drive targeted marketing efforts, to help them advertise themselves, and to track their advertising campaign results.

c) Change Management

i) How do they manage change in their business, and do they consider themselves first adopters, late adopters, or in-between?

Mr. Keene claims they are between the leading edge and the bleeding edge. They are known in the industry for being innovative with technology. They manage change on a continual basis by monitoring industry trends, their competition, industry
publications, and what their customers are either asking for or could benefit from. They plan around what their customers want, what new services or capabilities can serve them best, and what can further improve John Roberts’ efficiency.

ii) How do they keep in touch with industry trends and seek new opportunities?

Mr. Keene is the chair of Printing Industries of America (PIA), and regularly attends DScoop. He also has a peer group of several other successful printers with whom he discusses industry trends and operations. They seek opportunities through dialogue with their customers and looking at what is happening in the marketplace.

6) What are their two primary strengths, weaknesses, opportunities, and threats?

a) Strengths:

They have actively cultivated their people through training and development, encouragement, and cooperative teamwork, and were very fortunate to have a salesperson that drove John Roberts’ culture towards safety and sustainability. They are also a large company, and one of the very few privately-owned businesses in the top 100 printers in the United States, out of roughly 30,000 total printers.

b) Weaknesses:

The variety of their product mix has negatively impacted their ability to operate efficiently and to practice Lean manufacturing, making it difficult for them to
compete on price in markets with niche printers. They are also concerned about the lack of a succession plan, since Mr. Keene is nearing retirement.

c) Opportunities:
Cross-media is one opportunity to gain market share, retain customers, and add value by helping them stay competitive. Mailing and fulfillment have been additional opportunities they have chosen to add to their business. Another opportunity was sustainability prior to the recession, but customers are less willing to pay more for sustainability post-recession. John Roberts is actively searching for opportunities among emerging technologies and the changes in print media.

d) Threats:
Emerging technologies are also a threat because they can take away a vibrant print market within a few years, but they can also provide new market opportunities. Being diversified helps them endure the threat of emerging technologies. Economic recessions are also a threat to the printing industry because markets decline, their customers pay less, and some of their customers may even go out of business and/or be unable to pay their bills.

7) Which improvements have helped their business the most in the past ten years?
They gained substantial efficiencies through Lean, new equipment acquisitions, and sustainability, which drove down their costs of doing business and helped them
compete on price. Their new value-added capabilities, such as mailing, fulfillment, and cross-media, gave them access to new customers and markets.

8) In hindsight, what would they have done differently?

Shortly before the economic collapse they were planning to sell off an older web press. They had hesitations about acquiring a replacement even though it was in good shape and had a good price, but they followed through with the purchase anyway. After the economic collapse, they have been unable to fully utilize even four of their five presses, so the purchase was a costly mistake.

Also, it is difficult to balance the suggestions of employees who are passionate about guiding and improving John Roberts against the fact that company decisions require 100% support for successful implementation, even if they may not account for or even conflict with those employees’ ideas. Mr. Keene ultimately feels that, in the long run, it is wiser to listen to their suggestions and have buy-in to fix potential problems than to pursue an unwise decision without support.

9) How do they personally define success in this industry, and have they attained it?

They define success as not needing an exit strategy, maintaining profitability despite difficult times, and growing their business. Mr. Keene says they have attained a level of success, since they are consistently profitable (although only marginally so), and they do not have or need an exit strategy within the next five years. Instead, they are looking into developing a succession plan for the long-term. They have accomplished
more than they had originally imagined and have survived difficult times, but he does not feel they can relax just yet.

10) What are their thoughts and feelings about the printing industry in general?

It is still huge and vibrant, even though it has been shrinking, and there should be plenty of opportunities for them to expand their markets as other printers go out of business. Mr. Keene says that it is hard to look at projections and tell exactly what is going to happen to the print market. Even though it has been declining, it has gone up since the economy has improved, but not as much as in the past. He is excited about NAPL and PIA merging, feeling that they will become stronger. He wishes that more printers were members of PIA, and would use PIA’s full-time lobbyist to speak for them about issues affecting the industry.

11) What advice do they have for other commercial printers?

Mr. Keene half-jokes that he really wishes other printers would raise their prices, because the printers who price at or below cost are resetting the market prices and hurting the industry’s ability to survive and be profitable. He is especially concerned about printers getting into newer technologies and selling them way too low, which makes it difficult to remain profitable with those new services and capabilities. In fact, there are brokers and print buyers who are counting on failing printers’ prices.
They acknowledge that not every printer can become a marketing services provider, and that adding services also comes with the caveat of having to do them well in order to be profitable and competitive.

His advice for remaining competitive is to invest in training and people, because, as he quotes, “if somebody says, what if I spend money training people and they leave? The answer is, well, what if you do not train them and they stay?”
Kay Printing

Figure 5-3. About Kay Printing (Kay Printing, 2012).

Kay Printing is located in Clifton, New Jersey, within ten miles of New York City. They handle roughly $15 million in sales annually as of 2010, and have a wide variety of products and services that they offer. They haven’t shown a financial loss since 1975, and have positioned themselves as just-in-time printers who can rearrange their production to meet their customers’ deadlines with consistent, quality product.
1) Competitive Environment

a) How has their competition affected them?

Kay Printing’s market in the New York City area is fiercely competitive, and it is difficult to get jobs when failing printers are pricing at or below cost. There is also increased competition from online print bidding, which both opens up the market to non-local printers and allows failing printers to set lower marketplace pricing standards, thus threatening the profitability of the rest of the industry.

b) How do they feel they are managing to remain competitive?

Kay Printing has been able to control their costs by acquiring a variety of newer, efficient equipment, including web, offset, and digital. This allows them to manage their production costs better for different kinds of jobs. They have also added value-added services, such as those in their multimedia division, and can charge a premium for their willingness to take on last-minute jobs. They price based on marketplace demands and standards, yet still make a profit due to their efficiencies.

2) What has changed strategically within their business over the past 10 years?

a) Workplace Environment

i) Company Culture

Kay Printing emphasizes getting the job done right and in a timely manner, and actively practices flexible production management to ensure that even rush jobs are completed successfully. The majority of their production team is comprised of
industry veterans with over ten years’ experience. These employees have plenty of suggestions to improve their workplace, as well as plenty of experience in solving problems on the job.

ii) Hiring and Staffing

Kay Printing has not changed their hiring practices significantly since they have not been hiring new personnel in any substantial number, aside from experienced salespeople with accounts that Kay Printing is interested in. Their hiring for their multimedia division is handled separately from Kay Printing, and that division has been adding employees with skills in cross-media marketing,

iii) How do they keep workers flexible and efficient?

They are not directly working on Lean, but Kay Printing President Mr. Kirschenbaum remarked that, “with this many opportunities, this many experienced people and this many jobs, if you are not trying to do it in the most efficient manner possible, that is not going to keep you competitive for long!”

iv) How do they benefit from their workers’ expertise?

Since most of their employees have been in the industry for over ten years, they have a wealth of experience that they draw on to improve their workplace on a regular basis. Employees also regularly suggest improvements for their workplace separately from management inquiries.
b) Operations

i) Technology

(1) Equipment acquisitions or purchases

(a) Overall Attitude

They do not buy new equipment, opting instead to purchase used equipment that is not the newest, but is still significantly improved over their current equipment for a lower cost. Mr. Kirschenbaum likens it to “purchasing a lightly-used 2007 Mercedes instead of a brand new 2010 model.” The market has been full of opportunities for Kay Printing since the recession forced many printers out of business; especially printers who bought new equipment but could not fill its capacity and thus are selling it at a discount.

(b) What did they acquire, why, and how does it add value?

They purchased a relatively new half-web press, an automated plate maker, and a variety of newer equipment in the bindery. They continue to actively search for equipment that is more cost-efficient than their current equipment or that allows them to position themselves more strategically in different markets, such as their web and digital additions. They also had to bear the cost of setting up electricity and other infrastructure in their new facility when they moved in 2005.

They have also invested in the “finest and fastest” direct-to-plate pre-press equipment available on the market, which has doubled their output and virtually eliminated both pre-press downtime and delays.
By either tapping into new markets or lowering their cost of doing business, they can be more competitive. If their new equipment improves efficiency enough, it may allow them to reduce shifts, but they also have to weigh those cost savings against the cost of the equipment. They are “unwilling to spend $2 million on a press to save $100,000 on labor annually.” On the opposing side, they may also be able to add new business if they can expand their sales to fill their increased capacity.

Also, since Kay Printing can take last-minute jobs or work over the weekends, they can often add more profitable work beyond their budgeted operating hours. However, keeping their presses operating full-time has been a challenge.

(2) Software purchases or software-reliant capabilities
They invested in their new multimedia division, which was an extensive addition to their service offerings and required new expertise in those areas. The business is handled separately from Kay Printing as a subsidiary. They have also invested heavily in their pre-press department with the latest software and RIP, which have virtually eliminated downtime and delays and doubled their output.

(3) Digital Printing
They have three digital presses in the digital printing department, which was established in 2009. The pre-press manager says his file management and editing skills have come in handy with their new digital capabilities.
ii) Services

(1) What services have they added or removed?

They have been careful about what services they bring in-house, considering both required skill sets and potential capacity utilization. However, through their multimedia division they have added cross-media marketing services with the aim of managing more of their ad agency and corporate clients’ multi-media marketing campaigns.

They still outsource some of their finishing operations, since there is not enough consistent demand to support those operations in-house. They do perform cutting, folding, stitching, and product assembly, but they outsource die-cutting and other specialized services as needed.

(2) How have those services brought value into their business?

These services have allowed them to capture far more of their customers’ business, while consciously separating their competencies into separate areas. Their printing firm is still focused on print, while their design firm is focused on cross-media publishing, marketing, and the other services that go along with it.
(3) How are they improving the efficiency and profitability of their services? They have improved their manufacturing-related services by acquiring more efficient, strategically varied equipment, and by implementing employee suggestions.

iii) Efficiency

(1) What are their thoughts about efficiency?
They actively improve efficiency in their operations, and view efficiency as the key to maintaining profitability by reducing their costs of doing business and increasing work capacity while using their existing equipment.

(2) How have they systematically improved efficiency?
They have set themselves up to be “Just-in-Time” printers. Their flexible scheduling and vastly improved pre-press enables fast production turnaround by reducing wasted motion in their production workflow, since they do not have the time or luxury of warehousing their work-in-progress. Therefore, they have set up production to minimize the travel distance between the presses, bindery, and distribution; use one central production facility; and regularly implement suggestions from employees to improve efficiency and flexibility in production. They also regularly implement employee suggestions for improving workplace efficiency and addressing sources of errors.
iv) Sustainability

(1) How have sustainability concerns impacted their business?
Sustainability has not specifically been a concern, but they have been recycling for years and are FSC-certified.

(2) Has sustainability been a value proposition for them, how and why?
It has not particularly been a value proposition because the market is demanding low prices more than sustainability, but they have made efforts to be sustainable.

(3) What certifications do they have?
Kay Printing is FSC Certified and G7 Master’s certified.

(4) What has been their biggest emphasis or development in sustainability?
They are regularly looking at ways to bring down production costs, which often involves reducing waste, utilities, or materials used.

(5) How are they reducing costs, such as utilities, transportation, and materials?
They are using their own trucks and messenger service for distribution, and want to reduce re-make waste and other costs associated with production errors. They have also regularly invested in efficient equipment, which reduces utility and material usage. Also, they are located within ten miles of their primary market, so
they queue up their deliveries to save on time and fuel. They are using contracted drivers for their long distance deliveries, but want to further improve this area.

v) Supply Chain Management

(1) Working with Vendors
They have a great history of credit with their vendors, work closely with them for supply and service turnaround, and regularly beta test new developments.

(2) Warehousing Time & Capacity
They have quick turnaround times for the work they produce, and they schedule their production to minimize the idle time of work-in-progress. This has greatly reduced the warehousing space they need, since work is often shipped within two to three days of the order, versus being warehoused while waiting for other steps in the production process. They also use a PMS ink mixer to reduce their stock of leftover spot color inks.

c) Marketing Strategy
i) Marketing and Sales
(1) How have their value propositions changed?
They present themselves as reliable and persistent with super service, and are able to get jobs delivered as soon as their customers need them due to their just-in-time philosophy. They can charge a premium for work over the weekend and shift their
schedules to accommodate last-minute production, and they have developed a high degree of production nimbleness through their strategic variety of equipment and efficiencies. They are persistent in pursuing potential sales and in providing high-quality products with no mistakes as quickly as their customers need them. They have also been developing their community image through quality, services, and their subsidiary that is certified as both a woman-owned business and a minority business.

(2) How are they maintaining sales volume?
They are maintaining and even growing their sales volume through persistent efforts in their local markets and through acquiring salespeople and offices with accounts in which they have interest. Approximately one-third of their sales growth comes from acquisitions. They acquired a sales office in southern New Jersey to bring in more jobs from outside the NYC area as well. However, maintaining sales volume is a constant struggle.

(3) What are their thoughts about their sales margins?
Their goal is to keep their equipment running while remaining profitable, so there has to be some maintenance of margin on their jobs. They can charge more for work they perform over the weekend and for rush jobs, and they regularly suggest ways for their customers to save money on production and delivery.
ii) Customer Service

(1) How are they interacting with their customers, and is this similar to or different than it was prior to the economic crisis?

They are interacting with their customers similarly, except that they are more persistent in trying to capture new business and are competing on cost and services more aggressively. They are also trying to capture more business through outsourced services, since they cannot afford to lose a client over a job they cannot fully produce in-house.

(a) Have customers’ demands changed, and, if so, how have they responded?

Customers have asked for more cross-media options and a wider variety of services. Kay Printing outsources services with infrequent demand such as fulfillment and die-cutting. They have also added a subsidiary multimedia division. According to Sales Manager Jeff Kirschenbaum, “[p]eople do not just want printing. They want multiple marketing solutions, which we will be providing more and more of in the future.”

(2) How are they helping their customers remain competitive?

Kay Printing is working to become one-source providers for its customers. Their goal is to handle all of their customers’ production chain, from cross-media marketing campaign creation through print production and any production-related services they may need to outsource.
d) Change Management

i) How do they manage change in their business, and do they consider themselves first adopters, late adopters, or in between?

They are constantly looking for opportunities with their customers, the marketplace, and current events. They re-evaluate their plans on a monthly basis. They also consider themselves to be first adopters. Even though they cannot readily afford to invest in new technology as larger printers can, they do stay alert for deals on newer technology and for what their customers are seeking in services and capabilities.

ii) How do they keep in touch with industry trends and seek new opportunities?

They regularly talk to other companies, such as their vendors and the CEOs of other printing companies. They are always looking for opportunities in the marketplace, in industry trends, and from their customers.

3) What are their two primary strengths, weaknesses, opportunities, and threats?

a) Strengths:

Their first strength is the variety of equipment they have, which allows them to compete on a wide variety of jobs and manage their production scheduling effectively to be just-in-time printers. Their equipment helps them stay productive, manage costs, and meet their deadlines. Their second strength is their financial stability, which gives them the leverage they need to have good relationships with their vendors, acquire good used equipment, and grow their business.
b) Weaknesses:

They feel they do not have enough Fortune 500 companies as their clients. Most of their customers are small- to medium-sized businesses, although they do have a fair number of larger customers along with a few big banks and insurance companies. They also feel they do not have enough recognition or reputation in their industry.

c) Opportunities:

They see opportunities in the printing industry as being nearly unlimited, especially in offshoot markets such as building wraps, data management, and wide format printing. They also see competition going out of business as an opportunity, since it opens up the work for bidding, and they are also in a great location for finding talented people to help their business grow.

d) Threats:

Their biggest threats are price- and margin-related, due to non-local printers bidding online or printers who are going out of business and are willing to work at too low of a margin for competing companies to make a profit. They are also threatened by online auctions, which bring profitability down even further. They are especially threatened by print buyers who purchase printing for other companies, because they greatly reduce competing printers’ profits by opening up bidding to too many printers for a fair price to be maintained.
4) Which improvements have helped their business the most in the past ten years?
   Their equipment acquisitions, pre-press, and bindery efficiencies improved their productivity to handle business on tight deadlines for reasonable prices, and their relocation gave them easier market access and distribution. Their ability to handle last-minute jobs and perform weekend work has enabled them to stay profitable.

5) In hindsight, what would they have done differently?
   Mr. Kirschenbaum wishes they had developed been more involved in the printing industry early on—especially with trade organizations—in order to develop a reputation through recognition of their accomplishments.

6) How do they personally define success in this industry, and have they attained it?
   They define being successful as remaining in business and remaining consistently profitable, which they feel they have attained. They also define success by having good recognition and reputation in industry, which they feel they have not achieved.

7) What are their thoughts and feelings about the printing industry in general?
   It is a tough industry that is shrinking, but there are unlimited opportunities if companies are persistent enough and creative enough in seeking them out.
8) What advice do they have for other commercial printers?

Being in manufacturing is tough. It is easier to be a freelancer or broker, because the cost of doing business and maintaining their infrastructure traps them in this business. However, if companies are persistent and clever enough in seeking opportunities, they can stay afloat and do well.
The first section in the discussion compares the responses between companies to discover similarities, differences, and common themes in how they strategically changed their business models. The next section discusses those findings, and how they answer the study’s research questions. Finally, these findings are drawn on to explain which factors have contributed to the sustained operations of the participating companies.

**Comparisons**

**Demographics**

**Financial Profile**

Each of the three companies operates out of a single facility, and is a family-owned private business. Both John Roberts and JS McCarthy have been in business for over 60 years, while Kay Printing has been in business for 38 years. They all are financially stable with near-perfect credit scores, and they all receive discounts by consistently paying their bills early.

The Printing Impressions list of the largest print businesses in North America (ranked by sales volume) lists all three companies in the top 300 out of roughly 30,000 total printers. All three are consistently growing in sales, despite brief difficulties during the 2007-2009 recession from which they each recovered relatively quickly. JS McCarthy has roughly twice the sales volume of Kay Printing, with JS McCarthy having $23 to $30
million in sales compared to Kay Printing’s $14.5 to $16 million. Also, JS McCarthy has twice as many employees as Kay Printing, with 129 employees compared to a range of 55 to 72 employees over a two year period. John Roberts is larger than the two of these companies combined, with $60 million in sales and 280 employees. This makes John Roberts roughly twice as large as JS McCarthy and four times as large as Kay Printing.

Markets and Location

John Roberts and Kay Printing are fairly similar in markets and location. Despite being geographically distant from one another, each is located within ten miles of vibrant, highly competitive print markets: Minneapolis and New York City, respectively. Both companies offer a wide variety of products and services, produce a large volume of promotional printing, and have a range of customers including several large corporations. They are heavily affected by competition in those markets, especially from niche providers of products or services.

JS McCarthy, on the other hand, is located a long distance from their markets in New England and New York City, and produces fairly specialized products such as greeting cards, fine art reproduction, and college mailers. They have a much larger proportion of major corporations, agencies, and universities among their customers. They also actively seek to disrupt the market with their low prices and new capabilities.

All three are motivated by their competition, and use it as a driver for success in their businesses and in the marketplace. As Mr. Tardiff of JS McCarthy says, “[i]t is like
running in a road race. If you are the only one running, you are probably not going to be at your peak.”

**Workplace Environment**

*Company Culture*

While each company’s culture is decidedly unique, there are strong commonalities related to efficiency and continuous improvement. JS McCarthy emphasizes efficiency and expertise while John Roberts emphasizes environmental responsibility. Both companies also pursue efficiencies in production, and use sustainability to gain efficiency by reducing waste, continually identifying and addressing areas in need of improvement, reducing their consumption of materials and utilities, and streamlining their workflow. Kay Printing emphasizes quality, accuracy, and timeliness of production through flexible production management and continuous quality and efficiency improvements in their workplace.

All three companies receive regular suggestions from employees to improve their workflow and production. Both JS McCarthy and John Roberts have official systems for rewarding employee efforts to improve the company, although their specific approaches are somewhat different. JS McCarthy spurs competition by posting employee production data so that employees can compare themselves with one another, and, on a company-wide level, by comparing JS McCarthy’s performance to both their competitors and their peer group members. They develop pride in their company by discussing successes at sales meetings and sharing positive stories. John Roberts’ employee reward system
emphasizes co-operation through recognition of employees who identify problems and who make suggestions for the workplace. They send thank you notes to such employees, and also distribute reward points for these actions that are redeemable for gift cards or vacation days.

Both JS McCarthy and John Roberts have also heavily invested in training, and both label it as a tool to keep their workforce competitive and effective. JS McCarthy invested in Lean training for their employees to encourage continuous improvement and to solidify their employees’ understanding of their organization’s goals. John Roberts also has invested in Lean training, has consolidated their environmental and safety training programs, and uses an integrated approach to training to reduce production disruptions.

When hiring, all three companies look for experienced personnel, especially in sales. Kay Printing emphasized this most of all, as they only seek to hire experienced salespeople who have accounts in which the company is interested. JS McCarthy and John Roberts both look for employees with skills required for new positions—such as in fulfillment or the bindery area—and both also use temporary workers to manage fluctuating labor demand. Both Kay Printing and John Roberts have also been investing in new employees for their multimedia subsidiaries, as these groups require very different skill sets than in the production areas.

It is also worth noting that all three companies have regular meetings with their employees on a weekly or even daily basis to keep them informed of various aspects of their business. When touring the plants, every company’s president was recognized
among the employees on the floor, who acted familiarly and warmly towards their presidents. Thus, it was inferred that there was also a significant management skill factor in the success of these companies.

**Operations**

**Technology**

All three companies have been regularly investing in new technology to gain efficiencies and to target certain markets more effectively. They each plan their capacity improvements around the volume of sales they are able to bring in, minimizing wasteful idle time and maximizing the benefits of their investments for the price they have paid. All three printers have also actively engaged in improving the efficiencies of their equipment, especially when addressing workflow bottlenecks in the areas of customer service, pre-press, bindery and finishing, mailing, and distribution.

Both John Roberts and Kay Printing have invested in a wide variety of efficient equipment to optimally handle their widely varied work. At one-fourth the size of John Roberts, Kay Printing is not readily able to afford the newest technologies available. However, they are creative in seeking opportunities in the used equipment market, and regularly find good deals from printers who are going out of business. Mr. Kirschenbaum, president of Kay Printing, likens it to purchasing a 2006 Mercedes instead of a 2012. The costs are much more justifiable, and they still gain substantial efficiencies over the equipment they are replacing.
JS McCarthy, however, has divested themselves of their wide variety of equipment in order to put all of their work on three highly-efficient new presses from the same manufacturer. Since the presses are uniform in terms of materials required and operations, they have been able to streamline their pre-press, bindery, and finishing departments as well.

All three printers have also made investments in technologies that allow them to capture more of the print production value chain, such as fulfillment services. Specifically, JS McCarthy has branched out into folding carton production with the addition of a high-speed gluer, has added additional services to their greeting card production, and has invested in an expansion to their facilities to house their new presses. John Roberts has added mailing and some fulfillment services, and they are planning to develop this department further. Kay Printing has invested in setting up a brand new facility for their operations.

All three printers offer digital printing, either have or are considering purchasing HP Indigo devices, and have automated PMS ink mixers. JS McCarthy and John Roberts both have management information software systems for organizing their production and operations. JS McCarthy’s system allows them to update job progress and warehoused inventory in real-time, and interfaces with an online digital catalog for their customers. John Roberts is focusing on using their system to track the profitability of their various services after discounts have been applied. Kay Printing has invested in state-of-the-art pre-press software and RIP systems, which have doubled their output and virtually eliminated downtime and other related production delays.
Services

All three companies have strategically added services to better meet their customers’ needs and assist them in remaining competitive, while at the same time driving more printing business into their own companies. JS McCarthy has emphasized streamlining their customers’ workflow into their facilities, thus reducing the frequency of costly design mistakes and the turnaround time of their communications. To achieve this, JS McCarthy offers training and live support to their customers for their design software, promotes a PDF workflow, color calibrates their customers’ monitors, and provides support guides for designing for print. They have set up identical proofing printers at their facility and their major customers’ sites so that customers can access calibrated proofs at any time. They have also consolidated customer service positions, added automated estimation software, and added a digital catalog to automate and streamline their dialogues with customers. On the other hand, John Roberts and Kay Printing have emphasized adding cross-media marketing services through subsidiary companies. These services allow them to assist their customers with designing promotional campaigns, strategically gathering and managing information about their own customers, and reaching specific target markets more effectively.

Kay Printing has made a common practice of providing “super service” to their customers as just-in-time printers. They are also willing to perform work over the weekend or rearrange their production schedule to produce and deliver a customer’s work when it is needed, even if it requires same-day delivery. They also regularly make suggestions to customers on how they can save money in production and distribution,
such as using cheaper delivery options, substrates, and/or binding for their products. Kay Printing also differs from John Roberts and JS McCarthy in that they outsource some steps in their production workflow, such as die-cutting and fulfillment. It is currently more economic for them to outsource those services as there is not enough volume to support bringing them in-house.

Efficiencies

All three companies have been actively pursuing manufacturing efficiencies to bring down their cost of doing business, especially in regards to bottlenecks in the areas of customer service, pre-press, bindery and finishing, fulfillment, and distribution. All three companies’ employees are very experienced and regularly suggest improvements for workplace efficiency.

JS McCarthy and John Roberts are familiar with Lean and are actively practicing this philosophy to reduce waste and to better organize the workplace. JS McCarthy has thoroughly embedded Lean practices in its culture, such as waste reduction and continuous improvement, but has also modified many of these practices to fit their specific needs. John Roberts has not integrated Lean into their culture quite as thoroughly as JS McCarthy, but has used some of these practices—specifically, 5S—in the mailing and fulfillment areas. 5S is considered the foundation of Lean, and includes the following principles: setting a workplace in order, developing control through problem visibility and employee empowerment, and laying the foundations for continuous improvement.
Kay Printing president Richard Kirschenbaum is not personally familiar with Lean, although the company’s production manager is. However, they have been aggressively working on increasing efficiencies in production through several methods that are similar to the Lean manufacturing principles employed by JS McCarthy and John Roberts. They practice most of the 5S theory of neat, orderly workspaces, and they regularly address ways to reduce wasted motion, materials, utilities, and bottlenecks, among others.

There are several other similarities and differences between each company’s efforts to improve efficiencies. All three companies have invested in relatively new, more efficient equipment; have organized their facilities to minimize motion and streamline workflow; have clean and orderly workplaces; and have highly skilled employees who regularly contribute suggestions on how to improve the workplace.

John Roberts and Kay Printing have invested in a wide variety of equipment that is ideal for many different types of jobs and that allows them to produce these jobs at a lower cost. This allows them to target many different markets and to compete on price, but it also means that they have to maintain a wide variety of equipment and processes to handle such a variety of throughput. On the other hand, JS McCarthy sends the majority of their work onto the same efficiency-optimized presses in their standardized workflow, which has given them a high degree of competitiveness in their specialized markets.

JS McCarthy has pursued efficiencies through other means as well. Their production ranking lists turn continuous improvement into a company-wide competition, and they regularly benchmark themselves against industry averages in order to maintain
the motivation to do their best and continually improve. They are also a member of a peer network of eight other printers around the United States. This network discusses best business practices for handling different problems and critiques each others’ operations. The network even rotates production employees between plants to learn how other successful printers are working on attaining efficiency, which allows JS McCarthy to evaluate which ideas can be used in their operations. In their customer service area, they have consolidated positions, use automated software for estimating, and have a digital catalog for their customers to re-order repeat jobs, all of which has streamlined the company’s workflow.

John Roberts uses an employee management system that is more co-operative than competitive in nature. They reward problem identification, employee suggestions, and good teamwork with points that are redeemable for rewards, such as gift cards and vacation days. They also actively reduce waste generation and materials and utilities consumption through sustainability initiatives, which aim to reduce their environmental impact by running their operations more efficiently. They use ISO 9001 as a backbone for improvements to structure their plans and ensure sufficient control over implementation. John Roberts is also a member of a peer group of printers within the United States, which helps them generate new ideas and compare best practices.

Kay Printing has worked to optimize their production to become “just-in-time” producers for their customers. They have achieved a high degree of nimbleness in production through vast improvements in their pre-press throughput, and by using their wide variety of equipment to plan each job in a way that minimizes downtime and
smoothes the workflow. Work-in-progress travels directly between phases of production, rather than being warehoused while waiting for the next step. They have also improved their color management to a high degree of matching between proof and print, which allowed them to obtain G7 Master’s certification (as have John Roberts and JS McCarthy). This certification supports their ability to run multiple presses for the same job, yet obtain consistent quality results.

Sustainability

All three companies practice sustainability to differing degrees, either consciously or as a side product of their efficiency gains. Newer, more efficient equipment tends to use fewer materials in make-ready, to consume fewer utilities for the level of throughput, and to generate less waste due to poor quality work and other production factors.

John Roberts has historically focused the most heavily on sustainability as a value proposition for their customers and as a company-wide responsibility. They feel that sustainability is a mindful balance between the environment, the desires of their customers, and the company’s interests. They have worked to instill those values into their workplace culture by implementing environmental and safety training for all employees; using an environmental management plan to systematically identify, control, and manage their environmental efforts; and actively rewarding continuous improvement efforts towards their environmental goals. They have won numerous awards and achieved multiple certifications for their efforts in waste and pollution reduction, green power, managing chain of custody, and reducing their consumption. They are recognized
globally as one of the most sustainable printers in the world. Sustainability has also been a source of cost savings for them as many of their developments have paid for themselves within a few years, such as their solvent recovery centrifuge and their ink vapor containment system.

JS McCarthy has found sustainability to be a good value proposition, as well as an additional approach to reduce their costs and inefficiencies while improving productivity. They have invested in green energy, more efficient plant utilities, and superior equipment with significantly reduced make-ready, which greatly reduces waste and material usage. They also reuse many different consumables, such as customers’ product crates and ink barrels, and recycle and reuse solvents with their solvent cycling system. Transportation is an issue due to their location, however, since 65% of their business comes from out of state and thus requires fuel-intensive long distance shipping for their deliveries.

Kay Printing has had less focus on sustainability as a value proposition for their customers. They are FSC-certified, recycle, and have made gains in efficiency and productivity that have decreased materials and utilities usage while also reducing their waste. They are also located near most of their customers, which reduces the impact of their product distribution.

*Supply Chain Management*

All three companies have good relationships with their vendors in a multitude of ways, including beta testing new products for them; paying their bills on time and receiving discounts for paying early; and keeping in regular communication with them about new
developments in the marketplace and changing needs in their facilities. Each company also has a unique way that they interact with their vendors which correlates with their production focus.

JS McCarthy leverages their industry reputation and the fact that they are known as early adopters in order to get special access to new technologies. Vendors benefit by having their products associated with a highly-successful company such as JS McCarthy, so it is in their best interest to give JS McCarthy incentives to adopt their technologies. This in turn benefits JS McCarthy by allowing them to obtain better offers than they would otherwise.

John Roberts has paper and ink company representatives in-house who are able to test their products on John Roberts’ printing equipment to ensure high-quality production and learn about their printing operations to better serve their needs. They cross-communicate frequently to coordinate ideas and address issues. These strong relationships ensure both good deals and consistently high-quality production.

Kay Printing works on having good relationships with both their vendors and their frequently used outsourcing service partners to ensure that they have supplies on-hand in time for their rush jobs. Both JS McCarthy and Kay Printing manage their supply chains to receive materials on two- to three-week timeframes, thereby reducing their need to warehouse materials in large quantities or for long periods of time. John Roberts has more difficulty with this due to the size and variety of jobs they receive, but their on-site suppliers assist with materials procurement.
Marketing Strategy

Marketing and Sales

Each company has a different value proposition centered on quality, convenience, services, and capabilities, as well as their unique production strategy. For JS McCarthy, their focus is on niche markets where they are known as experts and are able to be among the lowest cost producers while still maintaining high-quality output. Since they have focused on adding specific capabilities in those markets—such as glitter for greeting cards—and have extensive knowledge of their customers’ needs, they can leverage themselves as authorities in those markets when they attend tradeshows.

John Roberts has marketed themselves as environmentally responsible printers with good quality and exceptional service. They have positioned themselves as a “one-stop shop” for their customers for cross-media marketing, printing, mailing, and some fulfillment, and are working on increasing their fulfillment services to capture more customers. They are also finding ways to market the fact that printing provides a tangible product versus digital media, which only provides information. In addition, they regularly evaluate their sales force compensation plan to reward the kind of business they want to obtain.

Kay Printing advertises themselves as a just-in-time printer with good quality and super service. They emphasize their ability to produce jobs on tight deadlines with no mistakes. They are also very persistent in presenting themselves to potential customers as a reliable, quick-acting company who can produce “miracles” whenever they are needed.
All three companies have gained organic growth through their sales forces. Kay Printing and JS McCarthy have also obtained growth through competitor acquisitions. Roughly one-third of Kay Printing’s sales growth has come from acquisitions, and they also have grown a significant amount by acquiring salespeople from other companies with accounts in which they are interested. Ratios or percentages are not known for JS McCarthy’s sales growth, but they have been aggressive in growing their customers to fill their increased capacity. On the other hand, John Roberts grows their sales almost entirely organically, and has only used acquisitions to bring new competencies or capabilities in-house. In addition, all three are likely gaining sales from the customers of competitors who have gone out of business.

When asked about their sales margins, all three companies stated that the market dictates their prices. The only way that they feel they can stay competitive is through being efficient and being able to reduce their production costs. It is also difficult because their sales teams are all commission-based, which means they are incentivized by the volume of sales they bring in and not necessarily by profit margins.

JS McCarthy has improved their margins by standardizing their workflow, which has significantly decreased their production costs. John Roberts has worked on changing incentives for their sales force to reward higher-profitability sales. Kay Printing has emphasized fitting in work over the weekend and rush jobs in order to charge a premium, while also assisting their customers in reducing costs by recommending different substrates, binding options, and delivery methods. In addition, both John Roberts and
Kay Printing are offering a wide variety of services to capture more of their value chain and bring more value in-house.

*Customer Service*

All three companies interact with their customers differently than they did prior to the recession, due to the changes they have made to their capabilities and production setups. These changes have been made to match customers’ new demands. An example of these changes was provided by JS McCarthy’s President Rick Tardiff:

> “Quality has been one of our hallmarks, but, back in the old days you could tell your customer, pick any two of quality, service, and price that you want. But these days you have to offer all three, and customers are also demanding to know what you are doing environmentally.”

To match these demands, JS McCarthy has added a digital catalog for customers to re-order products and an inventory system which updates stock in the digital catalog in real-time. They have also calibrated their proofing printers to match their customers’ so that customers can obtain proofs on demand. They have also consolidated their customer service positions and use an automated estimating system to streamline their communication turnaround time and points of contact. In addition, they provide extensive support for their customers’ graphic designers through live Adobe support and training sessions, how-to guides for designing for print, and on-site monitor color calibrations.

John Roberts and Kay Printing have both added cross-media services through their subsidiaries. These companies handle more of their customers’ marketing, help them manage their campaigns, and gather more information from their customers to better serve their needs. According to Kay Printing’s Sales Manager Jeff Kirschenbaum,
“people do not just want printed products. They want marketing solutions, which we will be growing in the future.”

Kay Printing has been assisting their customers in reducing costs by recommending different substrates, binding options, and delivery methods. They also advertise their super service and willingness to deliver on the same day as just-in-time printers. Kay Printing is also more willing to take on the liability of outsourcing print-related services such as bindery, finishing, and fulfillment, while John Roberts has added mailing and some fulfillment in-house as the demand has grown to support them.

Change Management

All three printers are first adopters of different degrees, determined by their size and targeted customer base. They all regularly invest in newer technologies to obtain new capabilities, services, and efficiencies, and also keep up on industry trends by paying attention to the marketplace, listening to their customers, and seeking opportunities where their competition has failed to address their customers’ needs. JS McCarthy and John Roberts in particular are known for being innovative with technology—which they leverage with their suppliers and customers alike—but Kay Printing is also very innovative with their pre-press developments and capital investments.

JS McCarthy and John Roberts are both members of peer groups, comprised of fellow printers who regularly communicate about their business practices, developments, and advice for managing operational difficulties. These peer groups have been great
resources, allowing them to evaluate their own operations through the viewpoints of others, and to fix problems which they had not been aware of previously.

**Strengths, Weaknesses, Opportunities, Threats**

**Strengths**

Each company defines their greatest strengths differently. JS McCarthy focuses on the efficiencies they have gained and their willingness to adapt in order to take advantage of new business opportunities. John Roberts considers their greatest strengths to be their people—since many of their successes have come from employees’ recommendations or personal projects—and the various benefits that the size of their company provides, such as marketplace presence, the ability to obtain discounts, and reputation. Kay Printing feels that the variety of equipment they have and how it allows them to be efficient, flexible producers is their primary strength. They also consider their financial stability to be a strength, as it has given them the leverage they need to have good relationships with their vendors and to continue to grow and improve their business.

It should be noted that, while the individual companies may define their two biggest strengths differently, each of the strengths they mentioned happens to be common among all three printers. All three companies share the following strengths: all three are financially stable, have highly-efficient equipment which has allowed them to better compete in their markets, have talented, well-trained employees who make regular suggestions for improvement, and have adapted to take advantage of new opportunities in the marketplace.
**Weaknesses**

With the exception of a lack of focused, centralized marketing efforts, each printer has unique sets of weaknesses which are not shared by either of the other two companies. JS McCarthy has difficulties with distribution due to being located in Maine, a state with only 1.4 million people and not nearly enough printing business to support growth in their niche markets. This distance from their markets is not common to the other two companies, who are each located within twenty miles of their primary markets. However, this difference is also reflected in the kinds of work they are pursuing. JS McCarthy’s customers are more widely spread in the New England and New York City areas for their niche markets, while John Roberts and Kay Printing both handle a wide variety of jobs from customers who are located much closer to their facilities.

John Roberts’ lack of a succession plan is a unique weakness, as the other two companies have competent successors groomed for when the presidents retire. However, John Roberts’ other weakness is shared by Kay Printing in some aspects. Both printers have a wide variety of customers which requires them to produce a myriad of products, thus reducing their efficiency in each of those markets as compared to niche printers such as JS McCarthy. This variety also makes it difficult for them to prioritize which areas to invest in. Kay Printing has addressed this weakness by advertising their flexible production scheduling as a strength, since they can creatively schedule their operations to produce work on very tight deadlines.

For Kay Printing, one of their key challenges is not having enough large companies as their clients. This forces their salespeople to search for many smaller jobs,
versus being able to manage fewer, more substantial accounts over a long period of time. This has not really been a concern for John Roberts or JS McCarthy, although John Roberts’ variety of service offerings may be partially due to having many smaller customers as well. Kay Printing’s other weakness of lacking recognition or not having enough of a reputation in the industry is a strength for both JS McCarthy and John Roberts. These companies have focused their efforts on being well-known for what they have achieved. For JS McCarthy, their reputation is secured through their expert status in their niche markets and their unparalleled productivity, while John Roberts has developed a global reputation as one of the most highly sustainable printers in the world.

Opportunities

Each printer has been active in pursuing opportunities by talking with their customers and vendors, paying attention to the marketplace, and keeping abreast of industry trends, though their specific opportunities differ based on the markets they have been pursuing. John Roberts cited cross-media as an exciting opportunity to gain market share, retain customers, and add value to their customers. This market has also been an opportunity for Kay Printing, even though they did not cite it as one of their two primary opportunities. This opportunity does not apply to JS McCarthy due to their different focus in production. However, JS McCarthy has had specific niche markets open up to them for folding cartons and for greeting cards. These markets are opportunities that align with their primary markets, as cross-media does for the other two printers.
Kay Printing’s location is a unique opportunity for them to find creative, talented people. New York City is a unique environment and marketplace to be in, which has been to their advantage in ways that are not accessible to John Roberts in Minnesota or to JS McCarthy in Maine. However, their other opportunity is shared among all three companies: they can grow when their competitors go out of business by acquiring those customers who are in need of a new printer.

All three companies also describe the printing industry as having virtually unlimited opportunities, even for printers of their size. Specific opportunities mentioned included wide format printing, building and car wraps, and data management services.

**Threats**

All three companies share many of the same threats, although there are some unique situations between them in the recent past. All three are threatened by highly-efficient niche printers competing in their markets who can produce the work for a lower cost and thus price lower. They are also threatened by printers who are going out of business that bid for work on narrow margins, no margins, or even at a loss merely to keep their equipment operating. This trend has been upsetting the overall print market, and has made it very difficult to remain profitable when the market expects much lower prices than are feasible for survival. Some companies have grown to capitalize on this, such as print buyers who manage print purchasing for other firms or online auction sites which allow more printers to be the low bidders outside of their local markets. John Roberts and Kay Printing appear to be more heavily affected by this due to their wider market spread.
This makes it difficult to compete with niche printers on price, let alone printers who are
desperate to keep their equipment running even if it is not profitable for them.

The other primary threats to these companies are interrelated. While JS McCarthy
cited the shrinking printing industry as a threat, John Roberts cited emerging technologies
and the economy. These are related because the printing industry has been shrinking due
to both of these factors. Emerging technologies have driven advertisers away from print
and towards other more cost-effective methods to get their messages out to their
customers. The shrinking economy has made advertising jobs scarcer in general, which
strongly affects printers such as Kay Printing and John Roberts who perform a high
volume of promotional work. John Roberts also cited an additional difficulty that they
encountered during the most recent economic recession, when some of their customers
were going out of business and thus were not able to pay their bills. This put John
Roberts in a difficult position financially.

JS McCarthy’s greeting card market is also threatened by digital technologies, as
more consumers now send digital “e-cards” instead of physical cards. However, this
market is still fairly vibrant. Kay Printing and John Roberts have benefited from having a
wider spread of markets they serve, as this helps protect them against any one market
failing. All three agree that the market is going to shrink further, but they feel poised to
survive as long as they keep pursuing cost efficiencies. Adding cross-media services has
helped Kay Printing and John Roberts weather the difficulties as well, as they are finding
ways to utilize these emerging technologies to help their own customers while keeping
themselves in business.
Responses to the Research Questions

How Has Their Business Model Changed from 2000 to 2010?

There are many long-term consistencies amongst these three companies in terms of business models. All three also have many commonalities in the ways that they have changed or adapted their businesses over the past decade. This section will solely examine changes over the past decade which are common to all three businesses.

All three companies have been investing in new technologies and improving their efficiencies more aggressively than they did prior to the year 2000, especially in regards to addressing bottlenecks and reducing their costs of doing business. John Roberts and Kay Printing have acquired a wide variety of efficient equipment in order to handle the many different jobs they produce for their customers. JS McCarthy has divested themselves of a wide variety of equipment in order to invest in three highly-efficient presses, and has also streamlined the rest of their workflow.

All three companies have also added additional capabilities in order to capture more of their customers’ business and to be able to tap into new, related markets. These include adding digital printing and other areas of the print value chain such as specific capabilities in bindery and fulfillment operations. They have all invested heavily in improving their pre-press workflows through upgraded software, equipment, and efficiency initiatives, which has reduced bottlenecks and downtime while vastly improving their pre-press throughput.

All three companies have also added services to meet their customers’ needs and assist them with remaining competitive while adding more value into their own
businesses by tapping into new, related markets. These services are varied, but all three companies’ services are structured around goals such as improving their market mix, improving communication and convenience for their customers, and handling different parts of their customers’ business that help improve their competitiveness and reach or appeal to their customers more effectively.

While Kay Printing hasn’t specifically added Lean as a business practice, all three companies are pursuing improved efficiencies through a variety of initiatives which reduce waste, improve their throughput, reduce bottlenecks in their operations, and implement employee feedback. All three companies have also organized their facilities to improve the motion efficiency of workers and work alike. They are all also G7 Master’s certified, which speaks to a high level of quality control improvements in their operations.

Sustainability has also improved in all three companies, though to a much stronger degree in JS McCarthy’s and especially John Roberts’ operations. All three companies have used sustainability as another method for attaining cost savings and increasing their value proposition with their customers.

They all have added sales through organic growth and through carefully managed acquisitions, both of salespeople and of printing companies. Acquisitions have also been used by all three companies to add capabilities and expertise into their businesses, but the most consistent emphasis has been on growing sales. All three companies have also been actively improving their sales margins through a variety of efforts, including using efficiency to reduce their costs of doing business; adding value-added services and
capabilities to their offerings; and optimizing their specific value propositions and levels of customer service to meet their customers’ changing needs.

All three companies have increased their change management efforts to more aggressively seek and pursue new opportunities in business, monitor industry trends and their competition, and pay attention to marketplace and customer demands. All three are more innovative than they were formerly, and credit this change in philosophy as a tool for remaining competitive.

Which Specific Areas of Their Businesses Have They Improved the Most?

There was a consistent consensus among all three companies as to which areas of their businesses they have improved the most in order to gain the best results. These were investments in their efficiencies and value propositions, added capabilities and services, and change management strategies. All three companies felt that these areas of focus would bring them the most improvements in competitiveness, and thus have invested the most time and effort in improving these areas of their operations.

How Do They Define Being Successful in Business, and Have They Attained It?

They each define being successful similarly as being profitable, being recognized for their achievements and their expertise, and being able to consistently grow their business. JS McCarthy is the most confident in declaring their company’s success, while the other two are a bit hesitant about defining themselves outright as successful, instead saying that they have attained a measure of success but there is still plenty of room to improve.
JS McCarthy has achieved double-digit profitability and is known as an expert in their markets. They have also achieved levels of performance far beyond many of their peers. They are regularly acknowledged and recognized throughout the industry for their accomplishments, and can leverage their reputation with new and existing customers, suppliers, and anyone else that is involved in their business. For them, their reputation provides new opportunities and helps them conduct their business more effectively.

John Roberts and Kay Printing have each maintained profitability consistently for many years, even though it has not been in the double digits. In the case of Kay Printing, they have not shown a loss for over 35 years. They each claim to have accomplished more than they had imagined possible in business through their effective investments and through the opportunities they have been able to take advantage of. However, they both are still working hard to improve their businesses and remain successful in their highly competitive markets. Kay Printing in particular wishes they were more well-known in industry, which they define as a critical part of being successful.
Factors Contributing to Sustained Business

For all three companies, there are four key factors which have been the most influential in their sustained business over the past decade. These factors are their continually-developing efficiencies, regular assessment and strategic repositioning of their marketing mix, willingness to invest in new technologies and capabilities, and business management methodologies. These will be referred to as efficiencies, market mix, change management, and business management in further discussion. These four factors appear to have significantly contributed to these companies’ longevity, and are relevant to their ability to sustain business well into the future as profitable companies.

Each company’s stated strengths, opportunities, and advice to other printers also directly correlate to these four categories of improvement, with each participating company mentioning efficiencies, marketplace assessment and positioning, investments in new technologies and opportunities, and strategic business management. In their advice to other printers, they also have a consistent message encouraging mindful investment, research into new opportunities, a willingness to expend effort and invest in training, and managing pricing in a conscious, fair manner.

Efficiencies

All three companies have developed superior efficiencies as compared to their competitors. These efficiencies drive down their production costs and thus help them to remain profitable when the market demands lower prices. Efficiencies developed by these companies include being able to produce jobs in less time, reducing make-ready,
reducing material usage and waste, and rightsizing their infrastructure for their sales volume.

These strategies reduce various costs to produce goods, streamline their workflows to produce jobs in a more effective manner, ensure quality of the finished product, and help them keep customers while reducing expensive idle time. They each have achieved these efficiencies through a variety of methods, although there are several in common amongst all three printers. These include rewarding and implementing employee suggestions and regularly evaluating existing equipment to determine the need for replacements or upgrades. They each have also emphasized streamlining their pre-press and post-press workflows by acquiring more efficient equipment, using state-of-the-art software and technologies, and reducing downtime to ensure a steady level of throughput.

As a niche printer, JS McCarthy has several key markets that drive the majority of their business. Their strategy was to improve their operational efficiencies through Lean initiatives, provide services which streamline the workflow from their customers into their facilities, and optimize their in-house workflow through standardization of their equipment. They were also able to vastly improve their throughput by addressing bottlenecks in their bindery, finishing, mailing, and fulfillment departments.

As a general market printer, John Roberts’ strategy was to improve their ability to handle many different kinds of jobs fairly efficiently through the use of Lean initiatives, equipment acquisitions, and sustainability initiatives, while providing services to capture
more segments of the value chain and also better serve their customers’ cross-media marketing needs. They also use sustainability as a value proposition with their customers.

Kay Printing’s strategy as a general market printer is fairly similar to that of John Roberts. They have acquired a variety of equipment to handle many different kinds of jobs and also handle service acquisition similarly, but there are a few differences in their other methods of obtaining production efficiencies. They have focused on improving efficiency through nimble production management, equipment acquisitions, and quality improvements, enabled by their strong color management systems and by their vastly improved pre-press efficiencies. Their production nimbleness has also been a strong value proposition for them, as they are able to perform last-minute jobs or weekend work for a premium. They also pursue several strategies similar to popular Lean initiatives in order to gain production efficiencies, though they are not specifically identified as Lean initiatives. In addition, they watch the used equipment market carefully to find newer, more efficient equipment for far cheaper prices than purchasing that same equipment new, which means their investments pay for themselves more quickly.

**Market Mix**

Among these three companies, there are two distinct methodologies for positioning themselves in their marketplaces. One of these methods is niche printing, where a company focuses on becoming an expert in several specific markets with added capabilities and services focused around those core markets. The other method is general commercial printing, where a company performs a wide variety of different kinds of jobs,
with a broad range of services offered. While there are not enough case studies or details to develop specific conclusions based on these three companies’ efforts in these distinct methodologies, there is enough evidence as to how their focused strategies have been a factor in their success.

JS McCarthy is a niche printer with primary markets in greeting cards, folding cartons, and college mailers. The majority of their equipment acquisitions are focused around gaining efficiencies in these markets (although they do also handle other work), and the majority of their services were formed by adding capabilities and services to existing product lines or to enhance their production workflow and convenience. They have also focused on improving their throughput and product quality and on building their reputation as experts within their markets and in industry. They have essentially positioned themselves as low-cost expert producers within their target markets.

John Roberts and Kay Printing are general commercial printers, with a wide variety of markets, products, and services. They each are located near vibrant print markets, which grants them easier access to a multitude of customers and distribution channels. Both tend to have a large proportion of promotional work among their product mix—likely due to their locations—but many different products fall under the promotional category. Therefore, both printers have acquired a wide variety of equipment to achieve cost-competitive optimization for different products, and have worked on their efficiencies across the board. Kay Printing has especially capitalized on their flexibility in production by marketing themselves as “miracle printers,” just-in-time suppliers who can produce and deliver on the same day of the sales order, run last-minute production over
the weekend, and do overtime (all for a premium). They have developed a high degree of nimbleness in their scheduling and production—thanks to their improved efficiencies and skilled personnel—which has streamlined their workflow and given them great advantages in turnaround time.

Both John Roberts’ and Kay Printing’s broad markets and product mixes have buffered them against reduced demand in any one particular market segment, and have also helped them to capture market share by becoming “one-stop shops” for their customers. Also, since their printed material tends to be used to convey information or draw in customers rather than be sold as or used as products, these two companies have found advantages in adding related services such as personalization, cross-media marketing, and customer information management. In order to capture and retain more customers, Kay Printing has been more willing to outsource capabilities and services than John Roberts. They have developed good relationships with their suppliers to ensure their product quality and timeliness of services.

In comparing these two strategies, it appears that niche printers can become more efficient and thus more cost-effective in their specific markets than general commercial printers, which gives them the ability to produce for the lowest price. Niche printers are also able to focus their service offerings around those core markets, becoming an expert source for their markets more easily than a general printer. However, a general commercial printer has more options for the kinds of work they can perform effectively—depending on their equipment variety and efficiencies—and they can also
provide a wider variety of value-added services for their customers that may be outside of a niche printer’s core markets.

*Change Management*

The third way that these companies have managed to remain competitive is through their change management policies. All three companies tend to be first adopters of new technologies or actively seek newer technologies which can improve their efficiencies, provide new capabilities and service offerings for their customers, and enhance their management abilities. For instance, JS McCarthy invested in three “bleeding edge” presses from Komori which drastically improved their production efficiencies, while John Roberts is using their new management information software to investigate the profitability of their capabilities and services. Kay Printing has developed their nimbleness in production by acquiring new equipment, investing in their pre-press department, and developing flexibility in their scheduling systems. Most importantly, each company carefully weighs the costs and benefits of technologies they invest in or capabilities that they bring in-house.

A significant proportion of their change management strategies involves information management. They all keep tabs on where their markets are transitioning, what their customers are demanding next, what industry trends they can adopt into their businesses, what their competition is doing, and what new capabilities or improvements they can develop and benefit from. These companies have each found reliable methods of gathering information on each of these topics to help themselves stay competitive in the
marketplace. All three printers have vendor relationships that allow them to beta test new products, strong customer relationships that allow them to discuss capabilities and services their customers would be willing to pay for, and employees that are a regular source of suggestions for workplace improvement or ways to meet changing marketplace needs. JS McCarthy and John Roberts also regularly attend industry conferences, consult with their peer groups on what they have been doing to remain competitive, and use Lean to develop change management strategies that keep their companies nimble and flexible.

In particular, continuous improvement appears to be a key component of these companies’ ability to change, as their employees regularly improve their workplace efficiencies, reduce the frequency of mistakes, learn from others, and implement new developments in their businesses. Continuous improvement also allows these companies to keep pace with or exceed the efficiencies, cost competitiveness, services, and capabilities of their competitors. All three companies use the threat of competition as a motivator for continuous improvement, as they all compare their own performance against industry averages. JS McCarthy and John Roberts can also compare their performance against peers from their peer groups.

Business Management

Despite great variation in their sales volumes, which range from roughly $15 million to $60 million, these companies are within the top 300 out of 30,000 total printers in North America. Larger companies may have more difficulty repositioning themselves, fostering innovation, or strategically managing their business culture. However, all three
companies have found ways to address these potential weaknesses through their business management practices.

All three companies actively gather and use employee suggestions in their operations. JS McCarthy and John Roberts use Lean as a framework for changing their company cultures, encouraging suggestions from employees, and steadily managing continuous improvement. They each pay close attention to the marketplace, their customers’ changing demands, and industry trends, and actively manage this information to reposition themselves strategically when there is an opportunity or a threat. They all have good relations with their vendors, and frequently work with them on new developments to ensure quality, timeliness, and consistency.

Being a large company provides several strengths which these companies have been able to leverage in surviving difficult economic conditions. For one, they have a larger financial buffer against customers going out of business and against markets temporarily declining due to the recession. They also have more finances available for investing in new technologies, such as addressing production bottlenecks, purchasing new presses, or adding new production capabilities. In addition, they have a better chance of developing leverage with their banks for receiving loans and of obtaining purchase discounts with their vendors because they buy in bulk and pay in a timely manner.

What is especially important to note with these three printers is that they have maintained stable finances for the majority of their time in business. Kay Printing has only shown a single annual loss since 1978.2 John Roberts has had several customers

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2 The company has been in business since 1974.
who went out of business and were unable to pay their bills, but the company was in a strong enough position financially that they were able to continue operations with only minor losses during that time period. Financially stable companies can also more readily invest in new technologies and long-term company development, whether from their own reserves or from loans, which they can get on better terms than struggling companies can.

There is an element of luck involved in the circumstances which allowed these companies to remain financially stable, but there is also a significant correlation with the ability to remain competitive over the course of their business operations. During each interview, employees stated that their respective president was a “shrewd businessman,” suggesting that the presidents’ own business acumen may have had substantial influence on the financial stability and longevity of their companies. Each company president also has family members in management positions, which gives them additional incentive to ensure the long-term success of their companies.
**Additional Comments**

**Reflections**

In looking at what has helped their business the most over the past ten years, all three companies cited their gains in productivity and efficiency through equipment acquisitions and continuous improvement in their workplaces, especially in their customer service, pre-press, and post-press areas. JS McCarthy’s and John Roberts’ work towards implementing Lean into their workplace cultures and best practices was also cited as a key factor. Added capabilities and accessing new markets has also greatly benefited each company. This includes JS McCarthy’s addition of greeting cards and folding carton capabilities, John Roberts’ addition of mailing and fulfillment services, John Roberts’ and Kay Printing’s new multimedia subsidiaries, and Kay Printing’s relocation next to New York City. Kay Printing also cited their ability to handle last-minute jobs as a business saver for them, as they are much more profitable on their weekend work and can also charge a premium for same-day production and delivery.

Each company has unique regrets that are related to their weaknesses or to not pursuing their strengths as aggressively as they should have. JS McCarthy had a few acquisitions that were less than ideal, but their biggest regret was being slow to react to the marketplace and economy. They also regret not adopting Lean practices sooner, and also wish they had right-sized their company before investing so heavily in their efficiencies.

John Roberts acquired a new web press to replace an older, failing one right before the economic collapse, even though they had been having some difficulties
keeping all of their presses running full-time. After the economic collapse, they have been unable to fully utilize even four of the five presses, so the purchase may have been an expensive waste. (However, it also may have allowed them to be more cost-effective and thus keep those four presses running versus merely two or three.) They have also had difficulties with balancing employee suggestions against making firm decisions as leaders, and have had difficulties making the right decisions in regards to both paths.

For Kay Printing, their biggest regret is that their reputation and involvement in the printing industry is less than they feel it should be, especially in regards to trade organizations. This is especially relevant as JS McCarthy and John Roberts have strong industry reputations and have obtained great benefits as a result, such as using that recognition for leverage with suppliers and customers and having access to discounts or special offers in certain circumstances.

**Thoughts About the Printing Industry**

All three printers agree that the printing industry is shrinking, although they feel that they are each personally poised to survive due to their efficiencies and their dedication to continually improving themselves, seeking opportunities, and changing with the demands of the marketplace. They each feel that there are nearly unlimited opportunities for creative and persistent companies who are willing to seek them out.

Their advice to other printers was varied, but spoke to their own business strengths. JS McCarthy’s president Rick Tardiff said that the best benefits are gained by improving their core business, adding services which are congruent with that core
business, and carefully balancing infrastructure and sales while keeping a good credit history. He also advises printers to embrace technologies and actively seek new opportunities, as does Kay Printing.

John Roberts’ president Michael Keene acknowledges that not every printer can become a marketing services provider, and that services come with the caveat of having to do them well and ensure that they are efficient, profitable, and competitive, which can be difficult. He also advises printers to invest in their people and in training. As Mr. Keene explained, if a company spends money training people and they leave, it is a far better alternative than not training people who end up staying at the company.

Both John Roberts and Kay Printing also advise printers to be careful how they price their services, especially when they sell new technologies too low or price their work at or below cost in order to keep their businesses operating, as these practices are detrimental to the industry’s profitability as a whole. If customers know they can get a cheaper price elsewhere, they will not be concerned about whether a printer is profitable or not. Therefore, both John Roberts and Kay Printing advise printers to price their work consciously and appropriately.
Chapter 7
Conclusions

This research investigated three commercial print companies in order to discover common factors which contributed to their sustained business from the years 2000 to 2010, with the goal of expanding or confirming printing industry knowledge about sustaining competitiveness in a difficult economy. This research had several limitations to the scope and duration of study which limited the study to three companies, and also required that the companies be studied at a singular point in time through interviews rather than over a period of time with more detailed analysis. In addition, the researcher used open-ended questions to gather qualitative data. Although the opinions of senior management and company presidents are noteworthy, they have not been quantitatively verified through statistical research into the exact impacts of the factors identified on business profitability, market share, or other key financial data.

Despite these limitations, this study was still able to contribute to and to affirm the existing body of printing industry management knowledge regarding strategies companies can adopt in order to sustain their business. These significant factors were discovered to be a combination of pre-existing conditions and strategic changes to business models, all of which confirm existing theories. These four strategic factors are as follows:

- Continuous improvement of efficiencies to reduce costs of production and increase throughput,
• Strategic positioning of the market mix to meet customers’ changing needs and benefit from new market opportunities,

• Aggressive change management strategies to actively explore and pursue upcoming opportunities, and

• Solid business management strategies to maintain stable financials and beneficial relationships with customers and vendors; design effective plans for long-term competitiveness; and evaluate opportunities for their investment potential without misgauging the demand or ROI.

This research also reinforces several key beliefs in industry literature through these four factors:

• That it is increasingly important to control costs through efficiencies for achieving profitability,

• That a business will be most successful if it appeals directly to its customers’ desires,

• That continuous change is required to gain and sustain competitive advantages, and

• That good business management practices are required as an overall framework for planning and maintaining long-term success.

Several methods for implementing and maintaining these factors in a business are provided below, based on a combination of industry advice and methods used by the interviewed companies. This is followed by a discussion of other findings related to the
printing companies’ competitive markets and how they have changed, and concludes with several suggestions for further research based on the methodology and goals of this study.

**Recommendations for Other Commercial Printers**

The recommendations of this research reflect how these three companies have remained in business and maintained profitability despite a difficult economic climate through gains in efficiencies, market mix positioning, change management approaches, and business management methodologies. These strategies are able to be adopted by other companies in the commercial printing industry. The methodologies used by the studied companies to attain them are described below.

The first recommendation is that companies should invest in their operations to improve their efficiencies, both in the pressroom and in related workflow steps that may be causing bottlenecks. This investment should include employee training, equipment upgrades, Lean manufacturing philosophies, and other continuous improvement efforts. Companies who continue to invest in their operations improve their ability to compete in the marketplace, especially against less efficient printers or printers who are also investing in their businesses.

The second recommendation is that companies should seek to understand their market, their customers’ changing demands, and industry trends in order to know where to transition their businesses in the future to meet their customers’ needs and access new markets. While the sample size in this study was limited to three companies, there were two distinct strategies on how to compete: becoming one-stop shops or becoming niche
experts. Companies have opportunities to position themselves in a new niche by branching off of their current markets and equipment, or they can invest in infrastructure to diversify their services and produce a wider variety of products more efficiently than their competition. Through these efforts, they should be in a position to retain customers, acquire new business from both new and existing customers, and stay competitive in new or current markets.

The third recommendation is that companies will benefit if they embrace change and actively explore opportunities in the industry and in their markets by becoming more aware of new developments and how these may help their business. This goes hand-in-hand with the two previous recommendations, as a framework for staying ahead of a majority of the competition may be obtained by developing efficiencies, targeting new markets, diversifying services, and capturing more of their customers’ business. It has been consistently shown over time that companies who embrace technology and invest in their businesses are the ones who remain competitive, as long as they do not over-invest, inappropriately judge the applicability of a new technology to their markets, or invest too heavily into a new development before demand has been established.

The fourth and final recommendation is that companies should consciously manage all of the above with shrewd business sense by knowing how to weigh the costs and benefits of an investment, how to manage finances to achieve stability, how to maintain strong relationships with suppliers and vendors, and how to plan for the long-term beyond immediate cost savings. This includes being willing to invest in Lean
initiatives, to train their employees, and to incorporate efficiency improvements in their business which will enhance their ability to compete.

**Other Findings**

In the course of the research process, there were additional findings related to the printing industry based on comments from the companies during interviews and on overall themes uncovered in analysis. The first additional finding of this research was that, while attaining profitability is the primary consideration for business survival, it should also be recognized as a tool to generate future investment and cost savings. A company must exercise sound business sense by wisely investing profits into the continued improvement of their operations, employees, and markets to remain successful in the future. Cost-cutting alone will not keep a company competitive, especially if those cuts are in areas funding future competitiveness, such as training, efficiency, and exploring new opportunities. Companies who have improved their efficiencies and their market position will surpass those who have not, due to the increased value they provide to their customers.

The second additional finding is that a commission-based sales approach, combined with online print bidding and print buying companies, may have been hurting the printing industry in recent years and especially during the recession. This is due to the fundamental nature of commission-based compensation, where sales personnel are rewarded for the volume of sales more than they are for the profit margins of those sales. While this may spur competitiveness and provide incentives for them to bring in a larger
volume of sales (which minimizes expensive idle time in production), it has also made it
difficult for companies to remain profitable due to the deep cuts to their margins they
have made in order to retain that sales volume.

This problem has only been exacerbated through online print bidding opening up
markets to non-local printers, as well as the fundamental way print buyers operate, which
is to look for the lowest price. These changes have introduced more competitors into the
marketplace and have driven profit margins substantially lower. This is especially
difficult for less efficient printers who have higher costs of operation than their more
efficient competitors, and for companies who invested in new technologies but are
pricing too low in order to gain back their investment while trying to remain competitive
in the marketplace. There is no direct solution for this problem. It has disrupted the
average market pricing for print, while making it more difficult for even efficient
companies to remain profitable. This effect, combined with the overall drop in the
volume of printing sales, has forced many additional printers out of business.

The third additional finding is that the printing industry—although shrinking—
still offers many opportunities for businesses that explore and pursue them while
exercising sound business practices. A properly-incentivized sales force can bring in new
business which matches the company’s goals and capabilities, while regular evaluations
of industry trends, new technologies, and customer needs will bring insight for the next
steps needed to remain competitive. Companies who have developed their efficiencies
and capabilities can better serve their customers for a lower price while retaining
financial stability, and will remain competitive while their competitors who have restricted investments and are struggling to compete on cost will not.

The fourth additional finding is that it is possible to draw conclusions about what kinds of printers are more suited to successfully become marketing service providers, as well as who would benefit the most from adding cross-media services to their offerings. For example, JS McCarthy’s greeting cards and folding cartons are primarily products that are sold in stores or used to contain other products. Their college mailers are designed by universities who have dedicated graphic designers and information management systems. It would be rather unlikely for these customers to switch to using JS McCarthy’s cross-media services if they were offered, and it would be difficult to ensure the volume of work or the availability of highly-skilled personnel due to JS McCarthy’s relatively remote location. However, since they are already recognized as experts in their specific markets, they may be able to offer additional consulting or other expertise-related services, but becoming a marketing service provider would not be the most advisable transition for their company.

On the other hand, John Roberts and Kay Printing are general commercial printers who serve a wide variety of larger and smaller customers, and are located near the vibrant markets of Minneapolis and New York City, respectively. They both also perform a fair volume of promotional work for their customers. Because of this shared market mix, a significant proportion of their customers benefited from having John Roberts and Kay Printing handle their cross-media services and marketing campaign management for them. And, since these two companies are located in or near vibrant markets, they have
been readily able to find highly talented employees to perform the work. With these added capabilities, they can gain expertise and increase customer confidence in their marketing abilities; they can become one-stop shops for their customers’ promotional campaign needs, including concept creation, cross-media production, personalization and information management; and they can gain new revenue streams to ensure their continued profitability.

The fifth and final additional finding is that the printing industry has opportunities both inside and outside of the print realm, such as in wide format printing, building and car wraps, and added capabilities and services which aid their customers’ ability to remain competitive and thus add to the printers’ value proposition. For general commercial printers with a high volume of promotional work, their customers are more likely to be interested in printers who have transitioned into marketing service providers or have added those services through a subsidiary. For example, John Roberts and Kay Printing are not only printing direct mail advertisements for their customers, but also are managing the personalization, information gathering, and targeted marketing of their customers’ customers, which adds tangible value to those services. By becoming experts in cross-media marketing, they have ensured both income and indispensableness. The only caveat, according to Mr. Keene of John Roberts, is that those services have to be performed well and be profitable on their own.
Suggestions for Further Research

Since these three companies were studied at a certain point in time, it may be advisable to conduct a follow-up study into these same companies within five to ten years to see if these same factors are significant or if other factors have come into play. Additionally, as this research report only studied three of the profitable commercial printers who met the qualifying criteria, there is ample room for further studies of other printers following this study’s methodology. Due to the narrow focus of this study, additional studies may be performed with different company selection methodology, such as studying digital printers, packaging printers, or other types of printers who have been profit leaders as compared to their competition. Further studies could also focus on smaller printers not included in the PI 400 list, or on larger multi-regional printers.

Controversially, less successful printers could also be studied, in an attempt to identify specific distinguishing features between successful and struggling companies’ business practices. This would require a much larger set of printers to interview, as well as very specific criteria to define the different levels of success or “failure” studied.

In addition, a common debate about marketing service providers is whether those services should be brought into the existing organization or handled in a separate, affiliated organization or subsidiary company. While this research did not explore this in detail, it should be noted that both Kay Printing and John Roberts chose to form separate companies to handle their cross-media services. Further study is recommended for comparing companies who host in-house marketing service providers versus those who host them in external or related subsidiary companies.
The final suggestion for further research would be to write case studies based on this research and/or future research of print companies’ strategies for use in educational material and industry publications. By spreading knowledge of these three companies’ and other companies’ successes, both current and future leaders in the printing industry may learn how to position their businesses to remain profitable.
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Appendix A

Interview Questions

Demographics

1. Size – Employees, Sales
2. Financial Stability
3. Location
4. Core Markets and Customers
5. Years in business
6. Years at current location
7. Competitive Environment
   a. How has their competition affected them?
   b. How do they feel they are managing to remain competitive?

Interview Questions

1) What has changed strategically within their business over the past 10 years?

   a) Workplace Environment
      i) Company Culture
      ii) Hiring and Staffing
      iii) Keeping Workers Flexible and Efficient
      iv) How do they benefit from their workers’ expertise?

   b) Operations
      i) Technology
(1) Equipment acquisitions or purchases
   
   (a) Overall attitude:
   
   (b) What did they acquire, why, and how does it add value for them?

(2) Software Systems or Software-Reliant Capabilities

(3) Digital Printing

(4) 3D Printing/Printed Electronics

ii) Services

   (1) What services have they added or removed?

   (2) How have those services brought value into their business?

   (3) How are they improving the efficiency and profitability of their services?

iii) Efficiency

   (1) What are their thoughts about efficiency?

   (2) How have they systematically improved efficiency?

iv) Sustainability

   (1) How have sustainability concerns impacted their business?

   (2) Has sustainability been a value proposition for them?

   (3) What certifications do they have?

   (4) What has been their biggest emphasis or development in sustainability?

   (5) How are they reducing costs, such as utilities, transportation, and materials?

v) Supply Chain Management

   (1) Working with Vendors
(2) Warehousing Time & Capacity

c) Marketing Strategy

i) Marketing and Sales

(1) How have their value propositions changed?

(2) How are they maintaining sales volume?

(3) What are their thoughts about their sales margins?

ii) Customer Service

(1) How are they interacting with their customers, and is this similar to or different than it was prior to the economic crisis?

(2) Have customers’ demands changed, and, if so, how have they responded?

d) Change Management

i) How do they manage change in their business? Do they consider themselves first adopters, late adopters, or in between?

ii) How do they keep in touch with industry trends and seek new opportunities?

2) What are their two primary strengths, weaknesses, opportunities, and threats?

3) Which improvements have helped their business the most in the past ten years?

4) In hindsight, what would they have done differently?

5) How do they personally define success in this industry, and have they attained it?

6) What are their thoughts and feelings about the printing industry in general?

7) What advice do they have for other commercial printers?